



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

An Exploration into the Psychology of Education: The Use of an Ecological Framework
to Address Macro and Microsystemic Factors that Influence Individuals Working
within Irish Education

By

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A Dissertation Submitted to the School of Education,
Trinity College Dublin.

In fulfilment for the award of:

Doctor of Philosophy

Supervisor: Dr Stephen James Minton

Submitted: September 2016

Revisions Submitted: July 2017

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Declaration

I declare that this thesis was not previously submitted as an exercise for a degree at this or any other university, and it is entirely my work.

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Date

Acknowledgements

Firstly, I would like to thank my supervisor, Dr. Stephen Minton. Without your infinite guidance and wisdom, this experience would not have been half as interesting (and enjoyable!) as it was - I especially appreciated the ratio of our meetings: one part 'intense work' to five parts music, stories, and laughing.

Next, a big thank you to the staff of the School of Education. Thanks for all your support over the last three years – letting me pop in for a quick chat when needed and (especially) helping out during my first year of supervising!

To the bunker buddies, it's a bittersweet feeling handing this work in. My time in TCD was made so much better with you guys, I can't express my gratitude enough.

A special thanks to Laura and Chloe – for proof reading and challenging my thoughts!

Finally, thanks to family and friends. It's been a long three years - full of ups and downs. Thanks for sticking with me and being there when I needed someone to be.

I would also like to take this opportunity to express my best wishes to my colleagues who are starting their own doctoral studies this year (– “sure it'll be grand”), to those who will be finishing up soon, and to my brother who just started on his journey into the depths of psychology.

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List of Acronyms

AR	Action Research
DES	Department of Education and Skills
GT	Grounded Theory
GUI	Growing Up in Ireland
INTO	Irish National Teacher Organisation
MBI	Maslach Burnout Inventory
MHI	Mental Health Inventory
PDA	Portable Digital Assistant
QTI	Questionnaire of Teacher Interaction
SSE	School Self-Evaluation
SWB	Subjective Wellbeing
TPACK	Technological Pedagogical and Content Knowledge
TPI	Teaching Perspectives Inventory
TUI	Teachers Union Ireland
WSE	Whole School Evaluation

Abstract

This Ph.D. project is considered a two-part piece. The first aspect is methodological and theoretical, concerning the design of an ecological and context-driven grounded theory framework. The second aspect is a cross-sectional study based on the researchers' interpretation of having implemented and interacted with the methodological framework.

This project first opens with a brief outline of the role psychology has played within education to explain the context and rationale of this research. Highlighting the core schools of thought and key theorists follows, explaining how these figures have influenced educational theory and practice. By critically reviewing the literature surrounding research frameworks and methodologies, a constructivist grounded theory variation is proposed.

A randomised sample of Irish Whole School Evaluations (N=59), statistics from an Irish longitudinal dataset (Growing Up in Ireland) and Departmental Annual Statistics, were used to provide a core foundation for this research. During a process of interrater reliability and a social media evaluation, three core research dimensions were identified: (1) the importance of Interaction, (2) the Dynamics of Pedagogical Skill, and (3) the Need for Psychological Support.

Encompassing both primary and post-primary school samples, this research involved a total of 758 individuals (educator, n=266; and student, n=489). Based on whether they had been teaching a class group at the time of this study, educators were categorised into 'Teaching' and 'Non-Teaching' samples. Several significant differences were found between the 'Teaching' and 'Non-Teaching' samples. Also, several differences were found at a primary and post-primary level.

With many recommendations and suggestions being made for future research, this study identifies and proposes a tool for educators to self-reflect on their interactions with students and their instructional practices.

Chapter 1: Operational Definition

“The purpose of social science is not to develop theory, but to contribute to society’s practical rationality in elucidating where we are, where we want to go, and what is desirable according to diverse sets of values and interests” (Flyvbjerg, 2001, pg. 167)

This quote not only cites the contribution of research to society’s functional development, it also highlights the importance of understanding what desirable values and interests are necessary for its functional development. By mirroring Flyvbjerg’s quote, and addressing components of where it is that we are as a society, the next aim is to understand where it is that we are going rather than where it is we want to go. Focusing on the broad environment of education, it is important to account for the assorted nature of societal desirability and understanding what values and interests are necessary for functional development.

1 The Expansion of Knowledge

The many types and definitions of research show that it is both a process of enquiry and a journey of self-discovery (Madan, 2014). While scientific research is a systematic process of enquiry and investigation, with the ultimate purpose being the expansion of knowledge (Kitcher, 2011), anthropologist Zora Neale Hurston (1942) maintains that all research is a type of formalised curiosity. Highlighting these definitions gives greater insight into what it means to be a researcher; studying aspects of the known world in depth, pushing boundaries in order to solve questions that have yet to be answered, or being fully immersed in a topic to the point where Maslow’s (1943) ‘self-actualisation¹’ is a constant conquest. The meaning of being a ‘Doctor of Philosophy’ refers to an individual who seeks to understand the very nature and limitations of thought and knowledge (Reber, Allen, & Reber, 2009). The purpose of this Ph.D. is to drive the boundaries of psychological and educational research, to expand and build upon the existing pool of knowledge, and to consistently push the various limitations of my learning by proudly standing among peers and contributing to science.

¹ This is a term Maslow referred to as being a type of self-fulfilment, that *“a musician must make music, an artist must paint, a poet must write, if he is to be ultimately happy. What a man can be, he must be. This need we may call self-actualization”* (pg. 382)

Roberts (2002) classified researchers and academics into three separate types; the first, 'Type A', refers to a researcher who, while perhaps spending their entire career working within educational institutions, is motivated by publishing and conducting research. 'Type B', also spending a large proportion of their career within a college or university, is motivated by sharing knowledge and teaching. Finally, 'Type C', refers to a researcher who spends their working career within an organisation and is motivated by sharing real world knowledge and practical expertise to others. In contrast, Oppenheimer (1945), better known for his role in the development of the infamous 'atomic bomb', claimed that;

"it is not possible to be a scientist unless you believe that it is good to learn. It is not good to be a scientist, and it is not possible, unless you think that it is of the highest value to share your knowledge, to share it with anyone who is interested." (pg. 51).

This definition implies that it is the moral responsibility of a researcher to share findings, collaborate, and openly assist in the development of understanding. While there are obvious criticisms to the work of Oppenheimer, considering he was the 'father' of the atomic bomb, it is without question that he was a brilliant scientist. The purpose here is not to dispute Roberts' (2002) classifications. Instead, it is to highlight the commonality between them; the research itself. While each type of academic has varying motivations, most likely overlapping in some cases, the process of research is unanimous. Oppenheimer (1945) further explained that it is essential to;

"believe that the knowledge of the world, and the power which this gives, is a thing which is of intrinsic value to humanity, and that you are using it to help in the spread of knowledge, and are willing to take the consequences" (pg. 51).

This line of thinking is somewhat similar to Carl Jung's view that it is imperative for psychologists to be acquainted with a diverse range of subjects, not only to understand the inner mechanisms of life and experience, but to quench the thirst for knowledge (Jung, Adler, & Hull, 2014). Jung continued to highlight that the only way a psychologist can approach these inner mechanisms for life and experience is to *"abandon his thickly walled specialist fortress and set out on the quest for truth"* (pg. 85).

1.1 The Influence of Knowledge

Research carried out by Auriol, Misu and Freeman (2013) report how Ph.D. or Doctoral graduates, despite being a relatively small sample in comparison to the overall population, are positioned to advance society through their unique contribution to knowledge. The holders of these qualifications, being recognised as authoritative professionals within a given field of study (Phillips & Pugh, 2010), are expected to solve complex issues, showing enhanced levels of responsibility and initiative, displaying skills in independence, research, and creativity (De Grande, 2009). The skill set of a Ph.D. graduate, however, is dependent on numerous variables, with some researchers such as Shinton (2004) claiming that there may be a core set of skills shared by the population of Ph.D. graduates. In general, each Ph.D. process is an entirely individual and subjective experience causing the skill set of an individual to vary. By taking aside the various fields of study, Mowbray and Halse (2010) adopted an Aristotelian concept of morality and intellect to describe the Ph.D. as being a process of formative development where an individual acquires a greater sense of intellectual virtue. Under this model, the Ph.D. is a pathway for an individual to increase the capacity for knowledge through the engagement of education and learning.

The Aristotelian ‘intellectual virtue’, or ‘*arête*’, is a term used to describe a set of interdependent values that make up the essence of an individual (Pakaluk, 2005). If the intellectual virtue is seen as a crown of jewels, each jewel would represent a particular intrinsic component, and the entire completed crown would be considered priceless (Nussbaum, 1986). Carr (2014) describes the intellectual virtue as being the cultivation of an individual’s ‘*character*’ (pg. 2), ultimately exhibiting qualities and strengths such as confidence, courage, humanity, or transcendence (Dutton, Roberts, & Bednar, 2010). There is some conflict, however, with some researchers such as Flyvbjerg (2004) mentioning only three virtues: ‘*epistêmê*’ (scientific knowledge), ‘*technê*’ (productive knowledge), and ‘*phronesis*’ (practical knowledge). It is further suggested that ‘*phronesis*’ is the most important as it refers to the process of logical rationality where an individual will identify a problem and work towards constructing a solution (Weber, 1978). Pakaluk (2005) mentions the remaining virtues, ‘*sophia*’ (theoretical knowledge) and ‘*nous*’ (intuitive knowledge), and proposes that ‘*sophia*’ and ‘*epistêmê*’ provide a theoretical and scientific component to the human experience. Interestingly, the ‘*technê*’ and ‘*phronesis*’ merge to contribute a practical and technical

component. The role of the *'nous'* is to foster the capacity of an individual to uncover theoretical principles and learn, from this experience, to inform practical knowledge. While education does not necessarily need to take place inside a formal education setting, this research is addressing the educational experience within the formal setting. Because research can be non-linear and evolutionary in nature, numerous steps will be taken to adapt to information circumstances with justification for each decision made. From a personal perspective, this exploratory research is one of many key stages in this researchers' academic career. One of the main challenges is to justify which direction the research will take. By doing this, it is imagined that this researcher will fulfil Jung's expectations and step down from "*his thickly walled specialist fortress and set out on the quest for truth*" (Jung, Adler, & Hull, 2014; pg. 85).

1.2 The Differing Research Approach

The very first academic journal, the *'Journal des sçavans'*, was published in France by Jean-Denis de Sallo in 1665 (Jinha, 2010), older than the Royal Society Journal of Philosophical Transactions, which boasts the longest 'continual' existence. Since the birth of these academic publications, Jinha (2010) highlights how over fifty million research articles have been published, with the majority being published post 1987. Equating publication frequency with academic prowess is not exactly linked with an increase in knowledge, but coupling this notion with the advancement of technology, access to information, constant connectivity, as a result of the internet, it is reasonable to assume that the ubiquitous acquisition of new knowledge is constantly at hand. In line with this growth of knowledge, the purpose of this research is to explore the formal education experience from a psychological perspective. Further information will be given below with regards to the specific methodologies adopted within this research, influenced heavily by the stance and approach of this researcher.

The 'traditional' opening to a scientific paper would highlight definitions, and in the case of this research, this tradition is acknowledged and maintained. However, the nature of both education and psychology make a definition somewhat difficult to attain. For example, the philosophical premise of education was once defined in terms of how it contributed to the 'growth of knowledge' (Kotzee, 2013). Modern definitions would suggest how education refers to the 'act' or 'process' of systematically acquiring knowledge during childhood and adolescence (Collins English Dictionary, 2015). These definitions appear robotic and lifeless; they fail to address the intimate, personal, and

subjective nature of what education is. The acquisition and systematic nature of education suggests a process whereby skills, knowledge, and values are provided to individuals within a formal setting. Brook (2013) believes simply that education is the process of becoming a “*fully flourishing human*” (pg. 33) which logically raises the question of what it means to be ‘fully flourishing’ and, of course, human. Whether there are differences in terminologies, subject matter, or field of study, one of the hidden influences within academia is the attempts of measuring or quantifying scientific contributions in the form of impact factors, article citations, or author status (Seglen, 1997). What this suggests is that published articles are numerically graded based on a myriad of factors, of which, the contribution to knowledge is just one. Within this research, education is classified as the process of developing students into knowledgeable, skilled, and moral individuals for the purpose of enabling society to continue to function and grow (Smith, 2013).

Having both a long past and short history (Ebbinghaus, 1910), psychology developed and evolved through the observations, thoughts, and perspectives of individuals from various backgrounds, such as philosophy and medicine. A youthful psychology attracted researchers such as Wundt (1916)(who was interested in the structural elements of conscious processes), James (1913)(who believed that psychological processes were a result of evolution and how an organism would behave and adapt according to the environment), or Freud (1910)(who believed that the unconscious plays an essential role in behaviour). Reber (1995) explains how attempting to define psychology is impossible as it is;

“an attempt to understand what has so far pretty much escaped understanding, and any effort to circumscribe it or box it in is to imply that something is known about the edges of our knowledge, and that must be wrong” (pg. 617).

Within the context of this research, the general definition of psychology is how it is the scientific study of human thought, emotion, and associated behaviours, through use of the scientific method to study of various aspects of human experience (Myers, 2003). Although this definition may appear somewhat broad, it is necessary as psychology is a discipline with many sub-disciplines. The cognitive perspective, for example, tries to explain behaviour regarding how individuals process information or the behavioural perspective which looks at how external stimuli within an environment influence the

behaviour of individual. The psychodynamic approach to psychology concerns the focus of unconscious drives and forces that influences their experiences and views of the world (McLeod, 2007). This differs from that of the phenomenologists, who study the universal structures of human experience by focusing on the perceptions of individuals and their own subjective lived experience (Langbridge, 2007). While there are many more sub-disciplines, the one aspect that has always personally influenced my approach to psychology is the subjective nature of experience.

1.3 Locating Myself as an Educational Researcher

This opening introduction began with a quote from Flyvbjerg (2001) who spoke about the purpose of science being to reveal where it is we, the collective ‘we’, currently are as a species, as a civilisation, and as individuals. Despite these varying differences in experiences, modes of expression, and levels of intrinsic or extrinsic motivations, the role of this scientist is to understand. ‘The expansion of knowledge’ has been arbitrarily mentioned above as the motivation behind this research project; while true, many questions remain that require further clarification that this research product will address.

Being an educational researcher can come with various nuances; of particular note is the ‘research to practice’ gap. Although the role of psychology within education will be addressed in depth in the next chapter (Chapter 2: Reviewing the Psychology of Education), it is important to be aware of the challenges and opportunities that educational researchers are faced with and the subsequent impact this can have on the research process itself. A paper by Carnine (1997) outlines several arguments that are said to be at the forefront of research within education (*adapted from pg. 513*):

- Some researchers believe that practitioners fail to notice the implications of their research and that, because research projects are structured to have implications rather than applications, it furthers this perceived gap. Additionally,
- Practitioners believe they are isolated from decision making processes when it comes to research, and that a proportion of specialised studies have no anchoring in a real-world environment.

There are few publications surrounding the problems of the research-practice gap (RPG)². Due to the nature of filtering using keywords, it is unsurprising that the number of RPG publications that focuses exclusively on education drops somewhat³. What is surprising, however, is that when the date filter is applied to account for publications within the last 10 years (from April, 2017), there is a significant reduction to 15,600 hits. While this research activity is not necessarily a ground breaking feat of data analysis, it does highlight the divergence of interest. The papers published, that address the role and training of educational researchers (Barone, 2001), mention that insights of educational researchers can help bridge the apparent communicatory divide between researchers and practitioners (Bero, Grilli, Grimshaw, Harvey, Oxman, & Thomson, 1998; Wagner, 1997; Carnine, 1997). This, however, is not without its challenges, as Labaree (2003) highlights.

More recently, these issues have been addressed by Corcoran (2014), who writes about how, as an undergraduate, the majority of psychologists who taught him had little to no experience of psychology outside the lecture hall. Further explaining his first role working in an adult prison service and later as a school psychologist, Corcoran recounted the struggle with psychological theories while in the prison service and that, in some situations, these theories set limitations on the individuals by demoralising “*opportunities for rehabilitation in many instances causing further concern regarding relationships between theory and practice*” (pg. xvii). Again, this experience was somewhat mirrored throughout Corcoran’s work as a school psychologist, mentioning how the psychological theory would work “*to maintain a status quo that, by effect, pushed those not seen as ‘normal’ to the margin*” (pg. xvii). As is seen, this disconnect between what Corcoran experienced on the ground and what he experienced during his classes suggests a discrepancy between theory and practice. Offering a metaphoric example, Henriques (2004) explains that the difference between noise and music is somewhat similar to the differences and similarities between scientists and practitioners;

“when both can be orchestrated to function in concert with each other, the potential pay-off is immense ... The confusion that permeates throughout the

² A simple Google Scholar task, searching for the keywords: “*research*”, “*practice*”, and “*gap*” revealed 3,200,000 hits.

³ Keywords: “*research*”, “*practice*”, “*gap*”, and “*education*” reveals 2,740,000 hits.

discipline creates massive amounts of static in their communications, and this, in turn, interacts with their differing motivational sets to create tensions” (pg. 1208).

In isolation, both frequencies and sounds equate to nothing but noise. However, with this metaphor in place, the role of an educational researcher is to disentangle the noise, apply structure and sequence, and transform the audio into the phenomena known as music. The argument of scientists is that *“practitioners are too loose with their conceptions and not well versed in science, whereas practitioners complain that scientists have failed to generate knowledge that is useful to them”* (Henriques, 2004; pg. 1208-09). Alexander and Winne (2006), recognising the debate on what it means to conduct scientific research within the field of education, argue that this *“challenges to scientific approaches to the study of education are simply no longer an issue”* (pg. 7). In explanation of why this debate is losing traction, Alexander and Winne (2006) mention that the arguments were regarding the dominance of scientific approaches in favour of other forms of educational enquiry, such as narrative or arts-based.

The objective nature of research has been criticised by many such as Kuhn (1962), who argued that scientific knowledge is knowledge of the nature of objects as they are perceived, that inquiry is based on human concepts, which are open to interpretation. McLeod (2011) mentions that researchers are influenced by *“theoretical orientations, personal anticipations ... values, interests and assumptions”*, and that if a researcher was to detail these influences, it could *“go on forever, in an endless recursive loop”* (pg. 268). Interestingly, McLeod (2011) continues to highlight that a researcher's intentions can be fundamentally guided by the stylistic convictions of a publisher or peer review panel⁴. In support of uncertainty, Russell (1948) maintains that *“all human knowledge is uncertain, inexact, and partial”* and that *“to this doctrine we have not found any limitation whatever”* (pg. 527). Kuhn (1970) emphasised that the advancement in many scientific areas occur during periods of intangible crisis. The first step in understanding these crises involved the acknowledgement that traditional methods currently in use, or paradigms are adopted, are ineffective at explaining a situation.

⁴ From a psychological perspective, just to add a further confusion, Newell and Shanks (2014) ask whether it is possible to be fully conscious of every decision an individual makes. While this review was not focused on methodological decision making, it does call to question whether the reported reason why a particular method was chosen is actually the real reason. In other words, because nothing is certain, the research must guide the research process.

It is argued that, because the scientific process is self-correcting, it allows researchers and practitioners to make judgements based on evidence (Mayer, 2000). Heavily critiquing this paper, Barone (2001) criticises Mayer for being a traditionalist who believes that “*non-traditional educational researchers ... employ research methods inappropriate for the narrow view of science*” (pg.24). Mayer (2000) had proposed that other forms of research processes, such as those taking an arts or discourse approaches, are not superior or inferior to the more scientifically led research processes; that they provide an alternative view. In a later publication titled ‘Resisting the Assault on Science’, Mayer (2001) claims that the criticisms were a “*personal attack on my motives and beliefs*” and did not present any form of “*reasoned and documented analysis of the relative merits of scientific and artistic approaches to educational research*” (pg.29).

The exchange between Mayer (2000; 2001) and Barone (2001) provides significant contribution to articulating what it means to be an educational researcher. For example, this exchange highlights that, for educational research to continue to make systematic changes to the way education functions, arguments should be based on facts and rigorous thought, rather on the subjective motives and beliefs of educational researchers themselves. Unlike Barone’s (2001) assumptions, the fundamental role of the scientific method is to provide a set of logical and procedural regulations which informs the general foundation and orientation within the natural world (Weber, Gerth & Mills, 1946). One of the core values behind the scientific method is that nothing can be ‘proved’ by scientific means, that an individual must either choose to accept or reject a position in accordance to empirical research and evidence. This gives rise to the position of falsification (Popper, 1959), and if a scientific theory becomes untestable, it ceases to become scientific. Russell’s (1952) assertion of falsification becomes evident in this case⁵. The purpose of this process is to provide researchers with a tested foundation of knowledge to allow multiple studies to be evaluated with a common set of criteria (Tudge, Mokrova, Hatfield, & Karnik, 2009). Mayer (2001) continues to

⁵ “*between the Earth and Mars there is a china teapot revolving about the sun in an elliptical orbit, nobody would be able to disprove my assertion provided I were careful to add that the teapot is too small to be revealed even by our most powerful telescopes. But if I were to go on to say that, since my assertion cannot be disproved, it is an intolerable presumption on the part of human reason to doubt it, I should rightly be thought to be talking nonsense. If, however, the existence of such a teapot were affirmed in ancient books, taught as the sacred truth every Sunday, and instilled into the minds of children at school, hesitation to believe in its existence would become a mark of eccentricity and entitle the doubter to the attentions of the psychiatrist in an enlightened age or of the Inquisitor in an earlier time*” (pg. 168).

argue that educational researchers should base their discussions on evidence and reasoned argument rather than on opinion and stance, for their findings to be reproducible and testable in a wider range of environmental conditions.

The position of this researcher, as an educational researcher, has been guided through experiences and training within the area of psychology. Early into this career, a university altruism project gave the opportunity of working in an educational setting with students at risk of dropping out of school. Gaining insight into the world of education, ranging from the varying factions of thought, to witnessing the differences in teaching approaches or pedagogical styles. Having continued to work in this area throughout an undergraduate, postgraduate, and now PhD, experiencing the environments of both primary and post-primary education, for the second time as neither a student nor a teacher, cultivated a depth of practical knowledge. As the years progressed, the divide between psychology and education became non-existent, theories mentioned in class were jumping from the pages of textbooks and computer screens; they became something more, something directly observable. Being both an external and integral aspect to the educational cycle and trained in psychology meant assisting students in need of guidance and supporting the role of the classroom teacher. As these practical experiences and understandings led to this career of being an educational researcher, this PhD research is based on extending this position of support and giving voice to individuals within education to discover their challenges and hopes for a holistic educational experience.

Chapter 2: Introduction

“We persevere in looking at small questions instead of large ones and our view of the forest is forever obscured by the trees” (Bevan, 1991, pg. 475)

As is convention, the introductory chapter and literature review precedes the research methodology. It is essential to note, however, that this research followed a methodological framework that mirrored the constructivist grounded theory approach. The most prominent implication of using this framework meant that an exhaustive literature review was conducted after conducting desk research. Glaser (1999) mentions that researchers must study the problems that exist, not to study the problems that professionals say are important. Under this argument, a researcher using grounded theory should minimise any and all preconceptions by casting aside prior understandings about a research area for later comparison. The issue, however, is that the grounded theory process identified by Glaser and Strauss (1967) failed to address how they themselves affected the research process and that much of their published works would report ‘generality’ and ‘objectivity’ rather than ‘relativity’ and ‘reflexivity’. The constructivist grounded theory approach, proposed by Charmaz (2001), states that a researcher must become involved and immersed in such a way that it allows them to accurately tell a story about people and their interactions with social processes and situations; differing from Glaser’s (2002) purpose of grounded theory being to identify and explain ongoing patterns of behaviour. Much of Charmaz’s work, which will be mentioned throughout Chapter 4, explains that a researcher will interpret the personal perceptions and views throughout the process, and place greater emphasis on the participants and not the literature.

Utilising a grounded theory approach means that the way in which a study is carried out is not likely to resemble the traditional write up. While this research is not an exception to this grounded theory approach, to make this PhD more accessible to the reader, the traditional PhD layout has been followed. In this regard, the purpose of this chapter is to introduce the research project as a whole; outlining the chapters contained in this project, introduce the literature surrounding this research, and outline the research questions and hypotheses associated with this project.

2.1 Introducing the Research Questions

In moving forward with this research, what had been currently known about the educational environment is that nothing is completely certain; the collected data from Study 1 and Study 2, however, revealed possible indications of what may be happening on a classroom level. While the purpose of this brief introduction is to frame the context of the following literature, it is to also highlight the general areas that Chapter 3 will address. For example, while studies using the Growing Up in Ireland dataset showed that students have identified liking their teacher more than they like school (GUI, 2009), it is possible that this indicates that the student places greater emphasis on the student-teacher relationship. However, it is unclear whether this dynamic extends into post-primary education, despite the follow up study reporting 61% of the students held a positive attitude towards school (GUI, 2012); as the nature of students in post-primary education having more than one teacher means the student/teacher relationship is more difficult to determine.

The lack of in-depth information and data surrounding the interactions between the students and teachers is interesting from an Irish context, considering the length of time one spends with the other. There is a reported gender imbalance throughout each level of education, with the number of male primary school teachers reducing as found in the DES statistics and, as suggested by the GUI, a possible difference in teaching strategies and styles in both male and female teachers (GUI, 2009). Interestingly, as it was also found that both teachers and principals experience high levels of stress in addition to experiencing high levels of satisfaction, there is evidence to encourage further research exploring the dynamic of the student-teacher relationship.

Despite the importance of a teacher preparing lessons that are ‘engaging’, as identified in the WSE, the delivery of this class is dependent on numerous factors. For example, a lesson plan is developed for a class based on what the teacher feels the class is capable of; it states the learning outcomes, how these are measured, what materials are used, or whether the teacher needs to cater for any special educational needs. Because every class is different, if a teacher intends on giving the same lesson to another group, the plan itself will need to be adapted to suit the needs and requirements of the next class. In other words, the teacher needs to understand the students and who they are to effectively deliver the content of a lesson. However, although the issues highlighted

above signify numerous factors that are not addressed in the above datasets, the literature does provide an opportunity for research to be conducted that is grounded in qualitative and quantitative educational data. For example, Wentzel (2005), argues that an educator should strive to build relationships that are “*emotionally close, safe, and trusting, who promote access to instrumental help, and who foster a more general ethos of community and caring in classrooms*”. In doing this, educators are more likely going to nurture and enhance the development of a students’ academic and psychosocial behaviour. Further research has shown the ways the student-teacher relationship can influence the development of student social skills (Cornelius-White, 2007), psychosocial adjustment (Buyse, Verschueren, Verachtert, & VanDamme, 2009), and directly influence teacher wellbeing (Spilt, Koomen, & Thijs, 2011; De Jong, van Tartwijk, Verloop, Veldman, & Wubbels, 2012).

The subjective variability in interpersonal interaction, pedagogical skill, and perception of psychological support means that an ecological approach to educational research is essential in identifying the factors that influence the holistic educational experience. Resulting from the grounded theory framework, the literature review was conducted in parallel to Study 3. This means that the literature developed into an in-depth critical analysis of the research findings.

2.2 The Evolution of the Research Questions

As the position of any research project brings certain biases in relation to how the research is approached, the aim of this current chapter is to provide some foresight into the way in which the research questions adapted. With this recursive process of prioritising participant data and datasets over literary reports and studies, the research questions adapted based on the interaction with the data in Study 1 and Study 2.

2.2.1 The First Iteration – Study 1

Siegel (2005) highlights that because researchers understand the differing beliefs and perspectives of individuals and how they are influenced by numerous factors, the educational researcher must focus on more than just questionnaires or interviews and look towards the diversities of cultures and groups. Just as Boudah (2010) mentions that there are numerous ways to conduct research, Siegel (2005) explains that this research diversity impacts the way in which a researcher articulates the research question under study. Similarly, the way the teaching style of an educator is developed through their

own personal beliefs and experiences, a researcher will strive to answer a question that has been formed from their “*interests, education, temperament, curiosity, ambition, originality, beliefs, values, and so forth*” (pg. 5). Oancea (2005) explains that there is a difference in conceptualisation between researchers. On one hand, there is a technician who conducts research that is defined in terms of accountability of ‘what works’ and, in the other is a researcher who is considered an intellectual, who focuses on the dissemination of knowledge that is localised, transferable, and meaningful (Mortimore, 2000; Furlong, 2004).

Within the context of this research, there is a large body of evidence to suggest the importance of a researcher looking towards the beliefs, perspectives, and judgements of educators (Pajares, 1992) because these ultimately “*affect their behaviour in the classroom*” (pg. 307). Considering the data found within Study 1, the view of an educator as being a ‘contributor to the classroom ecosystem’ and less of ‘just a member of a group’ gives a researcher the ability to conduct a study that is personal and context specific; tying into the ecosystemic perspective this research has adopted. With Siegel (2005) encouraging an ecological view of education, an analysis of qualitative data, including Whole School Evaluations, interrater reliability interviews, and a social media, and quantitative data, including the national statistical databases of the ‘Department of Education and Skills’ and the ‘Growing Up in Ireland’ survey, were coupled to lead to the formation of three research directions (*see page XXX for the findings of the WSE analysis and how these areas were derived*):

- *The Importance of Interaction*
- *The Dynamics of Individuation, and*
- *The Need for Psychological Support.*

2.2.2 The Revised Iteration – Study 2

Using a com macrosystemic datasets was invaluable to the further development of the research questions; allowing for numerous research avenues to be condensed to pinpoint the core focus of this project. Among the most important realisations is the importance of context within educational research⁶ that each classroom is an entirely separate ecosystem made up of individuals with shared beliefs, values, and attitudes.

⁶ And of course, other forms of research.

The first iteration remained as broad concepts that allowed for the identification of measures that could be used to view the classroom as a ‘microsystem’. Stremmel, Burns, Nganga, and Bertolini (2015) describe education as being reductive and resembling a regime of discipline. Arguing that out-dated and flawed educational policies cause mass disillusion and turn students into ‘cogs in a machine’. Stremmel *et al.* (2015) advocate for a holistic education, where students have more opportunities to be reflective, self-directed, and creative.

Having gathered macrosystemic data to form a broad direction, the focus then aimed to become more ‘microsystemic’ by translating the above research areas into more coherent and meaningful hypotheses. By gathering literature surrounding educational interaction, individuation, and psychological support, a number of questionnaires were identified. Finally, using these questionnaires, in the form of a pilot study, provided the framework to formulate a testable set of hypotheses.

- The first direction, (1) the ‘*Importance of Interaction*’, remained unchanged as it was found that the culture and atmosphere of a classroom is created through the interactions and influences of the individuals within said classroom.
- The second direction, the ‘*Dynamics of Individuation*’, changed as a result of researchers, such as Alexander (2008), who view pedagogy as being subjective and caused by “*underlying theories and beliefs that can be inferred from their actions even if teachers are not consciously aware of them*” (pg. 3). As pedagogy is a subjective approach to teaching, while individuation is an educational process, the research focus should change to (2) the ‘*Dynamics of Pedagogical Skill*’; as ‘individuation’ is a component of ‘pedagogy’.
- The third direction, regardless of the benefits and limitations of accountability and testing, it is clear that there is (3) the ‘*Need for Psychological Support*’. Whether a student is ‘under-performing’ or ‘over-performing’, or whether a teacher is finding it difficult to adapt to the needs of a particular class group, it is vital for there to be adequate supports in place; this particular topic was found in the qualitative element of the pilot study.

2.3 Chapter Outlines

Having outlined the operational definition of this research in Chapter 1, elaborating on the role of an educational researcher, Chapter 2 introduces this PhD research; beginning by highlighting the layout and design of this PhD, followed by an introduction to the literature surrounding the research, and how the research questions evolved as a result of the pilot study.

Chapter 3, the literature review, briefly introduces key theorists, concepts, practices, and gives an in depth account of the past, present, and future of what it is to be a psychologist within the field of education in Ireland. The purpose here is to detail the symbiotic relationship of how psychology has influenced education and, of course, how education has influenced psychology. Then, this chapter mentions a type of ‘educational bubble’ where schools prioritise academic outcomes and accountability; placing less value on student-centred learning. Focusing on models of teacher change and psychological health, leading to the view that the self-assessment of instructional practices and interpersonal behaviours are important factors associated with student-centred learning, this chapter explores the associated literature further iterates the research questions (n=3) by highlighting the hypotheses (n=23) that have been chosen.

Chapter 4, the methodology chapter, provides a justification for methodological design and theoretical framework adopted throughout this research project. Understanding the importance of attaining depth and breadth when it comes to educational research, in addition to allowing the data guide the research process, this chapter introduces the intuitive pragmatic research process drawn from the constructivist grounded theory framework. It then details the methodological procedures used within the desk and pilot research stage (Chapter 5), in addition to addressing the procedure followed in the larger scale study (Chapter 6).

Chapter 5 is pivotal in setting the scene of this current research project through desk research through the gathering of macrosystemic data. Specifically, this chapter highlights the first study “*Study 1 – The Educational Macrosystem*”, which explores the educational environment by performing a qualitative analysis on Whole School Evaluations (WSE) made by the Inspectorate of the Department of Education and Skills. In doing this, this research step provided more accurate account into the environment of education quality, efficiency, and effectiveness. Analysing the sample of Irish WSEs (N=59), in addition to data collected by the Department of Education and Skills and the Growing Up in Ireland survey, provided a strong foothold towards

identifying the experience of education, allowing the researcher to ground research judgments directly to the data and formulate research areas: educational interaction, individuation, and psychological support.

Chapter 6 focuses on further formulating the research areas highlighted through the second study “*Study 2 – The Educational Microsystem*”. By conducting a brief literature review, using the identified research areas as a guide, numerous questionnaires were identified for use and the research areas were articulated into the form of research questions (n=3) and hypotheses (n=23). The identified questionnaires were then tested on a small sample group (n=60) to determine whether the measures were suitable in answering the research questions and hypotheses. Using the feedback from the previous chapter, Chapter 7 concerns the larger scale study, “*Study 3 – A Snapshot of Educator Perception*”, that addresses each of the research questions and hypotheses. Each of the hypotheses were tested using quantitative analyses (ANOVA and t-test) or qualitative analysis (thematic analysis) and displayed in tables and figures throughout.

The final chapter, Chapter 8, discusses the findings of the research and what they mean in the context of Irish education. In addition to reflecting on decisions that were made regarding the methodological framework and each of the research questions, a series of sample reports were developed to explain the value of this research in addressing the self-reflection of practice within education. There are recommendations for further research, and the possible influences this research will have on a policy and practice level. Additionally, there is an elaboration on the way the measures adopted in this research could be used as a tool in educator training and continued development. A conclusion follows.

Chapter 3: Reviewing the Psychology of Education

“When an organism acts upon the environment in which it lives, it changes that environment in ways that often affect the organism itself” (Ferster & Skinner, 1957, pg. 1)

3 Psychology in Education

Combining research areas such as cognitive psychology, development, motivation, or instructional design, educational psychology or psychology in education far exceeds a one-sentence definition. Smith and Pourchot (1998) argue that, because learning and development occurs in various social and non-social situations, education is a lifelong process that is *“complex and richly colored by many variables that affect these developmental and learning processes”* (pg. 5). Highlighting how certain definitions of educational psychology are restrictive, Norwich (2000) mentions that some educational psychologists overlook how the education system ranges beyond primary and post-primary level; that it transcends well into third level and adult education. This difference in terminology is further argued by Woolfolk, Hughes, and Walkup (2008) who maintain that the area of psychology in education differs from educational psychology as it involves the study of the application of psychological theory and research into practice to inform and support the work of educational professionals working in the various forms of teaching and learning environments. While this description may appear synonymous with the role of an educational psychologist, Woolfolk *et al.* (2008), however, continue to explain that the role of an education psychologist would typically be to; (1) work with students, usually under the age of 19, who are experiencing various difficulties to promote positive educational and psychological development, and (2) work in consultation with parents and other individuals involved in the educational process. This view is consistent of the practitioner route of educational psychology. Regardless of this debate, the relationship between psychology and education has led to the development and formation of various educational ‘outputs’, such as theory, policy, interventions and support programs.

Generally, these ‘outputs’ are placed under various domains of psychology; cognitive-behavioural, constructivist, phenomenological, or psychodynamic. The vast body of educational research available would reference these domains, highlighting theorists that pioneer research within each of these areas. However, in the context of

this study, it is important to note that a large body of these theories were developed during a time where access to technology and other resources were not as prevalent, or were confined to larger universities (Siemens, 2004). For the psychologist within education, this implication suggests that the context of where and how research is conducted is essential to the understanding of the practical application of research findings. As a result, these findings would then influence (and at times criticize) particular theories of learning that had been previously used to understand psychological phenomena within an educational context.

Livingstone (1999) highlights the various categories of education by stating how education involves the pursuit of understanding, knowledge, or the acquisition of skills, suggesting that they do not necessarily need to take place within a formal or non-formal education setting, being led by a designated curriculum. In differentiating the several types of learning, Schugurensky (2000) mentions that learning is much more than sitting in a classroom, that learning can take place outside the curriculum of educational institutions (informal learning), or can occur when an individual takes part in workshops or shares professional knowledge with peers over a coffee (non-formal). Regardless of the various forms, education is magical, mystifying, and abundant; with countless researchers aiming to unravel the many facets of what education is, how it works, how it can be improved, or which type is the most effective. However, it is not a simple question of ‘what forms of learning are most effective?’, as the word ‘effective’ can be interpreted in various ways. Instead it would appear to be more a question of context. Defining education into one paragraph is difficult, considering it would involve trying to encapsulate the many forms of education proposed by the many educational theorists and philosophers into one, two, or three sentences. Dewey (1986), for example, mentions that “*mankind likes to think in terms of extreme opposites*” and that “*educational philosophy is no exception*” (pg. 17). He provides a broad (and democratic) outline of how education is the development of an individual from within through a process of substituting natural inclinations with “*habits acquired under external pressure*” (pg. 17).

Dewey highlights that, while education is influenced by an individual’s experience of education, not all experiences are educational, as some experiences can be mis-educative as a result of “*an experience ... [that will] engender callousness; it may produce lack of sensitivity and of responsiveness*” (1986, pg. 25). This, quite

naturally, will result in the restriction of an individual meeting his/her full potential to grow and develop. Positing several questions in lieu of this statement, Dewey reiterates a point that he had made in several earlier publications which ultimately feeds the motivation and drive within this current research project;

“How many students [and teachers] ... were rendered callous to ideas, and how many lost the impetus to learn because of the way in which learning was experienced by them? How many acquired special skills by means of automatic drill so that their power of judgment and capacity to act intelligently in new situations was limited? How many came to associate the learning process with ennui and boredom? How many found what they did learn so foreign to the situations of life outside the school as to give them no power of control over the latter? How many came to associate books with dull drudgery, so that they were ‘conditioned’ to all but flashy reading matter?” (1986, pg. 26).

Without placing a researcher into each classroom across each educational environment, is it possible to compare one student to another or one teacher to another? On a similar line of thought, Wapner (1978) mentions that the core conditions necessary for the growth and development of an individual are: opposition, contradiction, and obstacles. If this is true it would mean that the context of education is dependent on the experience of the learner and how the learner navigates the learning environment. Tennant (2002) explains that the growth of an individual is based on the various interplays between the individual acting upon experiences and how the experiences allow the individual to construct knowledge. This construction of knowledge somewhat resembles the theory of learning being a mental ability manipulated by the co-creation of the learner and learning experience (Sierra, 2006). Moving forward from the traditional mono-directional push from one individual to another, learning is the collaboration between an instructor and individual. Sneddon (2011) argues that learning is most effective when students are capable of self-regulation, engage with the material, are motivated to learn, and when the learning environment promotes active, experiential, collaborative, and reflective learning processes.

Mill (1969) maintained the position of how the science of human nature is a branch of the science of education, and that until the science of the human mind has reached the highest form of improvement, education will remain imperfect. Albeit humorous, this mismatch of importance is interesting as it not only shows the lack of awareness of the

importance of psychology at the time, but further shows how central psychology has become in the study of education (Olssen, 1993). This interdependent relationship between psychology and education is evident when one considers the impact one has over the other. The similarities, differences, and misconceptions of psychology and education highlight various questions regarding the relationships between the various professionals and the roles and functions each have.

Perhaps the theory of self-categorisation (Oakes, Haslam & Turner, 1994) is at play in this scenario. However, Sutherland (1988) mentions how psychologists with an interest in education would often refer to themselves as being ‘psychologists’, implying having interest in more than just education. Fontana (1995), for example, applies psychological theories from various areas of psychology to better understand the mind from an individualistic perspective. This is not to say that practitioner focused psychologists (such as counselling or clinical) would ignore research in other psychology fields; which would be naïve to assume, considering the importance of theory and research in their respective fields. Instead, it is to further highlight the importance of differing perspectives, that all areas of scientific enquiry are complimentary, not competitive⁷; the work of one enhances the work of the other. The research and application of psychological knowledge to the educational system is most often referred to as being educational psychology (Sutherland, 1988). Similarly, other definitions mirror this broad perception and explain that educational psychology is the scientific study of psychology in education (Wittrock, 1967). As to be expected however, this broad definition is often challenged and redefined. Ausubel (1978) for example explains how psychology, from an educational perspective, is an independent discipline the deals with the nature, outcome, and evaluation of school learning.

3.1 Brief Overview of Learning Theories

Historically, one of the main influences of psychology has had into the area of education is the development of learning theories (Jonassen & Land, 2012). The purpose of a learning theory is to understand and describe the processes involved in learning by identifying the operations and underlying mechanisms (Reber, Allen, & Reber, 2009). Sternberg (2008) further argues the importance of learning theories by suggesting how they give greater understanding of how individuals involved in the

⁷ Unless, of course, funding is involved.

process of education may think or feel and how to motivate them to continue trying to reach their full potential. Reeves, Albert, Kuper, and Hodges (2008) further suggest how learning theories provide a framework which can be applied and adapted to various environments, therefore providing greater opportunities and flexibility for learning. The purpose of highlighting the various approaches and theories within learning is not to elaborately critique, as various researchers have published widely in this area already (see Pritchard, 2013; Pedersen & Digby, 2014); instead, it is to highlight the development of psychology within education and how this current research fits into this narrative. Danforth (2008) suggests how it is essential for educational institutions to adopt the most appropriate style and approaches to learning as possible to support the diversity of intellectual ability and development of each student. Given the variation and dynamic of different theories, it is evident that the adoption of a single learning theory into a classroom would be counter-intuitive (considering the numerous individual differences within any given classroom environment), inevitably prompting the debate of the application of theory to practice.

The comparison of various learning theories shows that the line between each school of thought is not as transparent as was once believed. Ertmer and Newby (2013), understanding that learning is a complex process, asks whether an individual should select just one learning theory or draw upon the concepts of multiple theories. Previous researchers and theorists have argued that restricting oneself to one theoretical position is restrictive, especially when the individual is trying to address practical applications (Snelbecker, 1983). Using the questions suggested by Schunk (1991), for when one is trying to distinguish between the various learning theories, Ertmer and Newby (2013) answer each in the case of 'Behaviourism', 'Cognitivism', and 'Constructivism', and include an additional two:

- How does learning occur?
- Which factors influence learning?
- What is the role of memory?
- How does transfer occur? And
- What types of learning are best explained by the theory?
- What basic assumptions/principles of this theory are relevant to instructional design? and, (*added*)
- How should instruction be structured to facilitate learning? (*added*)

The added questions are interesting for several reasons. While Ertmer and Newby (2013) report that the answers to the first five questions give the reader a basic understanding to how these approaches differ, they mention that the final two questions address the practical application of each approach into classroom settings. Interestingly, there is use of the term ‘instructional design’, which is incorporated into the list. Instructional design is a concept that focuses on how to help individuals learn and develop more effectively. It comprises two or more components; the first requires the need of a method for facilitating learning and development, while the second requires indications as to when to adopt a new method should the first be incompatible (Reigeluth, 1999).

These fundamental components of instructional design embrace and draw attention to the conditions under which instruction will take place (a type of holistic approach to a situation or learning involving the interaction between students, teachers, resources, technologies, etc.) and the expected outcomes of the instruction. Reigeluth (1999) highlights that the instructional conditions of learning emphasises; 1) the nature of what is to be learned, 2) the nature of the learner, 3) the nature of the learning environment and 4) the nature of instructional constraints. These conditions would, therefore, imply that theories under this approach are situational and not universal; meaning that just because one approach worked well in one situation does not mean it will in another, promoting the idea of how every learning environment is an entirely separate ecosystem. The role of an instructional designer is to translate the “*principles of learning and instruction into specifications for instructional materials and activities*” (Smith & Ragan, 1993; pg. 12). For example, an instructional designer who is developing a constructivist strategy would adopt a methodology that would assist the learner in engaging in topics that would encourage thought constrained in the context of the learning area. In other words, the designer would motivate the learner to become immersed in the content to build a real world and practical context. A designer must first understand the needs of who will be applying instruction into practice, however, ultimately bridging the gap between research and practice.

3.1.1 Behaviourism

According to Cardwell, Clark, and Meldrum (2002) behaviourists viewed learning similar to the way a machine functions; a machine is given an input (stimulus) and will

react in a particular way as a result (response). The behaviourist shift within psychology sought to apply a scientific base to observe what can be measured, rather than focusing on unmeasurable factors such as the psyche (Watson, 1913). One behaviourist experiment conducted by Thorndike (1898) placed a cat into a puzzle box and measured the length of time it took the cat to escape. While each cat would try various attempts and techniques to escape to eat the reward (fish), a lever connected to the cage door would eventually be discovered; allowing the cat to escape. This process was repeated, and soon the cats would learn that pressing the lever would open the door, making the time it took to escape progressively quicker. This study led to Thorndike's (1905) 'Law of Effect', which suggests how behaviours that are immediately followed by positive responses are more likely to be repeated, while behaviours followed by negative responses are less likely to be repeated. Thorndike believed in a machine metaphor; that an individual will input something into this machine, and then what comes out is manifested as a change, thus believing that learning is the acquisition of new behaviours through observation and conditioning as opposed to thinking and emotion.

Classical conditioning is another theory that suggests how an individual can develop a natural reflexive behaviour towards pre-existing stimuli in response to another stimulus. Pavlov (1928), conducting an experiment involving ringing a bell in the presence of dogs while presenting the dogs with food, found that the dogs would begin to create a meaningful association linking a salivary response to the bell. In other words, food was required for salivation to occur but, by associating the ringing of a bell with the presence of food, the dogs began to salivate when the bell was rung in anticipation of the food. This finding indicates that, while the presence of the food initially made the dogs salivate, after the experiment, a bell did too. Skinner, studying the behaviour of rats (1938), developed a theory of conditioning that was proposed to explain human learning. Skinner argued that rewards and punishments can control and account for the majority of human behaviours, in addition to explaining human learning. Skinner's theory is claimed to be more flexible than the 'classical' equivalent (Pritchard, 2009) as new behaviours begin to develop as a result, and therefore seen as being potentially more powerful. Because it involves reinforcing behaviour by rewarding it, both positive and negative reinforcing is possible. Through this action, when an undesirable behaviour is displayed, an individual can be discouraged through some form of punishment. For example, if a mother gives her child a chocolate bar every day that he tidies his bedroom, the child may spend some time each day tidying

his room to receive a chocolate bar. In this example, the tidying behaviour increases because of the reward; this is the 'reinforcement'. However, it is likely that the tidying behaviour would decrease or stop completely if the rewards were suspended, which may result in a partial reinforcement.

Behaviourists propose how all forms of behaviour are determined by the environment. Bandura, Ross, and Ross (1961) sought to understand how social behaviours were acquired and conducted an experiment using 72 children, observing reactions at three different stages. In the first stage, there was a control group, another group watching an individual being aggressive towards a Bobo doll, and a final group watching an individual playing innocently with other toys, ignoring the Bobo doll. In the second stage, each child was taken into the room to play with toys, told that the toys they had been playing with were for other children, and were then taken into a different room which was the final stage. The final room consisted of aggressive toys such as a gun and hammer, and non-aggressive toys such as a tea set and crayons. Each child was observed for 20 minutes with observations being taken at 5 second intervals. It was found that the children who observed the aggressive individual were more likely to imitative aggressive responses than the other groups. Interestingly, female children who witnessed the individual being aggressive showed more physical aggressive responses if the individual was male but more aggressive verbal responses if the individual was female. This was one of the first indications of how important cognitive structures were in learning; that individuals are required to process information by making inferences between behaviour and the expected consequence of the behaviour. Technically, under the behaviourist model, behaviour of the children should not have been influenced by gender. The findings from Bandura, Ross, and Ross (1963) led to the development of the 'Social Learning Theory', which shows that learning occurs through the observation and imitation of others and is maintained through reinforcement.

Behaviourist theories explain how an individual can be understood by observing and measuring responses, implying how an individual is essentially a puppet that responds to stimuli with just as much control as an unconscious reflex (Cardwell, Clark, Meldrum, 2002). Direct rewards and/or punishments are a key component to the behaviourists; Bandura's Social Learning Theory however found that vicarious reinforcement was relevant and could be a better explainer of how aggression might be

learnt through observation. Of the many criticisms of behaviourist approaches, Lovejoy (1922) articulates a vivid explanation;

“Those who “grope in a laboratory to discover the ‘images’ that the introspective psychologist talks about” will find nothing but processes in the larynx. “It is,” Watson declares, “a serious misunderstanding of the behavioristic position to say,” as one would-be expositor of it has said, “that of course a behaviorist does not deny that mental states exist. He merely prefers to ignore them.” He ignores them, Watson explains, “in the same sense that chemistry ignores alchemy and astronomy ignores horoscopy” (pg. 138).

Lovejoy’s colourful description of Watson’s behaviourism continues, arguing that denying and failing to recognise the importance of cognitive process, involving imagery and imageless thought, is damaging to the development of theory. Schnaitter (1999) claimed that the debates and arguments that arose during the behaviourist period divided theorists to a point where critics of behaviourist theory set out to bring about the *“destruction of the behaviourist evil and the hegemony of the cognitive good”* (pg. 209). These criticisms of behaviourist theory were highly influential in many ways; it led to the development of applied behaviour analysis (ABA) for example. Essentially, ABA is the field of study that focuses on the application of behaviourist principles to improve the performance of an individual, or adopting methodologies and theory to try tackle solve societal and behavioural issues (Pierce & Cheney, 2004). ABA has been extensively researched and has shown to be an effective method of addressing the unique characteristics of behaviour in a wide variety of populations. Baer, Wolf, and Risley (1968) mention that the value of ABA is to highlight behaviours that are considered *“socially important ... and aim at its improvement”* (pg. 91). Giving the example of disruptive classroom behaviour, Baer, Wolf, and Risley (1968) explain that it can often be just as important to understand the procedures of how particular behaviours can be worsened; that in knowing whether their own behaviours are influencing classroom disruptive behaviour, a teacher could adopt a strategy to promote a more ‘socially important’ behaviour.

3.1.2 Cognitivism

The ‘roots’ of behaviour are now understood to be attributed to both internal and external factors. The internal factors range from the metaphysical ‘psyche’ or ‘soul’ to

the more, dare I say, measurable structures of the central nervous system; while the external factors of behaviour are influenced by the environment and the somewhat less measurable “*moon and tides, the arrangement of stars, and the whims of gods*” (Pierce & Cheney, 2004, pg.1). Miller, Galanter and Pribram (1960) explained how behavioural theories were inadequate because they failed to address how individuals would process information. Cognitivists would typically focus on the mental processes involved in the acquisition of information; looking beyond behaviour to explain how information is obtained, processed, and stored (Stavredes, 2011). Cognitivists would place emphasis on mental based learning and the interactions between where information is received as input, processed, and stored. Subsequently, learning theories under the cognitivist banner are quite varied.

Among some of the most influential theorists referenced throughout the cognitivist literature includes the work of Jean Piaget (1936). Piaget claimed to be a genetic epistemologist and was fascinated by the way children thought and processed information through experiences and interactions. Piaget proposed that cognitive development was a process of reorganisation, that children construct their own understanding by experiencing new information and then classifying this information by comparing it against what is known already; this idea of ‘schema’ is suggested to be the building block of an individuals’ intelligent behaviour (Piaget & Cook, 1952). Louis, Beswick, and Featherstone (2013) explain that Piaget’s schema theory, based upon his previous work, are cognitive structures that are present in each of the four developmental stages of an individual; 1) sensori-motor stage (0-18 months), 2) pre-operational stage (18 months – 7 years), concrete operational stage (7 years – 12 years), and 4) formal operational stage (12 years – adulthood). If a new experience can be placed within a child’s current understanding and way of being, the child maintains his/her ‘equilibrium’. However, if this equilibrium is not maintained due to the presentation of a new experience the child will alter their cognitive structure to facilitate this experience⁸. Agreeing, Cash (2002) further explains that cognitive theories, unlike behaviourist perspectives, highlight the importance of the cognitive processes behind learning and development.

⁸ Although much of his theories were flawed due to methodological limitations, Piaget used his own children and other children from equally high-socioeconomic backgrounds as a basis (Santrock, 2008), his work was, and still is, highly influential.

There are, of course, many other cognitive theories that are much more, 'elaborate'. Reigeluth (1979), for example proposes the aptly named 'elaboration theory' which suggests that, to achieve the most effective learning outcomes, instruction should be organised according to the increasing level of complexity. This framework proposes that the simpler task be presented first for the learner to develop greater learning context, and to form more effective cognitive structures allowing for better retention and information transfer (Reigeluth, 1992). Other theories look towards memory capacity, such as Miller (1956) writing about how an individuals' memory capacity limits the amount of information that can be received, processed, and recalled. Miller performed an absolute-judgment task, presenting individuals with stimuli (tones that varied in pitch) and measured the responses to each stimulus with a corresponding response. While it was noticed how individuals could recall 7 (plus or minus 2) items of information on average, Miller (1956) began to realise that by chunking information, more information could be processed.

On the note of memory processing, while other cognitive theories propose how individuals have three separate forms of memory (short-term, long-term, and working memory). The Information Processing Theory (Atkinson & Schiffrin, 1968) explains the process of how information progresses from input stimuli, through encoding and recoding, and organised into memory stores for later recall. Under this model it is suggested that information enters the working memory when it is detected by the senses, and is processed into short-term memory depending on whether the information is necessary. If the information within the short-term memory is rehearsed and used, it is then transferred to the long-term memory. If the information is not used, the information is lost. Critics of this theory argue about the oversimplification of the memory stores, short-term memory for example is suggested to be much more important, involving visual-spatial organisational or central executive processes (Baddeley & Hitch, 1974). More modern critiques mention how it is now understood that various forms of long term memory exist, such as episodic or semantic, and the information processing theory fails to accurately address how different forms of learning are processed (McLeod, 2007).

Purposely, out of the many 'cognitivist' approaches that exist and of those mentioned above, Piaget is mentioned because some of his work also fits the constructivist school in ways. Piaget's work suggested how learning is a dynamic process where individuals

construct knowledge by experiencing and manipulating their environment; resulting of this belief, Piaget was labelled a cognitive constructivist. While the behaviourists applied the scientific model to the (then) current learning practices, the cognitivists extended and developed this model into other areas of enquiry. Several papers have criticised cognitivism, however, for having a research focus “*too narrow to allow a full understanding of even phenomena commonly regarded as central parts of the discipline’s subject matter*” (Overskeid, 2008, pg. 135). This ‘narrow view’ is seen in arguments that cognitivism overlooks the importance of social or systematic contexts (Thagard, 2004) in decision making processes, or how various aspects of an individuals’ emotions can influence their choice or judgement (Prokopcakova, 2004). It is interesting to note that the behaviourists had also overlooked the importance of the social context; leading some to revise their earlier theories. Bandura, for example, realised that the traditional behaviourist approach of focusing on stimulus and response was too basic to accurately account for the personal thoughts, feelings and perceptions that an individual will have throughout learning. This realisation caused Bandura to transform the ‘Social Learning Theory’ into the ‘Social Cognitive Theory’, which places greater importance of the social context in learning; stating how individuals influence the learning environment just as much as being influenced by it. Bandura (1977) further mentions the role of cognitive processes involved in learning, how an individual continuously organises and reorganises information. This suggestion would then imply that an individual engages in the learning process; a feature of constructivist theory. There will, of course, be criticisms to this but the purpose here is not to argue theories specifically, it is to highlight how intertwined they are.

3.1.3 Constructivism

Many theorists across the constructivist domain mention that one of the core difficulties in understanding constructivism is that there is not just one constructivist theory (Phillips, 1995; Prawat, 1996). Multiple definitions imply that constructivism is an ‘umbrella term’ used to describe a variety of theories that break away from the empirical and nativist views of learning (Hausfather, 2001). According to Mascolol and Fischer (2005), constructivist theories are grounded in the assumption that knowledge arises through a process of active construction; hence the name ‘construct-ivism’. Constructivist learning theorists sought to improve behaviourist and cognitivist learning theories by highlighting the ability and motivation of an individual to construct their

learning (Forrester & Jantzie, 2005). By merging behaviourist principles of learning with the cognitive theory of 'information processing', Gagne and Briggs (1974) developed a theory of learning that focused on the internal processing of an individual that occurred during a learning moment. This new approach characterised learning into a systematic process of steps that, according to Forrester and Jantzie (2005), acted as the catalyst for the development for the creation of another theory of learning.

Forrester and Jantzie (2005) mention that the behaviourist learning theories were seen to have served their purpose as the approach and goals of theories were becoming outdated. The constructivist approach suggests how learners will construct new ideas or concepts based upon prior and existing knowledge, promoting free exploration within a given framework. A learner will take in new information and give it meaning using prior attitudes, beliefs, and experiences as reference points (Stavredes, 2011). The nature of constructivism adds the dimension of how learning is the result of engagement with learning material and consciously constructing meaning, regardless of whether the meaning relates to sandcastles on a beach or the defining theories of the universe (Papert, 1991). According to Brown Collins, and Duguid (1989), one of the clear focuses of the constructivist approach is to create the cognitive tools necessary to reflect the wisdom of the culture and the experiences of the individuals. Continuing, Brown *et al.*, (1989) mentions that for learning to be effective it must include three factors: activity (practice), concept (knowledge), and culture (context).

Many constructivist theorists believe that knowledge creation is a shared activity rather than an individualised experience; with Goodman (1986) explaining that knowledge is developed through the interplay of many minds, not just one. Additional theorists such as Vygotsky advocated constructivist theories by observing learning as a search for meaning and also describing how individuals would process information at different stages of development (Rummel, 2008). The constructivist approach is often associated with 'experiential learning' or 'discovery learning', and of which there are several critics (Kirschner, Sweller, & Clark, 2006; Tobias & Duffy, 2009). Despite the apparent developments, many academics and practitioners felt disconnected; that a stronger link between educational theory and practice was needed (Tyler, 1978). Additionally, Tobias and Duffy (2009) argued that constructivism is more of a philosophical framework than a theory of learning that allows individuals to define and describe the learning process. A paper by Von Glaserfeld (1989) mentions how constructivism is similar in ways to

pragmatism; that it shares some attitude towards knowledge and truth “*but differs from pragmatism in its prominent interest in how the knowledge that ‘enables us to cope’*” (pg. 125). This is an interesting concept which has been further highlighted through the work of Gordon (2009) who argues that the role of teaching should be to promote the experiences that require individuals to become actively involved in the learning process.

There are many views and theories that fall within the umbrella-term of constructivism which leads researchers, such as Gordon (2009), to seek a definition that extends beyond the “*set of abstract ideas about knowledge and human existence*” (pg. 40). One theory, pioneered by the humanistic theories and work of Carl Rogers (1959), places the student at the centre of the learning process; ‘student-centred learning’. In a book chapter released after his death, Rogers (2001) mentioned that “*we are ... faced with an entirely new situation in education where the goal of education, if we are to survive, is the facilitation of change and learning*” (pg. 26). Clearly drawing from his experiences of therapeutic relationships and educational interactions, Rogers argues that an educator should be a ‘real person’, being genuine and entering into a type of professional learning relationship with students without a mask or façade. The student-centred approaches are a contrast to the ‘traditional’ instructional methodologies (Hannafin, Land, & Oliver, 1999), as there is a direct focus on the role of a teacher in providing students with ownership of the learning process. Unlike the behaviourist and cognitivist approaches to learning, the constructivists will (generally) place a greater emphasis on the experiences within education. Constructivist theories value the importance of the social context and levels of interaction when it comes to the learning; these features closely resemble a more systemic and holistic development approach to education.

3.1.4 Implications of Systemic Learning

Ertmer and Newby (2013) argue that the way in which learning is defined and the way it is perceived has an enormous impact on the implementation of strategies to facilitate learning. While it is not the intention of this research to critique and evaluate the main theories of learning, as there are many publications and researchers in existence already, it is important to provide a rough explanation to observe where education and learning has come to give a context of where it is going. For example, the constructivist ‘movement’, ‘framework’ or ‘philosophy’ is incredibly interesting; it highlights how the role of teaching should be the promotion of experiences that encourage individuals

to be involved in their own learning (Gordon, 2009). Cremin (1961) argues that, for a total educational reform to take effect, ‘infinitely skilled teachers’ are required; papers from the late 90’s speak of the importance of ‘teachers’, and how individuals need to adapt to the role of a facilitator (Bauersfeld, 1995), that the emphasis of a lesson should be directed towards the learner (Gamoran, Secada, & Marrett, 1998). To further the issues related to the change in the teaching dynamic, Brownstein (2001) highlights how this dramatic change in role means that an individual may need an entirely new set of skills. In many ways, these collections of studies, discoveries, and theories bear a “*remarkable resemblance to ideas advanced by John Dewey ... [who] envisioned a school curriculum that would develop intelligence by engaging students’ experience, skills, and interests as the necessary first step*” (Shepard & Sheppard, 2000, pg. 26).

Prichard (2013) mentions that there is no ‘one-size fits all’ theory when it comes to learning; and, as a result, teaching. Each school of thought brings with it differing concepts, theories, ideologies, all of which can each be implemented and interpreted in a variety of ways. Often, many a Ph.D. student would devote several thousand words outlining which one is most important to highlight the conceptual framework in which they approached learning. However, Driscoll (2000) broadly defines learning as being a “*persisting change in human performance or performance potential... [that happens due to] the learner’s experience and interaction with the world*” (pg. 11). Similarly, Wertsch (1997) explains that to fully appreciate how a student can achieve their full potential, an individual must consider the learning outcomes and experiences in the context of the learning environment. From an educational perspective, Bronfenbrenner (1976) highlights that early educational theory was at times carried out in ‘real-life’ settings where researchers would write about the outcome of the research, but neglect to detail the atmosphere and working dynamic of the classroom. Bronfenbrenner further mentions that the key to his ecological approach is the “*focus upon the dynamic relations between learners and their surrounds, with both the person and the environment engaged in reciprocal tensions and activities, and undergoing progressive changes over time*” (pg.9). Wertsch (1997) argues how social and cultural factors influence students, and therefore understanding these factors will ultimately assist in the acquisition of new knowledge.

Marking the importance of the social context, Stormshack and Dishion (2002) suggest that Bronfenbrenner’s (1979) ecosystemic model can act as a heuristic

framework that “*disentangle[s] the various levels of influence*” (p. 197) which could be very much applied to education to perceive each classroom as separate ecosystems; made up of individuals with their own subjective experiences. The pre-emptive issue in the case of this educational research is that the nature of research environments and how each environment is a separate ecosystem made up of smaller systems (in this case, classrooms). Bronfenbrenner (1976) explains the nested nature of the structure that makes up an individuals’ environment signifies the dynamic relationship between individuals within an ecological system. Although Bronfenbrenner’s (1979, 1998) ecological theory is traditionally expressed graphically as a nested sequence of rings, it is also explained as being similar to “*Russian dolls*” (1979; pg. 3), that each doll represents a particular environmental context an individual engages with and is influenced by. The first refers to the microsystem and includes individuals within close emotional proximity (parents, carers, or other family members), followed by the mesosystem which includes individuals that we would regularly interact with (teachers, friends), the exosystem refers to the wider ecological environment that links microsystems together (local television, community), the macrosystem refers to the wider regional culture or economic climate.

The later addition to this theory was the chronosystem which refers to a temporal developmental component between the individual and the whole ecosystem across the individual’s lifespan. The way in which these individuals interact, from a multilevel perspective, ties with the constructivist ‘Social Learning Theory’ (Bandura *et al.*’s., 1961). Davis and Sumara (2002) mention that the application of theory from one discipline is often difficult to implement into another without accounting the motivation and purpose of the discipline and how the theory is being used. It has been previously mentioned that constructivism is an ‘umbrella term’ because it encompasses a wide variety of concepts (Hausfather, 2001). There are issues, however, of how can a researcher fully understand the implications of constructivist teaching and learning if there are still problems with defining what constructivism is (Phillips, 1995). Additionally, Davis and Sumara (2002) claim that many constructivist approaches were developed to critique the ‘current’ educational practice; that the practical concerns of educationalists are not fully addressed.

A paper by Kincheloe (1991) mentions that there are evident misconceptions in how teachers are ‘just’ practitioners performing a social function. Academics believed that

teachers should be omitted from participating in any form of research and theorisation on topics such as ‘goals definition’, ‘achieving goals’, or ‘what constitutes teacher and student competence’ (Kincheloe, 1991). It would seem, in this paper, that there was a perception in keeping theory confined to theorists, “*even though the practitioner may be in the school every day, engaged in an intensely personal relationship with students ... teachers should stick to the execution of their tasks*” (pg. 34). Citing this quote, Gordon (2009) argues that this perception of teachers is problematic and expresses the way some educational theories are idealistic philosophies, far removed from classroom realities. For example, the theory of cooperative learning involves the use of small groups of individuals that work together to increase learning outcomes, with several studies highlighting increased student achievement, motivation, self-esteem, and collaboration skills (Liang & Gabel, 2005). Research by Jacobs (2015) mentions how some researchers would often use cooperative learning and the concept of collaborative learning as synonymous entities, both reflecting the how and why of student interactions with learning. Of the theorists that differentiate between both terms, there is the underlying supposition that cooperative learning is more teacher-centred while collaborative learning is more student-centred; despite both being ways of facilitating student interaction (Brody, 2009).

Regardless of the term used, the implementation of group activities in classroom settings are a complete contrast to a teaching style that favours non-interaction; meaning they are both a student-centred pedagogies (Jacobs, 2015). Interestingly, Walsh (2001) provides an account of how the pressures associated with the continued use of student-centred and teacher-centred approaches can often damage the “*intellectual resources of even the most experienced teachers*” (pg. 110). Walsh (2001) suggests a ‘non-immunity’ of intellectual resources and that everyone is at risk of feeling a range of psychological experience, positive and negative, as a result of teaching. In other words, regardless of what pedagogical approach or number of years’ experience an educator has, they are not immune to the stresses of teaching. While there is evidence for particular teaching approaches, suggesting that they are effective from a learning perspective, should a teacher use a student-centred pedagogy if they will be more at risk of damaging their ‘intellectual resources’?

3.2 Towards a ‘Unified’ Theory

A quote by Ertmer and Newby (2013) highlights that “*as one moves along the behaviourist – cognitivist – constructivist continuum, the focus of instruction shifts from teaching to learning, from the passive transfer of facts and routines to the active application of ideas to problems*” (pg. 58). Instructional design is a process that aims to improve the quality of instruction by ensuring best practice in learning (Baturay, 2008). It is the systematic method for analysing, designing, developing, evaluating and managing the instructional process of learning in a way that is both grounded in theory and enriched by practical experiences (Morrison, Ross, & Kemp, 2004). According to Mager (1984) the role of the ‘Instructional Designer’ is to identify the objectives of the particular lesson, how to achieve these objectives, and how to reflect on whether the objectives are fulfilled. The constructivist learning approach, within this research, is considered vital when it comes to understanding factors associated with education. Ertmer and Newby (2013) explain that, similar to how a medical professional is unable to treat a patient without first conducting a thorough diagnosis, an individual is unable to suggest an appropriate lesson without an accurate indication of the instructional needs of the class.

According to Merrill (2002), instructional theories that focus on tasks based on practical contexts can help the learner to integrate knowledge and skills that are necessary for task performance and future application. Some researchers mention that these authentic learning experiences, including ‘project-based learning’ or ‘collaborative problem solving’, can sometimes run the risk of complexity (van Merriënboer, Kirschner, & Kester, 2003). Sweller (1988) explains the concept ‘Cognitive Load’ as being an instructional theory based on the understanding of human cognition; referring to the total amount of mental effort that is required to process and acquire new information. Piaget (1952) proposed that individuals hold mental schemas at an early age which he considered the building blocks of intelligent behaviour (mentioned above). Sweller, van Merriënboer, and Paas (1998) agree, but continue to mention that novice learners may not possess the necessary schemas required to learn using constructivist ideologies of discovery. It may be considered reconcilable from a Piagetian position (considering that an individual assimilate and adapt previous schemes). Van Merriënboer and Sweller (2005) suggest that “*human expertise comes from knowledge stored in these schemata, not from an ability to engage in reasoning with many elements that have not been organized in long-term memory*” (pg. 149). In

other words, if an individual has not developed the necessary skills required to learn through ‘project-based learning’ or ‘collaborative problem solving’ (both were used as examples above), then developing a lesson where these approaches are the primary teaching method will be counterintuitive. Upon reviewing a large body of literature about constructivist perspectives, Mayer (2004) agrees that the process of learning should be guided; similar to the Rogerian student-centred perspective. Mayer (2004), mentioning that not all teaching strategies are, to use Pratt’s (2002) title, ‘One Size Fits All’, argues that not all teaching strategies using constructivist principles will work in every educational context. Mayer (2004) terms a misapplication of constructivism as a ‘teaching fallacy’ because educators would often equate “*active learning with active teaching*” (pg. 15) when instead learners should be cognitively active, and the educator should be facilitating practice. This, of course, is easier said than done; in a classroom setting, planning and actualities do not always coincide. According to Tzu and Cleary (2003);

“if you know others and know yourself, you will not be imperilled in a hundred battles; if you do not know others but know yourself, you win one and lose one; if you do not know others and do not know yourself, you will be imperilled in every single battle” (pg. 85).

This quote was intended for ‘Planning a Siege’. However, it does accurately reflect the importance of an educator understanding his/her learners; that ‘*if you [the educator] do not know others [the learner] and do not know yourself, you will be imperilled in every single battle [lesson]*’. This adaption implies that teaching requires knowing how a learner acquires information and how you, as an educator, aim to deliver this information. The recurring question of measurability and subjectivity in education, however, implies that it is possible for a class to not be receptive to a new method of teaching, despite research showing that the particular method ‘works’; further calling for the more student-centred approaches. Reid, Zhang and Chen (2003) mentions that it is essential for researchers and educationalists to discover as much about how learning takes place to focus on the necessary approaches that will direct and support learners in the best possible way. Although speaking about adult development, Jung (1931) proposed that, as learners mature, the process of learning naturally moves from a process of specialisation to that of something more holistic and integrative. Mainemelis, Boyatzis, and Kolb, (2002), taking Jung’s view, believe that integrative learning is a cyclical process of “*creative tension among ... learning modes [that are] responsive to*

the learning situation and what is being learned" (pg. 5); these modes refer to 'experience', 'reflecting', 'thinking', and 'acting'. Considering this, the various levels of education and educational maturity would heavily influence the learning experience, learning environment, and the way in which an educator approaches each lesson. Megginson (1963) reiterates Darwin's 'Origin of Species' message of how,

"it is not the most intellectual of the species that survives; it is not the strongest that survives; but the species that survives is the one that is able best to adapt and adjust to the changing environment in which it finds itself" (pg. 4).

Perhaps, it may suggest that most useful learning and teaching theories are those that place greater emphasis on self-reflection and adaptability; encouraging a student and educationalist to adapt to the needs of each other.

3.2.1 More than Teaching and Learning

According to Pratt and Collins (2010), there is a growing appeal within educational institutions for educators to become more self-reflective of their teaching practice; evaluating their understanding of their teaching. Somewhat tying to a constructivist perspective, this task is worthwhile because it gives an educator a greater understanding of their own pedagogical practice, and whether elements of their teaching may need improvement.

Pratt and Collins (2010) further mention how the task of being 'self-reflective' in an educational setting can hold a hidden motive of conformity to being a 'good teacher'. In other words, an individual must conform to the societal norms of being a 'good teacher', which is context specific (Pratt, Sadownick, & Jarvis-Selinger, 2012); the needs in one school will differ than the needs of another. Pricard (2009) suggests that individuals must provide opportunities for learning in a range of different ways and be flexible; highlighting that lessons that are predominantly 'sit and listen' may suit some students but others may find it particularly unsettling. There are several applied studies that have observed the relationships between teaching and learning styles. Hsieh, Jang, Hwang, and Chen (2011) for example sought to investigate the role of teaching and learning styles on levels of self-reflection in ubiquitous learning environments⁹. Using a sample of fifth grade students (N=39) with an average age of 11

⁹ Ubiquitous Learning (UL) has roots in the pedagogy of 'situated learning' (Lave & Wenger, 1991); referring to how learning occurs in the context of real life activities, increasing learners engagement by replicating authentic tasks. UL is mostly associated with learning through the use of technology, enabling

years from two elementary schools located in South Taiwan, Hsieh *et al.* divided the sample by school; Group 1 (n=20) utilised a brainstorming teaching style while Group 2 (n=19) adopted an instruction and recall based teaching style. Each student was given a portable digital assistant (PDA) to record any observations, communicate with others, and retrieve information regarding the lesson topic (in this case, the topic was butterfly ecology). By reviewing the pre and post-tests, also factoring for the differing teaching and learning styles, Hsieh *et al.* were able to identify the level of learning gain within both groups. Interestingly, the main effects of individual learning styles ($F = 0.23$, p -value = 0.63) and teaching styles ($F = 0.06$, p -value = 0.82) were not in any way significant; meaning that the differing learning styles of individuals and the exposed teaching style, within this sample, did not have an effect on learning gain. There was, however, a significant effect on learning gain when factoring for the interaction between individual learning styles and teaching styles ($F = 0.23$, p -value = 0.63). When an individuals' learning style is reflective, the learning gain is higher for 'instruction and recall' ($M = 1.89$) than for 'brainstorming' ($M = 0.9$). While brainstorming does not appear to be as 'effective' for reflective learners, when an individuals' learning style is active, the learning gain is higher for 'brainstorming' ($M = 1.90$) teaching styles. Essentially, this finding suggests that a lesson adapted to the learning style of an individual is much more likely to enhance the learning and improve the learning performance. Disregarding the methodological limitations (small sample size, participant demographics, etc.), the message from this study suggests that 'it would make sense to adapt a lesson to suit the audience'.

It could be argued that the findings of Hsieh *et al.* (2011) may be somewhat bias because the focus was on ubiquitous learning involving the use of technologies in a technologically rich environment. Because both groups were exposed, however, it means that the individual teaching and learning styles could be tested. Mentioning that there is a "*myriad of ways in which it is possible to teach and learn; and different do learn in different ways*" (pg. 57), Minton (2012) explains that it can be advantageous for an educator to be able to recognise what learning styles or teaching methodologies may best suit the needs of his or her learners. By discovering the learning style preferences of a class, an educator is placed into a stronger position to plan classroom activities that are engaging and tailored; student-centred.

individuals to be self-directive and learn using various digital resources at any given moment (Huang, Lin, & Cheng, 2010).

Prichard (2009), referencing how vast the research into this topic is, mentions that each learner will naturally adopt an approach to learning that they perceive to be the most suitable for them. Interestingly, Prichard continues to suggest that learning styles are not fixed traits, that a learner is likely to adapt to a learning context. There are conflicting arguments for and against the existence of learning styles. For example, among the many findings of a study commissioned by the Learning and Skills Development Agency¹⁰ (Coffield, Moseley, Hall, & Ecclestone, 2004a) who sought to identify the primary learning styles and their implications on teaching and learning, it was proposed that the value of learning styles (when combined with personality) equates to 8% of an individual's academic achievement. Coffield *et al.* (2004a) make further reference to the critics of learning styles and mention how “*it is perhaps time that the learning style experts paid some attention to those factors responsible for the other 92%*” (pg. 127). Additionally, Wilson (2012) argues that in an environment that is continuously using terms such as ‘evidenced-based’, ‘best practices’ or ‘data-driven decision-making’, what is the perception of learning styles going to be if their scientific worthiness is called into question?¹¹

Other researchers argue that learning styles, although having an appeal, can damage a classroom environment and interfere with the natural process of information attainment. For example, Dunn, Dunn, and Price (1984) developed the VAK learning style theory; under this model, an individual is placed into a category of being a Visual, Auditory, or Kinaesthetic learner (VAK). The assumption of this model is that information processed by an individual's primary sensory modality will be acquired independently of other sensory categories. Many studies suggest that this is inaccurate. Neuropsychological research carried out by Kriegseis, Hennighausen, Rösler, and Röder (2006), found that blind individuals developed the same mental spatial maps of their physical reality as individuals who were sighted. This finding suggests that, despite the lack of their visual senses, an individual would develop these spatial maps through a combination of the other senses. Blair and Raver (2015) explain that cognitive development is like an orchestra, where each musician would;

¹⁰ A UK based Supported by the UK Learning and Skills Council and the UK Department for Education and Skills.

¹¹ It is worthy to mention that the title of this paper is ‘The Emperor’s New Clothes: Learning Styles and Multiple Intelligences’.

“build off of other players’ performances in ways that are precisely timed, highly synchronous, and carefully coordinated. Extending this analogy, the types of compositions that this orchestra plays... can be seen as a manifestation of the strength of connections among brain areas that are built over time by experience” (pg. 66).

Processing information involves percussion, it involves strings, brass, all playing in synchronous harmony to make sense of the information; from a VAK perspective, it is impossible to single out the senses into fully-independent modes of information processors.

The purpose of mentioning the VAK is to ask, ‘Is it possible to arbitrarily choose a particular style?’ or, more importantly, ‘are they important?’. Coffield *et al.* (2004a), referencing the work of Desmedt, Valcke, Carrette, and Derese (2003), mentions that being aware of learning styles are only a *“cog in the wheel of the learning process’ and that ‘it is not very likely that the self-concept of a student, once he or she has reached a certain age, will drastically develop by learning about his or her personal style”* (pg. 51). Learning styles are considered to be a small factor when it comes the overall picture of the learning process; research is showing how it is important to place a great emphasis on understanding the social context in which learning takes place. Providing an environment that allows an individual to develop and grow, promoting skills such as reflection, empathy, or compassion will encourage individuals to *“thrive in their environments and reach their full potential”* (Beaulieu & Sharpe, 2015; pg. 5). But, perhaps, it is not the end result of knowing the learning styles of a group of students in a classroom. Minton (2012) agrees that there are many criticisms regarding the existence of learning styles, but that the;

“usefulness of the concept of learning styles in helping us think about students as individual learners is not diminished by the fact that its neural basis has not been sufficiently ascertained” (pg. 60; emphasis in original).

Silver, Strong, and Perini (1997), mentioning the work of Jung (1927)¹², argue that learning styles are not fixed concepts; that they change and adapt depending on experiences and contexts. From both a developmental and educational perspective,

¹² Jung noted how individuals would differ with regards to how they perceived their environment, how they made particular decisions, and how active or reflective an individual was during an interaction. This work led to theorists taking his theories and changing them into measures of learning styles or personality type; the Myers-Briggs Type Indicator for example (Myers & Briggs, 1977).

these findings would suggest that the environment in which the learning takes place can adapt and change an individuals' ways of learning. While this may appear to say 'discovering the learning styles of a class is a useless endeavour', another interpretation is quite the opposite. It suggests that, if an educationalist takes the time to get to know the learners as individuals, he/she will discover their learning preferences at that time, but also discover their likes, interests, and most importantly, discover who they are as individuals. Jung (1974) exclaimed that;

“an understanding heart is everything in a teacher, and cannot be esteemed highly enough ... the curriculum is so much necessary raw material, but warmth is the vital element for the growing plant and for the soul of the child”
(pg. 144).

These findings suggest that the most important influence on a learner is the emotional connection rather than focusing mainly on the intellect.

3.2.2. The Science, Art, and Craft of Teaching

Early educational pioneers, such as Dewey (1938) or Kilpatrick (1925), rejected the traditional method of education which focused primarily on memorisation and rote learning. Instead, both educationalists argued how learning should be self-directed, touch upon students' interests and passions, and enhanced through experience and experimentation. Pineau (1994) takes this idea several steps further by explaining how teaching is a type of performance designed to captivate and engage students. This form of progressive education is akin to Plutarch's (1992) writing of how the human mind is more like wood that needs to be ignited, rather than a vessel that needs to be filled. This is also similar to Alexander's (2008) concept of 'pedagogy', referring to the act of teaching in a way that ties the practice of teaching with the thought and effort behind it. Garnett (2013), explaining Alexander's definition further, highlights that *“what teachers do arise from underlying theories and beliefs that can be inferred from their actions even if teachers are not consciously aware of them”* (pg. 3). In support, Edwards and Edick (2013) highlight that, because the learning environment and classroom dynamic are continuously changing, teachers are forced to adapt, prepare, and develop.

Traditionally, teacher education programs have focused on developing teacher knowledge and skills (Rosenshine & Furst, 1973; Shulman, 1986). Modern research indicates that the success of a professional educator may depend on the development of

necessary dispositions, such as caring for others, sensitivity to student differences, fairness, and strength in making decisions and getting things done (Grant & Gillette, 2006). Galavant and Webster-Smith (2012) argue how educators move beyond tokenistic practices such as ethnic festivals and foods toward a ‘transformative approach’, a more comprehensive, sustained approach that occurs at the personal and institutional levels (Banks, 2009). Although discussing inclusion from a special educational needs perspective, Ryndak, Jackson, and Billingsley (2000) found that it essential for educational instruction to meet the needs of each student through the collaborative planning, implementation, and evaluation of various aspects of instruction. Previous research has highlighted that accommodating for the needs of all students is known by educators to be advantageous. However, due to inadequate resources, time constraints, classroom management, and the differing abilities of students, they found that although teachers viewed accommodations as advantageous for all students, the modification of lesson planning is difficult (Schumm & Vaughn, 1995). The apparent difficulty of navigating through the barriers to accommodating each student leaves an opening for psychologists to be of assistance within educational settings. Taking a supportive role, a psychologist could assist educators in identifying their key strengths and work with them to address the needs of his or her students.

3.3. The Use of Psychology in Irish Education

Reiterating Woolfolk *et al.*’s (2008) view of the purpose of psychology in education, psychologists within this field must study how psychological theory and research is used in a way that supports and informs the work of individuals working within an educational context. According to Whinehurst (2010), every educational innovation or technique must have a strong foundation in research to ensure the ‘new proposed method’ has a positive impact on practice; giving researchers the opportunity to explore, in various levels of depth, an abundance of theories to support or questions to confirm. Seligman, Ernst, Gillham, Reivich, and Linkins (2009) mention that, across the various countries’ educational curricula, the last century had focused primarily on aspects such as ‘achievement’, ‘outcomes’, ‘leadership’, or ‘success’, suggesting that there was less value placed on happiness or satisfaction. However, it is not a simple case of a school wanting to focus on preparing a student for work rather than preparing them for life; this is made apparent in some studies which suggest that physical

education in schools is becoming marginalised due to the growing ‘necessity’ of numeracy and literacy outcomes (Riley, Lubans, Morgan & Young, 2015). The actual reality is that the school does not necessarily decide on what curriculum to teach as these decisions are made on a national level (See Chapter 4), informed by a panel of ‘experts’. Education should encourage students to foster a sense of wonder, discovery, and creativity. It is also essential to know that a “*strong knowledge base is a prerequisite to being creative in a particular domain*” (Roediger & Pyc, 2012, pg. 243)¹³. Although the holistic development of students can be a priority (Kuhl, 1983), it is often the case that the approaches that are used to employ these steps require a particular set of skills first.

Many studies across a wide variety of educational contexts have reported that, because students spend a large proportion of their time within school, that well-being initiatives and programmes that support students should function in schools (Cohen, 2006). In many ways, this concept is fantastic and simple; but in many others, it can be logistically impossible. Several studies report various difficulties of implementation within education, ranging from access to financial or physical resources (Gamoran & An, 2015) to mentions of the ‘overcrowded curriculum’ (Riley, Lubans, Morgan & Young, 2015). With some studies suggesting the concern that particular programmes will have a negative impact on academic achievement due to the diversion of finances and teaching-time (Benninga, 2006), the misguided perception these individuals have towards initiatives is having a detrimental impact on society and development of support programmes. Among the other issues, there is a general problem with many large scale interventions or initiatives concerning the inherent research flaw within universal designs; they eliminate the ability to tailor the programme to specific population samples (Spence & Shortt, 2007). For example, an intervention designed to increase levels of mental health awareness and wellbeing will risk showing non-significant differences in the evaluation of the programme if the particular sample is already knowledgeable of the area¹⁴. This confounding variable would speak more about the societal culture around a research topic or what societal aims are encouraged within that particular sample.

¹³ This of course is not new information as it was mentioned many years previously through the work of Piaget for example.

¹⁴ Pre/Post tests are usually conducted to determine baseline levels prior to an intervention, but even still there is a chance that the intervention will not work on a particular sample.

As the approach taken within the ecological systems theory (Bronfenbrenner, 1979), there is the implication that every environment is comprised of influences between separate individuals. Within the classroom setting, this would mean that the personal relationships and interactions between these individuals would, in many ways, create a unique atmosphere and culture within the classroom. The student-centred nature within the more progressive teaching approaches, unlike traditional teaching methods, place a greater emphasis on creativity, individuality, and independence (Svozil, 2005). Of course, depending on the individual educator, the characteristics of teaching an educator adopts would create a culture within the classroom that differs from that of their colleagues. Because psychology has assisted in the development and progression of educational practice, other than providing reviews of educational strategies on ‘effective learning techniques’ or ‘top tips for teaching’¹⁵, further research on the application of psychological theory into practice is needed. By examining the characteristics of educators and the ways they tailor resources or teach their students, educational researchers could create a way to assist educational practitioners by providing them with studies or resources that is personally relevant to them and their work.

3.3.1. The Application of Psychological Research

There are several reports, studies, and initiatives that attempt to identify factors associated with enhanced educational outcomes or teaching and learning. Ritzhaupt, Dawson, and Cavanaugh (2012), for example, sought to understand the factors associated with technology use in classrooms, or Bishop and Verleger (2013) explored the potential of ‘flipped classroom’ environments. However, there is a growing concern within psychological literature regarding the ‘Replication Crisis’; that psychology is under threat due to a number of researchers manipulating and creating falsified datasets in order to publish new articles. There is now a number of academics who are purposely conducting replicative studies to support previous findings (Erstock, Ages, Permis, & Associa, 2011).

Tukey (1969) claims that, as psychologists, “*we ought to try to calculate what will help us most to understand our data, and their indications*” (pg. 83) and once an

¹⁵ I always find these studies amusing because they conclude by saying that one particular strategy is not as useful as others, causing policy makers to radically shift funding or adapt practice; only to soon discover in another study that the original finding is supported. Two studies that use identical sample sizes or methodological procedures does not guarantee that the findings will be the same (See Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013)

indication begins to turn into something more substantial, “*confirmation comes from repetition*” (pg. 84). While it is the responsibility of the psychologist to uncover the many truths behind the data obtained, it must be understood that data comes in many forms and varieties; what the data appears to indicate and what they indicate are two separate concepts entirely. Regardless of the media citing the many concerns and travesties of psychological research, within the scientific community, it is understood that “*empirical findings cannot always be replicated*” (Stroebe & Strack, 2014, pg.60)¹⁶. Commenting on reasons why and how replicative studies may not support the original studies, Stroebe and Strack (2014) explain that the replication of studies is to test the theoretical assumptions and the reliability of the methodological procedure; meaning that, the application of an identical methodology in order to test an outcome using an entirely different participant sample at an entirely different point of time, does not mean that the outcomes will be the same.

The Coleman Report (Coleman, Campbell, Hobson, McPartland *et al.*, 1966) for example sought to understand educational outcomes for children from differing backgrounds and then describe aspects of the educational system by analysing the way it relates to educational achievement. Of the many reported findings, the availability of resources within a school was shown to have a much smaller effect on educational outcomes than previously hypothesised. Educational outcomes were measured through analysing the variance of achievement on standardised tests which were then cross-factored with the variables; school facilities, school curriculum, teacher qualities, teacher attitudes, student body characteristics. Interestingly, with students within the 9th grade (or Ireland’s ‘*Third Year*’¹⁷) these variables only accounted for 8% of the total variance; but when one personal attitude variable and two family background variables were added, this variance rose to 38%. Although the report found consistent results across the multiple student cohorts, replicative studies found varying significances for certain variables about school resources (Averch, Carroll, Donaldson, Kiesling, & Pincus, 1974). According to Hanushek (2002), because school based characteristics were not found to be significant influences on student achievement, it led to the conclusion that “*schools do not matter*” (pg. 116).

¹⁶ I do understand that unethical researchers exist, this is more a statement of lack awareness within non-scientific communities.

¹⁷ Students in this group are generally between the ages of 14-15.

Cain and Watts (1970) highlighted that the purpose of the Coleman report was to (1) describe aspects of the educational system at the time, and (2) analyse ways in which these aspects “*related to achievement*” (pg. 228); with the ultimate goal of revising educational policy. However, in the years following the publication of the Coleman report, multiple papers had criticised the study for its methodological limitations, analysis of variable error (Kain and Hanushek, 1968), and use of non-experimental data (Mosteller, 1967a). Considering the many issues within this report, the main finding, according to Cain and Watts (1970), was the identification of “*the inequalities in the education of children of different races, ethnic groups, and socioeconomic classes*” (pg. 228). Digging deeper into this particular publication reveals the many ways measuring and testing relies heavily on the assumption that “*median levels of ability are roughly similar across racial and class groups ... [and that] the assessment of progress toward that objective requires measuring instruments that have yet to be perfected*” (Cain & Watts, 1970, pg. 230). In other words, within particular student groups the action of raising (or lowering) average scores in a test, to facilitate for socioeconomic status or ethnic group, may give some form of support to particular students who may be struggling. However, doing this will widen the sample distribution which will ultimately affect the quality of the information and reducing the purpose of the testing.

It is necessary to compare a class group to their peers through the process of standardised testing; it allows an educator to tailor adapt his/her instructional strategies to benefit the students. As an additional criticism, although the Coleman report used several measures to evaluate educational outcomes, the analysis focused heavily on students’ verbal ability, which of course is important, but only one aspect of education. Despite these errors within the Coleman report, a later review by Gamoran and Long (2006) found that some replicative studies do partially agree with some findings of the study; higher levels of resources can be associated with higher achievement in some cases for example, but the specific qualities that mediate this effect can differ depending on unknown contexts. This suggests that the ways in which an educator uses the resources available has much more of an effect on student outcomes than merely having the resource. Clearly, the Coleman report was methodologically flawed, but through replicative studies, researchers were able to take particular findings and determine where significances were; reforming policy where appropriate and guiding the direction of future research.

The importance of replicative studies is undeniable; they clarify theoretical constructs or assist in the understanding how particular population samples differ. Biswas-Diener and Diener (2001), for example, sought to investigate the life satisfaction and subjective well-being of individuals (N=83) living in poverty based within Calcutta. While the findings reported a negative perception of life satisfaction, it was found that each of the three groups differed, as did the level in which income impacted on satisfaction and levels of subjective well-being. Although it was found that, on average, participants in this sample maintained an overall negative life satisfaction score, they were ‘fairly satisfied’ with aspects of the ‘self’ and ‘social relationships’. Biswas-Diener and Diener (2001) additionally make a cultural observation of because;

“Indian respondents do not rate global areas higher than specific, it appears they do not exhibit a ‘positivity bias’ ... [and that] it may be the Indians evaluate areas in a more even-handed way without focusing primarily on their best areas as Americans seem to do” (pg. 347).

Later, Biswas-Diener and Diener (2006), using a larger sample group of both Indian and American participants (N=183), reported almost identical findings to the previous 2001 study. Similarly, all three groups in this study reported high levels of satisfaction with the ‘self’, which was considered a cultural difference in the previous study. However, while the American samples reported negative levels of subjective well-being and social relationships, the Indian sample reported positive levels of subjective well-being social relationships. Biswas-Diener and Diener (2006) propose that macroeconomic factors, such as the communistic government or high poverty rate, as being a significant contributor to the differences between the samples. If they are the same, as was the case with Biswas-Diener and Diener (2001; 2006) great; if not, an analysis of population differences will most likely uncover a new way to view the phenomena under study.

3.3.2. Educational Assessment

In an educational setting, the concept of assessment within education falls under two main approaches; ‘Assessment for Learning’ (AfL – a formative process where a class teacher uses student information and feedback on an ongoing basis to inform teaching and learning) and ‘Assessment of Learning’ (AoL – a summative process where a class teacher records student progress and achievement periodically in order to inform parents, teachers and other relevant individuals) (Shute & Kim, 2014).

The NCCA (1999) define assessment as being a process of gathering information to make decisions about the process of teaching and learning and maintain that it “*is integral to all areas of the curriculum and it encompasses the diverse aspects of learning*” (pg. 18). Ranging from the selection of suitable resources to the identification of appropriate teaching methodologies, the NCCA (2007) mention that assessment is more than just testing, that it

involves the “*daily interactions between the teacher and each child that include moment-by-moment conversations, observations and actions*” (pg. 7). The NCCA (2007) provide several examples of assessment methods ranked in order of student-lead to teacher-lead

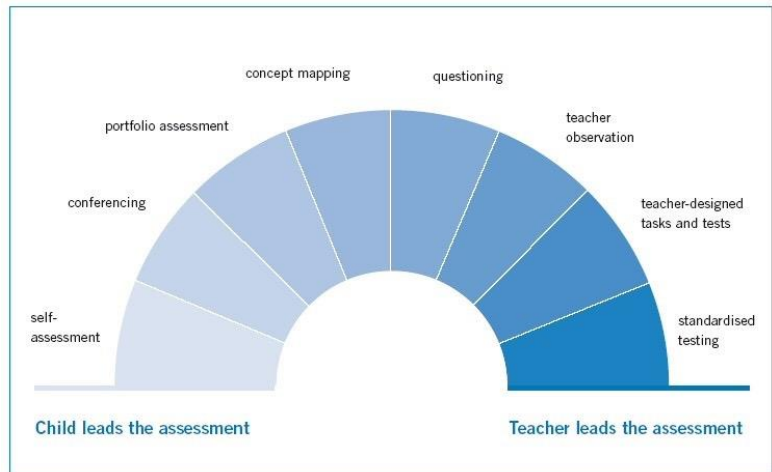


Figure 1; A Continuum of Assessment Needs (NCCA, 2007, pg. 13)

(Fig 1) reporting that the student-lead methods are more focused on AfL while the teacher-lead methods are more focused on AoL. However, while both of these assessment methods are complimentary in many ways, the NCCA (2007) report that teachers can use the process of AfL to make changes to planning or organisational strategies, or to adapt particular teaching strategies¹⁸.

Researchers outside the NCCA agree that assessment is a necessary aspect of education, and gives individuals the opportunity to make better decisions with regards to teaching and learning (Dunning, Heath & Suls, 2004). Noonan and Duncan (2005) write that summative assessments (AoL) are useful because they are large scale assessments that compare individual students with others outside of the classroom context. Other researchers argue that they are used for accountability purposes, and they are “*only marginally useful for guiding day-to-day instruction and supporting student learning*” (Shute & Kim, 2014, pg. 93). Formative assessment, however, is considered more progressive and classroom-orientated (Noonan & Duncan, 2005) but, as mentioned by Shute and Zapata-Rivera (2010), because individual educators may use differing

¹⁸ Not disregarding the importance of AoL, the way in which an educator interacts within the classroom ecosystem on a day-to-day basis would be of more relevance to this project.

methods of procedures, it is not a standardised process which affects the reliability and validity of the process. Researchers are aiming to understand the varying dynamics of AfL and how educators interact and perceive particular strategies (Warwick, Shaw & Johnson, 2015; Yan & Cheng, 2015). The decision regarding what method or strategy to use is left open to the individual teachers' interpretation ("*in partnership with colleagues*", NCCA, 2007, pg. 12). Because classroom assessments are administered at the end of a term or academic year, the results of the assessment may not give an educator enough time to implement changes (Shute & Kim, 2014).

Interestingly, other studies report that teachers often experience difficulties with particular AfL strategies (Marshall & Drummond, 2006) and claim that the rushed curriculum coverage, teaching-to-test, and tick-box culture are mediating factors that are constraining education. This particular finding was found again in a large scale study of the UK's 'Learning How to Learn Project' (James, McCormick, Black, Carmichael, Drummond *et al.*, 2007). James *et al.*, (2007) for example identified three of the main AfL practices commonly used by teachers and compared them against their reported value to teachers. Although teachers placed the highest value and highest reported use of 'making learning explicit', it was found that the majority of teachers struggled with the remaining areas of AfL ('promoting learning autonomy' and 'performance orientation'). These studies are further evidence of subjectivity within AfL processes, and that educators are in need of support when it comes to assessment.

In relation to the NCCA, the 'Assessment in the Primary School Curriculum: Guidelines for Schools' (2007) is a useful and practical guide for educators as it provides examples and suggested procedures about how to go about AfL and AoL. However, having spoken above about how job resources influence the working environment, these forms of assessment do not address the subjective factors that influence an educators' decision to decide on one form of assessment measure over another or how they use the information gathered through the assessment process. The argument, in this case, is the first step in the assessment processes first to provide a method for an educator to self-assess their abilities before assessing the quality of their teaching.

3.3.3. Psychological Assessments: National Educational Psychology Service

The first Diploma in Psychology course was offered by University College Dublin in 1958, partially funded by the Irish National Teachers Organisation (Swan, 2014); two

years later, the first psychological service for schools was set up by the City of Dublin Vocational Education Committee in 1960 (Crowley, 2007). Although the coverage of these services remained isolated to locations within Dublin, it meant that schools outside of this area were forced to seek private psychologists should the need for psychological services arise. Publications by the Psychological Society of Ireland (1974), recognising the value of work that was being done, actively called for a nationwide psychological service that worked in both primary and post-primary schools; as the majority of services available at this time were directed to post-primary schools and, in cases where primary school students were in need of support, services were provided by clinical psychologists (Crowley, 2007).

Although the above were among the first significant steps towards the application to psychology to educational practice in Ireland, the National Educational Psychology Service (NEPS) was only formed in 1999. According to NEPS (2001), its purpose is to “*support the personal, social and educational development of all children through the application of psychological theory and practice in education, having particular regard for children with special educational needs*” (pg.1). This statement somewhat contradicts the archaic attributional analyses that were heavily prevalent in the early application of psychology to education, such as the arguments of a students’ failure to master the educational curriculum, followed by the schools’ failure to support the student (Finn, & Rock, 1997; Weiner, Perry, & Magnusson, 1988; Scates, 1956).

Psychologists in Ireland, who work in educational settings, refer to themselves as being either an ‘educational psychologist’, ‘school psychologist’, or ‘psychologist’ (Crowley, 2007). Unlike the title arguments above (Woolfolk *et al.*, 2008), the role of a psychologist who works within the area is to assist the educational community with learning and behaviour, in addition to the development of students’ social and emotional growth (Swan, 2014). Prior to the integration of NEPS, it was common for clinical and educational psychologists to administer assessments and other services to parents independent of school referral. Kallos and Lundgren (1975), for example, highlight a tendency for inexperienced generations of psychologists to assume that psychological theory could be seamlessly applied to education contexts. As it is possible for a psychologist, working independently of the education system, may not fully understand the influences of particular school contexts, a thorough assessment of manifested behaviour or academic ability may not be possible.

Although psychologists can, and do, work independently of school systems outside of NEPS, it could be argued that the regulation of the provided services may or may not abide to the internationally utilised three-tiered service guideline that is followed in the assessment and identification of educational needs (NEPS, 2007; Klingner & Edwards, 2006). Following a problem solving approach, the first stage of this guideline focuses on the initial classroom interactions of a student in their progress across their academic, behavioural, emotional, and social development. Based on the progress a student makes during the first stage of the NEPS guideline, the second stage may be necessary if a student is still showing difficulties. After the first stage, if a student is still experiencing difficulties in progressing through the curriculum, the school's resource or support teacher will carry out a detailed assessment in collaboration with the class teacher and parents with the aim of developing a student support plan. Should the difficulties remain after the school support plan is implemented, the school can seek a professional assessment from a psychologist in order to assess the students' ability and develop an Individual Education Plan (IEP) for the student. As suggested by Banks, Shevlin, and McCoy (2012), the NEPS guideline aims to break away from the view that educational assessment is synonymous with psychological assessment. Despite the importance of assessment throughout the educational process, Banks, Shevlin, and McCoy (2012) mention that the traditional view of assessments focuses on "*ascertaining whether there was enough evidence of 'deficit' within the child ... and could be characterised as 'hunting for the deficit'*" (p. 222).

Initially, it may be alarming to highlight that some American based studies have shown that the identification of a learning disability in students has increased from 1.21% in 1974, to 6.02 percent in 1998 (National Research Council, 2002). These statistics may not be entirely accurate in practice, as the process of educational testing has been developing and improving for some time. However, there is still a significant issue with assessments. Research has shown that the deficit model of assessment can yield substantial damage to a student, family, and school. For example, Harry and Klingner (2007) explain that the deficit model of assessment is based on a normative developmental trajectory, meaning that student progress is typically measured in terms of a bell-curve. To put this into perspective, multiple studies have highlighted factors that influence this bell-curve, such as attendance (Morrissey, Hutchison, & Winsler,

2014), classroom instructional practice (Rivkin & Schiman, (2015), socioeconomic status (Spaull, 2013), and parental involvement (Blair, 2014). What is interesting about these factors is that, despite linked to a students' academic performance, they are all external; meaning that a psychologist would need to factor for a significant number of influences prior to placing a student onto a generic scatter plot that indicates an ability based deficit. Furthermore, an even bigger issue is highlighted by Hinshaw and Scheffler (2014) who, exploring the role of school policies, found that there is an incentive for schools to classify underachieving students as having some form of educational deficit to maintain their outward appearance of their school students achieving higher academic performances.

The model of assessment and intervention followed, according to NEPS (2007), is underpinned by the understanding that special education needs is viewed on interlocated continuums of mild to severe and transient to long term. While there are merits of this development, the limitation is that the role of the psychologist has been pushed away from the traditional focus on the individual (Swan, 2014).

3.3.4. The 'Educational Bubble'

In a recent TED talk, Seema Bansal (2016) mentioned being asked by the then head of the Department of Education in the state of Haryana (India), for help in addressing issues in their public schools. These 'issues' ranged in detail and complexity, including that up to 50% of students fall so far behind their peers before the age of eleven that they will be unable to recover. Despite public schools offering free meals or books to students, it was also found that 40% of parents would pull their children out of these public schools and register them into private schools. Bansal (2016), representing BCG (Boston Consulting Group), was asked to assist in the education renovation of an Indian state of Haryana, which consists of 15,000 public schools with over 2 million students. Bansal mentions needing to uncover the factors that have caused the educational issues in the first place and, in identifying the goals necessary to develop strategies for reaching this particular goal, decided to go directly into classrooms and observe the way educators were teaching¹⁹. Reporting that the problem within Indian schools was the quality of education, not access to education, Batra (2015) mentions that Bansals' BCG team devised a three-year plan that was based around student learning outcomes and

¹⁹ Though unable to source the initial number of schools observed, Batra (2015) reports the project has scaled to over 3,200 schools; representing 2.2 million students and over 100,000 teachers.

explicit focusing of accountability, data systems, and organizational capacity. Bansal (2016) reports that Haryana teachers were very capable of teaching a class but, the majority of their time was spent outside of the classroom; this was interesting as, before physically entering a classroom, non-educators had apparently viewed teachers being 'lazy' or 'incapable'. Although Bansal (2016) reported teachers not necessarily teaching, she mentions that it was because they were supervising the construction of new classroom buildings, supervising the cooking of student lunches, or visiting a bank to deposit scholarship money for students. This particular insight was (and is) incredible; Bansal asked teachers why they were not teaching and the teachers answered by saying that “*when a supervisor comes to visit us, these are exactly the things that he checks*” (5:29). This particular finding shows that in the provision of government programmes in Haryana, designed to motivate students to stay in school and give greater access, had become an additional point of accountability for teachers and had started to impede classroom instruction. Seeing this as an issue, Bansal and her team began to look at the literature at various educational programmes and pilot programmes that have been shown to improve instructional practice. However, what a large proportion of individuals fail to recognise is how the implementation of these programmes will always come at a cost. For example, schools that take part in a pilot that explores the use of innovative technologies on student learning might show that this programme does indeed result in higher levels of academic outcomes. In Bansal’s (2016) talk she mentions that, with regards to studies and interventions, researchers will typically bring in resources such as money, experience, research assistants, or products. Unless researchers intend to roll out this innovation across every classroom in the country, the findings are most likely going to be un-scalable, ungeneralisable, unusable, and does not reflect a real-world classroom setting.

It has been previously mentioned that “*teaching requires being responsive to real-world conditions and constraints that shape the activities of the classroom and students*” (Motoca *et al.*, 2014, pg. 120). This view is similar to schools being ‘learning organisations’ where the “*emphasis of research might be more upon the selection and differentiation of pupils and on their subculture rather than on the authority structure or the decision-making processes within the school*” (Bell, 1980, pg.183). Hamzah, Yakop, Nordin and Rahman (2011) explain that, like all organisations, there is a strong emphasis on schools to adapt to their surroundings, encourage flexibility, and to be responsive to the various societal and cultural changes across an educational landscape.

While there is a large body of evidence favouring schools as learning organisations (Mulford, 1997; Stoll and Fink, 1996), research concerning how a school should go about this change is not as prevailing (Silins, Zarins, & Mulford, 2002). While it is clear that there are similarities between a school and an ‘organisation’, both have structure, both have management, there is leadership, interaction, and varying levels of accountability, it is also clear that many factors influence the way in which both operate. Johnston (1998) sought to investigate the key characteristics that involved a school identifying itself as being a ‘learning organisation’. Although focusing exclusively on post-primary schools based in Australia, it was found that inclusive, collaborative structures, effective communication channels, integrated professional development, and learning-focused leadership were the four main characteristics of schools being one of these ‘learning organisations’.

Under the three guiding topics of this research, explicitly outlined through questions and hypotheses in Chapter 5, this current research sought to discover what the Irish educational environment needs and how a piece of research could be used practically to support school systems and the individuals within them. This research is looking towards the perception of a school being a learning organisation; considering the way which Silins, Zarins and Mulford’s (2002) express the four factors of ‘learning organisations’ above. These descriptions are remarkably similar to the focus identified through this research and, with this in mind, the three dimensions of this research are further explained as being; (1) the ‘*Importance of Interaction*’ – referring to the various levels of interaction between individuals within the school environment, accounting for behaviour, atmosphere, and types of communication, (2) the ‘*Dynamics of Individuation*’ – referring to the way in which the differing needs of individuals are personalised and catered for, accounting for classroom pedagogical approaches and student diversification, and (3) the ‘*Need for Psychological Support*’ – referring to the way in which individuals within the school and the school as a whole is supported by its community, from both an educational and psychological perspective. By suggesting that these research directions are intertwined concepts, they propose a holistic observation of contributing factors that influence the educational process.

Lee’s (2014) explanation of an ‘education bubble’ explains the concept of the increase of educational expenditure without a contribution to human capital. Olaniyan and Okemakinde (2008), defining human capital as a representation of the factors that

enhance human skill and talent, argue that the economic prosperity and functioning of a nation is dependent on its ability to invest in its people. As seen with Bansal (2016) and Batra (2015) above, the financial investment that facilitates access is not what was needed in their case; instead, it was an investment in teachers. Lee (2014), while writing about Korea, highlights that the bubble that exists in education is reflective of a high demand for quality education without the adequate diversification among schools; creating a vacuum of human capital. Primary and post-primary schools prioritise cognitive skills and pedagogical strategies that focus on university entrance exams or points systems, rather than aiming to improve vocational skills, psychosocial development, or creativity. A research project that assimilates this complex nature and focuses on practical ways of supporting an individual classroom is warranted.

McCarthy (2013) explains that through the exploration of organisational systems and the diversity of human behaviour, a researcher can begin to unravel the “*indigenous psychologies ... that are pertinent to our understanding of the dynamics of culture*” (pg. 471). While each classroom will have an entirely unique culture that is composed of the individuals within it and their shared subjective motivations, values, beliefs, and attitudes, there will always be shared commonalities between them. This understanding has lead researchers to define culture as being a “*psychological iceberg of whose totality only but a small proportion appears above the level of consciousness*” (Herskovitz, 1955, pg. 153). Then, the myriad of factors associated with the conscious perceptions of education boil down to the interactions between individuals and the promotion of positive working environments. What this indicates is that the provision of ‘optimal teaching conditions’ exist by the way in which they are consciously perceived, through accountability and results; a ‘good/bad’ school is ‘good/bad’ because the teachers/students achieve ‘good/bad’ outcomes. Having found an importance in educational relationships in Chapter 4, and securing this finding later in Chapter 5, Smagorinsky (2014) argues that “*if the primary factor in a student’s learning is the individual classroom teacher, then it makes good sense to make school a place where intelligent, dedicated, dynamic teachers want to be*” (pg. 167). Ideally, making a school an attractive place for teachers to work this would be a useful recruitment method, however, there are many factors involved. Various studies related to staff retention have shown that, due to high educational turnover, there is a difficulty in finding teachers that will be most suited for a particular school (Allensworth, Ponisciak, & Mazzeo, 2009). Further studies have found that the consequence of high rates of

turnover in school settings results in students from low socio-economic backgrounds, those who may need extra support, are more likely to be taught by teachers with less experience and training (Borman & Dowling, 2008). Smagorinsky (2014) explains that not all teachers;

“teach in the same way, and that not all assessments represent the effects of great teaching ... [educators should] practice great teaching on their own terms, rather than great teaching as measured by producing the highest student test scores regardless of population traits” (pg. 168).

This quote is understood and agreed with. By providing teachers with information on how they interact with their class or the opportunity to self-reflect on their own pedagogical abilities, may offer teachers a basic level of support that will enable them to focus on the ‘human capital’ aspect of education.

3.4. The Environmental Influence

The importance of promoting a positive educational environment that is becoming more and more evident, especially with various studies purporting how negative environments are most likely to contribute to lower psychosocial health (Jones, Moore, Villar-Marquez, & Broadbent, 2008). There is also evidence to suggest that a positive classroom environment supports the further development of prosocial skills that leads to positive outcomes throughout an individuals’ academic career, better academic performance, lower levels of peer rejection, or bullying (Veenstra, Lindenberg, Oldehinkel, de Winter, Verhulst, & Ormel, 2008). With an educator viewed as an ‘agent of change’, the relationship an educator has with his/her students will likely influence student academic and psychological development (Malmberg & Hager, 2009). This research has led to some countries such as Norway have gone so far as to adapting their initial Education Act (Norwegian Education Act, 1998; 2002) to cite that *“all pupils attending primary and secondary schools are entitled to a good physical and psychosocial environment conducive to health, well-being and learning”* (Ch.9a-1).

Previous chapters have advocated for the treatment of a classroom as being an ecosystem that influences, and is influenced by, what is now considered a ‘learning organisation’. The incorporation of a self-assessment tool in each classroom would give educators and students information that could enhance instructional practice. Ross and Bruce (2007) sought to understand the benefits of a self-assessment tool for teachers

and how this could be a way to encourage teacher professional growth and enhance teaching practice. However, they used the findings of a previous study of maths education (Ross, McDougall & Hogaboam-Gray, 2002) and Mathematics policy documents (NCTM 1989; 1991; 2000) to identify key characteristics of standards-based mathematics teaching. Then, Ross and McDougall (2003) mention factoring in an assessment rubric that was created through the observation and interviews of math teachers (N=10) who were taking part in an in-service programme designed to increase the implementation of standards-based teaching. Ross and Bruce (2007) outline the benefits of using a self-assessment tool but report that, because it is used alongside other professional growth strategies, the tool would most likely produce insignificant results in the absence of the additional strategies. While this study found the provision of a self-assessment tool useful, it is not necessarily related to this particular project as it focuses on the instructional practice of one curricular subject, it fails to address personal factors that may influence instructional practice or teacher change, and used in collaboration with other programmes. With other studies showing that the environments highly influence psycho-physiological characteristics of an individual, and this interaction causes a change in the environment (Beal Weiss, Barros, and MacDermid, 2005) the needs of each 'learning organisation' will differ and, by extension, as will the ecosystemic classroom.

Occupational based research has explored the subjective nature of workplace characteristics and found that the main influence on the behaviour of individuals within a working environment is the availability of job resources (Bakker & Demerouti, 2007). These particular resources are not only physical, however, in the sense of an educator having learning material or access to teaching resources. Instead, these resources are physical, social, or organisational aspects that an individual would need to perform to the best of their ability (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). There is substantial evidence to support the indication of how various forms of resources influence an individuals' ability to carry out work related tasks. For example, research by Xanthopoulou *et al.* (2009) sought to understand within-person variation in the job and personal resources and how they influenced occupational outcomes. It was found that, when an individual had the required job resources, they experienced higher levels of self-confidence, they reported being more engaged in their work, and their performance was reported to be greater. Interestingly, there was a difference found in

the daily job-resource availability which indicates that an individuals' particular level of engagement and performance will differ depending on daily tasks and workload. These findings suggest that the positive enhancement of physical, social, or organisational aspects of a work environment will lead to an increase perception of job-resource availability; which will have a positive influence on the working environment. Other studies, pointing towards the increasing administrative workload, the management of classroom behaviour, or lack of peer support (Kokkinos, 2007), have been criticised for not looking at the role of interpersonal relationships on behaviour (Split, Koomen, & Thijs, 2011).

3.4.1. Adapting to the Needs of Education – A Radical Shift

The accommodation and tailoring of educational resources and taking a more personalised approach would appear to be a double edged sword, insofar as education being 'resource driven' but 'outcome focused'. Pratt (2002), for example, mentions that an individuals' teaching perspective is highly subjective and that it develops through a "*set of beliefs and intentions that give direction and justification to our [their] actions*" (pg.6). It is also suggested that because 'perspective' is a subjective phenomenon, an individual may be unaware of the perspective or approach that is used in practice. Although this would imply that educationalists will almost definitely hold different perspectives with regards to teaching and learning, it is interesting because it suggests that, despite this difference, they may share similar beliefs about the importance of particular educational strategies that further the learning process. What this could mean is that, despite being trained in the same way or having similar educational experiences, educators will adopt particular strategies they feel work 'for them'; they could take the initiative to research into a particular instructional methodology and implement it to suit their needs. Along this line, a particular area of research focused on the development of a 'Teaching Perspectives Inventory' (TPI) that recognised these various 'beliefs, actions, and intentions' (Pratt & Collins, 2000).

The TPI questionnaire itself had been given to over one-thousand adult educators (N=1,198) throughout the United States, Canada, and Singapore, and was found to have high internal consistency (measured by Cronbach Alpha, $a = 0.79$). There were several interesting findings; for example, educationalists would typically hold one main perspective (a small percentage could hold two), and one latent perspective. Newly qualified educators and those still in training would often report higher

‘Nurturing’ scores, but if the learners are older students, the score would be lower. In cases where educationalists roles were split into teaching and other duties, or if the individual spent more time with students they reported higher scores in both ‘Nurturing’ and ‘Developmental’. Still, the overwhelming majority of respondents held ‘Nurturing’ as a dominant perspective (n=524), followed by ‘Apprenticeship’ (n=249), Transmission (n=202), Developmental (n=132), and Social Reform (n=22); the remaining (n=69) held no dominant perspective. Pratt and Collins (2000) identified the following five perspectives;

- *Apprenticeship* - educationalists under this perspective are assumed to be highly experienced practitioners of the content being delivered; the learning process involves a combination of demonstration, observation, and guided practice; educationalists are committed to having learners observe tasks in a practical sense, believing that the most effective teaching and learning takes place when individuals are working in settings where practical application of learning can take place effective teaching begins with the learners’ prior knowledge of the content and skills to be learned.
- *Developmental* – educationalists holding this perspective are committed to the restructuring of how people think about the content; they believe in the emergence of increasingly complex and sophisticated cognitive structures related to thinking about content. The key to changing those structures lies in a combination of effective questioning and ‘bridging’ knowledge that challenges learners to move from relatively simple to more complex forms of thinking.
- *Nurturing* – educationalists holding this perspective care about the learners and would support learner effort as much as achievement; meaning that they are committed to the development of a learner as a whole, not just intellectually. They believe that for any form of teaching to be effective, the entire context of the lesson must also respect the self-concept and self-efficacy of the learner; anything that disrupts these will ultimately disrupt the learning.
- *Social Reform* - educationalists holding this perspective are often deeply committed to issues surrounding social and structural changes within society. It is believed that effective teaching coincides with this pursuit of

social change; meaning that the learning reflects the understanding of what societal changes are necessary.

- *Transmission* - educationalists holding this perspective are committed to the subjects being taught throughout a lesson, believing that it is the responsibility of the learner to understand the content. Because the instructional process is guided by the content of the lesson, the educationalist's primary responsibility to present the content to the learners.

(adapted from Pratt & Collins, 2000)

One of the reasons behind mentioning these five domains is because, interestingly, Pratt (2002) makes reference to how the constructivist approach to learning served as the foundation for the 'Developmental' perspective. Under this perspective, an educationalist would hold the view that the main purpose of education is to develop challenging and sophisticated ways of understanding content and solving problems within a content area. Pratt (2002) uses a computer as a metaphor to explain how educationalists need to know how learners are 'programmed'; in other words, understanding how a learner thinks will assist the educationalist in knowing how the learner views the content of a lesson. While using the metaphor of a computer is somewhat arbitrary in this context, it does highlight the importance of knowing the learners, knowing the various processes that may be underlying their current forms of thinking, and knowing how the learners currently assimilate knowledge. This will allow an educationalist to make better judgements on how to make lesson content relevant and student-centred, enabling a process of building sophisticated ways of thinking and reasoning.

Although the 'TPI' was intended for use with adults in 'Higher Education' environments, there is still a body of research supporting how educationalists would typically hold various beliefs and adopt particular teaching styles within classroom settings. Despite the previous sections advocating for the use of constructivist style approaches to teaching, Pratt and Collins (2011) mentions that only 11% of respondents were reported having a 'developmental' teaching perspective; the one that resembles the constructivist paradigm. And, as mentioned previously, early constructivist teachings support how more meaningful learning occurs when new information is built upon pre-existing knowledge structures (Driver and Erickson, 1983). Individuals go through a process of "*assimilating, assessing and reflecting on new information within the context*

of their own experience and understanding” (Gelb, 2014, pg. 2). If a new experience contradicts this structure, the learner must either change the previous held belief or adopt the new knowledge. Pratt (2002) mentions that for this to be of use, and because the educationalist must place great emphasis on valuing the learners’ pre-existing knowledge, the educationalist must continuously adapt to the learners’ understanding.

3.4.2. Initiating a Medium of Change

Split, Kooman and Thijs (2011) refer to teachers as being the ‘agents of change’. Understanding the way in which teachers and educators perceive change will lead to more informed decisions on how to approach topics of educational reform, training programmes, or the design of new instructional interventions (van Veen, Slegers, & van de Ven, 2005). This importance of understanding perceptions is clear through studies such as Conway (2013) who mention that policy is placing significant emphasis on Irish education to focus on the “*standardisation and high-stakes testing for teachers, students, and to some extent for teacher education programmes*” (pg.57). Citing the ‘educational successes’ of Finland, Conway (2013) makes reference to Sahlberg (2007) who attribute these successes as being a direct result of reformation of the educational climate, placing emphasis on trust, support networks, and a holistic and broad education. According to O’Sullivan and West-Burnham (2011) when accountability and standardisation drive an educational climate it can often present itself in negative ways which can compromise teaching and learning; to name a few, job intensification, decreasing resources, damaged morale, (Dembele & Schwille, 2006; Hargreaves, 2005). Although it is clear that any form of educational change or innovation is a complex process, research has shown that the most difficult aspect is its implementation among educator communities (Fullan, 2001).

Hargreaves (1989) argues that, regarding reform of the curriculum, a change in educator attitude will naturally cause some form of change in the teacher. A further explanation provided by Ekiz (2004) mentions that this is because it is the educators who ultimately reflect on the changes that are required to assimilate these ideas or developments into their everyday practice. As a result, it is obvious to note that if educators do not understand the purpose or conceptual basis of a particular change and their role regarding its implementation they will most likely be resistant (Mangali & Hamdan, 2016). Fullan and Pomfret (1977) highlight that because an educator plays an unparalleled role in the process of change, it is essential for the individuals promoting

change help educators to change and adapt to the change. From a realistic perspective, Fullan (2001) argues that because change usually places greater effort on educators in the initial stages, making the transition of change as straightforward and practical to the classroom context is necessary.

The concept of teacher change refers to the way in which training programmes or personal development initiatives “*advance the knowledge, skills, and understanding of teachers in ways that lead to changes in their thinking and classroom behaviour*” (Fenstermacher & Berliner, 1983, pg. 4). Past research has identified three ways in which these programmes are developed (Schlechty & Whitford, 1983): (1) ‘establishment’, which offers educators new ways of teaching through the use of new technologies or procedures, (2) ‘maintenance’, which ensures educators remain consistent with administrative routines and preferred methods of organisational operation, and (3) ‘enhancement’, which aims to improve the classroom performance of individual educators. As educators believe participation in these programmes will benefit them which, in turn, will benefit their students (Luft & Hewson, 2014), studies show a mixed success rate with regards to enhanced student outcomes (Tripp & Rich, 2012; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007).

Numerous change models have been proposed or modified in recent years (Whitworth & Chiu, 2015; Desimone, 2009). However, the way in which teacher change is measured remains as a linear path-based model (Smylie, 1988); incorporating both the personal perspectives of an individual regarding their practice and whether a programme can improve this practice, and by an organisations environmental factors (March & Simons, 1958). Desimone (2009) proposed that participation in a development programme will result in increased educator learning, followed by a change in practice, and then increased student outcomes. However, Guskey (2002) criticises previous models of teacher change and suggests that significant changes in attitudes and beliefs are caused by the educator seeing evidence of improvement in student learning. Qualitative research by Bechtel and O’Sullivan (2007) found that educational reforms will typically drive towards professional development initiatives that focus on numeracy, literacy, and science based education. This study identifies themes, similar to those identified in this current study; the ‘beliefs and visions’ “*prompted them [the participants] to attempt changes in their programs, and teaching practices*” (pg. 228) or the availability of ‘support’ meant that “*if school*

conditions did not provide support among colleagues, change was unlikely” (pg. 228). Although these findings are with a select research sample, physical education teachers (n=4), it not only highlights the importance of teachers viewing progression as having passion and a belief in what it is they do, but also signifies the importance of receiving support from colleagues. The inhibitors to change, as outlined by Bechtel and O’Sullivan (2007), were the ‘practices and policies’ of the school district and the marginalization of educational programmes that do not align with the ‘educational priorities’ of the district. This finding is interesting because, this point had previously been addressed in Chapter 2, where it was mentioned that the curriculum in various countries have claimed for numeracy and literacy outcomes and achievement to be a necessity (Riley *et al.*, 2015) which means that less value is placed on happiness or satisfaction (Seligman *et al.*, 2009).

While theoretical models of teacher change are important, researchers have taken this model and used it to evaluate specific subject programmes (Doig & Groves, 2011) or others have used it as a framework alongside theories of personal growth to understand the benefits of programme processes such as peer coaching (Zwart, Wubbels, Bergen, & Bolhuis, 2007). Guskey (1986) explains that the reason why programmes designed to improve educator performance are unsuccessful is that they fail to account for what motivates teachers to engage in the programme. If they are forced to participate in a training exercise, the likelihood that they will engage and make changes to their instructional practice is slim. Guskey (2002) mentions that “*of all aspects of professional development, sustaining change is perhaps the most neglected*” (pg. 388), demonstrating that change does not begin in the moments after participating in a development programme. Instead, change is a gradual process that continues long after through the testing of these new resources or techniques in an instructional context (presuming the programme is for classroom instruction) or through the interaction with students or peers (asking whether the new techniques are suitable or need to be adapted).

3.4.3. A ‘Self-Assessment’ for Educator Change

Research conducted in the late 90’s showed how students exhibiting prosocial behaviours would typically have higher levels of social competence and would be more accepted by peers in comparison to students who showed less prosocial behaviours

(Katz & Mc-Clellan, 1997). Prosocial behaviours are seen as internal, proactive and instinctive responses to the needs of another individual (Hastings, Utendale, & Sullivan, 2007) and, within the classroom context, examples can range from showing concern if another student forgot lunch by offering some, or helping another with clearing away toys after break time. Arguably, an educational environment that exemplifies instances of prosocial behaviour is one that will lead to positive student and educator outcomes. For example, longitudinal research by Avant, Gazelle, and Faldowski (2011) found how 9-11 year olds, scoring high on an anxiety scale, showed significant decreases over the course of an academic year in classrooms where teachers offered ‘above average’ educator emotional support and opportunities for positive peer interaction. As each classroom ecosystem is different, a process that allows an individual to understand the characteristics of that specific ecosystem and required job resources, explicitly highlights where improvements can be made, could be useful.

Studies throughout Chapter 2 showed that the beliefs and values that educators hold will influence their thoughts and their instructional decisions (Woolfolk Hoy, Hoy & Davis, 2009). Within the studies above, they indicate that a wide range of individual factors, such as gender or teaching experiences (Ross, 1998), and school contextual factors, such as socioeconomic status of the school, (Smith, 2015), will further influence the work of an educator. This has a substantial influence on educational research as the ways in which an educator delivers a lesson is shown to be one of the biggest factors on academic ‘achievement’²⁰. For example, by exploring over 130 influences of student achievement, Hattie (2008) conducted a meta-analysis²¹ on over 800 studies and identified educators as being “*the single most powerful influence*” (pg. 4). When these particular findings are further explained, it not only provides a guideline of best-practice when it comes to teaching, but it shows what exactly the key influences are. Among the findings it was shown that particular pedagogical strategies were important (students completing self-report assessments, $d=1.44$; being creative and open $d=.9$, person-centred, $d=.72$; and being self-reflective in the way instruction is actually delivered, $d=.62$), knowing the students cognitive ability (from a Piagetian

²⁰ Despite the ambiguity of words such as ‘effective’, mentioned earlier on page 10, are used too often in educational research.

²¹ A meta-analysis is the method for quantitatively measuring the difference in results between studies using a ‘standardised mean difference’ (Glass, 1976) through the use of an ‘effect size’; an effect size of $d=0.2$ or less is considered low, $d=0.4$ is medium, $d=0.6$ and above is high.

developmental stage perspective, $d=1.28$), and having strong interpersonal skills (creating a positive working environment, $d=.8$; and understanding the value of cooperation, $d=.59$).

Ross and Bruce (2007) used a self-assessment tool as a mechanism for personal growth to encourage ‘teacher change’ which, according to Ross, McDougall, and Hogaboam-Gray (2002), occurs through the reflection of experience, that their self-efficacy beliefs mediate the ability of a teacher to self-assess their teaching practice. This particular concept of teacher change refers to the way in which teachers adapt as a result of influences, such as the development of new curricular guidelines or instructional innovations. If a teacher believes that a new technique or resource will improve their instructional practice or enhance student outcomes, they are more likely to endorse and continue with the change. If this is truly the case, as the above studies suggest, research into achievement and goal setting would argue that the differing orientations towards instructional competence will influence the interplay between cognitive, affective, and behavioural processes (Elliot, 2005). Suggesting that the self-perception of an individuals’ own ability to perform a certain task is a significant indicator of their performance (Liem, Lau, & Nie, 2008) one of the most factors with regards to teaching and learning is an individuals’ psychological characteristics. In agreement, teacher change is a “*complex and multifaceted*” (Richards, Gallo, & Renandya 2001, pg.41) concept that influences and is influenced by both psychological phenomena and the social contexts (Richardson and Placier, 2001).

3.5. The Design of Self-Assessment

There are numerous ways in which the development of measures for self-assessment takes place; giving some direction and advice for this current research. One example briefly mentioned and elaborated somewhat further in Chapter 2, is the self-reporting TPI, which focuses on five independent teaching profiles that involve categorising teachers into particular groups based on their subjective perceptions of teaching (Collins & Pratt, 2011). The TPI, used in numerous studies, Jarvis-Selinger (2002) for example aimed to identify the journey of student-teachers towards becoming qualified, or Panko (2004) comparing the differences in perceptions and practice of teachers in online and face-to-face instructional settings. Initially designed for teachers in further education settings, Pratt and Collins (2010) report that the TPI respondents ($n=$

>100,000) span a wide range of educational settings. The majority were reported to hold the role of teacher (47.5%), followed by student-teachers (17.7%), and other roles such as administrative/manager (8.9%) or research (3.5%). Of these percentages, the majority of the research samples report teaching third level students (30.5%), but 15.9% and 16.6% report teaching primary and post primary school students (respectfully). The majority completed the TPI as a part of a mandatory course requirement (52.7%), but other participants reported completed it due to peer recommendations (19.0%), as a part of an online search for jobs, or for 'other' reasons (13.4%). According to Pratt and Collins (2010) the TPI being available online means that individuals receive an instantaneous response of their scores and documents on how to interpret these scores. In the conclusion of this paper, Pratt and Collins (2010) acknowledge that the TPI is not a diagnostic resource for teachers. Rather, the TPI is a tool provides with a way to "promote reflection, discussion, clarification, and, most important, respect for the intellectual, relational, moral, and cultural aspects that are essential to understanding what it means 'to teach.'" (pg. 16). The purpose of the TPI was to give teachers a way to monitor their instructional styles; albeit through the labelling of being 'developmental' or 'nurturing' for example. Based on the TPI, the use of a similar tool that addresses instructional style and how this may affect interpersonal behaviour, and subjective psychological health could be useful. This tool could promote the literature surrounding teacher change and monitor the ways that, quite simply, teachers change. This assessment could be used to identify teacher strengths from a personal, interpersonal, psychological, and pedagogical perspective. Introduced in Chapter 5, the QTI, TPaCK, MBI and MHI were used in the pilot study and were considered to be suitable for the needs of this research stage. As it is now needed to discover what other studies have found using these questionnaires, they will be grouped to reflect the differences between job-lead and psychological resources (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009; Bakker & Demerouti, 2007). These differences will combine the elements of the used measures used and reflect 'Instructional Resources' and 'Psychological Resources'.

3.5.1. Instructional Resources

According to Wentzel (2005), the educator should strive to build relationships that are "emotionally close, safe, and trusting, who promote access to instrumental help, and

who foster a more general ethos of community and caring in classrooms". In doing this, educators are more likely going to nurture and enhance the development of a students' academic and psychosocial behaviour. Early psychological research has shown that the behavioural effect an educator has on a particular class group determines the psychological response of the class group towards the educators behaviour (Doyle, 1979; Shulman, 1986). This research shows the importance of promoting a positive learning environment where an educator can create an encouraging and engaging atmosphere to motivate students to respond appropriately to instructional practice. In contrast to the instinctive response view (Hastings, Utendale, & Sullivan, 2007), further research has shown that the relationship between a student and teacher can influence the development of student social skills (Cornelius-White, 2007) or psychosocial adjustment (Buyse, Verschueren, Verachtert, & VanDamme, 2009). Moreover, as seen in studies (Spilt, Koomen, & Thijs, 2011; De Jong, van Tartwijk, Verloop, Veldman, & Wubbels, 2012), the relationships teachers share with students have been linked directly to teacher wellbeing. As a result, they are considered to be a significant factor associated with educators leaving the profession. Having spoken above about the values and beliefs of educators encourage them to make changes to their instructional practices (Bechtel & O'Sullivan, 2007), it would be consistent to view positive student-teacher interactions as being just as important for teachers as they are for students.

Many studies use a correlation based structural growth model design to observe aspects of psychological distress or background demographic factors. They show that the absence of stable and high-quality student-teacher relationships influence an increased risk of anxiety and depression (Maldonado-Carreño & Votruba-Drzal, 2011) or lowered prosocial behaviour (Miller-Lewis Sawyer, Searle, Mittinty, Sawyer, & Lynch, 2014). As a result, it is essential for educators to be able to monitor the interactions they have with students and recognise that these interactions can influence their instructional practice. However, research concerning the ways in which teachers self-reflect, monitor, or experience the change in their teaching throughout their entire career is lacking. A large proportion of studies are small-scale and focus on teachers at specific points in the teaching career, such as pre-service teacher educators or early career teachers, or compare the differences among newly qualified teachers and teachers with many years' experience (Woolfolk Hoy & Burke Spero, 2005; Conway & Clark, 2003). Brekelmans, Wubbels, and Tartwijk (2005) argue that a large proportion of studies fail to address how teachers change and that "*becoming an expert teacher*

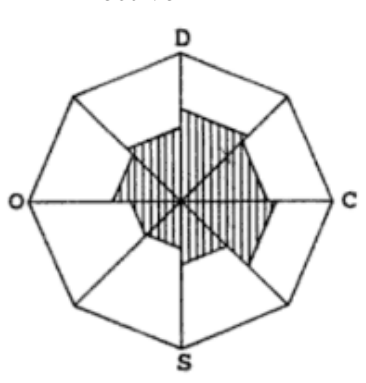
follows some kind of developmental process” (pg. 56). They investigated the importance of considering the subjective experience of a teacher in the development and sustainment of teacher–student relationships throughout a teachers’ career. Although grouping teachers into particular types, this study showed that of the wide variety of factors that influence teacher-student interaction, experience over time is one of the most complex and difficult to measure. It found that ideal-perception remains relatively stable throughout a teachers’ career, but that behaviours, attitudes, and values, can change.

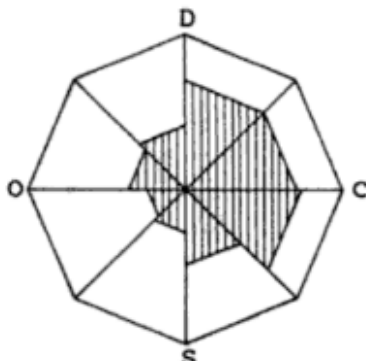
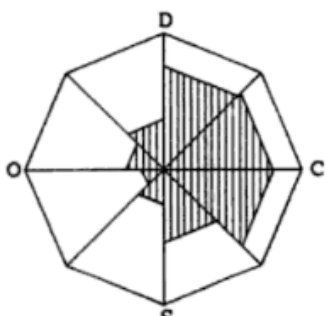
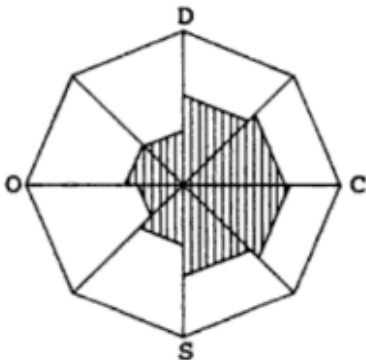
As mentioned in Chapter 5, the QTI was developed to measure the perception of student-teacher relationships through the observation of interpersonal teacher behaviour (Wubbels, Creton, & Hooymayers, 1985). It consists of two dimensions that are split into four polar categories (Influence – *Cooperation* [X-axis], *Opposition* [Y-axis]; Proximity – *Dominance* [X-axis], *Submission* [Y-axis]) that make up eight subcategories (Leadership ‘DC’, Helpful/Friendly ‘CD’, Understanding ‘CS’, Student Responsibility and Freedom ‘SC’, Uncertain ‘SO’, Dissatisfied ‘OS’, Admonishing ‘OD’, and Strict behaviour ‘DO’). Studies using the QTI indicate a strong link between both the ‘Influence’ and ‘Proximity’ QTI dimensions for both student cognitive and effective outcomes (Wubbels & Brekelans, 2005), leading researchers to look at the relationship between teachers and students by focusing on student academic outcomes. Studies using numerous samples and demographics report high reliability and validity for the QTI (Fisher, Henderson, & Fraser, 1991). Some studies highlight that the consistency levels for teacher self-perception can often be lower than that of student scores “*but hardly ever below 0.65*” (Wubbels, Brekelmans, 2005; pg. 11). Naturally, the next step in the QTI research would be to consider individual differences such as in pedagogical styles, experiences, or management.

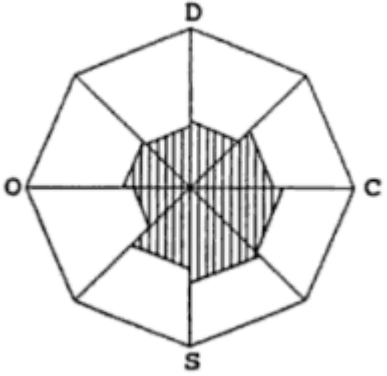
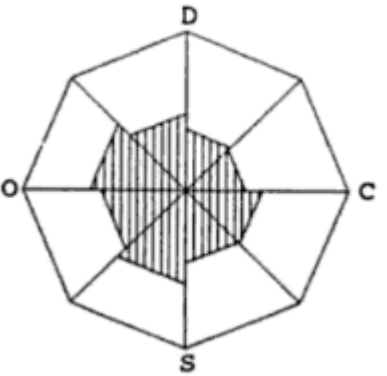
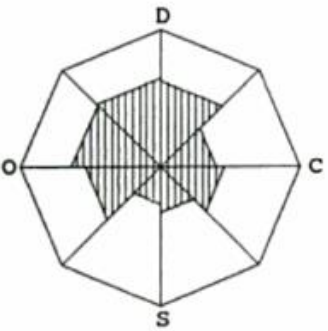
Unlike the TPI, the QTI is not just a self-report questionnaire; it can be given to peers and students of a teacher to give a more robust perspective of teacher behaviour. As seen above, several studies have used the QTI in various ways by adopting various methodological designs or combining the subcategories into particular educator profiles. Brekelmans, Wubbels, and Tartwijk (2005) for example combined cross-sectional and longitudinal datasets that span twenty years of QTI responses. Brekelmans *et al.* (2005) used a sample of teachers (n=3,813), student teachers (n=2,388), and students (n= >240,000) and asked teachers and student-teachers to complete the QTI

twice (self-perception and ideal-perception) and students to complete the QTI once. The findings suggest that teachers will hold a relatively stable ideal-perception of a teacher throughout their career, but the level of self-perceived influence will grow within the first six years. Suggesting that as the average newly graduated teacher will not have had the opportunity to develop their skillset, the first several years of their teaching career will ultimately develop their teaching values, attitudes, and behaviours. These studies directly call for a supportive working environment for newly qualified teachers, including sufficient professional development strategies the will allow them to adopt instructional techniques that will be useful throughout their career. Additional research by den Brok, Fisher, Brekelmans, Wubbels, and Rickards (2006b) found that there can be differences in the QTI scale scores when making comparisons across cultures. These studies suggests that the QTI dimensions, from a definition perspective, may differ depending on the country. With this in mind, it is therefore also likely that the scale dimensions will differ depending on the role an educator has in the school.

Brekelmans, Levy, and Rodrigiguez (1993) report on the construction of eight teacher profiles (Directive, Authoritative, Tolerant/Authoritative, Tolerant, Uncertain/Tolerant, Uncertain/Aggressive, Drudging and Repressive) based on the interplay between each of the QTI subcategories (Fig 2). According to Wubbels and Breklemans (2005), the profiles are descriptions of educators and their interactions with their students within a particular classroom. In other words, an educators profile will only be accurate if their students are involved in the profile construction:

Type	Description
<p>1. Directive</p> 	<p>Characterised by a well-structured and task-orientated learning environment; the educator is normally organised and completes lessons on time, is a dominant figure in class discussions but maintains student interest; usually friendly and understanding, the educator remains somewhat distant from the students; they have high standards, seen as demanding, can get angry at times, and will remind the class that they are there to work.</p>

<p>2. Authoritative</p> 	<p>Characterised by a well-structured, pleasant, and task-orientated learning environment, the students follow clear rules and procedures; students are attentive and can produce better work than a directive educator; the educator takes a personal interest in their students and is attentive to their needs; they adopt a lecture based instructional approach as a base but will include other techniques; they are enthusiastic, logical, organised, and considered to be good teachers by their students.</p>
<p>3. Tolerant/Authoritative</p> 	<p>Characterised by a structure that supports student responsibility and freedom; educators adapt their instructional techniques and would often divide the class into small groups; the educator will develop a closer relationship with their students; there is little need to enforce rules, and class can be heard laughing; the students will enjoy the class, engage in lessons, and are motivated to meet an educators' instructional goals.</p>
<p>4. Tolerant</p> 	<p>There is a reported cultural difference in this profile between the US and Dutch samples. With Dutch educators, the atmosphere is pleasant, supportive, the teacher adapts instructional techniques to meet the needs of students and students enjoy the class, educators give students more responsibility and freedom and allow students they work at their pace which may cause confusion. With US educators, the atmosphere can feel disorganised, students are unchallenged, and the educator can come across as being more dominant.</p>

<p>5. Uncertain/Tolerant</p> 	<p>Characterised by high levels of cooperation, but poor leadership, classroom structure, and students that are not task-orientated; students sitting in the front will listen while the others will remain off-task; there are no clear or set rules in the class; the educator is concerned about the students, will repeat instructions several times to students who are not listening, and will react quickly to misbehaviour or will ignore it; the educator has low expectations of student performance.</p>
<p>6. Uncertain/Aggressive</p> 	<p>Characterised by an aggressive, uncooperative, and often hostile environment; students will aim to be disruptive and provocative; rules are not adequately communicated or implemented; the educator will discipline students after a disturbance but miss the real instigator; the educator spends most of their time managing behaviour; they are unpredictable and unbalanced; they are often unwilling to adopt differing instructional techniques that would be suited to student needs.</p>
<p>7. Repressive</p> 	<p>Characterised by a docile, unpleasant, and guarded atmosphere; the students are afraid of outbursts and overreactions; the educator will make sarcastic remarks to students; the lessons are structured but not well organised; the educator is not very supportive and discourages questions; the educator is competitive, perceived as being unhappy, they repress student initiative and use lecture based instructional techniques.</p>

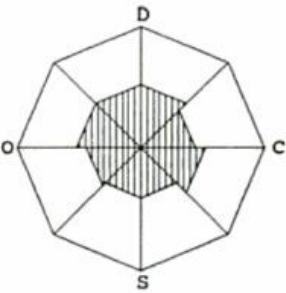
<p>8. Drudging</p> 	<p>Characterised by a type of tolerance, the atmosphere is based on an educator trying to manage the classroom; the educator expels substantial energy trying to motivate students; the instructional methods will follow a routine, but the teacher will mostly talk and avoid using new techniques; the educator is perceived as unenthusiastic, unsupportive, non-competitive, and on the verge of burnout.</p>
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Figure 2; QTI Profiles (Breklemans *et al.*, 1993, pg. 49)

As the TPI labelled teachers into five differing profiles, the QTI profiles are more reliable as it combines teacher and student scores to identify particular teacher-student relationship patterns. Wubbels and Breklemans (2005) explain these profiles and highlight that students who perceive educators as being high on the ‘Proximity Dimension’ (Cooperation; X-axis) are most likely going to be either ‘Repressive’, ‘Authoritative’, ‘Tolerant/Authoritative’, or ‘Tolerant’, with the ‘Repressive’ type being placed on the lowest of the ‘Influence Dimension’ (Y-axis). Students who perceive educators as being ‘Directive’, ‘Drudging’, ‘Uncertain/Tolerant’, or ‘Uncertain/Aggressive’ are considered to be lower on the ‘Proximity Dimension’, with the ‘Uncertain/Aggressive’ type being placed lowest on the ‘Influence Dimension’ (Y-axis).

Breklemans *et al.*’s (2005) research indicate an obvious value in allowing educators to complete a teaching profile that focuses on the relationship they have with their students. The long-term completion of these assessments will provide a teacher with a way of tracking and observing the ways in which they are currently changing as educators. Research has found that the overall mean class perception of an educator remains consistent and that this mean score is built up depending on the length of time the class spends with an educator (Den Brok, 2001). In other words, this would indicate that the student-teacher relationship will most likely still be developing at the beginning of the academic year and that a newly employed educator will need to ‘find their feet’ in the context of the new working environment. It also means that a pre-existing educator will already have some form of rapport as they will have (most likely) interacted with numerous students in a non-teaching context previously. Both situations

bring with it various challenges for an educator within a new class, with a new teacher trying to build their style of teaching relationship and an existing teacher trying to adapt their style of teaching to an entirely new set of students. Similarly, addressed by den Brok, Breklemans, and Wubbels (2004), this finding suggests that that students will naturally create ‘character perceptions’ of a teacher after the first lesson. After several lessons, these perceptions will have “*stabilised, and students can tell what kind of teacher someone ‘is’*” (den Brok, Breklemans, & Wubbels, 2004, pg. 411). What is different now, however, is that den Brok *et al.* (2004) mentions that the process of identifying ‘character perception’ works in the same way for a teacher in understanding his/her new class group.

By assessing the student perception of the student-teacher relationship, an educator will then be able to adapt their instructional practice where appropriate, monitor their progress, or even partake in specialised professional development courses. From a research perspective, the identification

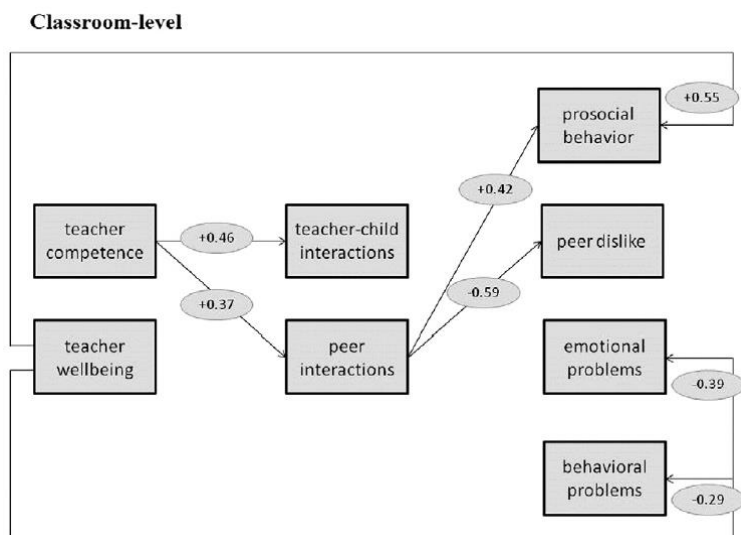


Figure 3; Classroom Level adjustment (Breeman *et al.*, 2015,

of these needs will allow a

learning organisation to develop their professional development initiative on a needs-basis. Although this research suggests that it is important to understand the personal factors that are experienced by educators when it comes to the relationship they have with their students, there is also value in exploring the way in which instructional resources and job based factors influence this relationship. One study by Breeman, Wubbels, van Lier, Verhulst *et al.*, (2015) found that educator instructional practice, on a classroom level, was mediated by the teacher-student relationships and that there is an association between high levels of educator wellbeing and classroom adaptive and maladaptive student behaviour and academic outcome. The finalised sample comprised teachers (n= 56) and students (n= 414) from a special educational needs context where each child had been diagnosed with at least one psychiatric disorder, 49.6% were taking medication, and 47.5% were receiving psychological treatment. Interestingly, some

teachers (n= 6) were excluded from the study due to resignation and levels of experienced burnout. This particular study involved students that would require a higher level of emotional and behavioural demands that differ from a non-special needs context, no comparative difference was found in the reported wellbeing of educators in this sample. The reported level of self-competence was found to be higher in this sample than in other educator populations. Although this difference/non-difference is suggested to be due to the availability of additional resources, specialised training, and smaller class sizes, it shows the varying demands and requirements that are faced by educators in varying settings and that the teacher-student relationship is bi-directional. Another interesting component is that Breeman *et al.*, (2015) had used two subscales of the MBI²² (*‘Personal Accomplishment’* and *‘Emotional Exhaustion’*) to measure *‘Personal Competence’* and *‘Wellbeing’* (respectfully).

While the QTI observes the interactions between teachers and students, the TPaCK has been incorporated to measure the particular instructional strategies that teachers have incorporated into their classroom practice. Several studies have validated this particular measure, one of which was a doctoral dissertation submitted by Cox (2008) who conducted a conceptual analysis to explore the individual constructs of the TPaCK. It was found that, as with several areas of research, there are multiple definitions and terms for TPaCK components that are often used interchangeably, causing Cox (2008) to articulate precise definitions of what it was the TPaCK constructs were (*see Cox, 2008, pg. 70*). According to Cox (2008), this research resulted in “*a number of conclusions as well as unanswered questions*” (pg. 95). The broadened availability of technology has led to the adoption of multiple definitions which also means that there are multiple types of technological tools designed for instruction, all having varying degrees of success with regards to implementation. The TPaCK constructs are shown to be highly interrelated (Koehler & Mishra, 2009), Cox (2008) explains that an individual scoring high on the individual dimensions such as the TPK may understand the incorporation of technology alongside pedagogical approaches. These approaches can enhance practice and motivate students through the use of blogs, online videos, adding additional communicatory channels, but that the focus of the lesson is on the medium used and not necessarily the content. The various TPaCK components have been used

²² This particular MBI version has been adapted to a Dutch population (Schaufeli & Van Dierendonck, 2000)

to discover ways in which educators use particular resources and how they relate to specific learning activities (Harris & Hofer, 2009). Harris and Hofer (2009), explaining the need for planning and organisation, identify ways educators can incorporate specific instructional activities into a classroom context and describe the various ways in which an individual can incorporate instructional resources and tools into a lesson.

Although the TPaCK is structured around and places emphasis on the use of technologies in classroom settings, it provides a way to measure the application of pedagogical skills in a practical and applied setting. In applying the findings of the TPaCK with those of the QTI, it highlights the behavioural implications and relationship focused outcomes of instructional decisions. This combination will identify whether the strategies an educator has adopted regarding their instruction meets the needs of their students. What is not measured by these scales, however, is how instructional decisions may affect the teacher from a psychological perspective. Several studies, such as Tkacheva and Sazonova (2015) who measured emotional exhaustion, suggest that pedagogical training that focuses on interactive educational methods may act as a barrier to burnout symptoms and may decrease levels of perceived burnout. It is interesting to note that, within that study, high levels of responsibility and workload were the largest influences to burnout formation. Additionally, it was found that younger educators had a greater ability to “*restore their psychological balance quicker and more effective than the teacher of other ages*” (pg. 483).

The implications of the research above highlight the importance of factoring for instructional practice as it is likely that pedagogical skill has an impact on psychological health. Another component of Tkacheva and Sazonova’s (2015) research was the way the number of years’ pedagogical and teaching experience impacted levels of perceived burnout; educators with fifteen-twenty years’ pedagogical experience showed the highest level of burnout, while newly qualified teachers (>5 years) reported the lowest²³. While this research may suggest that younger teachers may be less susceptible to burnout, or older teachers are more at risk, it is more likely a combination of factors exist; such as the participation in professional development and training (Khan, Rasli, Khan, Yasir, & Malik, 2014) perception of career progression or the

²³ The sample sizes were diverse (n=78); 4 teachers reported less than 5 years’ experience and 30 teachers reported 15-20 years’ experience.

satisfaction of their current career path (Biron & Eshed, 2016), or conflictions with organisational leadership (Shanafelt, Gorringer, Menaker, Storz, Reeves *et al.*, 2015).

3.5.2. Psychological Resources

The previous section concerned instructional resources and how they influence an individuals' behaviour. Numerous studies have also shown that that the influence of a wide range of material and economic factors, such as high income, democratic leadership, or social equality (Stevenson & Wolfers, 2008), are likely to contribute to the well-being of individuals. However, the psychological approach is naturally more concerned with the individual and subjective factors. A meta-analysis by Fischer and Boer (2011) aimed to discover what was more important; 'money or health?'. Among the many findings, this research showed that the provision of autonomy and individualism would consistently reduce the negative psychological effect, independent of wealth. However, most importantly, while wealth was found to lead to increased autonomy, it does not contribute to an individual's subjective experience of well-being. The implication of this research points towards organisations having a strong influence on an individuals' psychological health, but that personal and individual factors can be greater. Similarly, the importance of individuality is suggested by Dizen and Barenbaum (2011) who found that the frequency, intensity, and duration of particular experiences will have a differing emotional effect but that these differ depending on individual emotion-related traits.

Freudenberger (1974) published a paper defining '*Staff Burnout*' as a feeling of failure and of being worn out. In the many years since, numerous definitions have been created and are accurate but not fully explanatory of the nature of burnout. Several definitions include the sense of idealism, energy, or purpose (Edelwich & Brodsky, 1980), physical, emotional, or mental exhaustion (Pines & Aronson, 1988), and even the increasing levels of stress, demands, challenges, and recognition (Sarros & Densten, 1989). However, while all of the above definitions are separate, they do conceptualise the many factors in defining 'Burnout'. Characterised as being a gradual consequence of prolonged and extensive work-related fatigue (Peeters & Rutte, 2005; Pöhlmann, Jonas, Ruf, & Harzer, 2005), burnout is an incredibly complex condition that effects numerous types of social working environments. Devos, Dupriez, and Paquay (2012) suggest that research needs to account for neglected factors, such as environmental

contexts, in previous studies and measurements. While various studies use the tri-dimensional model of burnout, indicating the serious problem it has amongst educational communities, a large body of research use different dimensions.

3.5.2.1. Educational Burnout

Studies that determine the impact of burnout within educational populations typically use Maslach and Jackson's (1986) MBI-ES model that involves emotional exhaustion, personal accomplishment, and depersonalisation (Horn, Taris, Schaufeli, & Schreurs, 2004; Sadeghi, & Khezrlou, 2016). Other studies would replace one dimension with another, such as professional inadequacy (Hakanen, Bakker, & Schaufeli, 2006) inefficacy (Breso, Salanova, Schaufeli, 2007), cynicism (Bakker, Schaufeli, Leiter, & Taris, 2008). Regardless, each of these dimensions can manifest through a lack of emotional and motivational energy, with feelings of being strained and tired at work (Maslach, Schaufeli, & Leiter, 2001). Much of the research surrounding burnout symptoms, within an educational context, show that it results in detachment towards fulfilling their work, dissatisfaction towards students, colleagues, or incompleteness of other organisational commitments (Schaufeli & Buunk, 2003). Burnout has been shown to increase the likelihood of developing physiological infections, psychosomatic complaints, health issues, depression, or substance abuse (Schaufeli & Buunk, 2003). Research based in Italy found how burnout prevalence is 19.7% but cite how prevalence across Europe is estimated to be between 25-35% by (Quattrin, Ciano, Saveri, Balestrieri, Biasini, Calligaris, & Brusaferrò, 2010). While the prevalence of burnout as a condition was seen effecting almost one-in-five, it is diagnosed by the presence of at least two particular dimensions; meaning that even educators who were not necessarily 'burnt-out', may still experience some of the symptomologies of burnout. With several studies finding that students in classrooms where an educator showed numerous symptoms of depression would progress slower and achieve fewer educational outcomes when compared against classrooms with teachers that had fewer symptoms, researchers began to explore the links between burnout and mental health (McLean & Connor, 2015). Friedli (2009) broadly explains mental health as being a concept that directly relates to an individual's subjective psychological health. Various studies concerning mental health show that it is concerned with aspects of an individual's behaviour, attitudes, and motivation, but that it is intricately related to aspects such as physical health, academic and occupational performance, or creativity. On the other

hand, poor mental health reduces individual and social wellbeing, sanity and productivity (Leppin *et al.*, 2014).

Numerous studies have explored mental health related concepts such as self-efficacy (Manojlovich, 2005) and well-being (Abdi, Kaviani, Khaghanizadeh, Momeni, 2007) and how they relate to burnout. Laschinger, Borgogni, Consiglio, and Read (2015) sought to understand the importance of leadership, and to what effect this had on burnout. In using a sample of nursing (N=1,009), it was found that leadership behaviour has a direct and indirect influence on an individual by their particular leadership style and how this affects the organisational environment. Leaders that promote work environments that are inclusive, supportive, and provide opportunities for staff to create a positive work-life area (Gardener Avolio, Luthans, May, & Walumbwa, 2005) which, according to Laschinger *et al.*'s (2015) model, will influence an individuals' levels of self-efficacy. As supported by Maslach and Leiter (1997), the perception of burnout can be mediated by self-efficacy which shows that high levels of self-efficacy reduce the likelihood of an individual experiencing burnout. However, while keeping mental health and symptoms of burnout separate, Laschinger *et al.*'s (2015) model show burnout as being a mediator which highlights the intricate relationship between symptoms and mental health.

Researching into both occupational fatigue/burnout reveals the many factors that have been shown to have an influence on the perception of burnout. Female teachers, for instance, have been found to have a higher risk for exhaustion in comparison to male colleagues (Fernet *et al.*, 2012; Watts & Robertson, 2011), or larger class size (Watts & Robertson, 2011). With social support defined as the existence or availability of individuals whom one can rely on, value, and care for (Sarason, Levine, Basham, Sarason, 1983). Social support, in this case, would provide an indication that educators working in large schools would tend to receive less social support from colleagues when compared to peers working in smaller schools (Skaalvik & Skaalvik, 2010). Several studies throughout the 80's and 90's, such as Parke and Ladd (1992), found positive correlations between social supports (e.g. parental support, peer support) and the increase in the development of emotional regulation and problem-solving interactions within environments. These positive correlations suggest that individuals who feel comfortable and secure in personal relationships they may be a part of can result in an increase in the ability to build support and competence in other domains.

Because an individual feels safe and secure within a personal setting, they are more likely to show increased empathy and concern to other individuals.

The availability of social support has previously been tied to an individual's psychological development (Sarason, Levine, Basham, & Sarason, 1983). The satisfaction that an individual would feel with the support they receive is said to influence factors such as emotional stability, extraversion, or an individual's outlook for the future (Sarason, Levine, Basham, & Sarason, 1983). From a healthcare perspective, Pedersen, Spinder, Erdman, and Denollet (2009) discovered that the availability of social support is a common factor of individuals suffering from various forms of physical or psychological distress. If a patient receives continuous support from friends and family, they would, on average, spend less time in recovery in comparison to patients who underwent the same treatment but receive less familial support. Other studies have shown that patients with higher levels of social support appear more optimistic about surgery. Pedersen *et al.* (2009) suggest that having high levels of social supports can improve the health and positivity of an individual even when the individual may be going through traumatic life experiences. This finding would also suggest that the absence of social support can contribute to the perception of social-isolation or loneliness. Whether an educator works in a primary or secondary school may also be associated with teacher exhaustion and lower job satisfaction (Jepson & Forrest, 2006; Klassen & Chiu, 2010). This further emphasises the importance of the working environment of a school being likely to place distinctive demands on particular educator groups (Embich, 2001). Considering the way teachers work in a social environment, burnout has been attributed to the lack of social support, perceived levels of inequity, and a poor sense of community (Milfont, Denny, Ameratunga, Robinson, & Merry, 2008; Sharplin, O'Neill, & Chapman, 2011). Nursing research has shown that the transitionary process from being a student to practicing can be difficult. Studies report factors such as a graduate trying to build their confidence in meeting particular job demands, responding to chronic emotional and interpersonal stressors (Maslach and Leiter, 1997), and poor mental health (Laschinger and Grau, 2012; Rudman and Gustavsson, 2011). All of these factors will, of course, lead to a heightened risk of an individual experiencing burnout.

3.5.2.2. *Interpersonal Behaviour*

Various studies have proposed links between a student's attitude and motivation towards a subject taught and the interpersonal behaviours they share with their teacher

(den Brok, Levy, Brekelmans, & Wubbels, 2005; Bernaus & Gardner, 2008). As a result, it is important to view interpersonal relationships as having a mediating role in shaping the atmosphere in educational environments. As younger educators were shown to be at higher risk of burnout in comparison to their slightly older and more experienced colleagues (Tijdink, Vergouwen & Smulders, 2014), a type of inverted bell-curve of burnout risk is suggested with differing factors being the primary influences. Brekelmans *et al.*, (2005) emphasises this suggestion by finding that educators moving toward the end of their career are more likely to display a repressive teaching profile (explained above), showing that an educator's instructional techniques and personal psychological resources will evolve over time depending on their experiences within the classroom. Personal factors such as age have also been suggested to influence the way in which educators experience a class group. Brekelmans *et al.* (2005), suggesting that the distance in emotionality and age may cause educators to become more disconnected with their students, found that as educators get older, they would be more likely exhibit 'strict behaviours' in comparison to their younger peers. Although other studies have found links between psychological resources and burnout, most of these studies failed to examine the mediators between these factors (Bitmis & Ergeneli, 2015). Gathering a sample of mostly female (95%) nurses (n= 161), Bitmis and Ergeneli (2015) employed a regression analysis to find that the availability of psychological resources plays a mediating role in the experience of burnout. This finding suggests that the availability of personal resources serves as a protective barrier against the stressors that likely contribute to the development of burnout. This suggestion is likely, but because the complexities and dynamics of the educational environment is often reported as being neglected in studies on burnout among teachers (Devos, Dupriez, & Paquay, 2012), it makes it difficult to test the exact environmental causes.

Other studies have alluded to the role of social interactions by concluding that unresolved confrontations and friction between colleagues and students is also a contributor to burnout (Leung & Lee, 2006). According to Pietarinen, Pyhältö, Soini, and Salmela-Aro (2013), because the sources of educational burnout are embedded in the social interactions of a school ecosystem, the sources that prevent burnout are likely to exist there too. Pietarinen *et al.* (2013) sought to identify whether proactive strategies and teacher perceptions of workplace fit' were mediated by burnout; in other words, the way a teacher interacts and perceives themselves to work with the environment will

either cause or protect them against burnout. It was found that the ability for a teacher to utilise their social and personal resources was negatively correlated with burnout. This study explains that, while teachers can learn strategies that can increase levels of well-being, protecting them from burnout symptomatology, they are required to do more than just adapt to the educational environment. Instead, this study suggests that teachers must actively engage and adjust the environment to create a shared space with colleagues and students. In the absence of a positive and supportive working atmosphere, as found by Košir, Tement, Licardo, and Habe (2015), the perception of support has no influence on levels of stress in teachers that were found to be highly reflective, but it acted favourably to individuals that were considered less reflective. In other words, teachers who reported low levels of reflection and reported high levels of perceived colleague support were shown to have the lowest levels of stress, while non-reflective teachers with low levels of perceived colleague support reported the highest levels of stress.

3.5.3. Ecosystemic Contexts and Curricular Circulars

There is much confliction and confusion within the area of educational burnout; Tkacheva and Sazonova (2015), for example, found that newly graduated teachers are more likely to ‘restore their burnout balance’ while Brekelmans *et al.*, (2005) found that newly graduated teachers are most at risk. Combined, these studies suggest that younger teachers are most at risk of burnout but are more likely to recover quicker; what is more likely, however, is that the contributors to an educators’ perception of burnout will change depending on factors such as experience, age, school type, or classroom interaction. Also, the systemic nature of the educational environment is likely to be bound in conflicting levels of variability in the findings; influenced, of course, by the differing methodologies or approaches adopted by a researcher, or the culture or subculture of the participant sample.

Citing the importance of acknowledging different organisational social cultures and subcultures, Huhtala, Tolvanen, Mauno, and Feldt (2015) found that there can be a type of emotional transference between colleagues; that expressed burnout symptoms can be shared between individuals working within the same environment. The importance of the ecological systems (Bronfenbrenner, 1979) in observing the social context, previously mentioned throughout Chapter 2, highlights that every individual

becomes an influence of the environment they interact with (Wertsch, 1997). The implications of these studies would suggest that an educational environment where several individuals are experiencing high levels of emotional exhaustion will, in some way, have an influence on the educational ecosystem of that school. What is important here is that, as Huhtala *et al.* (2015) point out, this influence can also be used to encourage “*positive feelings [that] can promote collective feelings of work engagement in the work place*” (pg. 24). This particular finding, shown by Willard-Grace, Hessler, Rogers, Dubé, Bodenheimer, and Grumbach (2014), explains the association between the perceptions of a positive workplace culture and reduced levels of exhaustion.

Studies by discuss the importance of maintaining positive relationships with students, but agree that it is “*unreasonable, if not optimistic, for teachers to think they will naturally like every student that walks through their door*” (Newberry & Davis, 2008, pg. 1982). Interestingly, this dynamic was seen earlier during Chapter 4 (4.6.1, pg. 135), where an inter-rater mentioned that students can ‘work out’ when a teacher does not like them and that a teacher cannot be an ‘effective teacher’ if they do not like their students. Newberry and Davis (2008), found that teachers would operate on an economic view of their relationships with students; that the level of effort they put into the relationship was dependent on the likelihood of getting something in return. Additionally, it also suggests that when students were seen to reject these efforts, a teacher would resort to instructional methods that were considered ‘safe’. In this case, it is possible that the level of personal effort towards building the relationship, if rejected by a student or class group, will deteriorate over time. It may also suggest that teachers are less likely to use innovative or new instructional methodologies in class if a teacher suspects that there will be a negative appreciation or reciprocity. Social dynamics have been explored more recently, with findings suggesting that the classroom teacher is a position where they can directly influence, oversee, and affect the classroom peer ecology (Gest & Rodkin, 2011). Other studies also support the way the teacher can have a mediating role in the development and maintenance of student peer-peer interactions (Hendrickx, Mainhard, Boor-Klip, Cillessen, & Brekelmans, 2016).

Teachers differ in the way they establish relationships with whole class groups and individual students (Wubbels, Brekelmans, Den Brok, Wijsman, Mainhard, & Van Tartwijk 2015); this level of subjectivity within the research makes it difficult to

understand relationships and interactions within an Irish context at this point²⁴. As there are many influences of teacher behaviour, longitudinal methodological approaches would be necessary. There are several studies, however, that have observed general macrosystemic influences and found that educators were aware of the benefits and purpose of implementing new and innovative ways to teach, but because they found themselves constrained by policy and fulfilling other educational duties it severely affected their instructional practice (Mittal, 2015). This particular finding gives rise to how educational macrosystemic factors will influence the instructional practice of individual educators. It would make sense that the impact of decisions at a ‘macro-level’ will depend on how well aligned a school is with implementing the decisions. One threat to this current project is the similarity it has with self-evaluation. As mentioned in Chapter 4, Chapman and Sammons (2013) outlined ‘School Self-Evaluation’ (SSE) as being a process that encourages a school staff to reflect on the current instructional practices to identify areas for improvement. In 2016, the Department of Education and Skills released Circular 0039/2016 which called for primary schools to continue to implement the process of self-evaluation (DES, 2016). As research shows a clear value in self-evaluation (De Grez, Valcke, & Roozen, 2012; Artzt, Armour-Thomas, Curcio, & Gurl, 2015) the Irish National Teachers’ Organisation (INTO, 2016a) issued a press release calling its members to cease co-operation with the SSE process.

While research in an Irish context has found that only 33.1% of schools regularly engage with SSE (Brown, 2010), this dispute between the DES and teaching unions will cause frustration, anxiety, and confusion throughout the educational community. The SSE is a thorough research process that requires considerable resources, the problem is one of ‘lack of support’, almost mirroring the issues faced by Bansal’s (2016) team in Haryana. Additionally, this lack of support echoes in other ways. For example, on 30th of March 2016, the INTO released a press release that argued against the cut in government funding for education and highlighted that schools are being forced to fundraise themselves, that they are “*kept running on cake sales, raffles and sponsored walks*” (2016b). Despite having no empirical evidence to support

²⁴ Research surrounding the importance of relationships and interaction within an Irish teaching sample has not been published as yet; to the best of my knowledge. It is believed that focusing on key points now is premature, that a broad initial approach to identify a suitable research framework is the necessary first step.

this claim within the press release itself, it does clearly articulate the many problems experienced in Irish Education.

Despite focusing on the individual educator, rather than the collective school environment, this Ph.D. project somewhat resembles the development of a self-evaluation process; it requires educators to complete measures that evaluate their subjective instructional and psychological resources. Although the issues surrounding self-evaluation may be a possible limitation, this research would argue the opposite. This study could provide a process that allows schools to self-evaluate in a way that takes the workload away from schools, provides tailored feedback to individual educators, has a standardised methodological approach, and is evidence based and research driven. A new model of self-evaluation may be considered a momentous task, however, it is not beyond the scope of this project.

3.6. Conclusion - The Individualised Teacher Report

According to Collins and Pratt (2011), “*there is a move to adopt a single, dominant view of effective teaching ... [where] teachers are asked to reflect on who they are and how they teach but with an implied message that reflection should conform to some preconceived notion of a ‘good’ teacher*” (pg. 359). It is naïve to assume that there is a ‘single view’ of what it means to be an effective educator, as the requirements and needs of one classroom group will differ that than of another. What is arguably more appropriate for education, rather than training educators to teach in the same way and conform to a preconceived notion of what a ‘good teacher’ is, is to encourage and train teachers to be self-reflective and adapt their teaching to suit the needs of their students. Boud, Keogh, and Walker (1985) mentioned that reflective practice is an important human activity where provision is given for individuals to recapture their experiences and evaluate them to improve on one’s abilities. One consistency throughout the literature of educator training and interaction is the importance of self-reflection; Paterson and Chapman (2013), for example, argue that self-reflection that motivates an individual to learn from their experiences and is the key towards the maintenance and development of competency throughout their work practices. Others, such as Hendrickx *et al.* (2016), mentions that reflective teachers who are aware of their influence on student behaviour can tailor their interactions to benefit their instructional practices. According to Patil (2013), reflective practices are self-regulated processes that aim to enhance an individuals’ ability to communicate and make balanced

decisions.

Educational researchers, such as Valli (1997), describe reflective teachers as being individuals that can “*look back on events, make judgments about them, and alter their teaching behaviors in light of craft, research, and ethical knowledge*” (pg. 70). Other researchers argue that reflective action “*involves intuition, emotion, and passion and is not something that can be neatly packaged as a set of techniques for teachers to use*” (Zeichner & Liston 1996, pg. 9). These quotes would suggest that reflective practice in education is an ideal that pedagogics and educational researchers would encourage teachers to become accustomed to, but that the practical implementation of may be somewhat difficult to achieve. Kay and Johnson (2002), speaking about the University of Washington’s teacher education programme, mention that the reflective seminars and completion of reflective portfolios are a useful method to provide support to student teachers in developing the skills necessary to reflect on their practices. Kay and Johnson (2002) do mention that the limitation of these methods is the way they categorise dimensions of reflection into a teachable concept, or that the use of typologies naturally constrain teachers towards ‘thinking like a teacher’. But, similar to Pratt and Collins (2010) view of the TPI, the concept of using this approach as a tool is quite useful. Without the opportunity and a way for teachers to systematically reflect on their instructional practices, they may be unable to view the importance of their instructional decisions, interactions, and relationships with students.

3.6.1 The Sum of its Parts

Both Kay and Johnson’s (2002) and Pratt and Collins’ (2010) view of their respective research areas (Seminars and Portfolios, and the TPI) are that the tools they developed could be tools for reflection. The seminar and portfolio would take a qualitative approach to teaching reflective practices, while the TPI takes a more quantitative, by using questionnaires and research on implementation. Diener, Napa-Scollon, Oishi, Dzokoto, and Suh (2000), although researching into the concept of subjective well-being (SWB), explain that various studies that examine SWB have found that there are differences across cultures when it comes to the identification of a ‘global’ identifier of SWB. Aiming to identify what country is ‘happiest’, Diener, Diener, and Diener (1995) found that, in countries where the economic indicators would suggest heightened levels of happiness (Japan), the level of happiness was lower than that of countries with a lower economic climate (Columbia). Diener Napa-Scollon, Oishi, Dzokoto, and Suh

(2000) argue that levels of global positivity is intricately related to cultural norms, and the perceived value and desirability of this culture is towards being happy and positive. The implication of these findings is that, to be blunt, the cultural perception of Irish educators towards having a positive relationship with students is unknown. It is possible, although unlikely, that educators are trained in a way that act against student-centered instruction, or that the perception of what it means to be a 'leader' or 'understanding' will differ depending on the environmental context of a school.

The findings of Košir *et al.* (2015) validate the ecosystemic view of this Ph.D. project. For example, in educational community that reports high levels of workload, stress, and burnout, the provision of a self-reflection tool may actually act as an additional stressor that could be a further cause of burnout and negative mental health. This finding has elsewhere; research by Takano and Tanno (2009) showed that individuals who reflect on their practice while, at the same time, coping with high levels of job demand, is likely to result in a negative self-focus. These studies suggest that a stand-alone tool for self-reflection could be a dangerous concept within an environment that is perceived as being physically and psychologically demanding. In light of this finding, the development of a tool that measures key factors associated with the identification of these cultural perceptions is considered the necessary first step. For example, use of the QTI could measure the current perception of what traits an ideal teacher is, and whether this ideal is shared between primary and post-primary schools. Upon identifying this, this averaged ideal could be used as a template to determine how far individual teachers deviate from this averaged score. Additionally, in coupling measures of psychological health, such as the MBI or MHI-38, or instructional practice, such as the TPACK, a researcher would be able to determine whether particular self-perceptions of interpersonal interactions are indicative of positive or negative psychological health, or whether knowledge of pedagogical implementation influences interpersonal behaviour. In explaining this from another perspective, Within Chapter 5, it is mentioned that low response rates and 'evaluation anxiety' (Kyriacou, & Stephens, 1999) were a cause for concern within this research. The pilot research also found that the sample as a whole had fallen into the moderate level of risk for emotional exhaustion and depersonalization (measured by the MBI). At this point, it is unclear whether these 'moderate levels' are actually 'moderate levels' within an Irish population.

Chapter 4: Methodological Framework

“Science isn’t perfect, and it’s not the only way to view the world, but it does give us a system for trying to find answers to questions” (Field, 2016, pg. 12)

4. Framing the Research Process

The purpose of this chapter is to ground the theoretical framework in order to guide the research process. It will be observed that information regarding participants, demographics, etc., are withheld within this chapter; this information will be included in specific chapters, as detailed previously in Chapter 1. Cohen, Manion, and Morrison (2013) mention that there is no finite way for planning research, which some may consider unfortunate, but the objective and aim of this researcher is to make a contribution to knowledge by expanding and revisiting various theories and behavioural approaches from a psychological perspective. Shweder (1991), taking a phenomenological position, mentioned that few researchers have begun to realise that because individuals live and experience the world differently, they live in an entirely different world.

Throughout both psychological and sociological literature, arguments arise that suggest a need for rigid associations between theory, methods, and the logical approach taken by the researcher throughout the research journey (Tudge, 2008). This decision of selecting each component can then be attributed to the interplay between the personal epistemology and ontology of the researcher. Marcos (2010) explains that epistemology is the discipline that aims to address the scientific study of the nature, origin, and limitations of knowledge. With this in mind, and broadly speaking, ontology is defined as the study of ‘being’ (Latsis, Lawson & Martins, 2007), while referring to the existence of objects or concepts, the deeper focus is the study of what it means to exist and whether there is a relationship between objects or concepts that exist. The interplay between both branches of philosophy has an undeniable influence on the methodological approach taken by a researcher; while the ontology concerns the ‘what’, in the context of how something exists the environment, the epistemology concerns the ‘how’ and ‘what is’, from the perspective of how something is typically known to exist. Creswell (2007) explains that the ontological position is used to explain the ‘nature of reality’, the epistemological position to explain the ‘relationship between the researcher

and the topic being researched', while the methodological stance refers to the processes and design of how conclusions are made and knowledge is generated. The methodological stance of a research project guides actions and decisions, ultimately providing a certain degree of insight related to the research area. The stance of this researcher is that of a pragmatist, using a constructivist grounded theory methodology in order to understand particulars of the environment in which learning occurs. The direction of this research is uncertain, but the methodological framework is fixed, meaning that the findings and results of this project are somewhat unforeseeable. However, although grounded theory is typically seen as a qualitative methodology (Bryant and Oliver, 2009), Simmons (2014) mentions that this is not entirely accurate; while the majority of studies using GT may sway towards qualitative, either qualitative or quantitative data can be used. Bronfenbrenner (1989) mentions that research processes can be restrictive and subjective, and that "*applications of research to real world situations reflect the particular biases and blind spots of each researcher's root discipline*" (pg. 662). As this quote suggests, a researcher is restricted in ways by the subjective nature of the research itself throughout the research process. It is felt that this constructive grounded theory stance is necessary; as it identifies theory that is grounded in the context of where the study is taking place. It encourages the researcher to focus on the data and make decisions based on the data itself rather than on literature and previous research.

4.1. The Scientific Method

The objective nature of research has been criticised by many such as Kuhn (1962), who argued that scientific knowledge is knowledge of the nature of objects as they are perceived, that inquiry is based on human concepts, which are open to interpretation. McLeod (2011) mentions that researchers are influenced by "*theoretical orientations, personal anticipations ... values, interests and assumptions*", and that if a researcher was to detail all of these influences, it could "*go on forever, in an endless recursive loop*" (Pg. 268). Interestingly, McLeod (2011) continues to highlight that a researchers' intentions can be fundamentally guided by the stylistic convictions of a publisher or peer review panel²⁵. In support of uncertainty, Russell (1948) maintains that "*all human*

²⁵ From a psychological perspective, just to add a further confusion, Newell and Shanks (2014) ask whether it is possible to be fully conscious of every decision an individual makes. While this review was not focused on methodological decision making, it does call to question whether the reported reason why

knowledge is uncertain, inexact, and partial” and that “*to this doctrine we have not found any limitation whatever*” (p. 527). Kuhn (1970) emphasised that the advancement in many scientific areas occur during periods of intangible crisis. The first step in understanding these crises involved the acknowledgement that traditional methods currently in use, or paradigms are adopted, are ineffective at explaining a situation.

The lack of a theoretical model can often be considered a serious flaw by some researchers. Schaufeli and Maslach (1993) suggest how, in some situations, lack of a theoretical model merely emphasises the newness of a phenomenon being researched and how more needs to be observed in order to develop an accurate theoretical foundation. Stepping back from a theoretical model highlights a differing process that suggests how real world problems are “*messy and complex*”, and that theoretical models encourages a researcher to reflect on the best case scenario of “*clean and simple*” (pg. 5). Crotty (1998) highlights how researchers interested in social sciences would focus on nomothetic elements such as unique, individual, and qualitative aspects of data interpretation. However, researchers with an interest in the natural world would tend to sway towards ideographic elements that are abstract, quantifiable, and that yield empirical regularities (pg. 68). The epistemological view of ‘interpretivism’ for example maintains the argument that both the nomothetic and ideographic approaches are entirely different entities that require separate methods of data collection.

The fundamental role of the scientific method, in this case, is to provide a set of logical and procedural regulations which informs the general foundation and orientation within the natural world (Weber, Gerth & Mills, 1946). One of the core values behind the scientific method is that nothing can be ‘proved’ by scientific means, that an individual must either choose to accept or reject a position in accordance to empirical research. This gives rise to the position of falsification (Popper, 1959), and if a scientific theory becomes untestable, it ceases to become scientific. Russell’s (1952) assertion of falsification becomes evident in this case²⁶. The purpose of this process is

a particular method was chosen is actually the real reason. In other words, because nothing is certain, the research must guide the research process.

²⁶ “*between the Earth and Mars there is a china teapot revolving about the sun in an elliptical orbit, nobody would be able to disprove my assertion provided I were careful to add that the teapot is too small to be revealed even by our most powerful telescopes. But if I were to go on to say that, since my assertion cannot be disproved, it is an intolerable presumption on the part of human reason to doubt it, I should rightly be thought to be talking nonsense. If, however, the existence of such a teapot were affirmed in ancient books, taught as the sacred truth every Sunday, and instilled into the minds of children at school,*

to provide researchers with a tested foundation of knowledge in order to allow multiple studies to be evaluated with a common set of criteria (Tudge, Mokrova, Hatfield, & Karnik, 2009). Trochim (2006) explains that theoretical and methodical frameworks consist of a chain of concepts that are integrated together, based on current theories supportive of a research area. It is further explained that a framework is not a universal entity that can be adapted to every research project, that they are guided by empirical and scientific evaluation of literature relevant to the research problem. Frameworks must demonstrate thorough understanding of the theory and concepts relevant to the topic of research and how it will complement the broader fields of knowledge (Tavallaei & Abu Talib, 2010).

Because behaviour is one of the most complex and theoretical aspects of the social sciences, encompassing relationships between psychology, sociology, or cultural anthropology, the need for depth and breadth is essential. Within the scientific method there is a route of adoption between ‘qualitative’ or ‘quantitative’ methodologies. Guba and Lincoln (1989) mention how qualitative research puts high emphasis on using an approach that places emphasis on induction, subjectivity, and contextualisation, in order to gain descriptive and informative data about specific items. The inductive approach proposes relationships between particular and predetermined variables by observing patterns that are extrapolated from the data. Within qualitative research, an individual would aim to strengthen or challenge current theories by providing arguments informed by in depth analyses on specific populations (Gray, 2013). Johnson and Onwuegbuzie (2004) argue the difficulty in differentiating between cause and effect relationships within qualitative research and suggest that *“logic flows from specific to general, and that knower and known cannot be separated because the subjective knower is the only source of reality”* (pg.14). In contrast, quantitative research is a process that places emphasis on deduction, objectivity, and the generalisability of information in order to attain insights into behaviour. Tashakkori and Teddlie (1998), taking a positivist approach, maintain that in order to be an ‘effective’ researcher one must aim to eliminate all biases and remain emotionally detached in order to reliably support hypotheses. Similarly, Johnson and Onwuegbuzie (2004) mention the importance of remaining separate from participants that are involved in data collection; arguing that

hesitation to believe in its existence would become a mark of eccentricity and entitle the doubter to the attentions of the psychiatrist in an enlightened age or of the Inquisitor in an earlier time” (pg. 168).

social scientific inquiry should remain objective (Nagel, 1986). Although this deductive stance, focusing primarily on hypothesis testing, creates principles that can be tested through observation and experimentation, there are benefits and limitations, as with all methodological approaches. The question that surrounds the value of trying to remain unbiased within social scientific research, however, would depend on the questions that a researcher is testing.

As there are many forms of research placed under two ‘distinct’ categories of quantitative and qualitative. Several researchers, such as Onwuegbuzie and Leech (2005), try to reason that the terms ‘quantitative’ and ‘qualitative’ would be better understood if replaced with ‘confirmatory’ and ‘exploratory’, implying that both quantitative and qualitative, when viewed separately, are not confirmatory AND exploratory; that one cannot be used for both confirmation and exploration. Although research is exploratory in nature, if this change is to be made, how possible is it to confirm a phenomenon without first exploring, and vice versa?

4.2. ‘Subjectivity + Objectivity = Subjectivity’

The term ‘Paradigm Wars’, coined by Gage (1989), assumes the outdated nature of the traditional position of a researcher choosing the allegiances to either qualitative or quantitative methods of conducting research. With Gorard and Smith (2006) arguing how the use of either one or the other type of methodological paradigm will limit the range and depth of the research, Brannen (2005) calls for greater convergence between both in order to create enhanced understanding of the research questions. Further research strengthens this dispute by arguing that mixed methodologies reduce the likelihood of research becoming subjective and objective (Denscombe, 2008). Creswell, Klassen, Plano Clark, and Smith (2011) mention that there are many definitions of mixed methods, and provide an elaborate description by saying how mixed methods is an approach that focuses on research questions and hypotheses that signify an applied contextual understanding. Mixed methods are achieved by engaging in comprehensive quantitative assessments in order to evaluate frequencies of traditionally large samples, while qualitative research explores meaning and understanding of constructs.

Rossmann and Wilson (1985) mention that the ‘paradigm war’ between qualitative and quantitative researchers lead to the creation of a methodological continuum; on opposite ends lie the ‘purists’ and ‘pragmatists’, while in the middle lies the ‘situationalists’. Although the history regarding the aforementioned war has been

said to be shrouded in a sea of “*muddledness*” (Rorty, 1991; pg. 64), the differing views of the researchers fell into any one of these three categories which relate to the perception of how well qualitative and quantitative approaches interact²⁷. According to Smith (1983), ‘purists’ would contend that, because qualitative and quantitative approaches hold different views regarding the nature of research, they are completely incompatible and should never be mixed; thus, advocating for single-method study designs. Additionally, Vidich and Shapiro (1955) mentions how ‘situationalists’ would believe that both qualitative and quantitative methodologies, despite being complimentary and valuable in their own right, are very different; suggesting that a research question will need to be answered by using either one or the other methodology. In stark contrast, pragmatists argue that the questions being asked should be the driving force behind the methodologies used within a research project (Miles & Huberman, 1984).

Fully endorsing the pragmatic philosophy, Onwuegbuzie (2002) highlight the flaws in the purist and situationalist approaches by, not only claiming that their view of science is skewed by the concept of objective verification, but how some research decisions are made throughout the research process. Onwuegbuzie and Leech (2005) mention that the vast majority of measures and tests used within the social sciences are never 100% reliable²⁸; it could be argued that failing to achieve 100% reliability in a study would imply some level of subjectivity when it comes to interpreting the results. Armed with this understanding, Onwuegbuzie and Leech (2005) mention the formula “*Subjectivity + Objectivity = Subjectivity*” (pg. 377), suggesting that objectivity does exist in the social sciences.

Pragmatic approaches are traditionally determined by answering exploratory based questions, such as ‘what is happening?’ combined with the explanatory approach of ‘and why is it happening?’ (Frost, 2011). Strengths of these approaches are the immersive nature of the research, not only because of the theory building design, but for

²⁷ It is possible that a significant contribution to this ‘*muddle*’ is the lack of epistemological and ontological thought. Addressing the context and purpose of selecting a research methodology and design is essential; allowing future researchers to understand where the research decisions came from and a rationale as to why they were made. Failing to answer this question could ultimately lead to methodological error in future replication studies as the researcher would not fully understand the limitations and restrictions in the context of the selection; this can be as simple as a paragraph highlighting ‘what works’ or ‘suggestions for future studies’.

²⁸ These confidence/reliability levels, or ‘alpha’ levels, are represented in studies by the symbol ‘ α ’. The most frequently used alpha scores are 0.05 or 0.1, signifying a 5% or 10% risk of reporting a significant difference when none exists.

allowing the researcher to know and interpret particular subtleties within the data based on observation. According to Cohen, Manion and Morrison (2013), the pragmatic stance implies the understanding of how research can give both individual and multiple versions of reality, both of which can often be subjective and objective in addition to being both scientific and humanistic. As opposed to engaging in the ‘paradigm wars’ (Gage, 1989), the pragmatist approach allows a researcher to judge the best course of practice in order to understand the most effective way to answer the research questions chosen (Feilzer, 2010). This eclectic design extrapolates principles from positivism and interpretive based epistemologies based on purpose and practicality (Johnson and Onwuegbuzie, 2004).

Creswell (2003), drawing from the work of Murphy (1990) and Cherryholmes (1992), suggest that a pragmatic research design would draw substantially from both quantitative and qualitative assumptions throughout the research process, as this provides an enhanced understanding of a research problem. Using a mixed method approach “*opens the door to multiple methods, different worldviews, and different assumptions, as well as to different forms of data collection and analysis*” (pg. 12); this would often involve the collection of various types of data simultaneously to better understand the research question. This is further emphasised by Burke-Johnson and Onwuegbuzie (2004) who advocates for methodological pluralism in order to conduct more informed and effective research in a world that is “*becoming increasingly interdisciplinary, complex, and dynamic*” (pg. 15).

According to Maxcy (2003) holding a pragmatic or pluralist research perspective can further advance knowledge because it enhances communication between researchers from differing fields, all observing similar phenomena. This approach helps provide context due to the combination of multiple perspectives. In a paper by Cornish and Gillespie (2009) that reviews the use of pragmatic approaches in the context of health psychology, it is mentioned how pragmatic researchers would argue against knowledge being a representation of reality, that it is instead a tool for action. Cornish and Gillespie (2009) further explain how pragmatic approaches are pluralist because they accept the various forms of competing interests and categories of knowledge. For example, disseminating a ‘tick-box’ questionnaire is often used by quantitative researchers because they provide data that is precise, can reach a large sample with relative ease, and are quick to analyse. A participant in this case would

read the question, and then tick the appropriate answer that reflects their attitude towards the particular research question. Assuming in this case that a simple ‘yes’ or ‘no’ questionnaire was given, rather than a Likert scale, the researcher would be able to determine the consensus regarding the question that was asked. Consider, in an educational context, that a principal was curious as to how effective the school was at dealing with issues of bullying. A questionnaire is then sent to the parents or guardians of each pupil asking “Does the school effectively deal with bullying?”.²⁹ It would be natural for some parents to tick either ‘yes’ or ‘no’ depending, obviously, on whether the school was ‘effective at dealing with bullying’. However, there is a key issue here. When the principal (assuming the role of a ‘purist’, mono-methodological researcher) receives all of the responses only the responses that are ticked would be observed regardless of any other item of information on the page. Even if a parent or guardian ticked ‘no’ and explained that “I ticked no because my child was never bullied and therefore I never had any dealings with the school with regards to bullying”. While ticking ‘no’, this answer does not actually mean ‘no’. Morgan (2007) suggests that choosing to ignore all of the information provided throughout the data collection process would result in a severely unreliable dataset.

The quest of deciding on a particular research model, one that will allow a researcher to accurately address epistemological anxieties, can be difficult. Within the case of this current study, the direction prior to the completion of Chapter 4 was still unknown. The pragmatic position, for example, acknowledges how a research topic question may have a wide range of possible explanations. This suggests that the adoption of a mixed method focus a researcher could apply qualitative methods to explore possible explanations and then use quantitative methods to support (Feilzer, 2010). In agreement, Feilzer (2010) mentions that;

“pragmatism is a commitment to uncertainty ... [and] this commitment to uncertainty is different from philosophical skepticism saying that we cannot know anything but an appreciation that relationships, structures and events that follow stable patterns are open to shifts and changes dependent on precarious and unpredictable occurrences and events” (pg. 14).

²⁹ There is the added assumption here of whether the researcher developed the questionnaire while taking into account the range of factors involved in designing a questionnaire or survey, such as the purpose of this questionnaire, whether the language is appropriate for the respondents, whether the right questions being asked, will the respondents understand what is meant by ‘effective’, will a simple ‘yes/no’ questionnaire fulfil the purpose of the research, etc.

Pragmatic researchers are led by the research, not the other way around; tying with the constructivist grounded theory model by emphasising the need for a researcher to be flexible and adapt to changes that is guided by the data.

Denscombe (2008) mentions that the design of a methodology, that combines both quantitative and qualitative methods, increases the accuracy of data by allowing the researcher to discover a more accurate account of the research environment. The attraction of attaining depth and breadth within studies has been mentioned by researchers such as Creswell and Tashakkori (2007), who suggested that there are four aspects of mixed method research: methods, methodologies, paradigms, and practice. This form of methodological eclecticism (Hammersley, 1996) is widely used but it is also recognised how there are also cases where one method alone is most appropriate. The rationale of adopting the constructivist grounded theory approach is similar to the suggestion made by Johnson, Onwuegbuzie, & Turner (2007), who mentioned that a study that allows ‘methodological pluralism’ rather than calling for one paradigm is much more reflective of the environment under study. Yin (2006) supports this statement by claiming how a ‘tight integration’ of quantitative and qualitative methodologies within all stages of research will lead to stronger and explanative research findings.

Further researchers suggest that an applied and reflective process for research design is necessary in order to be mindful of the philosophical assumptions that underpin the environment involved in the research (Greene, 2008). The first is unearthing the environment; how it is understood and how it functions. Once this process is complete the researcher can then effectively understand and rationalise the purpose of using either quantitative, qualitative, or a mix of both. The next step is a process of enquiry which provides a linear justification supporting the decisions within the research process. The information attained within these steps allow for research questions to evolve in line with the demands and perceptions of the research environment. Although the several studies above mention how integrating quantitative and qualitative design is most useful (Feilzer, 2010), the exploratory nature of research is somewhat limited within the short timescale of a Ph.D. Therefore, clear and concise research questions will allow a researcher to tailor methodologies that will answer a question. Additional questions will undoubtedly be raised but understanding which questions to answer

within this timescale is a key skill that will be developed. Green's (2008) design reflects guidelines for practice which refer to how each form of quantitative and qualitative method is integrated in order to study the phenomena in question and socio-political commitment. Subsequently, referring to who benefits from this research being carried out, the work of Teddlie and Tashakkori (2006) will be placed between these steps. Using Teddlie and Tashakkori's (2006) design provides a series of steps which efficiently provides a plan for conducting effective research. The first step is to determine whether the research questions, which were identified under Green's (2008) initial steps, will be most effectively answered using a single or mixed method design. If a single method design is chosen, the researcher will then apply the chosen framework and then conduct the research. However, if mixed method research is chosen, the researcher must understand how there are multiple mixed method research designs, selecting the most appropriate for the particular study.

4.3. The Influence of the 'Paradigm Wars'

Howe (1988) suggests that integrating methodological approaches allows one problem to be observed from multiple perspectives, incorporating confirmatory and exploratory styles of analyses. Adopting both a qualitative and quantitative approach to research combines elements from both strands to develop new insights from research questions and hypotheses that quantitative or qualitative methods alone would be unable (Lingard, Albert, & Levinson, 2008). Further mentioned by Greene (2008), there are many ways of conducting social research and using a single approach will shroud the research assumptions by yielding partial understandings of the research topic.

Overlooking the safety of an epistemological foundation and using a pragmatic approach adapts philosophical techniques that best fit a research project (Richardson, 1996). A pragmatic researcher uses available resources, both qualitative and quantitative, to fully challenge a research question. A provocative (and enlightening) paper by Saldana (2014) talks about how researchers who;

“proudly call themselves a “post-structuralist” or “critical theorist” or some other fancy five-dollar Term... make a life's work out of studyin' that stuff... kinda limits who you are and what you can accomplish” (pg. 977).

Although Saldana (2014) is writing about qualitative method approaches, it is still very much applicable to the entire research process. It is the opinion of this researcher that

being mindful and open towards using the most appropriate methodological approach will produce the most reliable data. If this means that a researcher must combine multiple approaches, once the rationale is supported, it must be done. Because mixed methodologies function on the premise that a research environment is impossible to interpret from solely a quantitative or qualitative view (Leech & Onwuegbuzie, 2009), another approach that is used is the Multilevel Mixed Method Design. This approach involves the integration of phases into research followed by analyses to answer the research questions. This process involves the collection, analysis, and interpretation of data within a single study or series of studies to investigate the same problem from more than one perspective. While some papers show that this design is more popular in health related research studies (Palinkas, Aarons, Horwitz, Chamberlain, Hurlburt, & Landsverk, 2011), Jones-Moore (2011) used a multilevel design in order to observe the perceptions of third, fourth, and fifth grade teachers' and their role in teaching literacy in the curriculum, focusing on science and social studies.

The design used within this study is similar to that of the 'Sequential Mixed Methods'. Under this design, a researcher would typically use either a qualitative or quantitative approach in a one after the other (Teddlie & Tashakkori, 2009), creating a series of sequential research steps where findings from the first strand of data, quantitative or qualitative in nature, inform the subsequent strands of data collection. Creswell *et al.*, (2011) mentions that this approach is more popular among the health sciences, where qualitative data is used to explain the working dynamic and mechanism underlying the findings within quantitative results. Creswell *et al.*, (2011) uses the example of how the quantitative results of a quality-of-life scale distributed among a particular population could be better explained by conducting a follow-up qualitative study to understand the context of the responses within the scale. Research by Krohwinkel- Karlsson (2013) used a sequential design to understand the reasons behind delays in a multi-project organisation.

4.4. Sequential-Exploratory Design³⁰

According to Saunders-Lewis and Thornhill (2007), an exploratory research design is usually adopted in studies for the purpose of understanding of particular situations. Although the sample sizes tend to be slightly smaller, the focus of this methodology is to gain insight into the working dynamics under observation and to determine what methods are best suited for further studies. Other researchers have mentioned how this design is particularly useful for initial research projects as it uncovers a wealth of avenues that could be ‘explored’ in further studies (Singh, 2007). The Sequential-Exploratory (SE) design, as described by Creswell and Clark (2011), first begins with a qualitative data collection procedure and then, building upon the findings of this phase, will conduct a quantitative phase to confirm the findings of the first phase. In other words, the SE design is a two phased methodology that begins with an exploratory analysis of qualitative data and is supported with quantitative data in the second phase. This particular approach has been used under different pseudo-names such as the ‘instrument development’ design (Creswell, Fetters, & Ivankova, 2004) or the ‘quantitative follow-up’ design (Morgan, 1998) due to the intuitive and adaptive nature of the design; it allows for the development of tools that accurately measure the topic under study. Of interest in this research is the checklist provided by Creswell and Clark (2011) that is used when a researcher believes an SE approach is best suited to assess and explore phenomena:

- When the research problem is more qualitatively oriented,
- When the researcher is unsure what constructs are important to study; and/or relevant quantitative instruments are not readily available,
- When the time is available to conduct the research in phases,
- When resources are limited, and a design is needed where only one type of data is being collected and analysed at a time,
- When there are research questions based on qualitative results that cannot be answered with qualitative data alone.

(adapted from pg. 87)

³⁰ At the beginning of this project the methodological approach assumed, while still of a pragmatic nature, was a combination of Grounded Theory and Action Research; this has changed. Following the ‘Continuation Interview’ for this project, the methodology was reviewed in order to establish “*a clear focus for the study and [inclusion of] a defined methodology*”. The Continuation form is included in the appendices.

Creswell and Clarke (2011) continue to mention that the qualitative component of the research is usually the more dominant under this design; also providing a four step guideline for using this methodology in practice. Starting with qualitative data collection and analysis, a researcher is required to explore the phenomena using only the data that is provided. Building upon the findings of the previous step, an instrument is developed which is designed to test the variables that have been proposed within the first step. This instrument is then disseminated to a new sample, independent from the previous, to explore the relationships, meanings, and understanding between the qualitative themes and quantitative findings. The final step is to interpret the way in which the results can support and/or enrich the initial qualitative findings.

4.4.1. Ecological Influences

Upon reflection of the checklist proposed by Creswell and Clarke (2011), the SE design would fit the purpose of this research; however, there is still an element missing, of which one further checklist will address;

- The research must be carried out in a real-life educational setting.
- Because learning and education is a function of forces, the study of relationships and interaction between these forces are necessary.
- Matching subjective characteristics or other factors will aid in the study of contrasting environments, which will uncover confounding influences that are critical to the understanding of influence.

(adapted from Bronfenbrenner, 1976; pg. 5)

As mentioned in Chapter 2, the subjective nature of the individual and systematic nature of education is one reason why the ecological perspective is an important factor of this research methodology. For example, within an educational setting, individuals are influenced by a wide range of systems ranging from the interpersonal classroom behaviours to the curriculum that is being taught. Bronfenbrenner (1977) explains that “in order to understand the relation between the developing person and some aspect of his or her environment, try to budge one, and see what happens to the other” (pg. 518)³¹. It is the opinion of this researcher that the concept and understanding of how

³¹ As a psychologist, my initial view of this research was to group individuals together in order to make sense of particular variables and how one variable may be related to another – I was wrong. In

each classroom is an entirely separate ecosystem. Although in support of this concept, van Petegem, Creemers, Rossel and Aelterman (2005) describe the classroom as being a microsystem comprised of differing interpersonal relationships that are perceived differently by the individuals themselves. However, there is not much explanation as to why this approach was taken, or how it is taken.

Based on previous work by Farmer and Farmer (1999), who utilised Bronfenbrenner's (1979) framework to detail how a school is a social ecology, Motoca, Farmer, Hamm, Byun, Lee *et al.* (2014) explains that "*experimental research limits or statistically controls ecological factors ... teaching requires being responsive to real-world conditions and constraints that shape the activities of the classroom and students*" (pg. 120). Neglecting to treat the classroom as an individual ecosystem is a limitation. According to Motoca *et al.* (2014), on a daily basis, both students and teachers experience a number of microsystems that they are required to adapt to. Although this concept is easier to understand (or comprehend) when thinking of a secondary school setting, it is still very much fitting to a primary school setting³². Therefore, the microsystem(s) in this case is the class or staff room(s), the direct interactions with parents, or collaborations with other teachers, etc. The mesosystem involves the way in which the various microsystems communicate and interacts within each setting; such as the communication and interactions between several classrooms. It is also mentioned that at this level, the interaction with individuals outside of the school setting, such as interactions with the community, is also an important feature of this system.

The exosystem, according to Bronfenbrenner (1994), relates to the processes that take place between two or more settings, where one of which does not directly involve the individual; such as the workplace of students' parents. With the microsystem being the classroom (Figure 4), Motoca *et al.* (2014) explains that the exosystem concerns the incorporation of "*policies, guidelines, and the use of resources that impact and are*

understanding the Bronfenbrennerian ecological theory, each classroom is a completely separate ecosystem; made up of individuals that are influenced by additional systems. It would be wrong to assume any two teachers or students are identical with respect to subjective characteristics because these characteristics are exactly that – subjective.

³² I am reminded of how in one of the schools where I teach computers to a class of 27 female students aged between 10-11. The class would often erupt into laughter and discussion and, while I would be aware that the discussion is on-task, the teacher would mention that "*the girls are usually very well behaved in class, but somehow when they sit in here [the computer room] they change*" - in understanding the ecology and the behaviour, the students are adapting to another system.

impacted by what happens in the classroom” (pg. 120). In other words, this level contains the non-direct of the school ecology and how this impacts the students and teachers (such as anti-bullying policies, for example). The last feature of Motoca *et al*’s (2014) ecological approach, the macrosystem, refers to the “*culture in which the school is embedded and involves the paradigms, practices, and general blueprints for these nested systems*” (pg. 120).

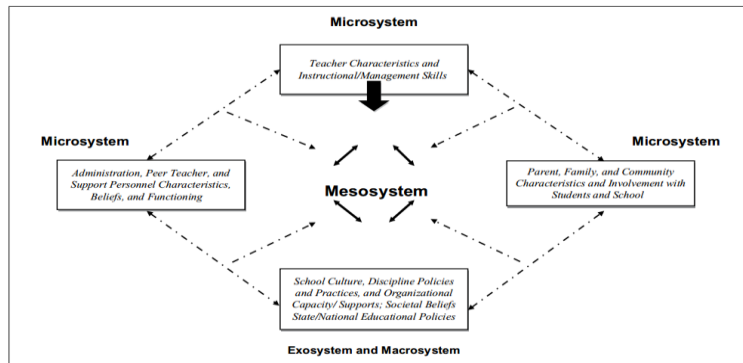


Figure 4; Classroom Ecology (Motoca et al, 2014; pg. 121)

4.4.2. Implication of the ‘Paradigm Wars’

Taking the understanding of ecological subjectivity, the initial phase of research inquiry needs to be broad; it would also need to involve data and observations from a range of points in order to accurately take into account the levels of variability in demographic characteristics. Assuming, of course, that this data is available, the next phase would require the development of an instrument that measures the phenomena that was found in the first phase followed by an analysis of the findings from both phases. Greene, Caracelli, and Graham (1989) mention that the primary purpose of an SE design is to extrapolate the findings from the initial data collection phase meaningful by comparing it to a second data collection phase. It would appear that comparing individual classrooms without an understanding or acknowledgement of the various influences to the classroom (meso, exo, macro), is a monumental limitation in educational research. It also seems that, upon acknowledgement of the existence of influences, ‘comparing’ microsystems become a process of ‘triangulating phenomena within microsystems’.

Interestingly, the concept of ‘triangulation’ refers to the process of obtaining an accurate representation of phenomena through the collection and interpretation of data from a combination of multiple research methods or sources (Polit & Hungler, 1999). Several researchers, such as Klein and Olbrecht (2011), mention that the power of triangulation allows a researcher to identify unknown or unforeseen phenomena. Through the integration of other points of view into a study, it is more likely to produce particular insights that would initially have been impossible to interpret. Taking the

above example of a school principal asking parents how effectively the school deals with issues of bullying, the (fictional) questionnaire was sent to parents who reported that school was not effective at dealing with bullying, but when taking the qualitative notes into account it was discovered that one parent mentioned never being in a situation where it was needed. However, if a questionnaire was also given to the child of this parent, the child reports ‘no’, this could signify a lack of communication between the child and the parent. By increasing the sample in a school, the principal would gain a much better view into much factors associated with the question asked; the principal would be more likely to identify potential issues, and where the issues exist. For this reason, triangulation allows a researcher to develop new research avenues that lead to a more concise understanding of the research topic. The differing opinions from a wide range of individuals, all in related but unique positions, give data points that allow the researcher to cross-reference and support the obtained data; thus, eliminating the likelihood of reporting a significant finding when there is none.

Research by Foss and Ellefsen (2002) supported the use of triangulation within mixed methods research from a nursing perspective. It is reported that nursing research needs to be anchored in epistemological diversity in order to account for the complexity of nursing practice; triangulating multiple sources gives this anchor. It is further mentioned how researchers should embrace the experiences perceived throughout this process, arguing that;

“these experiences should be used to discuss how the results are anchored in the real world and to argue the relevance of the results for practical use in improving health services. It is a banal although sometimes forgotten fact that research does not rest on some magic or obscure formula that is fundamentally different from common logic and reason” (pg. 247)³³.

The field of education is similar in this regard, as it encompasses a wide array of professionals with differing opinions and perspectives on what is the most important feature of educational research; even defining education could differ depending on who is asked. The use of triangulation is therefore considered a key component in the case of

³³ It is also worthy of note that Foss and Ellefsen (2002) continue to mention that it is necessary to mention how it is important to make reference to how the additional data comes from a differing methodological perspective; so there is “no risk of presenting some sort of epistemological porridge” (pg. 247).

this current research. It is envisaged that the Sequential-Exploratory design mentioned above could be further supported by the supporting feature of triangulation; this polymerisation would then lead to the development of the ‘Sequential-Exploratory-Triangulation’ design.

4.5. Applicability of Grounded Theory

The purpose of grounded theory (GT) is to understand various social phenomena discovered through the systematic analysis of gathered data (Glaser & Strauss, 1967). Used to study interactions or experiences within social settings, Lingard, Albert & Levinson (2008) mentions that researchers would, ideally, approach a study with no background assumptions, or having knowledge of relevant key papers. In practice, however, it is envisioned that the cyclical nature of grounded theory means that data is collected and analysed in phases, with each phase of analysis informing the next (Kennedy & Lingard, 2006). The purpose of this process is to continuously adapt the research process in order to further disprove and strengthen the research questions and theories under study. Star (2007) suggests how grounded theory makes the work and practices that go unnoticed better identified as it asks individuals about current practices and what outcomes individuals have in mind. Charmaz’s (2008) perspective of grounded theory is that “*few grounded theory studies build theory, but many provide an analytic handle on a specific experience*” (pg. 401). This understanding, proposed by Charmaz, is vital to the rationale of using an approach, such as GT, in this current study; it signifies that the researcher is aware that a theory may or may not be developed in using this methodology, but that the process in itself will provide a greater perspective on the social context of the research participants.

Despite being critically coined as an “*epistemological fairytale*” (Wacquant, 2002, pg. 1481), grounded theory has its fair share of criticism, suggesting how it acts as a label for researchers who use qualitative research which lacks analytical strategy (Hood 2007). Other critics dispute the predominantly inductive/deductive focus (Snow, Morrill, & Anderson 2003), and how researchers would often use grounded theory as a way to advance alternative approaches that have previously been established. Other critics mentioned that GT was a naïve a voyeuristic approach that was becoming increasingly intrusive in the lives of the participants involved in the research (Clough, 1992). Glaser and Strauss (1967) aim to persuade researchers to, at first, avoid

preconceptions of existing theory as the findings will emerge from the collection of the data. The argument, in this case, is how a researcher working with raw data will be able of draw conclusions and develop theories based on the researcher population. By beginning data collection, having conducted an exhaustive literature review will give expectations of what might be found; affecting the theoretical and practical relevance of the findings. The element of ‘theoretical sensitivity’ is also said to be a contradiction in ways, as a researcher has been asked to ignore pre-existing theories and also rely on personal insights (Timmermans & Tavory, 2012), although this may be a hint towards the difference between the applied and theoretical nature of research. For example, when conducting research in a school setting, asking teachers or students to complete questionnaires is difficult; teachers may be stuck for time and be unable to complete the questionnaire and students may not understand elements of the research. A psychologist with no knowledge of this school dynamic may experience frustration as a result of repeatedly explaining concepts to students, or having a limited amount of time to run an experiment. A psychologist with experience working in schools directly will understand the difficult research culture of ‘time constraints’ and ‘added workloads’ that act against participant recruitment. In these cases, the applied psychologist would innately design a study understanding (using ‘tick-the-box’ style or online questionnaires for example) and taking into account these limitations, whereas a theoretical psychologist may be entirely unaware of how a school system operates.

Timmermans and Tavory (2012) mention that, because researchers place greater emphasis on generating new theory, grounded theory should be kept similar to Peirce’s (1934) theory of abduction; suggesting that an outcome may have multiple causes. The abductive position as an overarching frame within grounded theory means that the variables within the data are possible explanations, but only through inductive and deductive reasoning can a formal theory of logic be determined. Supporting this stance, Charmaz (2009) proposes a constructivist grounded theory approach which highlights the reflexive nature of analysis as being an interactive and iterative process. Charmaz’s (2009) work argues and supports the importance of supporting findings by triangulation, using multiple methods and processes.

Writing the process of conducting grounded theory research, Simmons (2014) highlights the first step, preparation, and how it is essential for a researcher to minimise any and all preconceptions regarding a research topic. Although a general research topic

can be devised, the data obtained must dictate the problem. The second and third step of grounded theory is 'data collection and analysis'. Within these stages, quantitative and qualitative data is collected to determine particular avenues of study. These steps are an iterative cycle of collection and analysis, during which a researcher develops codes to summarise empirical content. Using a theoretical coding frame, a researcher begins to discover key variables and dimensions by focusing on coding specific dimensions related to the research topic. In doing this, the research can then conceptualise what is happening inside the data. The SET design of this project could very well borrow core components from grounded theory; ensuring the researcher holds no pre-established bias or assumptions, and the cyclical nature of the research process. While yes, the SET design involves two main phases of data collection (qualitative followed by quantitative), the absorption of grounded theory could secure a rationale for additional phases of data collection if required; this could be done by harnessing pre-existing data in a process of triangulation.

4.5.1. Learning from Grounded Theory

Wieringa and Morali (2012) argue the difficulty of developing 'real world' interventions in a setting that does not correlate with the setting of the proposed intervention. Applying this argument to this research suggests that developing an intervention within the environment which it will be used, is far superior than applying lab based projects to 'real world' environments. Using a software development analogy, reflecting on research methodological practice encourages 'real world' beta testing, encouraging an initial design process to be regularly evaluated first under idealised conditions, while gradually scaling up into conditions of practice (Kuppers, 1978). This cyclic process allows the researcher to monitor and evaluate initial behaviours and experiences in order to increase significance without surrendering consistency. Wieringa and Morali (2012) support this model, stating that new treatments are first tested in safe, artificial conditions, after which the context is scaled up to more realistic conditions of practice involving constant revaluation and processing.

Dick (2007) suggests how the process of self and research reflective processes can enhance theory development by adopting the analytical interpretations of grounded theory. In an earlier publication, Dick (2003) highlighted how reflective research is action oriented, incorporating a somewhat participative position with individuals involved in the research. With grounded theory research involves a researcher

theorising while engaging in multiple research procedures, the reflective nature provides an iterative approach that can increase a researchers' understanding of an environment as the study progresses and, at the same time, a procedure can be adapted to deduce causes of specific issues. According to Campbell and Huxman (2003), building theory is one of the main challenges within action research. Although speaking about action research, Dick (2007) argues how action research can benefit from grounded theory through rigour and systematises analysis. Proposing the use of action research as a type of meta-methodology, Dick (2003) suggests that the methodology used for collection and analysis can be adapted and changed using the integrative cycles of research.

The purpose of scientific research to develop human society by providing a deeper understanding of the natural world; many academics, such as Auriol, Misu and Freeman (2013), highlight the importance of Ph.D. or Doctoral research in relation to advancing society through their unique contribution to knowledge. Research conducted by Waas, Verbruggen and Wright (2010) mention that, because higher educational research institutions hold a large responsibility to contribute, researchers should view research as a vital response to the happenings of society rather than a mere exercise in academic discourse. By investigating the dynamics of university based research and its relationship to the sustainable advancement of human development, Waas *et al.* (2010) acknowledges a need for new ways of research practice and develops a list of characteristics designed to be a terms of reference for sustainable development orientated research. The reason for mentioning this particular study is twofold; first, it highlights the need for using adaptive methods in developing sustainable research; second, the methodological approach integrated grounded theory with action research. By using action research to focus on practice and then grounded theory to develop meaning, Wass *et al.* (2010) carried out a four phased explorative study; the first involved a thorough literature review; the second involved an analysis on documents in the field of Sustainable and Higher Education; the third was a workshop designed to gather detailed information regarding the perceptions of sustainable development characteristics and; the fourth involved integrating the characteristics derived from the previous phases to develop theory and enhance policy. Morris (2000) argues how a cyclical research process allows a researcher to get to the “*essence of the core issues or problems*” because they are identified by the stages in the research, making the “*action*

generated by the research more likely to penetrate the nucleus of the problem and bring forth more lucrative solutions for all concerned” (pg. 18).

Simmons and Gregory (2004) found how it encourages researchers to resist focusing on what “*ought to be*” and instead look at “*what is*” (pg. 91). The difference in using the grounded theory approach is that allows a researcher to ask questions, through the use of coding, from the very start of a research process in order to better understand what the data implies. Charmaz (2012) identifies the various questions the researchers are encouraged to ask while engaging in the research process;

- “What is this data a study of?” (Glaser, 1978, pg. 57; Glaser and Strauss, 1967),
- “What do the data suggest? Pronounce? Assume?” (Charmaz, 2006, pg. 47),
- “From whose point of view?” (Charmaz, 2006, pg. 47),
- What theoretical category does this datum indicate? (Glaser, 1978),
- When, how, and with what consequences are participants acting? (Corbin & Strauss, 2008),

(Taken from Charmaz, 2012, pg. 5)

In the division of GT’s creators Glaser³⁴ and Strauss³⁵, other ‘flavours’ of GT were developed (Morse, Stern, Corbin, Bowers, Clarke, & Charmaz, 2009). These agreed with some of GT’s critics of how ‘researchers using GT construct the process of study’ (Danermark, Ekström, Jakobsen, & Karlsson, 2002), but explained how these constructions “*occur under pre-existing structural conditions, [that] arise in emergent situations and are influenced by the researcher’s perspectives, privileges, positions, interactions, and geographical locations*” (Charmaz, 2009; pg. 130). Similarly, Corbin and Strauss (2008) mention that individuals give “*meaning to events in light of his or her own biography or experiences, according to gender, time and place, cultural, political, religious, and professional background*” (pg. 10). It is further explained that, when an individual is watching the news on television, what he or she “*sees and hears are multiple viewpoints on the same topic with no apparent consensus ... [what is seen*

³⁴ Who maintained that generalisable theories regarding objective realities can be developed through the systematic observation of method, and that a researcher should approach inquiry without substantive knowledge (Oliver, 2011)

³⁵ Who saw the importance of participants and researchers co-creating knowledge in order to understand the contexts and meaning of individualised experiences (Oliver, 2011)

and heard is then] *filtered through the viewer's interpretation of the event based upon his or her personal history and biography*" (pg. 10). Treating the subjective experiences of an individual as another piece to the metaphorical jigsaw assists in the creation of the whole picture, but the meaning behind the completed image can only be understood (at best) when the researcher co-creates the image alongside the participants in the research.

Despite GT being developed in order to cater for the broad range of theoretical approaches and perspectives (Glaser & Strauss, 1967), an issue within the use of grounded theory (especially for a Ph.D. project), is that it has been described as being "*ontologically and epistemologically neutral*" (Breckenridge, Jones, Elliot, & Nicol, 2012; pg. 68). The reason why this is an issue is because, within the social sciences, researchers are being encouraged to clearly articulate the particular philosophical position that is guiding the research process (Grix, 2002). In support of the use of grounded theory, Holton (2007) argues that grounded theory is not necessarily ontologically and epistemologically neutral, that it is actually a general methodology that can be used under any philosophical position. Glaser (2005) explains that a researcher could adopt a positivist, realist, or post-modernist approach to grounded theory and that each is just one other way of conducting research. Regardless of the epistemological differences between each flavour of grounded theory, Bryant and Oliver (2009) state that the purpose of research is to make some form of difference and that researchers should focus more on the research itself and less on the subtle philosophical variances.

4.5.2. The Constructivist Flavour

According to Lincon and Guba (2005) social scientists focusing on methodologies would typically approach the ontologies and epistemologies from the perspective of particular paradigms; constructivist, logical-positivist, post-positivist, etc. From one end, logical-positivist researchers would strive towards understanding through a position of objectivity and view unobservable characteristics as being exactly that; unobservable (Trinder & Reynolds, 2000). On the other end of this spectrum lies the constructivist paradigms, of which, are thought of as ways in which individuals create systems for meaningful understanding of their social world and experiences (Raskin, 2002). Schawndt (1998) mentions that if an individual believes that the mind is active

in the construction of knowledge they can be considered constructivists; the constructivist researcher, then, creates concepts and models to make sense of experiences, they will continuously modify or readjust these concepts based on new experiences.

The approach and stance of this research is that of Charmaz's (2006, 2009) view of Constructivist Grounded Theory. Under both the realism and pragmatic banner, this flavour of GT "*assumes relativity, acknowledges standpoints, and advocates reflexivity ... assumes[ing] the existence of an obdurate, real world that may be interpreted in multiple ways*" (pg. 409). The constructivist epistemological stance implies that reality is constructed by individuals and the interactions they have with their social world (Appleton & King, 2002). Charmaz (2008) mentions that grounded theorists use multiple strategies in order to focus the data collection and analysis process, but the 'what', 'how', and 'why' depends on the interactions of the researcher with the data and participants in addition to their thoughts and reflections. It would appear that the use of GT is not a light research endeavour. For example, Charmaz (2008) highlight that the researcher who applies GT as a "*recipe for stamping out qualitative studies*" will be left in a position of being "*narrow and rigid*" (pg. 398) which result in findings that are superficial at best. The objectivist and constructivist applications of grounded theory side towards the realist view that "*entities exist independently of being perceived, or independently of our theories about them*" (Phillips, 1987, pg. 205); but constructivist GT's also understand that viewing these entities as a whole is difficult and often problematic.

Of the many ways the constructivist grounded theory approach differs is that it embraces the way researchers are a component of the research process; the positions they hold, perspectives they bring, and interactions they have, all combine to shape the way the research is conducted and viewed (Charmaz, 2006). Glaser and Strauss failed to address how they themselves affected the research process and that much of their published works would report 'generality' and 'objectivity' rather than 'relativity' and 'reflexivity'. According to Charmaz (2004), a researcher must become involved and immersed in such a way that it allows them to accurately tell a story about people and their interactions with social processes and situations; differing from Glaser's (2002) purpose of grounded theory being to identify and explain ongoing patterns of behaviour. Glaser's (1978) view was for grounded theory to be relevant and modifiable,

that it must fit a particular research context. Noting that few studies that use a grounded theory approach do not (always) build theory, Charmaz (2008) mentions that it does, however, provide “*an analytical handle on a specific experience*” (pg. 401), meaning that it does allow the voice of participants within a study to be heard. For this reason, Charmaz (2008) writes about how the constructivist approach is to not assume that the data creates the theory. Instead, the researcher creates the labels that categorise the theory. The researcher will interpret all of the interactions and behaviours of each individual participant (which shape the researchers approach and attitude towards the research topic). The researcher will interpret the personal perceptions and views throughout the process (which are based directly on the participants – not the literature; as no formal literature review is conducted before data collection). The researcher will also interpret the data that is collected.

4.6. The Theoretical Research Approach

Charmaz (2008) differentiates her flavour of grounded theory by offering four particular key points:

“(1) Reality is multiple, processual, and constructed – but constructed under particular conditions; (2) the research process emerges from interaction; (3) it takes into account the researcher’s potentiality, as well as that of the research participants; (4) the researcher and researched co-construct the data – data are a product of the research process, not simply observed objects of it” (emphasis in original; pg. 402).

This is something that is felt to be the most relevant and applicable to this current Ph.D. project. The constructivist grounded theory approach gives an overarching framework and provides structure to this research project in dealing with particular data points. However, to give context and further understand the various influences that may affect each individual participant, adopting an ecological approach to the constructivist philosophy would further strengthen the researchers’ perspective and views. Essentially, the constructivist grounded theorist places the highest value on (1) the participants, then (2) the data, and then (3) the researcher’s personal views and perspectives. The problem with this particular approach is that there is no way of understanding the context in which the research is taking place unless a participant mentions this throughout the research process. Glaser (2001) alludes to this particular

issue by mentioning that grounded theory “comes from data, but does not describe the data from which it emerges” (pg. 4). It is felt that the constructivist grounded theory researcher who adopts the realist stance will view the results in accordance to the data itself; while somewhat similarly, the pragmatic researcher will view the results in the context of the research environment. The pragmatic concept of having a commitment to uncertainty (Feilzer, 2010) does not in any way indicate a sense of disillusionment; though many critics would most likely take this interpretation. Within this Ph.D. project, the pragmatic position means to approach each finding with the understanding that because “all human knowledge is uncertain, inexact, and partial” (Russell, 1948; pg. 527) one must find ways of understanding the context and meaning behind the data.

As the stance of this researcher is that of a pragmatist, using a constructivist grounded theory methodology, the use of an ecological element to both qualitative and quantitative data, the following framework is proposed; ‘Sequential-Exploratory-Triangulation’ (SET Grounded Theory).

4.6.1. Sequential-Exploratory-Triangulation

The development of a theory that accurately explains the sources of a societal issue is essential, any action not directly related to the context of the research environment will cause the data to become misaligned, and any attempts to change the environment will be unsuccessful (Glaser, 1994). According to Simmons and Gregory (2005), one of the reasons why attempts to resolve societal problems fail is due to a lack of research sophistication and detail.

This is caused as a result of a researcher not fully understanding the importance of generating an explanatory theory grounded in the context of the research resulting in a focus on what ‘ought to be’ as opposed to discovering ‘what is’. One of the issues with the supporting studies above is

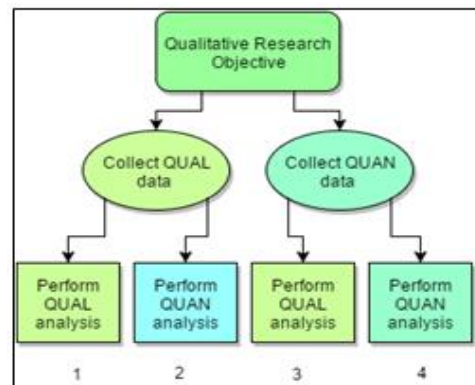


Figure 5; Qualitative Research Objective

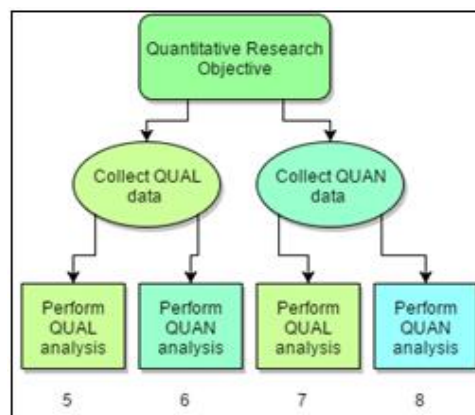


Figure 6; Quantitative Research Objective

concerned with how the nature of using a grounded approach is to eliminate, as much as possible, all preconceptions.

Carrying out a thorough literature review before understanding the research environment could encourage a researcher to develop an opinion based on the findings of other studies before understanding the context of the environment under study. It is the opinion of this researcher that seeking to understanding the environment is the most important first step of any research project. Hanson, Creswell, Clark, Putsch, and Creswell (2005) mention how, in using a SE design, the first procedural notation begins with a qualitative or quantitative driven study followed by a quantitative or qualitative data collection; written as QUAN → QUAL, or QUAL → QUAN. This is similar to the Tashakkori and Teddlie’s (1998) typology of mixed-model design strategy (Fig 2, and Fig 3); under this model, a researcher must determine which route to follow to adequately address the research objective. As seen, ‘Label 1’ is fully qualitative with ‘Label 8’ being fully quantitative, with the remaining being various iterations of methods; the purpose of this is to create a specific design in accordance to the initial availability of data. The first step in the SET model (Fig 7), is to use both qualitative and quantitative methods to extrapolate meaning from the research environment. This allows the use of both

types in sequence to triangulate data and make meaning of information. Because, as mentioned above, the exploratory nature of research is limited when timescales are considered, clear and concise research questions allow a researcher to tailor methodologies that will most effectively answer a question.

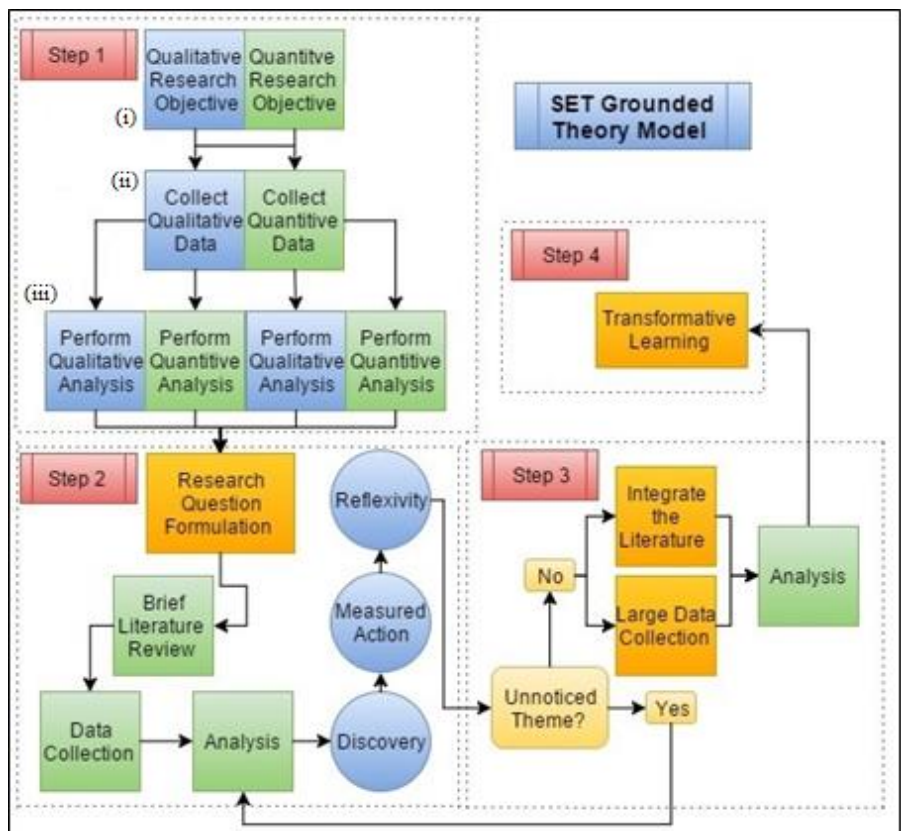


Figure 7; SET Grounded Theory Model

This means how an overarching research project can be used according to this model, as can smaller scale studies.

While Johnson and Onwuegbuzie (2005) provide eight steps for the process of conducting a mixed method research project³⁶, this researcher would argue for the necessity of understanding the research environment prior to formulating the research question. This is not to assume that understanding the environment and formulating the research question are two isolated processes; instead, they are highly inter-relatable. In other words, the process of identifying the environment will lead to the creation of research questions, with the second step being to express these questions further:

4.6.4.1. Step 1 - Environmental Understanding;

Traditionally, a researcher would begin a project with an established set of understandings or beliefs. These preconceptions were developed based on self-observation, previous studies, or mainstream theoretical ‘norms’. On one hand, a researcher must acknowledge what is currently known about a topic; but only to a certain degree. Glaser (1999) mentions that researchers must study the problems that exist, not to study the problems that professionals say are important. It is, therefore, essential to minimise any and all preconceptions by casting aside these understandings for later comparison, a researcher will draw out various problems regarding the overarching research topic. The studies that have been cast aside will have focused on particular aspects or populations they may un-generalisable to the population under study by the researcher.

By using a deviation of Tashakkori and Teddlie’s (1998) typology, the purpose of the first step is to find a way of understanding the research environment that is currently under study. Being primarily desk based, the data obtained within this step, taking the form of either quantitative or qualitative, is dependent on the area under research. In practice, to identify the objective of the study, **Step 1** involves the review of data sources to ascertain possible avenues of research. The first action of this step is to identify a research area or topic of focus that the researcher is expecting to review. In carrying out this task, the researcher will gather qualitative (marked blue) or

³⁶ (1) determine the research question, (2) determine whether a mixed design is appropriate, (3) select the research design, (4) collect the data, (5) analyse the data, (6) interpret the data, (7) legitimate the data, (8) draw conclusions.

quantitative (marked green) data, and perform a broad analysis with the aim of identifying a series of themes that the researcher can use to direct their research. The initial data selected must be explicitly identified by highlighting the choice made in (i). Having identified and analysed data in task (i), the researcher must then supplement this analysis by actively collecting data through task (ii), and carrying out analysis based on the position of falsification. Again, the researcher must explicitly identify whether the data gathered in this action is either qualitative or quantitative by highlighting the choice made. Within the final action of Step 1, action (iii) involves applying the findings of (i) and (ii) to available national datasets. The purpose of action (iii) is to reflect on the findings made with the aim of identifying ecological factors that may be influencing the research area. Akin to the previous actions, the researcher must explicitly identify whether the data gathered in this action is either qualitative or quantitative by highlighting the choice made.

4.6.4.2. *Step 2 –Research Question Formulation, Pilot, and Memo;*

○ *Research Question Formulation*

The nature and unique approach to this type of analysis will undoubtedly have uncovered a large number of research avenues; it is therefore essential to select the best direction of the research by formulating the research question(s). The way of completing this task is through a process of purposive sampling in order to triangulate and secure the findings of the previous step. Although this is a time consuming process, it is vital to identify and consolidate hypotheses that may have been developed while also remaining unbiased. This process of purposive sampling is a reminder that, while it is possible for the researcher to have a broad knowledge of the topic under study, the selected individuals will bring many years' practical experience to the datasets. Understanding that other individuals will most likely have a much greater knowledge is essential in order for the research to develop.

Jung (1966) once wrote about becoming familiar with a wide range of subject matters in order to allow for a more sustainable growth of knowledge. As the researcher within this current project is trained as a psychologist, it is thought that the inclusion of the experiences and thoughts of individuals from a wider range of disciplines will get a better glimpse of this research topic. To further explain, the participants within this study, as each come from differing backgrounds and experiences, are all viewed as, in

Vygotskian terms, a ‘More Knowledgeable Other’. From a research perspective, it is essential to consider the information at hand and acknowledge when an individual or group can provide a greater insight into a topic. Whilst also going through this step, further analysis of the purposive sample interviews from the previous step will act as a guide to assist in the formulation of the research questions. The depth of the interviews will undoubtedly have enhanced the understanding of the researcher on a practical level; in the case of this current study, interviewing principals for example would highlight policies or procedures, the culture or ethos of a school and how that could influence the staff or students within a school.

○ *Pilot*

Once the research questions have been proposed, a researcher will begin a brief review of the literature with the intent of identifying the most appropriate scales, inventories or questionnaires that can answer the formulated research questions. By only focusing on methodological and key findings of studies, the researcher will be able to highlight key components of what is currently known about the research topic and allow the researcher to select the methodologies based on what has been used previously. Once the main measures have been sourced, the researcher will develop an instrument in order to test the research questions, and then identify a methodological sampling strategy that will best answer the formulated questions. At this stage, the researcher will include information regarding the sample, such as the demographics of participants and recruitment strategies.

Within this research, an opportunistic sampling strategy has been adopted. Patton (2002) explains that, under this sampling strategy, a researcher will take advantage of opportunities as they arise in the research and will add to the sample in order to address limitations and oversights of the recruited sample. For example, if a researcher was conducting a study on technology use and decides to do this by using an online survey, it is possible that only participants interested or proficient in technology will partake in the research. While the findings may be interesting, they will not get the full perspective of a representative sample. Suri (2011) explains that this sampling strategy is a useful technique for the combination and identification of research questions at an exploratory level, especially when the research is at an exploratory stage. It is also suggested that this strategy can be advantageous when the researcher “*does not have an emic or insider status in the relevant field of research*” (pg. 8). Once

the data methodology has been set, the researcher will run a pilot study in order to test the research questions, and evaluate the instrument that has been developed. Once the data has been collected, the researcher can then begin to analyse the findings. The findings of this stage supports the overall justification of the research at this point, as it shows how the proposed study will contribute to existing knowledge by using tested methodologies and reliable measures. During this process the core variables associated with the problem will be identified. The researcher will be able to decide whether the quantitative or qualitative methods need to be modified or tailored to appropriately identify what 'IS' happening as opposed to what is 'SAID' to be happening. Once the data is analysed, the researcher progresses to the next step.

- *Memo*

As mentioned above, action research is a highly cyclical and transformative that will give a researcher new insights and understanding (James, 2006a) which develops as a result of the research itself. During the analysis phase of Step 2, the core variables associated with the problem will have been identified. However, the 'discovery' step acts as a further abductive analysis in order to extract and identify what information the previous analysis failed to discover. In other words, the Step 2's analysis will have uncovered particular findings based on the sample and instrument used; this step will highlight and embrace the limitations in order to discover what the data has not yet found in relation to the research question. The 'measurable action' aspect allows the researcher to identify what tasks to address in order to commence and implement the findings of the discovery component; this feature involves the researcher, taking into account all of the procedures completed to date and how to further extend these findings by deciding on the most appropriate methodologies to address any limitations within the data. Within the 'reflexivity' component, the researcher must realise how self-reflection allows an individual to explore deeper into the research in order to review what works and what may need to be changed in order to reach a desired outcome. Once the changes (if any) have been decided, the process of data collection begins again to further filter the inner dynamics of the issue. Cohen, Manion and Morrison (2013) argue that the purpose of reflection and reflexivity accounts for the fact that the researcher is a part of the social world within the topic of study; giving a researcher an awareness of possible bias within the project. Hall (1996) further explains that reflection is vital because it draws upon the various data components collected in order

to ensure that the construction of knowledge is; (i) accurately reflecting the authentic experiences of the research participants, that (ii) there are common demographic variables shared between each of the participants, and that (iiv) the views and opinions of the researcher are treated as recessive entities in comparison to the views of the participants.

This section takes the form of a critical reflection of the researcher's work. This implies that the researcher must explain and make reference to personal notes, possible explanations, in addition to thoughts and feelings that have been acquired throughout the research process to date.

4.6.4.3. *Step 3 – Literature, Data Collection, Analysis*

Due to the reflective and highly integrative nature of Step 4, it is entirely possible for the researcher to discover a significant theme that had previously gone unnoticed within the data. As a result, the researcher must decide whether it is appropriate to proceed to step 3; if not, the researcher must review the analysis of step 2 and reiterate the process of 'Discovery, Measured Action, and Reflexivity'. Once Step 3 has begun, the researcher begins the parallel cycle of literature review integration and large scale data collection; once this is complete the researcher then begins the analysis.

The literature review in Step 3 requires the researcher to begin a focused review of the literature. Although this step may generate new ideas, the main aim is to determine whether the findings of the research are consistent with the literature. Because no exhaustive or formal literature review had previously taken place, the researcher is now able to conduct a review of the literature that is highly focused and tailored exclusively to the research project. The integrative cycles within the previous steps will have identified various headings that the researcher must address throughout the review. This step also gives the researcher the opportunity to evaluate whether the findings of this research are consistent with the available literature. Based on the findings of the previous step, the research is now able to adapt the questionnaires used or modify the sampling strategy. Because the researcher now has an enhanced understanding of key issues within the research topic, the researcher will be able to apply this knowledge into the final data collection stage. Again, at this stage, the researcher will include information regarding the sample, such as the demographics of participants and recruitment strategies; this may differ from the original pilot sample as the researcher may have decided to include or exclude a population sample or dataset.

The final analysis of this sample aims to address the findings of the study while taking into account the researchers' position within the study. Staying true to the constructivist paradigm, the core value is placed on the subjective experiences of the participants, the dataset as a whole, followed then by the researchers' views and opinions.

4.6.4.4. Step 4 - Transformative Learning;

This step acts as the formal conclusion and discussion for the project. It integrates all forms of learning throughout the individual research processes, providing direct evidence of theory development based on the gathered data. This SET methodology places a researcher into a continuous state of discovery and learning as it acknowledges how certain social research environments change over time. The learning acquired from the transformative learning process provides further justification towards the actions taken throughout the research. Because the research findings have been analysed, Simmons and Gregory (2003) mentions how further data may be collected in order to incorporating interviews, observations, or additional variables that had not been mentioned during the data collection stage. However, the purpose of the reflective components in 'Step 2' is to enhance the researcher's learning in order to tackle the multiple variables as they unfold. Because it is the moral responsibility of a researcher to share findings, collaborate, and openly assist in the development of understanding, putting a variable or finding on hold for later examination may limit the scope of findings of a current study, as what may seem as a small and insignificant variable may actually be the purpose of function.

4.6.5. Strengths and Limitations of this Framework

Not only does the SET combine elements of grounded theory and action research, it also reflects elements of other methodological designs such as sequential mixed methods or exploratory design, briefly explained above. Sequential mixed methods are more widely used in research projects opposed to concurrent approaches, as they are more appropriate when various factors, such as time, supervision or funding, are limited. A single level design is usually used in order to answer a research question by using one specific population, whereas a multi-level design is used to answer a research question by using a number of population types. Bryman (2007) suggests how a researcher that adopts an approach such as mixed methods, invariably conducts research

that offers an illumination of the field. By using qualitative and quantitative data, the researcher can become fully integrated into a project, allowing the researcher to answer research questions by drawing information from multiple sources. Cohen, Manion and Morrison (2013) provide an example asking about ‘staff turnover’ within inner-city schools. The qualitative component will allow the researcher to observe a range of issues related to turnover, and perhaps give some reasons. Then, the quantitative data would provide numerical statistics to support particular reasons, pinpointing the exact cause. In relation to the following research project, a mixed method approach is used throughout each phase of data collection and analysis. Although this process ensures effective data convergence and triangulation, producing greater insight into the research area, it is also highly time consuming. It highlights avenues of research that may not be an initial focus, but could very well be a factor that contributes to the particular focus. Some researchers may also feel that delaying the completion of a literature review as being a limitation; the rationale, however, is to encourage focus.

As previously mentioned in the opening chapter, the aim of this research is to observe the varying aspects that influence educational dynamics by focusing on key challenges and opportunities within the educational environment. Although it is envisioned that this ‘bottom up’ methodology will be useful for the purposes of this study, the key limitation is the unknown; as this framework has been constructed for this Ph.D. project and, obviously, has never been used before. This means that there is a significant risk, in a sense, as this researcher is removing the ‘comfort’ of using pre-designed methodological framework. Theoretically, the SET is an iterative and ecological design that can be used to address and further understand the various factors that may (or may not) influence a research environment under study.

4.7. Utilising the SET-GT in Practice

The practical application of the SET Grounded Theory model has been guided by the framework development mentioned throughout this chapter. It is necessary to mention that, due to the iterative nature of the proposed methodological framework, the layout of this PhD follows the traditional write-up somewhat differs from the way in which the project was conducted. There are elements of this section that were have been written in hindsight. In using the grounded theory methodology, three core research compositions were carried out that reflect the implementation of the methodology: Chapter 5 (Action

1) refers to “*The Irish Educational Macrosystem*”; Chapter 6 (Action 2) refers to “*The Irish Educational Microsystem*”; and Chapter 7 (Action 3) refers to “*A Snapshot of Educator Perception*”.

3.7.1. Study 1 - The Irish Educational Macrosystem

As explained in ‘Section 3.6.4.1’ above, the first step of this research (i) involves a review of data sources to ascertain possible avenues of research; (ii) gather data to confirm whether the research avenues uncovered are accurate; and (iii) perform an analysis on all gathered data. In the case of this current research, the typology direction is seen through figure 8. A large number of qualitative evaluations have been carried out to review the quality, efficiency and effectiveness of both

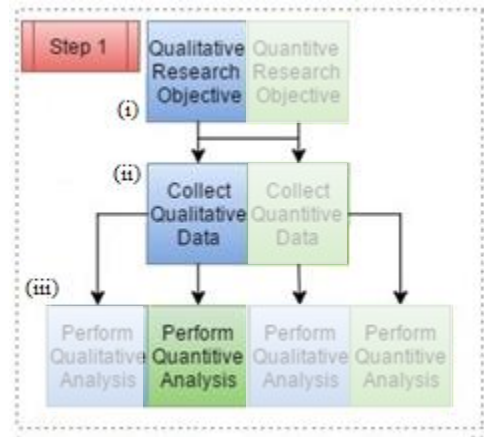


Figure 8; SET Step 1 Application

primary and post-primary schools within the Irish education system. Upon aligning with the first step in the SET methodology, the following research tasks were completed;

4.7.1.1. Action 1 – (Qualitative Research Objective)

The aim here was to compile a randomised sample of Irish Whole School Evaluations (N=59). It was decided to code Primary and Post-Primary schools separately as both educational types are not only structurally different but are designed to develop students in different ways. These documents were separated according to school type (n=39 Primary; n=20 Secondary) and then uploaded into MaxQDA (V.11) in preparation for thematic analysis. As both the primary and post-primary WSEs are divided into sections (based on strengths and recommendations) it was decided to keep these divisions to aid the coding process. The reports were randomly selected through the use of a number generator, and additional demographic information was retrieved post selection by looking through the school website online (this was done for cases when student numbers was not explicitly mentioned for example). The reports were uploaded to qualitative data analysis software (MaxQDA V.11) where an inductive thematic analysis, based on the constructivist grounded theory approach was used. Within a thematic analysis, there is no clear agreement as to how one is to be conducted (Tuckett, 2005). Arguing that coding is a process where a researcher actively labels content as

they interact with data, Charmaz (2012) explains that the GT coding approach is “*inductive, comparative, interactive, and iterative – and later – deductive*” (pg. 4). As a result, the themes were initially coded using a broad interpretive approach and later categorised based on the level of interactions between each identified theme. According to Tinsley and Weiss (2000), inter-rater agreement is essential in research as it measures the extent to which different individuals assign a value to the same theme. Within a thematic analysis, there is no clear agreement as to how one is to be conducted (Tuckett, 2005). For a start, Taylor and Ussher (2001) mention that themes rarely, if ever, ‘emerge’ from a body of data; instead, a researcher actively engages with the data to make sense of what it says. The particular approach within this project is the ‘theoretical thematic analysis’ as this method is most commonly used to analyse key components within the data. The purpose of this approach is to allow the researcher to develop research questions while coding, rather than have predetermined questions. The counterpart of ‘theoretical’ is that of the ‘inductive’ which is used to generate a vast description and give detail about the identified themes (Braun & Clarke, 2006). Using a process of open coding, the strengths and recommendations were coded using the GT interpretive approach mentioned by Charmaz (2012) to highlight key themes prevalent within the reports

4.7.1.2. *Action 2 – (Collect Qualitative Data)*

Having outlined a number of themes from the WSEs during phase 1, phase two consisted of an inter-rater evaluation process with some educational personnel (N=3). The inter-rater evaluation took the form of an interview style process where the researcher allowed each participant to critically review and give personalised interpretations of the collected data. Also, a retrospective review of social media articles (n=13) that were released concerning teaching and learning was completed. A large number of articles were discovered (N=97) but were filtered using three criteria; 1) both online tabloid and broadsheet national newspapers were chosen, 2) there must be evidence of social media sharing (Facebook and/or Twitter), and 3) they must relate to the themes identified in Phase 1.

4.7.1.3. *Action 3 – (Perform Quantitative Analysis)*

After gathering and making qualitative assumptions the next task was to then apply these findings to quantitative datasets. The purpose of this phase was to provide a quantitative element which may indicate trends or patterns that support or reject the

themes found within phase 1 and phase 2. The first of these datasets was the National Statistics published by the Department of Education and Skills (DES) from the years 2010 and 2015³⁷. During the qualitative data collection process, the student voice was not portrayed within the evaluations, for that reason, the raw datasets for the Growing Up in Ireland (GUI) survey child cohort were also acquired from the Irish Social Science Data Archive (ISSDA).

4.7.2. Study 2 - The Irish Educational Microsystem

The purpose of Chapter 6 was to identify a set of questionnaires that could be used to further develop and answer the identified research areas (section 6.5). Similar to the previous step, this research composition involved three actions:

4.7.2.1. Action 1 – Brief Literature Review

Macnaughton (2005) defines information gathered by the scientific method as a type of evidence, but differing in a way that evidence is not just information. This dual meaning refers to the way in which a researcher must attribute some form of meaning in order to make a particular judgment about phenomena. This creates a workable hypothesis in which the scientific method can be applied in order to accept or reject the hypothesis under study. Highlighted in Chapter 3, a number of factors which are believed to influence the educational environment, to the point where teaching and learning are affected, are referenced as being: (1) the Importance of Interaction, (2) the Dynamics of Individuation, and (3) the Need for Psychological Social Support. While the aforementioned themes are guiding the direction of this research, they are still broad constructs that will need to be further articulated. The purpose of this step in the SET-GT process is to evaluate the chosen research directions and formulise a series of testable hypotheses by selecting appropriate psychometrically valid questionnaires.

4.7.2.2. Action 2 – Data Collection

Having identified questionnaires considered suitable, an opportunistic sampling strategy was adopted by using digitalised questionnaires on educational staff within both Primary and Post-Primary school settings. Contact information was collected for schools (Primary, n= 3,074; Post-Primary, n= 685, and Special Schools, n=130) across

³⁷ Retrieved from <https://www.education.ie/en/Publications/Statistics/Statistical-Reports/>

the country, who were then sent a link to the online study. Through contacting the schools, it was requested for the questionnaires to be circulated throughout the staff.

4.7.2.3. *Action 3 – Analysis*

To the best of this researchers' knowledge, the scales used within this study have never been used with an Irish sample; while this stresses the importance of conducting a Cronbach Alpha, it adds a level of ambiguity with regards to research sampling strategy. Initially, this research sought to recruit teachers in both primary and secondary schools throughout Ireland. This study incorporates an ecological systems perspective, including a wide range of participants, was considered necessary to reflect the broad purpose and function of Irish education. As the pilot study found that individuals working within the broad education system (principals, support workers, etc..) participated, the decision was made to open up the research to non-teacher populations. The sampling strategies used within this research is purposive and opportunistic (detailed in section 3.6.4.2), which had been informed by the procedure used within the pilot study.

4.7.3. *Study 3 – A Snapshot of Educator Perception*

4.7.3.1. *Action 1 – Integrate Literature*

Although labelled as first, this action was conducted in parallel to the data collection action below; aligning with the tradition of grounded theory, outlined in Chapter 2. Initially difficult, the researcher is empowered to approach a topic from an objective perspective of falsification and evolution, rather than supporting data that may or may not be accurate. Arguments in support of this action have been made throughout this chapter.

4.7.3.2. *Action 2 – Data Collection*

A cross-sectional design had been adopted for this study. According to Babbie (1989), cross-sectional studies are carried out to investigate the relationships between a set of variables and an outcome by taking a cross-section of the population. Longitudinal data would provide an additional contrast to this research. However, the way in which variables were measured in the GUI and the inexplicable anomalies within the DES findings, would require an in-depth analysis and comparison that is beyond the scope of this research stage. In the case of this project, it is used in order to estimate the

prevalence of student-teacher interpersonal behaviours and the way these mediate (or are mediated by) burnout, pedagogical and technological traits, and psychological health. Levin (2006) highlights the value of cross-sectional studies; that they are economical from a time and financial perspective, can observe a wide range of outcomes, are useful for the planning of future research, and for the development of policy.

The first step in this study phase was to secure ethical approval, which had been attained from both the TCD School of Education Ethics Committee (30/07/2015) and by the TUSLA Research Ethics Committee (16/10/2015). From having conducted a pilot study and realising the limitations of only using one data collection procedure, it was decided to distribute the questionnaires in three ways (Post, Email Attachment, and Online [Qualtrics]). Using the compiled contact list of schools in Ireland, attained through educational websites (such as *SchoolDays.ie*) during the pilot research phase, the data collection process began with contacting the principals of schools (N=3,889) and School Completion Programme (SCP) coordinators (N=124) on the (October 20th, 2015) requesting that they circulate the study information to staff. The link for the study was closed on the (January 18th, 2016) but additional time was given for participants who had decided to post the questionnaires back. The principals and SCP coordinators were contacted with two versions of the measures (one attached to the email, the other was a link to a version inputted into Qualtrics). A consent form was augmented into the Qualtrics questionnaire, meaning that a participant could only continue if they agreed to participate. If participants required a postal version, they were asked to contact the researcher directly, and this would be facilitated. The student questionnaire was included in the email in addition to consent forms for teachers, parents, and students. In the cases where the researcher delivered psychology based workshops (N=17), parental and student consent was attained for each student. Post data collection, the raw data was inputted into SPSS (V.23) and MaxQDA (V.12) for further analysis.

4.7.3.3. *Action 3 – Analysis*

Both quantitative and qualitative data were collected for this study. The quantitative data was statistically analysed using SPSS (V.22) and graphs to visually display this data were created using Microsoft Excel. Due to the exploratory nature of this research, the sample was first tested to review the population distribution. According to Sheskin (2003), the shape of a sample populations' distribution will determine whether the

sample follows a set of parameters; a sample with a normal distribution will use parametric tests, while a sample following a skewed distribution will use non-parametric tests. Numerous quantitative analysis procedures were carried out within this research based on whether the hypotheses allowed for Parametric and Non-Parametric testing (these are labelled within each statistical analysis in the results section within Chapter 7). Freidlin and Gastwirth (2000) argue that the statistical power of parametric testing is stronger than that of non-parametric; as a non-parametric test does not make the assumption of whether a statistical finding is indicative of a parameter within the sample population. Additionally, Zimmerman (1994) highlights that outliers within a sample increase the likelihood of statistical errors to be reported within the data.

Within this research, nominal distributions were found within the sample population. As a result, a range of parametric testing methods are used; T-Tests, ANOVA analyses, and Pearson correlations. For example, paired samples T-Tests were conducted on each of the QTI behaviours to compare educator group differences in ‘Self-perception’ and ‘Ideal-perception’. Because this research was based on the comparison of multiple groups, between-group ANOVAs (with PostHoc tests) were conducted on the QTI behaviours, for example, to evaluate differences in self-perceptions when compared to a representative student sample. Additionally, within the ANOVA analyses, a Levene test is used to determine the homogeneity of variance. There are several instances, however, where the sample distribution is skewed. As a result, the ANOVA analyses were carried out in the same way as the parametric, but a Brown-Forsythe is used instead of the Levene as a test for robust equality of means. Spearman's Rho correlations are also used to test the direction and strength of association between variables. As mentioned by Zimmerman (1994), however, individuals that significantly deviate from the norm are likely to influence the statistical outcome.

Chapter 5: The Irish Educational Macrosystem

“You don’t seem to give much thought to the matter in hand,’ I said at last interrupting Holmes’s musical disquisition. ‘No data yet,’ he answered. ‘It is a capital mistake to theorise before you have all the evidence. It biases the judgement’” (Conan Doyle, 1903; pg. 39)

5. The Structure of Irish Education

Heick (2014) suggests that formal education is a learning tool which is led and initiated while learning itself is a process driven by curiosity and the joys of discovery. Hare (1989) writes of Plato and his six-tiered educational system associated with various life stages. For example, the first stage in Plato’s education spanned from birth to the age of seven. It was believed that children should stay with their mothers and play with peers, to attain a balanced moral education. Plato suggested the importance of care and social interaction in the psychosocial development of a child. However, the second stage spanned from the age of seven to seventeen and had the purpose of teaching a child specific disciplines such as literature, mathematics, music, and gymnastics. Plato suggested this ‘curriculum’ was important to encourage the growth of an individuals’ physical and mental aptitude, in addition to their ability to develop spiritual understanding. Plato’s additional stages, spanning from the ages of eighteen to fifty, included a range of further learning and occupational decisions based on subject specialisation and academic progression for students who show a natural ability to succeed in their learning. The later stages accounted for an individuals’ self-reflection, thoughts about personal philosophies, with the ultimate achievement of working as a member of state or commanding within the military.

Interestingly, not taking into account stage 3 which involved military conscription (although some countries do still enforce military conscription), Plato’s educational stages do somewhat resemble the modern formal educational structure proposed by the International Standard Classifications of Education (ISCED). ISCED was developed by the United Nations International Family and Social Classifications for the purpose of organising educational programmes across the United Nation member states. Although it is beyond the scope of this research to discuss the full history of education from Plato to the ISCED, as this action would be a Ph.D. in itself,

it is important to highlight the ISCED model as it can provide a guiding framework of competencies about educational development.

The structure of the modern educational system across the UN begins with '*Early Childhood Education*' (Level 0), which caters for children from birth to the age of five. Education at this level is tailored to support early cognitive, physical, and emotional development, and usually referred to as 'Play School', 'Nursery', or 'Creche'. These programs allow children to interact through tailored learning activities and prepare children for organised instruction within primary education. The environments within these programs are typically characterised as being visually stimulating, with emphasis placed on motor-skills, language ability, expression, and social skills. At the second level, '*Primary Education*' (Level 1), which caters for children from five to the age of twelve, aims to further develop student literacy and numeracy, in addition to establishing a core foundation of knowledge in areas of personal and social development. Particular educational activities encompass broad learning areas rather than specialising in particular subjects. This educational level also marks the beginning of compulsory education. The next level is known as '*Lower Secondary Education*' (Level 2) which caters for children from the age of twelve to sixteen, is designed to develop the skills and knowledge necessary for an individual to enhance their lifelong learning and human development. Within this stage, some educational institutions may develop purposive programs, such as vocational programmes which have the specific intention of teaching students the skills relevant to employment. Students are taught a subject-led curriculum by teachers with qualifications in key subject areas.

Students between the ages of sixteen and eighteen have numerous options with regards to their education. The first stage, '*Upper Secondary Education*' (Level 3) is designed to prepare students for further education, employment, or both. Students usually have a greater choice of subjects, which are further specialised and structured towards application after a student graduates from this level. The next option is termed '*Post-Secondary Non-Tertiary Education*' (Level 4) and provides learning experiences to students that builds upon the 'lower secondary education' to prepare students for employment or as a way to gain experience or requirements for Tertiary Education. It is usually between one to two years in duration. Students that have not completed Level 2 or Level 3 education can, depending on a number of circumstances, apply to participate in Level 4 education. The next stage is called '*Short-Cycle Tertiary Education*' (Level

5) and is designed to provide students with professional knowledge, skills, and competencies, that are practical based and usually occupationally specific. Again, it is usually between one to two years in duration.

The next stage, '*Bachelor's or Equivalent Level*' (Level 6), caters for students between the ages of seventeen and twenty-two, and provides students with intermediate academic or professional skills and competencies, ultimately leading to the award of a degree or equivalent, taking usually between three to four years to complete. It is typical for educational institutions to screen students based on various criteria, such as Age, Education Ability (measured by examinations or portfolios), Interviews, or Subject Choice (in previous education levels). Usually, this level encompasses a range of theoretical instruction, but many educational institutions provide practical elements and, in some, encourage students to compete in local, European, and Global competitions. Students are usually assessed using exams, and in some cases, a major research project or thesis may be required also. After completing the Level 6 programme, a student can then pursue either a '*Master's Degree or Equivalent Level*' (Level 7), or a '*Doctorate or Equivalent Level*' (Level 8). Both of these qualifications are designed to provide an individual with advanced academic and professional skills and competencies. Students can take modules in a taught programme or can complete these levels through a research project.

There is an apparent criticism, however, possibly aroused by the approach of this research, that these 'levels' were developed in isolation from theories of psychosocial development. Smail (2010) argues how individuals would often see themselves as being unique, self-creating and motivating social units; that life is made up of a series of decisions, influenced by various subjective emotions and experiences. Highlighting the importance of social competence, Campbell, Hansen and Nangle (2010) mention how it is critical to the development of personal regulation and social functionality. The importance of social competence is, therefore, essential throughout theories of child development, as each stage of development is dependent on perceptions of the individuals' environment. Although it is understood that the ISCED model is not a model of psychosocial development, understanding the difference in ability between a child at the age of five and a child at the age of twelve is essential, especially when planning for educational activities.

5.1. Brief Principles of the Irish Educational Curriculum

Within Ireland, the National Council for Curriculum and Assessment (NCCA), which is the advisory body for the Minister for Education and Science, assists in the development of the curriculum. Remaining as advisors to the Dept. of Education, the work of the NCCA focuses on the educational development and curriculum of children within Early Childhood Education (overlapping Level 0 and 1 in the ISCED model), Primary School Education (Level 1 in the ISCED model), and Secondary School Education (Level 2 in the ISCED model). According to the NCCA, the Irish curriculum has a strong focus on school and classroom planning, with the selection of subject material being made based on the individual needs of an individual school, and how the character of the school makes a dynamic contribution to shaping the school curriculum. Each level of education, mirroring the ISCED model, would have core principles that instruct and guides decisions about educational attainment. Principles are designed and addressed to inform the decisions regarding the intended curriculum, enacted curriculum, and the experienced curriculum.

Aistear (NCCA, 2009) is a curriculum framework used for students in Ireland from birth until the age of six. Its purpose is to allow educators to provide a foundation for students and support them to “*grow and develop as competent and confident learners within loving relationships with others*” (pg. 6). It cites twelve principles that fall into the categories of; (1) ‘children and their lives in early childhood’, (2) ‘children’s connections with others’, and (3) ‘how children learn and develop’. The Aistear framework is reported to be a guide for individuals working in day care services, infant classes, and childminding settings, on how to plan and construct learning experiences for students that are exciting, engaging, and fun.

The ‘*Curaclam na Bunscoile*’ (NCCA, 1971) had outlined the main purpose and aims within the primary school curriculum until its revision in Primary School curriculum (1999). The main purpose of the revision was to account for the changes in social, cultural, and economic developments within Ireland. The five principles of this curriculum were reportedly based on a philosophy of education that focused on (1) the integrated nature of the curriculum and (2) development of the child, (3) allowing for individual difference, (4) activity and discovery methods of teaching, whilst (5) acknowledging the importance of environment based learning (NCCA, 1971). The updated ‘*Primary School Curriculum*’ (NCCA, 1999) represented a process of revision

that claimed to take into account the “*current educational thinking and the most innovative and effective pedagogical practices*” (p. vi). The document looks towards an overarching vision of the primary school curriculum as the encouragement and promotion of the child as an individual through the expression of individual personalities and intelligence of each child. According to the NCCA (1999) the revised primary school curriculum was designed to reflect the educational, cultural, social and economic objectives within the Irish society and, as a result, the original principles were broadened in order to “*help to characterise more fully the learning process that the revised curriculum envisages*” (pg. 8). In other words, the five principles transformed into seventeen principles.

Within the Junior Cycle (Level Two of the UN Framework), the descriptive and innovative set of core principles developed within the NCCA’s *‘Towards a Framework for Junior Cycle’* (2011) has the purpose of improving the educational experience of students and giving educators the freedom to develop the skills and abilities of students that is reflective of student requirements and interest. The eight principles are ‘Quality’; ‘Wellbeing’; ‘Creativity and Innovation’; ‘Choice and Flexibility’; ‘Engagement and Participation’; ‘Inclusive Education’; ‘Continuity and Development’; and ‘Learning to Learn’. However, the later NCCA (2013) report “*Information on The Framework for Junior Cycle*” outlines several issues within the Irish post-primary education system and explains that the full implementation of the eight principles within the current curriculum has yet to happen. For example, within the NCCA (2013), it is explained that the way in which education is measured can often lead to narrowed learning experience, causing several of the principles above to become diluted and lost within the curriculum. Another factor suggests how state examinations were developed during a time of social and economic growth, where students could receive this qualification and immediately seek employment, emphasising the need for change.

The Senior Cycle curriculum (Level Three or Four of the UN framework) within Ireland can take either a two year Leaving Certificate programme or a three year programme incorporating an additional year known as Transition Year, which is optional. The Senior Cycle offers several strands such as ‘Leaving Cert Applied’ where students typically follow a pre-vocational programme consisting of courses specifically structured according to; vocational preparation, vocational education, and general education. Most students will usually choose 6 to 8 subjects throughout the two years (regardless of having completed Transition Year). The purpose of the Senior Cycle is to

develop a students' ability to think critically and creatively, to innovate and adapt to change, to work independently and in a team, and to be a reflective learner (NCCA, 2009). The aim is to advance the skills and knowledge of students to achieve their full potential. This is divided across five areas; (1) Information Processing - encouraging students to develop the skills necessary to access, select, and evaluate information, and to understand the role of information and knowledge in making decisions and judgements, (2) Critical and Creative Thinking - assisting students in being aware of the different processes involved in thinking in order to become more skilled in higher order reasoning and problem solving, therefore shaping perceptions, opinions and knowledge, (3) Communication - allowing students to appreciate the importance of communication within human relationships, and to become better communicators in the various forms of formal and informal situations, (4) Working with Others - highlighting the dynamics of working within groups and the social skills necessary to facilitate and engage in collaboration, helping students recognise the importance of social cohesion, and (5) Being Personally Effective - encouraging students to become more self-aware and giving them the opportunity to use knowledge in order to create personal and academic objectives by informing students of the strategies needed to achieve and motivate themselves.

There has been an international trend over the past decade, with many countries such as Scotland, Australia, and Poland revising the way in which their curriculums are implemented in order to cater for current trends in educational practice (Scottish Government, 2008a; Australian Government Department of Education, 2009; Polish Eurydice Unit, 2014). There are, of course, several issues with regards to the implementation of curricular frameworks. Gray and Ryan (2016), for example, mention that Irelands' Aistear curriculum framework is not a substitute for the primary school curriculum, that it is intended to be used as a way to adapt the primary school curriculum for students. As students in the infant classes fall under Aistear's age bracket, there is a framework overlap, meaning that a proportion of junior and senior infant teachers are in the position of having to adapt to a new method of teaching³⁸. Interestingly, one country without the 'overlapping' issue is Scotland; the purpose of

³⁸ This adds to the issue of training, with primary school teachers being required to teach different class groups throughout different academic years; a sixth class teacher in the current academic year may be asked to teach an infant class in the next

this curriculum is to enable students to become ‘successful learners’, ‘confident individuals’, ‘responsible citizens’, and ‘effective contributors’ (Scottish Government, 2008a). This curriculum is reported to focus on the development of knowledge, skills, and attributes of students for them to have the opportunities necessary for a broad learning experience. Initially, this seems identical to the focus of each of Ireland’s curricular principles, but that is exactly it; the principles are the same across each educational stage.

While the capacities, principles, focus, of a country’s curriculum is designed following a particular educational guideline, researchers such as Priestley and Humes (2010) explain that curricular documents give “*little specific detailed guidance on the sort of approaches to teaching, for example cooperative learning or inter-disciplinary timetabling that might be utilised to foster such goals*” (pg. 20). Also, on the principles themselves, because there are no operational definitions mentioned throughout these documents, there is a concern regarding the interpretability; ‘what is a successful learner?’, ‘what is an innovative or effective pedagogical practice?’. Priestley and Humes (2010) conclude this paper by stating that developments in a curriculum should aim to inspire individuals into looking towards what it they can become, but currently the curricular developments “*constrained this aspiration, potentially reducing the freedom and creativity of teachers and learners, and rendering classrooms predictable, limited and uncreative*” (pg. 27). Thus, following from the question in Chapter 2 regarding the purpose of a psychologist within education and what it is they can do, it would seem that there is a blank canvas. For example, a psychologist could be used to help organise personal development workshops, assist in the implementation of new instructional strategies, help educators improve SEN resources, monitor the progress of educational activities, or be a key figure in whole school or school-self-evaluation.

5.2. Evaluating and Assessing Irish Education

The identification of each factor that contributes to the educational experience, both positive and negative, is dependent on the approach taken by the researcher, the scales or measures used, and the sample population recruited. The structure of education has been mentioned above; understanding the actual context and environment of Irish education. The first proposed step in this understanding is through publications made by

a division of the Department of Education and Science that are responsible for evaluating and reporting on the performance of schools in Ireland; the ‘Inspectorate’. These reports, known as the Whole-School Evaluations (WSEs), consist of a review process for schools within educational system. According to the Education Act (1998), the purpose of the WSE is to review the quality, efficiency, and effectiveness of recognised schools within the Irish education system. Evaluating areas such as ‘management’ or ‘teaching and learning’ give the inspectorate insight into the working dynamics of a school, provide information into the strengths of the school, and also highlight areas that may need to be developed further. The number of inspectors deployed to a single school depends on school size, but a chief inspector is usually elected to represent the inspectorate within the school. During each stage, the inspectorate will be in constant communication with the principal, teaching staff, board of management, parents, and students. Although several studies suggest that school based inspections are merely an instrument to identify the many indicators and criteria for what is termed a ‘good school’ (van Bruggen, 2000), the WSE is the only large scale body of data that can most accurately provide information relating to the educational experience.

5.2.1. Whole-School Evaluation Overview

By evaluating areas such as management, teaching and learning, the inspectorate ‘*promote best practice and school improvement*’, report on areas such as curriculum provision, teaching, and learning, and also ‘*provide advice on a range of educational issues to school communities*’ (Department of Education and Skills, 2015). Documents published by the Department of Education and Science, namely ‘*A Guide to Whole School Evaluation in Post-Primary Schools*’ (DES, 2006b) and ‘*A Guide to Whole School Evaluation in Primary Schools*’ (DES, 2006c), highlight the process of conducting a WSE. A team of inspectors will usually conduct the evaluation and involves meeting boards of management, parents, principals, and teachers; interviews are also held with students during second level evaluations. Inspectors will review the teaching and learning within classrooms and also observe the interaction between teachers and students, in addition to examining various forms of assignments; class based and statutory. Mathews (2010) reviewed a large body of school evaluation literature and found how inspection appeared to be viewed as a form of control and because the reports are made accessible it can lead a staff “*feeling that it is necessary for them to prove rather than to improve*” (pg. 50).

Faubert (2009) mentions that the inspection standards between the educational systems of each country vary in terms of indicators for learning and teaching. From a methodological perspective, however, comparisons are difficult because the differing inspectorates will typically “*combine different, sometimes even contradictory, approaches and emphases in the various aspects of their work*” (Ehren, Altrichter, McNamara, & O’Hara., 2013; pg. 5). A face level comparison of any two educational systems may reveal multiple differences or similarities that could be used to improve educational policy or practice. Ultimately, even with a standardised research framework adopting a cross-cultural analysis approach, the number of variables would differ substantially between each inspectorate. In partial contradiction of this, van Bruggen (2000) compiled a number of inspectorate reports (n=18)³⁹ and found that, while the majority use comparable frameworks for reviewing schools, the reports will generally prioritise different features, targets, and characteristics.

According to MacBeath (2005) developing targets and improving standards are sometimes viewed as synonymous, to the point that the process of target setting is viewed as being all that is necessary to raise standards. However, in adopting an ecological systems theory view (Bronfenbrenner, 1979), an inspectorate will view schools from a macrosystemic perspective and report on the school targets that have been set from this position. This position has been influenced by the large scale implementation of policy, informed by governmental departments and educational organisations. MacBeath (2005) explains that if departmental targets are set on behalf of a school and are made,

“independently of teachers and pupils ... they are the province only of managers, administrators and politicians, targets can only have a negligible or negative effect on what teachers and pupils feel, think and do, and so do little to enhance what pupils experience and achieve” (pg. 1).

One of the additional findings of van Bruggen’s (2000) report found that only three of the eighteen inspectorates gave teachers feedback on the evaluation, seven were unclear whether they did or not, and eight did not give any feedback at all; which is worrying, considering the purpose of a school review. Essentially, how can a school review,

³⁹ These were from the Czech Republic, Denmark, England, Estonia, Flanders, Hesse, Ireland, Northern Ireland, the Netherlands, Norway, Portugal, Palatine, Saxony, Scotland, Slovak Republic, Spain, Sweden, and Wales.

which uses a small sample of school teachers, make any changes to instructional practice without the necessary information?

5.2.1.1. *Problems with Evaluation*

In Ireland, gathering and collecting data is a large component to the WSE process, including both qualitative and quantitative data. Schools are obliged to produce a range of documentation that outlines the number of staff, attendance records, pupil enrolment, standardised assessment results, etc. According to McNamara and O'Hara (2012), inspectors will use the characteristics mentioned in '*Looking at our School*' (DES, 2008) and make judgements on areas such as school planning, curriculum provision, or teaching and learning. While specific and measurable outcomes are absent from the finished WSE, findings are presented internally.

Research conducted by Mathews (2010) explored the concept of school evaluation within the Irish education system. A component of this study addressed the function and perceived purpose of the Whole School Evaluation. Citing studies related to how external evaluations provide transparency, accountability, and improvement (MacBeath 1999; Ehren & Visscher 2006), Mathews (2010) found how the current Irish model is a compliance model, that schools would approach evaluations as "*an event to get over*" (pg. 144). 'Compliance' has also been observed by Richards (2004) who, by conducting research on external evaluations conducted in the UK, suggested that evaluations are designed and tailored as a defensible purpose to fulfil statutory requirements. The research by Mathews (2010) mentioned there being a 'hype' in schools leading up to the Inspectorate carrying out the WSE, which was explained as being further evidence for schools needing to 'prove' their performance and accountability to the Inspectorate. Mathews found that the WSE process gave schools the opportunity to initiate improvements by encouraging self-reflection and take note of what the school needs. It is also noted that process of the WSE can, in some cases, act as a catalyst for development and improvement (MacBeath, 1999). Other studies conducted on the Irish evaluation process described how WSEs lack adequate rigour, which the current approach takes (McNamara & O'Hara 2008).

The process of the WSE is reported to be a "*thorough, time-consuming and expensive approach, where all groups in the school are met... inspectors get a proper flavour of the school by meeting all groups*" (pg. 147). Mathews (2010) also reports how because the recommendations within the published reports are too broad, they lack

strength and fail to provide sufficient advice for further development. It is also found that because there is a lack of attention to the student voice, an accurate depiction of the school atmosphere is difficult to ascertain. The above studies indicate that school based inspections are an instrument to identify the factors and criteria for what constitutes a ‘good school’ (van Bruggen, 2000).

5.3. Action 1 - Qualitative Research Objective

The methodology for this section has been outlined in Chapter 4 section 7.1.1 The procedure followed in analysing the WSE reports was the same for both school types (Primary and Post-Primary):

5.3.1. Primary School Themes

A random sample of WSEs (n=39) were analysed with the purpose of identifying the key strengths and recommendations suggested by the inspectorate. As the WSEs were taken at random, the breakdown of Primary

Whole School Evaluation – Primary				
	Male	Female	Mixed	Total
Schools	0	3	36	39
Students	0	1055	5319	6369
Teachers	0	27	121	148
Support	0	8	53	61

Table 1 - Primary School WSE Sample

schools can be seen in Table 1. The largest school consisted of a student population of five hundred and forty, with twenty teachers on staff and seven resource staff, while the smallest school consisted of a student population of fifteen, with one teacher on staff and two resource staff. A small proportion of the WSEs failed to report the number of students within the school (n=14), the student population were then accessed from the school websites. Almost half of the WSE sample failed to report the number of teachers (n=19) and resource staff (n=21) within the school. The teacher and resource staff numbers were then sought from the school websites, but the information was not provided. Six schools reported to be involved in the DEIS (Delivering Equality of Opportunity in Schools), while two reported involvement with the SCP (School Completion Programme). With regards to enrolment size the most frequent within this sample was schools with a population of ‘0-49’ (n=14) followed by schools with a population of ‘50-99’ (n=6) (the remaining population frequency are as follows; ‘100-149’ n=2; ‘150-199’ n=5; ‘200-249’ n=3; ‘250-299’ n=1; ‘300-349’ n=3; ‘350-399’ n=0; ‘400-449’ n=1; ‘450-499’ n=1; ‘500-550’ n=3).

5.3.1.1. Culture and Ethos

○ Environment

This theme was originally placed under the theme of ‘Teaching and Learning’ but from the suggestions of the inter-rater process in Phase 2, has been moved. The main recommendations focus on how schools need to further develop the learning space; in some cases by accounting for accommodation needs “*notwithstanding the restricted physical space available to teachers, some of the learning environments require significant development*” and in other cases to having “*very attractive, well-organised learning environments*”. With regards to strengths, the most frequent mention was how the “*school environment is very well organised and maintained*” and that there is a “*very positive working atmosphere in the school and staff morale is high*”. In addition to schools being “*open*”, “*welcoming*”, and “*inclusive*”, the WSEs mention how students “*engage with staff, visitors and their peers in a very positive, respectful manner*” and teachers “*demonstrate high levels of commitment to their roles in providing a broad and balanced education for the pupils*”, both of which would naturally have an effect on the educational environment and how it is perceived. The student-teacher relationship is also mentioned in that the “*very positive school atmosphere coupled with dynamic pupil-teacher relationships has resulted in caring, confident learners*”. One report cited a “*striking positivity in the general atmosphere throughout the school*”.

○ Statement of Character

According to the WSE reports, there are a range of statements that reflect the ethos of a school. One report refers to how the “*ethos of care and welfare permeates the life of the school*” or how an affirming, inclusive school ethos can be “*characterised by commendable pastoral care*” team. This suggests the importance of a school having a purposive ethos to manage the perceived atmosphere of the school. Despite this importance above, school character and ethos was mentioned within eight reports. However, the eight recommendations within the WSE is that the “*patron body and the board of management should work together to reach agreement on a reasonable and practical Interpretation of the ethos of the school*”. This means that eight schools have been given the same recommendation, word for word. If this is a common theme, accounting for 20.5% of this WSE sample, perhaps giving suggestions for how a school can go about working together to interpret the school ethos is needed.

○ *Relationships and Communication*

Relationships and communication from a management perspective arose on several occasions. The majority of these mentions refer to the performance of the relationship and communication, with one report highlighting that a “*welcoming school manages its relations and communications with the community very successfully and provides praiseworthy pastoral care to all pupils*”. Another report, highlighting the school atmosphere, suggests how an “*inclusive atmosphere is cultivated and interactions are characterised by a culture of mutual respect*”. This is further highlighted by how the management staff members support the school community through leadership that “*is characterised by openness and a collective responsibility for all aspects of school life*”. In this case, no recommendations were made under this sub-theme.

5.3.1.2. *Ownership and Management*

○ *Roles*

This particular subtheme was not mentioned very often. However, where it was mentioned (n=4) it expressed the strength of how there was a “*clearly defined role and [that the board of management] contributes positively to many aspects of school life*”. This shows aspects of passion and ownership to a certain degree and how these individuals actively support the staff and students in the school. The two recommendations, however, highlight a need for instructional leadership and how “*parents should be afforded a more central role in policy formulation and review*”.

○ *Policies and Procedures*

In contrast, this subtheme received mostly recommendations (n=7) and one strength, which referred to how “*policies and practices embody a solid commitment to inclusive education*”. The recommendations on policies and procedures are both diverse and informative. For example, one recommendation suggested that “*a policy in Relationships and Sexuality Education (RSE) should be formulated as a matter of priority*”. It is unclear whether this indicates a need for a policy as the school does not have one, or a policy is needed ‘as a matter of priority’ due to a situation that arose in the school. Although some schools do have policies for particular aspects of the school, it was reported that “*some curriculum policies require collaborative review to reflect the schools priorities and to guide classroom planning*”. There is also another recommendation of how “*the board needs to adopt the Child Protection for Primary and Post-Primary Schools without modification and ensure compliance with the*

requirements of the Child Protection Procedures for Primary and Post-Primary Schools". The lack of context of 'without modification' highlights a potential issue, as it is unclear whether a school would select and tailor aspects of the Child Protection for Primary and Post-Primary Schools to fit the school practice.

- *Planning*

The recommendations suggest that the management should "*issue an annual report on the operation of the school*", "*should develop a strategic plan which will address the future accommodation needs of the school*", and be given time to "*report progress on their agreed areas of responsibility to the board of management on an annual basis*". These reflect the functional aspects of the board, highlighting the need for transparency and clarity in the work that is being done. A recommendation explained that the "*board of management should continue to explore all possible options in order to provide appropriate school accommodation for the pupils*". Interestingly, the report mentions how the board '*should continue to explore*' suggesting that the board is actively working on possible solutions to address this issue. The main planning recommendations referred to the need of schools to prepare for "*self-evaluation*", "*accommodation needs*", and the development of a school "*planning calendar*". In light of recommendations, the WSEs report how certain schools are planning and "*implementing a range of commendable educational initiatives*" and that the "*commitment to ongoing development and improvement is highly praiseworthy*".

With regards to implementation, the WSE reports how individuals on the management team effectively lead "*the monitoring and implementation of the school plan*", but that it is essential that schools develop "*a system to monitor the impact of agreed actions and initiatives*".

5.3.1.3. *In-School Management*

- *Staff*

Under this sub-theme, a need for "*a review of duties allocated to post-holders*" was recommended. Because it was also mentioned how "*management should formulate a policy on staff rotation in order to provide teachers with an opportunity to teach in a variety of classes and contexts*", when coupled with the previous point, may indicate a range of possible situations such as a staff body needing support or training in how to perform particular tasks or duties. This needs to be addressed and explored further. With regards to strengths (n=29), it was reported how principals of schools "*provide*

very effective leadership”, *“display a willingness to embrace new ideas and methodologies”*, and are generally *“committed to establishing a positive school atmosphere and to establishing a very good rapport with all the school partners”*. It was also mentioned how *“ancillary staff contributes to the effective functioning of the school”* and would often *“take cognisance of pupils needs and implement strategies to support their learning”*. It is reported under this heading, in some WSEs, that there is a culture of teamwork and collaboration *“within certain school environments”*.

○ *Students*

There main recommendations regarding the management of students referred to how schools should perform an *“analysis of current school attendance trends should inform a targeted approach to improving attendance rates for some pupils”*. The strengths of student management (n=28) report how the behaviour of students is *“excellent and pupils display high levels of engagement in school life”* with many students being *“co-operative, respectful of each other”* and having a *“keen interest in all learning activities”*. Additional reports show how many schools adopt *“a whole-school approach to the promotion of positive discipline”*. This positive feedback within the reports highlight how, within this sample of WSEs, that *“the management of pupils is very effective with respectful relationships in evidence between teachers and pupils”*.

○ *Parents*

The two recommendations with regards to this subtheme are how *“parents should be afforded a more central role in policy formulation and review”* and that *“a parents association be established in the school”*. There is an abundance of strengths (n=35) with regards to parents, mainly in reference to parent associations and how they *“provide valuable support to various school activities”* and are *“are involved actively in supporting the work of the school”*.

○ *Resources*

The main problem and recommendation, as highlighted under the resources theme, is accommodation. There are several reports on how the school needs *“to ensure that pupils have access to school accommodation which is fully appropriate to meeting their needs”*, it is suggested that *“a strategic plan”* is put in place to *“address the long-term accommodation needs”*. The strengths, in this case, refer to how there is *“a very broad range of resources is provided to support the teaching of curricular areas and very attractive, well-organised learning environments have been created”*. It is also mentioned how the grounds of the school is *“very well maintained”*.

○ *Self-Evaluation*

Under the Self-Evaluation sub-theme, it was recommended how “*the school's first school self-evaluation report (SSE) and school improvement plan (SIP) need to be developed as a matter of urgency*”, and how the development of a learning benchmark “*would facilitate the sharing of expectations and a more cohesive approach to teaching*” among the staff and students. The strengths reported referred to the process of self-evaluation and the work currently being done in the area, for example, “*teachers have begun to engage in the school self-evaluation (SSE) process and have set targets for improvement in literacy and numeracy*”.

5.3.1.4. *Quality of Curriculum Provision*

○ *Broad and Balanced Content Implementation*

From a curricular provision perspective, it is suggested that schools should plan for a more “*problem-solving approach to Mathematics*” and that a “*development plan for Irish is developed*”. Under the plan for Irish, the WSEs highlight a need for schools to place greater emphasis on “*Irish writing, as art of the overall development of the language throughout the school*” in order to “*enhance pupil achievement*”. It is also suggested to “*compile and implement appropriate poetry and song repertoires in Irish and English*” and to expand “*assessment-for-learning approaches*” in order to differentiate the learning activities and cater for students at each class level and ability.

There were several strengths within the WSE reports. For example, it was mentioned how “*classrooms are stimulating, colourful and print-rich with many displays of pupils' work celebrated in a range of curriculum areas*”, that “*pupils experience a broad and balanced curriculum and their learning achievements are of a high quality*” and how “*good practice was observed in some aspects of teaching and curriculum provision*” in areas such as music, physical education, promoting the Irish language, etc. Some schools were also commended for implementing the Aistear framework, while others were mentioned bringing “*a range of skills to their teaching, in Art, Technology and Music, which enriches the learning experiences for pupils*”. This particular theme was interesting as it mentions how “*pupils' positivity towards school is reflective of teachers' efforts to deliver a broad, balanced and interesting curriculum*”. This would suggest that the positivity and engagement of a student would reflect a teacher’s ability to deliver a ‘broad, balanced and interesting curriculum’. Teachers were also praised for their collaboration with members of staff in order to “*provide a*

broad and balanced curriculum”, and their dedication in voluntarily leading “*curriculum initiatives and pupil-support measures*”. The only recommendation reported was that teachers should try “*differentiate their class programmes, lessons and activities more effectively in order to cater for the diverse range of learning and language needs in their classes*”.

○ *Literacy and Numeracy*

There was an equal balance of recommendations and strengths for literacy and numeracy. The range of recommendations suggested that schools should try and offer “*a range of differentiated approaches used to teach English reading*”, that “*the explicit teaching and development of specific reading skills during English lessons and across curricular areas is recommended*”. The use of “*reading and structured writing programmes*” and the “*the teaching of handwriting should be reviewed*” was mentioned, but it is interesting to note how the WSEs suggests that to “*progress the pupils’ oral skills further, the teachers should ensure a consistent, school wide focus on developing their ability to express opinions and engage with the views of others*”. This provides an added importance of literacy programmes and how they are reported to develop additional skills such as confidence and interpersonal relationships. For numeracy, it was suggested that “*teachers should place more emphasis on developing the pupils’ reasoning skills and on enabling them to solve everyday problems across all strands*”. In addition to this recommendation, schools are advised to deliver a “*whole-school approach to the development of pupil’s problem solving abilities and oral reasoning skills in Mathematics*”.

The strengths of school literacy were referred in regards to student “*handwriting and of the overall presentation of their work*” and that “*standardised test scores indicate very high overall standards in reading*”. Luckily, the WSEs report “*an impressive standard of penmanship and presentation is noted across the school, and the consistent use of copybooks is worthy of high praise*”. An additional strength of a particular school was how it is an “*inclusive and welcoming community where the majority of pupils achieve high standards especially in literacy and numeracy*”. This recognises a possible link between the atmosphere of a school and standards in numeracy and literacy. The several strengths mentioned regarding numeracy, such as how teachers are engaged with “*regular continuous professional development*” for maths and science, were “*highly commended and innovative school wide initiatives in English, Mathematics and play are being implemented successfully*”, suggesting that

teaching staff are engaged and understand the importance of literacy and numeracy. It was also noted how the *“majority of pupils achieve well in standardised tests with particular strengths in mathematical attainment”*.

5.3.1.5. Support for Student Needs

○ Enhancing Learning

Several reports mention how teachers should consider using the local community and landmarks into their lessons by *“researching and collating local history as part of the Local Studies strand of the history curriculum”*. The WSEs also report how there should be *“greater use of collaborative, activity-based methods together with further Information and Communication Technology (ICT) initiatives”* in order to enhance the pupils' skills set. Strengths under this heading report how the opportunities provided by extracurricular activities are said to cater for the *“holistic education of pupils”* and that by providing opportunities *“to participate in a broad range of community- related events and extra-curricular activities”* allow students to *“benefit”* in various ways.

○ Direct Support

This theme is somewhat diverse with recommendations asking for *“more support for pupils in the form of early intervention”* or the *“provision of in-class support”*. It was suggested that the existing support models should be reviewed in order to ensure that *“all interventions are purposefully planned and focused on the needs of identified pupils”*. On several occasions however it was suggested that *“a policy in Relationships and Sexuality Education (RSE) should be formulated as a matter of priority”*. Although this was mentioned above under a different theme, it was placed under supports as RSE is an essential aspect to student development.

WSEs mention that schools provide *“praiseworthy pastoral care to all pupils”* and that the *“school staff is commended for the good quality care and support provided for the pupils in an inclusive and encouraging learning environment”*. One report also highlights how a school actively provides students the opportunity *“to contribute ideas and talk about issues”*. It was highlighted on several occasions where *“the school environment is inclusive and the emphasis placed upon the well-being of pupils is evidenced in the effective promotion of sport”*. The staff in several schools are also said to *“take cognisance of pupils needs and implement strategies to support their learning”* and that *“pastoral care for pupils with special educational needs is of a very high standard”*.

5.3.1.6. Teaching and Learning

○ Organisation

There was a larger number of recommendations (n=19) than strengths (n=7) under this subtheme. The most common mention was the need for teachers to address the need for “*short-term planning*” in order to provide effective “*lessons for the full range of learning needs in the class*”. It is further suggested that “*curriculum policies require collaborative review to reflect the schools priorities and to guide classroom planning*”, which will provide an effective framework for teachers to guide their lesson planning and a “*common approach to the recording of monthly progress records*”. The strengths of classroom organisation is seen in mentions such as “*quality of teaching is very good as teachers use a wide range of child-centred approaches to maximise pupil participation and engagement*” or how the teaching staff approach “*their work with commendable enthusiasm and diligence to provide high quality provision for pupils*”. Student engagement appeared on numerous occasions, showing the importance of planning “*carefully and creatively for lessons which are delivered in a very vibrant and engaging manner*”.

○ Quality

The quality of teaching and learning as being a separate term was used as it was mentioned in several cases. It is understood, however, that many themes and subthemes address the issue as a whole. The main recommendations within the WSEs is that the “*promotion of active, collaborative, problem-solving approaches to teaching and learning should be a feature of practice in all class settings*” and that “*challenging and differentiated learning opportunities should be provided*”. The overall number of strengths (n=31) outweighed the recommendations, with a proportion of the WSEs just stating how the quality of teaching ranged from “*ranges from good to very good*” (n=10). In other cases, the quality of teaching was explained by mentioning how staff would approach “*their work with commendable enthusiasm and diligence to provide high quality provision for pupils*”, showing “*deep commitment to the holistic development of their pupils*”. Strengths in particular subjects were mentioned “*noteworthy strengths in teaching and learning in Science*”.

○ Assessment and Achievement

The main recommendations were that schools should consider adopting peer assessment strategies within classrooms, and that “*standardised tests should be used to aid*

assessment” and policy development. Positive aspects of assessment were noted through student “recall of previous learning” and how student “learning attainments are high and their application to learning is commendable”. Students’ “written work is presented to a very high standard and is regularly monitored” by the class teacher, with the “majority of pupils achieve[ing] high standards”. “Teaching and learning in Physical Education is very good” and the students “display high levels of interest in learning and their levels of achievement are generally very good”.

5.3.2. Post-Primary School Themes

Identical to the primary school WSE selection, a sample of secondary school WSEs (n=20) were observed with the purpose of identifying the key strengths and recommendations suggested by the inspectorate. Again, as the WSEs were taken at random, the breakdown of schools can be seen in Table 2. The largest school consisted of a student population of one thousand two hundred and eight, while the smallest school consisted of a student population of seventy-two. All of the WSEs failed to report the number of teachers and support staff within the school, and the information was not given on the school websites. One school reported to be accredited by the Council of International schools (CIS), another runs an International Baccalaureate Programme, four are involved in DEIS (Delivering Equality of Opportunity in Schools), and four are involved in the Catholic Education an Irish Schools Trust (CEIST).

Whole School Evaluation – Post-Primary				
	Male	Female	Mixed	Total
Schools	3	6	11	20
Students	2,181	3,278	5,873	11,332
Teachers	0	0	0	0
Support	0	0	0	0

Table 2 – Post-Primary School WSE Sample

Two schools were reported to have a specialist unit for students diagnosed with ASD, and one have a unit for students with Mild learning disabilities. Several schools provide students with Transition Year (n=9), JCSP (n=4), LCA (n=4), LCVP (n=2), and PLC (n=2). One school also reported involvement with the SCP (School Completion Programme), another also reported involvement with the HSCL (Home School Community Liaison). With regards to enrolment size the most frequent within this sample was schools with a population of 400-499 (n=5) (the remaining population

frequency are as follows; 0-99 n=2; 200-299 n=1; 300-399 n=1; 500-599 n=4; 600-699 n=1; 700-799 n=2; 800-899 n=1; 900-999 n=2; 1200-1299 n=1).

5.3.2.1. *Culture and Ethos*

○ *Statement of Character*

According to the WSE reports, there is a range of statements that reflect the character of the school. There were no recommendations under this theme, but several strengths. One report, for example, refers to how the board of management “*is committed to the school and its developmental priorities are indicative of its dedication to promoting the schools ethos*”, suggesting that the board would actively encourage students to learn and develop in line with the school ethos. Being viewed as “*inclusive... with a strong ethos of care and concern for the students*”, the WSEs that highlighted an ethos mentioned how policies that are developed would often encompass the school ethos “*care of students is informed by the school's ethos and is safeguarded by the policies and structures that are in place*”. Several reports mention that a “*positive atmosphere is evident ... and impacts on all areas of school life*” and that students are reported to be provided with a “*very good range of empowering leadership opportunities*” and the “*relationships and interactions between teachers and students were very good*”.

5.3.2.2. *Ownership and Management*

○ *Operation of the Board of Management*

The most common recommendation under this theme was in relation to planning and transparency; that the board of management must “*ensure that action plans, relevant to the achievement of its identified priorities, are developed and collated into a single document, incorporated into the development section of the school plan, and communicated to the school community*”. Numerous comments reflect this importance as it is further mentioned how the board needs to “*strengthen its governance*” in order to prepare for the future. A second recommendation suggested how management should “*review the in-school middle management structure, and the duties attached to the posts of responsibility, on a regular basis*”, because in some situations “*the duties assigned to some posts are not meeting the needs of the school*”. It is also recommended that “*training should be accessed by board members when it becomes available*”.

In other cases, however, several WSEs report how several boards of management would “*discharge its governance responsibilities with integrity and transparency*”; being active and involved in the “*running of the school and has overseen the development and review of a wide range of policies*”. It is mentioned how “*the board of management, senior management and staff are committed to its [the] constant development*” of teaching and learning”. This is echoed by several WSEs reporting that the board is made up of individuals with various complimentary backgrounds, experiences, and qualifications. The diverse qualities of a board of management appear to be effective, and the expertise of board members is very beneficial to the school with reports of how “*the board of management is very committed and experienced*”, being “*proactive and effective in carrying out its duties*”. With regards to parental involvement, it was suggested how “*written report[s] from all board meetings should be sent to the parents' council*” in order for parents to remain aware of the working dynamics in the functioning of the school. In contrast, the strengths of the school highlight that parents are “*very active and [are an] effective part in the life of the school*”, providing a “*dynamic, engaged and innovative ... range of practical and strategic supports to the work of the school*”. Several WSEs report how the “*school management is committed to the whole school community with a particular emphasis on partnership with parents*” with shows how the schools are “*completely supportive, rooted in the community and diligent regarding the development of the school*”. This shows a clear efficiency in communication and transparency in some cases.

- *School Planning*

There are recommendations that broadly represent the need for schools to adopt a “*coherent and unified approach*”, however, in the coordination and in organising “*an over-arching strategic [development] plan*” is required. It is suggested that a collaborative and whole-schools approach will “*bring cohesion to the planning process*”. A second component to the recommendations was for schools to develop and “*further advance the integration of technology to support teaching and learning*”. The recommendations in literacy surrounded the need for schools to develop a “*school improvement plan [using] a coherent and unified approach to areas such as literacy, numeracy and curricular reform should be adopted*”. The other recommendation, again in relation to a school improvement plan, schools should “*formulate further strategies*

as a support for staff to improve accuracy in Irish and to encourage the students' commitment to speaking Irish". In relation to strengths, it was reported how *"the JCSP literacy and numeracy initiatives are examples of excellent practice in terms of fostering learner motivation and developing key skills in these areas"*.

The functioning is also highlighted within two WSEs; that *"the approach to formulating the developmental section of the school plan is very effective"* and how schools are *"a reflective and proactive organisation that implements very good self-evaluative practices to achieve ongoing and lasting school improvement"*. It was also shown how schools have *"successfully emerged from a challenging period of change ... in relation to extensive accommodation developments"*, with other WSEs reporting how there is a *"considerable demand for places in the school"*.

5.3.2.3. In-School Management

○ Staff and Students

Recommendations under this subtheme report a need for schools to review particular posts of responsibility in order to be *"closely aligned to the school's needs and priorities"*. Regarding the management of students, schools are suggested to *"develop a whole-school teaching and learning policy and to consider the introduction of academic tracking and mentoring to further support students across all levels to achieve their full potential"*. The main recommendation, however, was the clear need for development in the areas of *"leadership, teaching, learning, self-evaluation and school improvement"*. The WSEs reported the importance of the senior management team to *"affirm the work of the staff and to establish a professional dialogue to formulate improvements"*. There were several mentions of how *"posts of responsibility ... [and how they] should be reviewed to ensure the implementation of best practice with regard to deployment of staff and lesson distribution in the interest of student progress and attainment"*. This is particularly interesting as there were several reports of how *"lessons in Physical Education (PE) should be taught by qualified PE personnel"*. These recommendations suggest that schools need to deploy staff in-line with qualification and best practice. With regards to students strengths, on the other hand, these are greatly informative, with several schools showing a *"highly committed senior-management team exhibiting very effective leadership of the school and an equally committed staff demonstrating a strong culture of volunteerism in many areas of school*

life”. Other strengths within the WSEs highlight how several schools showing a “*good capacity for change and improvement*”, in addition to having a “*principal and deputy principal [that] demonstrate high quality leadership and management*”. There was one school that reported devolving the leadership across all members of the teaching staff, which allowed the staff to “*take on responsibilities which contribute to the effective management of students and to the school improvement agenda*”. There were several mentions of attendance being an issue and that the “*factors underlying poor attendance levels of some students should be fully investigated and corresponding intervention strategies initiated*”.

Within one particular school, it was mentioned how the “*attitude to learning and relatively high rates of student suspension are among the key factors affecting student attainment*”. Various WSEs reported variations of how “*high expectations are set for students in all aspects of their attendance, participation and attainment*” it is further explained how these expectations are “*underpinned by a highly effective student support system and support for learning*”. A good working relationship was reported with teaching and learning taking place in an “*atmosphere of mutual respect and there was very good rapport between teachers and students*”, with further mentions of how students were “*mannerly and their behaviour was exemplary during the evaluation*”.

5.3.2.4. Curriculum Provision

○ Broad and Balanced

There was a range of recommendations under the subtheme of curricular provision. For example, one WSE highlighted a need for schools to allocate additional time to “*subject-department planning*” in order to develop “*a greater consistency of approach and the further development of short- term schemes of work for a number of subjects and programmes*”. It was suggested for schools to make decisions surrounding “*the provision and implementation of some senior cycle curricular programmes, including TY, LCA and LCVP*”. Of the many strengths, some variation on having teachers on staff that are “*strongly committed to supporting students and are willing to embrace new initiatives to enhance teaching and learning*” was the most frequently mentioned. This was further emphasised in reference to teachers being willing to complement curricular provision with a “*wide range of co-curricular, extra-curricular, fundraising and sporting activities*”.

There is a reported strength in some cases of how there is a commitment of staff to “*providing a wide variety of co-curricular and extracurricular activities*” which highlights the successful deployment of staff evidenced by the efficiency of the curriculum. Recommendations suggest however that the use of double period classes were also asked to be minimised “*the frequency of double classes being timetabled across breaks should be minimised*”. Another recommendation surrounding junior cycle was that the number of “*Irish lesson periods for junior cycle students should be increased*”. There were also several mentions of how “*the number of hours of instruction fall[s] below the required minimum of 28 hours per week*”. Physical education is also needed to be increased in line with circular M15-05. The issue with timetabling was agreed but disputed by principals who argue that each decision that is made with regards to the curriculum depends entirely on the availability of personnel and other resources. This would hint at how part of the issue with regard to timetabling is not fully at the hands of the school, but can be caused as a result of the physical, budgetary, and availability of adequate facilities.

It was also noted how “*broadening of the curriculum should be continued*” which was furthered by the suggestion of “*investigating digital remote teaching possibilities, especially with other Gaeltacht schools*”. It was also recommended that “*common schemes of work should be prepared and common testing across subject departments should take place*”. These educational changes can be tackled through the collaborative work of the entire school community. While ‘recommendations’ under this theme can be observed as negative and problematic, strengths were varied and abundant. Some WSEs reported that the broad and balanced curriculum was a “*significant strength*” or the “*key strengths of the school*”. The remaining strengths are focused on how “*the school offers a comprehensive curriculum ... very effectively organised*”. Further support under this theme mentions that “*curricular provision is complemented by a wide range of co-curricular, extra-curricular, fundraising and sporting activities*”. While the main recommendations mainly focus on the use of technology to enhance the curriculum, it is suggested that the “*emphasis should be placed on incorporating the dynamic and interactive use of information and communication technology (ICT) in subject teaching*” and that the “*broadening of the curriculum should be continued, investigating digital remote teaching possibilities, especially with other Gaeltacht schools*”. Strengths were varied, with some WSEs reporting that staff are to be “*commended for its [their] diligence and generosity in*

providing a very broad range of curricular and extracurricular activities for its students”.

5.3.2.5. *Support for Students*

○ *Direct Support*

Direct support comes in various forms; for example, it was recommended how *“the role of the student council should be further developed”*, suggesting that the student council is a supportive entity within the school. Practical recommendations were given also suggesting that *“existing student care structures should be further supported by the facilitation of regular meetings of key personnel”*. The main strengths under this theme mentioned how schools should be a place *“where all students are encouraged to achieve to the best of their abilities”*. Schools where a student council is active, are reported to be *“well organised and democratically elected, [and] takes an active part in the life of the school”*. Additional resources within schools are highlighted to be of great benefit in relation to the care for students which are reported to be *“very good with a number of key staff from the School Completion Programme (SCP) and school staff working together to ensure the wellbeing of students”*. Within one particular WSE, it was mentioned that *“teachers, and those in support roles, under the leadership of senior management and the board, are highly committed to the welfare, learning and progression of the students in their care”*.

○ *Special Educational Needs*

The support focusing on SEN reported how *“the delivery of resource hours should be focused around a tightly defined core special educational needs team”* in order to *“ensure the appropriate use of all resource teaching hours”*. The board of management in several schools were encouraged to *“ensure [the] appropriate use of all resource teaching hours for students with special educational needs”*. It was mentioned that although *“resource hours for students with special educational needs (SEN) are used appropriately ... not all allocated hours are fully deployed on the timetable”*, it was then recommended for schools to adopt a more *“systematic approach to recording the supports provided for students”*.

In relation to the organisation of SEN allocation, several schools reported having attained additional resources hours, but these available hours are not all *“fully deployed on the timetable”*. There is a reported need for schools to *“expand the role of the SEN*

co-ordinator to work towards a more collaborative and a co-ordinated approach to meeting the needs of students with additional educational needs". The several strengths mainly report that schools have *"very good provision for students with additional educational needs"*.

○ *Academic and Personal Guidance*

There were few mentions of guidance support for students. Of the points mentioning guidance support, reports asked for schools to investigate *"the best ways to provide or develop professional skills in guidance counselling and learning support in the school"*. One WSE reported the strength of how *"guidance provision for students across the school is a particular strength"*. In addition to academic guidance, there was a reported lack of personal guidance. For example, there is a need for schools to *"initiate a collaborative review of its Social Personal and Health Education (SPHE) and Relationships and Sexuality Education (RSE) programmes with a view to developing greater awareness of the content of the programmes among parents and addressing any perceived shortfalls identified by students"*. This recommendation arose on several occasions that schools have no RSE module and that *"school should implement an RSE programme at senior cycle in accordance with Circulars 0037/2010 and 0023/2010"*, or that *"the policy should be revised and updated"*. While there is no 'formal' module in personal growth, it was reported that *"care for students is very good with a number of key staff from the School Completion Programme (SCP) and school staff working together to ensure the wellbeing of students"*, which shows the effective integration and support of auxiliary staff within the school.

Whether student provision is accurately achieved however is mentioned throughout *"anomalies and issues"* with regards to timetabling. One issue is the lack of *"SPHE be[ing] timetabled for second and third year students"* meaning that these students are progressing to senior years without covering topics in the areas of social, personal, and health education. The only strength reported, in relation to SEN, was that the *"resource hours for students with special educational needs (SEN) are used appropriately but not all allocated hours are fully deployed on the timetable"*. It is somewhat understandable as to how there may be issues with timetabling with the numerous changes within the second level curriculum, further exacerbated with comments such as the need for balance within *"TY and Leaving Certificate Applied (LCA) programmes ... in accordance with the requirements of the syllabus"*.

5.3.2.6. *Teaching and Learning*

○ *Student Engagement*

This particular subtheme was created as a result of the inter-rater reliability process. Three subthemes which were moderately supported within the secondary school WSEs were Enhancing Learning (*Curriculum Provision*), Organisation (*Teaching and Learning*), and Environment (*Teaching and Learning*). Upon reflection of the rater comments it was decided to merge these subthemes into one; Student Engagement.

There were a larger number of direct recommendations under this subtheme; one WSE highlighted, for example, that in a number of lessons observed “*there was scope for development*”. This case was reported to be as a result of “*inadequate lesson planning or the lesson material not being appropriately pitched at the ability levels or the interests of the group of students*”. The most common mention was that teachers need to “*plan for a range of opportunities for student engagement in lessons*” and that, because of this, “*scope for [the] further improvement of learning, greater use of student-centred, collaborative teaching approaches is recommended*”. The importance of student engagement is further mentioned, making reference to teaching methodologies, suggesting that “*protocols that empower students to engage more actively in lessons, think more critically and take on greater responsibility for their learning should be adopted*”. There is further requirement for teachers to develop the “*independent learning skills*” of students and plan “*strategies for differentiation [in order to] maximise learning outcomes for students across the range of abilities*”. Emphasis on technology is required, as teachers should incorporate “*the dynamic and interactive use of information and communication technology (ICT) in subject teaching*”, in addition to providing a “*good balance between teacher input and student activity in lessons*” and issuing homework that should be “*consistently and regularly assigned and assessed*”.

○ *Quality*

The reported strengths explained that “*preparation for lessons was of a high standard throughout and all lessons were well structured and paced*” emphasising how “*teachers are very committed and work diligently in the best interests of students*”. Some teachers organised lessons effectively and show a strong commitment “*to supporting students and are willing to embrace new initiatives to enhance teaching and learning*”. Despite several recommendations calling for the increased use of strategies of differentiation “*to*

support student learning”, the majority of mentions stating that the “*overall quality of teaching and learning was good with very good to exemplary practices in a number of lessons*”. In one WSE it was reported that in exactly “*one third of the lessons observed exemplary teaching approaches that resulted in high quality learning among students*”. It is also mentioned that the quality of teaching and learning is reflective of how the board of management, senior management, and staff is committed to its constant development.

○ *Assessment and Achievement*

The main recommendation under this theme was that teachers need to engage with “*assessment for learning (AFL) strategies into classroom practice*”. Again highlighting the need for AFL, it is recommended that “*all teachers need to engage*” and that a “*whole-school approach to integrating*” the AFL strategies is needed. It was mentioned how “*focused attention is being given to improving students' expectations and academic attainment*”. However, it was also highlighted that although “*attendance and retention are monitored in an organised and systematic way, however, poor levels of attendance of some students has contributed to their underachievement*”. This theme was mentioned within the principal interviews, with one principal mentioning that sometimes reflection on the product and outcomes as opposed to how education will often focus on the “*product and outcomes as opposed to how people are*”. The principal furthers to mention that if a teacher has a student for business and another teacher has the same student for English, “*comparing notes around the table of how they are performing...really gives a good picture*” related to the students’ academic achievement and assessment. This highlights the importance of cross-curricular collaboration.

5.4. Action 2 – Collect Qualitative Data

The procedure for this phase was somewhat different due to the retrospective aspect of the ‘Social Media’ analysis. Each inter-rater was selected through convenience sampling; an email was sent to various academic and workplace colleagues and the first three who responded were selected to take part. The evaluation was carried out in a setting decided by the inter-rater in order to facilitate them as much as possible, a hardcopy of the themes was given to each inter-rater to grade, and the researcher took field notes of what was said throughout process. The researcher also asked the inter-rater several set of questions such as ‘could you explain this further?’ or ‘do you think

this could be labelled differently?’ which made the process resemble a semi-structured interview.

Although the retrospective review of social media articles (n= 13) was unplanned⁴⁰, the procedure was relatively straight forward. By searching through online news reports using dates that were selected for the pilot study, and also filtering for general words ‘Teaching’ and ‘Learning’, the researcher compiled a list of news articles that were further filtered using three criteria; 1) both online national newspapers were chosen, 2) there must be evidence of social media sharing (Facebook and/or Twitter), and 3) they must relate to the themes identified in Phase 1. It was felt that this process provided a further element of context that may give some indication of the wider ecosystemic context within Irish education. The online news articles were uploaded to qualitative data analysis software (MaxQDA V.11) where a thematic analysis was carried out.

5.4.1. Inter-rater Evaluation

The only selection constraint within this WSE sample is publication date (published between May 2014 and January 2015), in order to assume the most recent education related information. Other than publication date, the WSEs were randomly selected meaning that other variables, such as school size, gender of pupils, etc., were not a selection criterion. Each thematic report was then reviewed by independent inter-raters (n=3) in order to confirm inter-rater reliability and strength was confirmed using the *T-Index* proposed by Tinsley and Weiss (1975).

Each independent reviewer was given a list of subthemes and WSE quotes and was then asked to rate their level of agreement using a Likert scale of 1-5 (1-Strongly Disagree; 5-Strongly Agree). The formula, as seen in Figure 9, ‘N1’ refers to the number of theme agreements with a quote, ‘N’ refers to the number of inter-raters, and ‘P’ refers to the probability of chance agreement. The value ‘P’ was found using Lawlis and Lu’s

$$T\text{-Index} = \frac{N1 - NP}{N - NP}$$

Figure 9; T-Index (Tinsley & Weiss, 1975)

$$P = \frac{(n-1) \sum_{i=1}^{k-1} 2^{k-1} + n}{nk}$$

Figure 10; P Value (Lawlis & Lu, 1972)

⁴⁰ During one particular morning in a school a number of teachers were discussing their own plans for an upcoming teacher strike which was mentioned in a newspaper. One particular teacher mentioned having a sick relation and they would use this day to spend time with them, this caused noticeable friction among the staff however, and a number of staff members ridiculed and became hostile towards the teacher. Perceiving this gave this researcher a view that, one could argue, would not be seen within a WSE or government publication.

(1972) formula seen in Figure 10, 'k' refers to the number of inter-raters, and 'n' refers to the number of points on the scale used; because this study used three inter-raters and a 5-point Likert scale, P was calculated as '0.2320'. Additionally, Lawlis and Lu (1972) mention that a researcher using this method is required to define the level of agreement within the context of data under study. The four possible definitions provided by Lawlis and Lu (1972) are; (1) ratings should be identical, (2) ratings should differ by no more than half a point, (3) ratings should differ by no more than one point or, (4) ratings should differ by no more than two points. In the context of this study, the ratings should differ by no more than one point, or (+/-1). A score of 3 (unsure) will be substituted by the average score of the majority of inter-raters where the remaining two inter-raters are in agreement. For example, under the theme of 'Culture and Ethos', there is a sub-theme 'Statement of Character'; "*ethos of care and welfare permeates the life of the school*". Using this quote, the inter-rater was asked to rate the appropriateness of this quote under a list of possible sub-themes. In one condition this quote was given the subtheme 'Statement of Character' and in the other a subtheme was randomly assigned (while randomly assigned, in one instance, a subtheme was matched with an assigned subtheme from the same theme list; this particular subtheme was selected and paired with a subtheme under a different theme list). The level of agreement was noted with inter-rater 1, 2, and 3 as being 'Strongly Agree' (5) under the 'Statement of Character' subtheme, and was given a 'Disagree Strongly' (1) under the randomly assigned subtheme. This means that there was a strong consensus that the quote fell under the theme of 'Statement of Character', which is measured under 'Culture and Ethos'.

Between both the primary and secondary school themes, the *T-Index* scores were calculated for each of the identified themes and for the randomly allocated themes. While Tinsley and Weiss (1975) do not suggest that the researcher needs to randomly allocate themes in order to compare strength scores, it was done in this study in order to further validate the themes within the WSEs. Within the Primary School datasets, 18 of the 21 subthemes were confirmed with a value of 1, a further 2 scored a value of 0.566, and the remaining 1 scored -0.302. In order to find the total level of agreement, each of these *T-Index* scores were added and were found to have an agreement factor of .896, indicating high reliability. The same calculations were made with the randomly allocated themes; a strength factor of .19 was found, indicating low reliability and is a positive finding for this study. Within the Secondary School datasets, 15 of the 21 subthemes were confirmed with a value of 1, and a further 4 scored a value of 0.566. In

order to find the total level of agreement, each of these *T-Index* scores were added and were found to have an agreement factor of .908, indicating high reliability. Interestingly, the same calculations were made with the randomly allocated themes; a strength factor of .406 was found which indicates low to moderate reliability.

Gathering and confirming the themes within the WSEs will ultimately assist in the formulation of the research questions in the next step. Gathering the themes was one step, confirming them is another; this process involved three individuals with no prior knowledge of this project and all with completely subjective experiences of education and what education means. As a result, the comments and suggestions made throughout this process are just as important as the themes themselves. There were several instances where some themes were elaborated by the inter-raters. For example, with ‘assessment and achievement’, inter-rater 3 felt that this should be placed under the context of management because the “*monitoring [of assessment and achievement] requires an ongoing process*”. However, upon reflection, the inter-rater felt that it should actually be kept under the theme of ‘Teaching and Learning’. Another case was, again with inter-rater 3, “*is enhancing learning not the same thing as giving a broad and balanced curriculum? Surely the school should be giving this anyway?*”. Reflection of this confirmed the current theme placement. Of note, the inter-rater expressed the main difference between these cases was dependant on the workload of a teacher; an example was given of a teacher with large class groups and finding the time to be able to ‘Enhance Learning’ by researching the local history of a particular area whilst also keeping in-line with the curriculum. These occurrences signify the high interconnection between the themes, and one of the biggest challenges within this step was to confine each subtheme to a main theme. The high inter-rater level confirms the success of this endeavour.

The main comment that was made throughout each process was how the quotes taken seemed to say more than what was written; “*this one here, look ... it says ‘good use of’, why wasn’t it great? And there ... it says ‘in some aspects of teaching’, what does that mean really? I don’t know, I think some of these comments raise more questions than [pause] than the actual statement is worth*” (inter-rater 2). These comments were made with the assumption that the writer was intentionally leaving an underlying tone within the report in order to hint towards a school needing improvements. Inter-rater 2 made the comment of how the student voice is not

portrayed within the evaluations, “*maybe I just understand it differently but... [pause] I can't hear the students. I don't think a WS approach is solely student focused. I think students are the last to be approached in these situations. Or [pause] are they approached?*”. While it was further explained that a large proportion of the context is removed in the case of these quotes, the inter-rater still believed that the reports are focused mainly on the management and structure of the school, “*as long as the school ticks a box, that's all that matters it seems*” (inter-rater 2). Inter-rater 1 made reference to the Hawthorn Effect⁴¹ when reading the ‘In-School Management’ subtheme of ‘students’;

“How certain can an inspector be, I wonder, that the class they're sitting in are always this well behaved or if [pause] the room is bright and colourful, or decorated with posters and a globe of the Earth all the time? It says here 'behaviour is excellent and pupils display high levels of engagement in school life', it should say something like 'while I was in the room, the behaviour was yadda yadda, y'know?’”.

Although the content within a WSE provides a wealth of information, there is a limitation to what this information means in the context of psychological research. The information within WSEs, not necessarily detailing the lived experiences of individuals within education, provide a contextual snapshot of a brief period of time, attained by a subset of classroom observations. Criticising a more reductionist and mechanical view of the scientific method, which was prompted by the behaviourist and psychoanalytical approaches to psychological research (Davis, 2009), Maslow (1966) believed that psychologists should explore inclusive approaches to psychological methodology. Advocating for the expansion of research to study optimal psychological health, he commented on the limitations to conventional psychological methodology by saying “*I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail*” (Maslow, 1966, pg. 15–16). WSEs appear to explore the positivist aspects of education that can be measured and quantified through direct observation. This approach naturally restricts the discovery of phenomena because intangible concepts, such as ‘feelings’, ‘emotions’, or ‘values’, cannot be quantified within the scope of a WSE. While there are no direct mentions of ‘human experience’ within this sample of

⁴¹ The ‘Hawthorn Effect’ refers to the change in an individuals’ behavior as a result of the presence of another individual (Landsberger, 1958)

WSEs, there are some indications among the various themes. For example, several reports at both primary and second level highlight the ‘positive school atmosphere’, which would of course have some impact into the general experience of students, educational staff and, by extension, their experiences; but it fails to address the extent of this ‘positive atmosphere’ in influencing experience. This deviation into the experience of individuals within education, sparked by the inter-rater reviews of the WSE themes, is opening up the nature of a human science that aims to build and support the descriptions of lived experiences within a research area (Davis, 2009).

There are several studies that look towards the purpose of an ethos and how influential it can be, but within the thematic observations above, the importance of having a school ‘ethos’ was made clear as it was said to indicate the perceived atmosphere and build upon the character of a school. Within the secondary school reports, it was suggested how schools would actively integrate the ethos into policies and procedures in order to encourage students to learn and develop in a particular way. Torrington and Weightman (1993) maintains that a school ethos represents a form of self-conscious expression towards specific and objective behavioural values, but a school culture represents the nature of the working relationship between individuals. Torrington and Weightman (1993) continue by mentioning how a culture may not always be expressed, or need to be expressed, as it is rooted into the environment. This comparison is curious as it proposes a type of intrinsic and extrinsic relationship within a school environment. This would suggest that because the inspectorate is not necessarily ‘rooted’ into the school environment, the ethos may be identified but the culture may remain somewhat hidden.

This was touched upon within the inter-rater process, with one particular inter-rater mentioning how a school ethos can refer to the particular philosophy of a school, but the school culture is something much deeper. The culture of the school can refer to the;

“level of moral, and the relations, and the element of trust between the players ... we often talk about ... schools as a community of learning but are they really effective at learning themselves? ... An ethos might be something that you are aiming for or expresses your value system but just because you are expressing something doesn’t mean you’re achieving, or it may even be a false

picture. Maybe something that is never really gonna happen, that the ethos is actually something else or should be something else” (inter-rater 1).

This type of intrinsic/extrinsic difference would suggest that although an environment may be led in ways based on a particular ethos, the influential strength of this factor may become somewhat insignificant when compared against the actual relationships and interactions between people within the environment. It is clear that the educational culture within schools is influenced by a wide range of factors, diverse but inter-related. It is also clear that the shape and format of the current method of evaluation does not accurately depict this culture. The purpose of the WSE is to promote best practice and for school improvement, but there is an evident focus on management, leadership, and governance. Within the inter-rater interviews, the management focus was emphasised and explained as how school systems are constantly changing and that “*the outside world is coming in all the time*” (inter-rater 1). This emphasises the need for the educational community to develop a strategy that is both adaptable to change and implementable in line with the curriculum.

Applying this understanding to Bronfenbrenner’s (1989) work on ecological systems suggests how internal systems are influenced by the external systems. The influential factors within an educational culture becomes more transparent, with the board of management (exosystem) influencing a teacher (mesosystem) who in turn influences the student (microsystem). If analyses were to be conducted in isolation to the understanding of the ethos/culture difference, it would be entirely possible for that analyst to neglect the influence of managerial direction and leadership on the school culture. The thematic observations in ‘Quality of Management’ looks at the management standards and practices across the school community and under the logic of how the school system changes it would be “*foolish to think that the system in the school doesn’t change*” (inter-rater 1). In other words, actions and decisions made on a national level would impact the decisions and behaviours within an individual school system.

5.4.2. Social Media Evaluation

Through the navigation of online national newspaper websites, a large number of search articles were found (n= 97)⁴². In doing this, online newspaper articles were considered

⁴² The study in question is Devine, Fahie, and McGillicuddy (2013).

based on the criteria of; 1) both online national newspapers were chosen, 2) there must be evidence of social media sharing (Facebook and/or Twitter), and 3) they must relate to the themes identified in Phase 1. Of the 17 articles considered relevant, a small sample was chosen based on having both Facebook and Twitter ‘likes’ (n= 13). Table 3 (below) displays the headlines for the news article followed by the number of individual Facebook and Twitter likes; organised by the sum of likes between Facebook and Twitter. As seen, the article with the most reported ‘likes’ on Facebook was ‘How to stop teenagers from tuning out of music lessons’ (n= 1,048), followed by ‘Gender imbalances in the classroom – and all the way up’ (n= 777).

Although it is important to remember that the number of ‘likes’ does not report the number of views, it only records the number of times the webpage where the article is published was liked; the findings are interesting and revealing. Regardless of the popularity of the article “*How to stop teenagers from tuning out of music lessons*”, none of the WSE reports mentioned music, despite the author (Pollak, 2015) referencing to that music can enhance other areas of learning and being a huge component of Irish culture; it is acknowledged in the article that there is a lack in music education programmes, especially within schools based in low socioeconomic locations. The theme of ‘Curriculum Provision’ is evident to a certain extent, as the article expresses the need for music to be taught, but ‘Enhancing Learning’ is directly appropriate.

Social Media Analysis – Using Online News Articles			
Newspaper Article Title	Facebook	Twitter	Sum
How to stop teenagers from tuning out of music lessons	916	132	1048
Gender imbalances in the classroom – and all the way up	635	142	777
The lesson for us all is that Ireland’s teachers need to be re-educated	592	26	618
Ireland needs to switch on or be left behind in computer science	353	106	459
Schools asked to test new system for special needs pupils	223	37	260
Fitness to teach' hearings to be held in public	180	25	205
Refusal by teachers to assess students is a ‘step back’, says Finnish expert	75	123	198
The Teaching Council plans to ‘liberate’ teachers – not just collect fees	75	47	122
Primary literacy and numeracy rise for first time since 1980	41	71	112
Galway President acknowledges low morale among teachers	79	11	90
Internet safety: My Selfie teaching students to be app happy	65	2	67
Opinion: We need a Roosevelt-style New Deal for Irish schools	3	26	29
Teachers strike talks adjourned until Monday	5	15	20

Table 3; Social Media Articles

Again, in the context of music, the article makes reference to teachers who ‘facilitate

learning’, and show imagination and creativity in their approach to teaching. Music is suggested in this article to be less of a taught subject and more of a way for students to express themselves, develop, and engage in their own learning.

In another article, McGuire (2015) mentions that the education system is askew; highlighting that male students are underperforming while female students are excelling, but in academia, female academics are underrepresented in senior positions. The article continues to make reference to how male students ‘dominate’ in math based subjects (such as engineering), while female students are ‘winning more college places’. Continuing, the article makes reference to some research that showed how teachers working in mixed and girl schools put greater emphasis on particular teaching strategies that encourage active learning and collaboration; the author of the study mentioned additional factors within the study itself. The article continues to make reference to gender based statistics from the Irish education unions, mentioning how the majority of primary school principals are female (65%) and secondary school principals are male (68%). The article itself is interesting and suggests that the gender inequality within the Irish education system is blatantly noticeable; despite no scientific references, it makes the claim of how mixed gender schools better prepare students socially. This article claims that male students are not performing as well because they are being taught by female teachers, that female students take school far more seriously. The themes in this article vary, ‘Culture and Ethos’ is quite prevalent, as is ‘In-School Management’, but the article raises many questions, including how personal demographic variables (such as age, gender, or teacher training), influence the in-class ‘Teaching and Learning’.

The last example article, titled “Fitness-to-teach hearings to be held in public ‘by default” (Humphreys, 2015), the writer talks about how a teacher undergoing disciplinary action will be held in the public domain. Although the proposals for this had been argued against by the many teaching unions, the minister was said to have overruled these suggestions in order to mirror the disciplinary practices of other professional bodies. The arguments made by the teaching unions were that, because Ireland is a small country, should a teacher be reprimanded before a panel, there will be significant damage to their reputation, even if the allegations were found to be false. Under this legislation, the Teaching Council will be responsible for ensuring all teachers are vetted (it is reported in the article that 40% of the registered Teaching Council members have yet to be Garda vetted), and will also be responsible for

investigating issues of underperformance and complaints made by students, parents, or other teachers. This particular article highlights a feature of Irish education that was partially raised within the WSEs under the theme of ‘Teaching and Learning’. However, it also provides a perspective of the current environment of the Irish educational system. For example, several WSEs reported how significant improvements in particular lessons were needed, but does this mean that the teacher in question is underperforming? And if so, does this mean that could be sent for disciplinary hearing if there is a report of underperformance? The news articles provide an additional element to the themes outlined above. Many of the articles highlight how important it is for teachers to engage students by using new and innovative teaching strategies. It appears, from these articles, that teachers are being asked to do much more in the classroom and, at the same time, are being placed into vulnerable positions. With articles titled “*The lesson for us all is that Ireland’s teachers need to be re-educated*” (White, 2015), it is entirely possible that this would affect the moral of teachers and other educational staff in Irish schools.

The media articles refer to the ‘Reformation’ of various aspects of teaching and learning. Various studies have taken place observing reformation within an Irish context such, as Conway and Murphy (2013), who examined the emergence of new accountabilities between 1997 and 2012. The very title of this publication, ‘A Rising Tide meets a Perfect Storm’, places a curious understanding, and perhaps a premature assumption, of the current atmosphere related to reformation. Conway and Murphy’s (2013) paper placed teacher accountability in terms of the three approaches (compliance with regulation, adherence to professional norms, and finally attainment of outcomes). Although the purpose of this current study is not to address the issue of reform, it is an interesting development that it is becoming more and more prevalent within media circles. One particular quote within the ‘How to stop teenagers from tuning out of music lessons’ (Pollak, 2015), is that “*It’s going to take a generational change to adapt and amend that ... we need a cultural shift in our thinking around the benefits of the arts in the holistic education of young people.*”. However, under the same theme, another article ‘Teacher Strike talks adjourned until Monday’ (Humphries, 2015) spoke about how “*further strike action has been threatened and teachers are refusing to cooperate with the roll-out of the new curriculum, including planned short courses, until agreement is reached*”. It is clear that there is a need for enhanced engagement and reform of current practice, but at the same time, there is resistance to what the reform

actually means and how it will take place.

There is also mention of ‘Interpersonal Relationships’ and the importance of and benefit of personalisation within the context of education. One article, ‘Ireland Needs to Switch on or be Left Behind in Computer Science’ mentions how in addition to the Israeli curriculum being “*meticulously engineered*” by educational and content expert, another “*key ingredient in the success ... has been the focus on teacher experience*” (McGuire, 2015). This points this current research in a possible direction of how the curriculum is designed to facilitate this teacher experience. Another article ‘Teachers warn of further action after Thursday’s strike’, makes reference to how formative assessment within classroom settings are having a positive impact on teaching and learning. This article goes into detail on how the “*the biggest gains [in educational performance] are made by students who were previously underachieving*”. This is made clear as it is further mentioned how “*one size doesn’t fit all in education, and teachers who are assessing while they teach, rather than teaching to an exam, can find innovative ways to reach switched-off students*” (White, 2015). This understanding allows for a more personalised approach to educational assessment and teaching methods. While again, it is possible to quote various theorists such as Piaget, Vygotsky, or Bruner (which will come in the next chapter), the purpose here is to highlight what the data says from an objective view, not from a theorist perspective.

The most common theme found within the newspaper articles referred to ‘System Holes’ (n= 16). Items under this subtheme referred to issues that arise that are not easily resolved, for example, the article ‘Fitness to Teach’ Hearings to be Held in Public’ (Donnelly, 2015), mentions that “*the Teaching Council will not investigate a complaint unless existing school procedures have been exhausted*”. While the article in this particular class needs to be read in order to understand the context, it raises the question of what would happen if a school was unable to effectively deal with an issue or had inadequate procedures in the first place. It is to be stressed that the full article needs to be read in order to understand the context and message, if this is not done the message of the article (or quote) is open to various levels of interpretation and bias (Sargent, 1996). Another example of this subtheme is found within the article ‘Gender imbalances in the classroom - and all the way up’ (McGuire, 2015), mentions how “*about one-third of schools in Ireland are single-sex, a situation that is almost unique*

in Europe” and continues to mention how “[In secondary schools] *girls are leaving boys in the dust, outperforming them in 50 out of 59 Leaving Cert papers last year*”.

The nature of ‘Support’ is also mentioned which refers to the various supports given to educational bodies. For example, within the article ‘The Teaching Council plans to ‘liberate’ teachers – not just collect fees’ (Humphreys, 2015), the Teaching Council is compared to ‘Irish Water’ in the sense that annual membership is like a “*stealth tax*” as “*teachers have to cough up €65 to stay on the register – or at least €90 to be registered in the first place*”. While this does make sense in a way, if the article above “‘Fitness to Teach’ Hearings to be Held in Public’ (Donnelly, 2015), it is mentioned how “*the minister has rejected a recommendation from the Teaching Council that decisions about whether they will be held in public or private should be made on a case-by-case basis*”. Would it be possible that the demand of a “*stealth tax*” is called into question when it is clear, albeit from this collection of media articles, that the Teaching Council are operating on the best interests of its members? If this is the case, another direction of research could be addressed.

5.5. Action 3 - Quantitative Data Analysis

To provide a quantitative element to this project, enhancing the understanding of the educational environment, a number of external quantitative datasets have been used. The first of these datasets are the National Statistics published by the Department of Education and Skills (DES) from 2010 and 2015⁴³. They are used in this case to provide further information which may indicate a trend or pattern within the educational environment. Because it is noted during the qualitative data collection process that the student voice was not portrayed within the evaluations, the raw datasets for the Growing Up in Ireland (GUI)⁴⁴ survey child cohort were acquired from the Irish Social Science Data Archive (ISSDA). The purpose of both GUI (2009, 2012) data collection waves was to reveal some indication into the life of children by focusing on factors such as family and parenting, education, socio-emotional wellbeing, and relationships with peers. Use of these datasets was to provide the student voice that had previously been missing from both the WSE analysis and quantitative data retrieved from the DES.

⁴³ <https://www.education.ie/en/Publications/Statistics/Statistical-Reports/>

⁴⁴ By using a representative sample, the GUI was set up in order to establish a national longitudinal study of various factors that influence the life of children living in Ireland (<http://www.growingup.ie/index.php?id=83>).

The following quantitative data will be divided similarly to the qualitative data collection; with primary schools and secondary schools separated.

The DES data is divided between Primary and Secondary schools, making the comparability of the identified themes from the previous research step relatively straightforward. However, the GUI data collection, using the same students in both waves, took place in 2007/2008 when the students were aged 9 years old (n= 8,500; all of which were currently enrolled in a primary school) and again in 2011/2012 when the students were aged 13 years old (n= 7,525; 98% of which were currently enrolled in secondary school). For the purpose of this study, the findings of wave 1 will be used to enlighten the primary school dataset⁴⁵, and the findings of wave 2 will be used to enlighten the secondary school dataset. It is fully understood that these datasets, having been collected in 2007/2008 and 2011/2012, are outdated. The purpose, however, is that this is not to draw statistical significance; it is instead to secure the direction of the themes. Interestingly, in a publication using the GUI datasets, Greene, Williams, Layte, Doyle, Harris, McCrory *et al* (2010) mention that because of the evolving reciprocal nature of systems of change, a researcher should “*not look for static, universal laws but attempt, instead, to understand the ‘trajectory’ or ‘developmental pathway’ along which the person has travelled*” (pg. 19). This understanding is important when observing the qualitative data in tandem with the GUI data.

5.5.1. Primary School

According to the DES, primary schools within Ireland take three forms. There are two types of mainstream school: the first, ‘Mainstream 1’, refers to Primary financially aided by the DES; the second, ‘Mainstream 2’, refers to Primary schools that are considered to be private and are independent of DES aid. Finally, ‘Special School DES’ refers to schools that are specifically designed to cater for pupils with special educational needs, and of which are aided by the DES. As shown in Table 8 (below), the number of Mainstream 1 schools have reduced over the last 5 years (n= 28 schools); the number of Mainstream 2 schools have reduced, but remain unchanged as of 2013/2014. Finally, special education school’s in Ireland grew to 141 in the 2011/2012 report but has since dropped back to 140 in 2014/2015. It is unclear from this data what caused the school closures or whether a number of school in close proximity merged

⁴⁵ The data will be partially used due to limitations in the GUI study. These limitations will be mentioned below.

together; any analysis of this statistic would be speculative at this stage.

Although seeing a drop in the number of schools in Ireland, the number of students attending school is gradually increasing. As displayed in Table 4, the number of students within primary school education has risen by several thousand (n=33,690). There are several interesting findings within this data. For example, the number of students in Mainstream 2 schools grows considerably in the 2011/2012 cohort (n=332), followed by a sharp decline in the 2013/2014 cohort (n=1,636). When compared against the number of schools in Table 4 the sharp reduction in student numbers could be explained. There is a drop in a number of Mainstream 2 schools (n=10), it is possible that schools were aware of possible closures and therefore restricted student admission.

The main curiosity in this table, however, is the sharp fall in students with special education needs in mainstream schools in the 2011/2012 cohort (n=6,910). This report shows a small increase in the number of students with SEN in Mainstream 1's 2010/2011

Numbers of Primary Schools and Students in Ireland						
Number of Schools	10/11	11/12	12/13	13/14	14/15	
Mainstream 1	3,165	3,159	3,152	3,145	3,137	
Mainstream 2	42	37	37	27	27	
Special (DES)	140	141	141	141	140	
Total	3,347	3,337	3,330	3,313	3,304	
Number of Students	10/11	11/12	12/13	13/14	14/15	
Mainstream 1	492,742	506,216	515,676	525,141	532,931	
Mainstream 2	5,200	5,219	5,551	3,915	3,846	
Special (DES)	7,178	7,420	7,665	7,755	7,949	
Special in Mainstream	9,732	2,822	3,081	3,421	3,816	
Totals	514,852	521,677	531,973	540,232	548,542	

students with **Table 4; Primary School and Student Numbers**

special education needs had made up a proportion of this number; if this is the case, it would mean that a proportion of students who may have received additional supports and resources may have lost them. It is also possible that the data is wrong. In order to gain additional insight into this issue, the 2011/2012 Annual Report from the National Council for Special Education (2012) was accessed. Providing a more accurate depiction, it is reported that there were 20,138 students with special education needs within primary schools in Ireland. However, even when totalling the number of students with special education needs in mainstream 1 (n=2,822) and students in special

education schools (n=7,420), the total (n=10,242) is still very much less than the number mentioned by the NCSE; this drop in student numbers remains inconsistent in relation to the DES report.

Simple bivariate correlations were carried out in order better understand possible trends within the educational system by measuring the linear strength associations between the numerous variables mentioned above. The results found are typical, a strong negative correlation for example between the number of schools and the size of the schools ($r = -.817, p < 0.01$) was found; showing that there are a larger proportion of schools that are smaller in size and as the population of a school increases, the number of schools decreases. A strong positive correlation was found between the number of students in a school and the number of full-time teachers ($r = .991, p < 0.01$) and part time teachers ($r = .975, p < 0.01$). Again, this shows that a school with a large number of students have a large number of teachers, factoring for a ‘demand/supply’ relationship.

Although these correlations are not necessarily increasing knowledge, there were several other interesting findings. For example, Pearson correlation coefficient indicates a strong positive correlation between the ratio of student to teachers and school size ($r = .887, p < 0.01$) and the average class size ($r = .954, p < 0.01$); meaning that schools with a high student population are more likely to have a higher ratio of students to teachers, further suggested by a correlation between the average class size and school size ($r = .888, p < 0.01$). This data highlights a number of potential situations within a school environment. For example, it shows that larger schools, while less common, are more likely to have an increased number of teachers and students, but the students are also less likely to have as much contact time with a class teacher. Some of the main hypotheses within the GUI focused on out-of-school activities and how they may vary by school, and also looked at the influence of the learning environment of the classroom (GUI, 2009; No.3).

The statistical report published by the GUI (2009) reveals some indication into how children are experiencing their education. For example, when students were asked how much they liked school, 27% reported always, 66% reported sometimes, and 7% claimed never. In addition, when asked if they liked their teacher, 53% reported always, 41% reported sometimes, and 6% reported never. However, within the second wave of the GUI (2012), a sample of children were re-interviewed (n= 7,400). The majority of students had transferred into secondary school with 46% in first year and 51% in second

year; the remaining were still attending primary school. Of this sample, most held a positive attitude towards school (29% liked it *'very much'* and 32% liked it *'quite a bit'*). This statistic also means that 31% of the sample held a neutral to negative attitude towards school. It was found that a larger proportion of female students (35%) were positive about school than male students (23%). It was also found that students in second year were less positive about school than the other school groups. It was interesting to note that the children who held a positive attitude about school during the first data collection wave were more likely to be positive about secondary school. What these statistics show is that, not only do students who like school more likely to feel positive about secondary school; this positivity appears to decline in the second year of secondary school. Despite these statistical findings being anecdotal due to the outdated nature of the raw data, the statistics do point towards how a child will hold a teacher in a higher regard than the school itself, which places emphasis on the importance of the student-teacher relationship. It also provides evidence for a 'cultural' perception within education; partially confirming an ecological influence, as the child will have direct contact with a mesosystem (through the teacher within the classroom) and not the exosystem.

Among the other reported findings in the GUI (2009; No3) report, it is mentioned how 57% of students had access to the internet in class; there were other interesting findings in relation to the physical location of the school and the provision of resources. It was discovered that small urban schools (< 100 pupils) were less likely to have internet access; private schools were 79% likely to have access in the classroom than those in other schools (53%). Internet access was found to vary, but it was found that mixed-classrooms with a male teacher and multi-grade classes also influenced the likelihood of having Internet access; this particular finding was dependent on geographical location. Similar to the difference in primary school teacher gender reported in the DES reports, the GUI indicates a higher number of female teachers. In relation to internet usage, it was reported that smaller classes used computers more often, that students in DEIS schools were more likely to use computers, and multi-grade classrooms were more likely to use computers.

Percentage Frequency and Ratio of Gender					
Gender	07/08	08/09	09/10	10/11	11/12
Male	4,868	4,715	4,969	4,966	4,461
Female	25,500	26,634	26,912	27,634	27,569
Male %	16.0	15.0	15.6	15.2	13.9
Female %	84.0	85.0	84.4	84.8	86.1
Ratio – 1:	5.2	5.6	5.4	5.6	6.2
Totals	30,368	31,349	31,881	32,600	32,030

Table 5; Teacher Gender Descriptives

According to the DES 2007/2008 report, 93.7% of all nine-year-old students were enrolled in 3rd class (55.7%) and 4th class (37.9%); indicating that the majority of the GUI sample were recruited from one or the other class group. As seen in Table 5, the teacher gender ratio of primary schools in 2007/2008 was 1(m):5.2(f), while the GUI study reports a gender ratio of 1(m):5.9(f). At first glance, this does not appear to be a large difference, but it must be remembered that the GUI reports the ratio for a sample of teachers in a sample of 3rd and 4th classes. Therefore, the statistics related to teacher gender differences are not representative of the entire primary school sample.

Sticking with this gender imbalance, it is interesting to observe how the number of male teachers within the primary school education system is slowly decreasing while the number of female teachers is increasing (the gender description was unavailable after the 2011/2012 report). While it is unclear why this ratio is increasing, it is even more unclear as to what effect this would have (if any) on a students' education. Perhaps further study may indicate the effects of particular teacher characteristics on student experience.

Later in the GUI (2009; No.3) publication, it is reported that “*Nearly half (47%) of all 9-year-olds were taught by teachers who felt ‘very’ or ‘fairly’ stressed by their jobs; however nearly all (97%) had teachers who were at least ‘fairly satisfied’ with their job*” (pg. 3). On deeper inspection of these findings, the cumulative percentage breakdown is as follows; 5.7% ‘Very Stressed’, 40.8% ‘Fairly Stressed’, with the remaining reporting ‘Not Very’ (43.8%) or ‘Not at All’ (9.7%). What is interesting is that principals report higher levels of stress than teachers; 47.9% of principals reported being ‘Fairly Stressed’ and a further 17.8% reported being ‘Very Stressed’, totalling 67.8%. Regardless of the high levels of stress, there is also a high level of satisfaction. In teachers, it is reported that the majority are ‘Very Satisfied’ (58.7%), with a further 38.7% reporting being ‘Fairly Satisfied’ and the remaining 2% being ‘Not Very’ and

.4% being 'Not at All'. In principals, 50.1% report being 'Very Satisfied', a further 45.5% reporting being 'Fairly Satisfied', the remaining 3.5% being 'Not Very' and .9% being 'Not at All'. This finding is also seen in the GUI wave 2 dataset for principals, with 49.6% of principals reporting being 'Fairly Stressed' and a further 18.2% reported being 'Very Stressed', totalling 67.8%⁴⁶, and, 64.7% report being 'Very Satisfied', a further 33.9% reporting being 'Fairly Satisfied'. Whether symptoms of stress are balanced by levels of satisfaction is unclear. An analysis of this particular data would not be effective as a Likert scale of 3 was used to measure both 'Stress' and 'Satisfaction', and both of which were inputted into SPSS as a 'nominal' variable⁴⁷, which would provide an inaccurate measure of stress⁴⁸.

Other factors were reported to influence a child's education. For example, it was found that students being taught in gaelscoileanna or in Gaeltacht areas were more likely to partake in cultural activities than students within mainstream schools. Interestingly, students within Gaeltacht schools were less likely to use social networking websites than students in other school types. It was also reported how schools with all-male students were more likely to be involved in sports activities and less involved in cultural activities, while all-female schools favoured cultural activities over sports. The reason given, as reported, is due to the "*gendered nature of involvement in cultural activities, not to school sector per se*" (GUI, 2009; No.3, pg. 46). It is unclear what exactly is meant by 'gendered nature', but it is suggested that this 'gendered nature' is also seen in mixed gendered schools when it comes to cultural activities. The sentence reads as "*Pupils in boys' schools had lower levels of involvement in cultural activities (12% compared with 23-24% in mixed and girls' schools)*", does this mean that male students in mixed gendered schools refuse to participate in these activities and are offered an alternative activity, or do the students participate but express limited engagement?

⁴⁶ This statistic is identical to the GUI Wave 1 dataset total for principals.

⁴⁷ A nominal variable is essentially a variable with no intrinsic ranking. Gender would be an example of a nominal variable.

⁴⁸ As a direct result of this finding, it was decided to look to the discussion sections of each of the published GUI report in order to reference the criticisms and limitations of the datasets. While some of these sections mentioned how there were "*substantial social gradients*" within the study and that "*only an initial look at the lives of nine-year-olds*" (pg. 24) was taken (GUI, 2009; Executive Summary), it is felt, by this researcher, that going into excessive depth within this dataset would not be wise. However, among the search for limitations, one study using the GUI dataset was found that looks into job satisfaction and occupational stress among primary school teachers and principals (Darmody & Smyth, 2011). This study mentions that the GUI was not designed to explore levels of occupational stress, but may give some indication into possible limitations of the GUI study itself.

Darmody and Smyth (2011) highlight that one of the limitations of the GUI dataset is that it only accounts for nine-year-old students, and the parents and teachers of nine-year-olds; and that the experiences of individuals outside of this demographic are not represented. This limitation is completely understood. Despite the GUI data being used to enhance the qualitative findings in this project, the raw data itself has limited interactivity. Still, the findings of these reports do suggest that individual characteristics may impact the development of a student and the progress of their education. For example, it was found that students in classes with experienced teachers were more likely to have achieved higher scores in math. While one confounding factor for this finding is the influence of the teacher the class had in the previous year, access to the Internet was also found to have a positive influence on a students' score in maths. It is possible that teachers who place greater emphasis on the use of technology and the internet in classrooms may influence students' scores in math; it will be interesting to explore this context in today's educational setting, as technology has somewhat advanced since the publication of this GUI report.

5.5.2. *Post-Primary School*

According to the DES, secondary schools within Ireland take various forms, with four being referred to as schools are aided by the DES (Secondary School, Vocational School, Community School, and Comprehensive School), and two types considered private and independent of DES aid (Agriculture/Defence, and Secretarial/Commercial).

Number of Post-Primary Schools in Ireland					
School Type	10/11	11/12	12/13	13/14	14/15
Secondary (DES)	383	376	375	373	375
Vocational (DES)	254	254	253	256	262
Community (DES)	78	79	79	80	81
Comprehensive (DES)	14	14	14	14	14
Agriculture/Defence	9	9	9	9	8
Secretarial/Commercial	15	17	17	16	15
Total	753	749	747	748	755
(Boarding School)	(29)	(28)	(28)	(29)	(30)

Table 6; Post-Primary School Numbers

As shown in Table 6 the number of schools has not changed significantly from 2010/2011 (n= 753) to 2013/2014 (n= 748). There has been a drop in ‘Secondary’ schools from the 2010/2011 report to the 2013/2014 report (n= 10). Despite the reduction in schools after the 2011/2012 report (n= 1), there was a slight increase in the number of ‘Vocational’ schools from the 2012/2013 report (n= 253) to the 2013/2014 report (n= 256). This dataset is inclusive of boarding schools that are operating in Ireland; the exact number for each year is seen above. Although showing a slight increase in students in the 2013/2014 academic year (n= 347), the number of students attending boarding schools has been steadily decreasing over time, with a slight increase in students in the 2013/2014 cohort. While this can be explained by the opening of an additional boarding school in this year, there is an additional boarding school opened in the

2014/2015 academic year but the number of students attending boarding schools fell (n= 414). It is also interesting to note that in

Number of Boarding Schools					
	10/11	11/12	12-13	13/14	14/15
Males	2,529	2,173	2,106	2,318	2,082
Females	1,668	1,603	1,522	1,657	1,479
Total	4,197	3,776	3,628	3,975	3,561

Table 7; Boarding School Numbers

this rise in student numbers, it is possible that a proportion of these students came from non-boarding schools, which would add to the drastic fall in student numbers in the mainstream second level senior cycle. Each year there are more male students attending boarding school than female students (Table 7); it is possible, however, that several boarding schools failed to report the number of students enrolled in the school.

The DES divided the majority of the figures into several categories; ‘Secondary’, ‘Vocational’, ‘Community and Comprehensive’⁴⁹, each with three additional sub-categories, Junior Cycle, Senior Cycle, and PLC (Table 8). There are also a number of notes on each report to mention that some figures may be inaccurate due to advances in data collection procedures; as a result, some findings may not be significant. However, similarly to primary school populations, Table 8 shows that the number of students attending school is gradually increasing. The remaining two school types have not been included in the dataset; as the DES reported having insufficient access to the data.

⁴⁹ Within the DES documents, ‘Community’ and ‘Comprehensive’ schools are merged into one group

Observation of the total student numbers, at Junior Cycle level, are interesting; for example, the difference in student numbers between the 2010/2011 and 2011/2012 cohort are much greater (n= 3,764) than the previous or later report differences⁵⁰.

Number of Post-Primary Students in Ireland					
Junior Cycle	10/11	11/12	12/13	13/14	14/15
Secondary	101,867	101,794	101,513	101,167	101,182
Vocational	45,191	47,997	48,892	49,980	51,653
Com and Comp	29,648	30,679	30,829	30,837	30,892
Totals	176,706	180,470	181,234	181,984	183,727
Senior Cycle	10/11	11/12	12/13	13/14	14/15
Secondary	83,740	83,757	87,684	87,624	89,405
Vocational	33,186	34,347	38,666	38,267	39,959
Com and Comp	23,795	23,945	25,297	25,280	26,116
Totals	140,721	142,049	151,647	151,171	155,480
PLC	10/11	11/12	12/13	13/14	14/15
Secondary	1,015	858	1,016	655	557
Vocational	36,384	34,495	47,561	32,226	31,466
Com and Comp	1,281	1,175	1,623	1,102	1,066
Totals	38,680	36,528	50,200	33,983	72,663

Table 8; Post-Primary Student Numbers

At Senior Cycle level, there are further differences between the 2010/2011 and 2011/2012 cohorts being much lower (n= 1,328) than the difference between the 2011/2012 and 2012/2013 reports (n= 9,598); indicating a sharp rise in the number of students enrolled in schools. This difference is furthered, regarding the total number of students at PLC level, as there is growth of numbers in the 2012/2013 report (n= 13,672). The parallel rise in student numbers at senior cycle and PLC level courses is interesting; one possible explanation is that the rise in junior cycle students in the 2010/2011 cohort is causing a rise in senior cycle students in the 2012/2013 cohort. However, this would not explain the sudden rise and fall of PLC students in the 2012/2013 cohort (n= 16,217). The junior cycle students would only account for the full rise of the student number in the 2012/2013 cohort; what would be more likely is that several schools failed to report the total number of students enrolled. With the number of students increasing and the

The Ratio of Students : School Size					
Secondary	10/11	11/12	12/13	13/14	14/15
>100	77	55	86	98	789
100-200	152	156	160	164	483
200-300	256	258	256	257	357
300-400	346	343	346	352	419
400-500	445	448	449	447	650
500-600	548	545	549	554	691
600-700	647	648	643	649	449
700-800	739	743	738	745	1,004
800<	923	939	931	928	8

Table 9; Secondary School S:S Ratio

⁵⁰ This could be down to a 'methodological error', reported in the publications.

number of schools remain consistent throughout each academic year, this endeavour may give some indication into classroom sizes and ratios of teacher-students.

While it is understood that some schools may over or under enrol students and that the data within the DES reports are not accurate,

this task would identify several pitfalls and possibly project a near-future difficulty in facilitating student enrolment. Again, the school types were divided into the three categories ‘Secondary’ (Table 9, above), ‘Vocational’ (Table 10), and ‘Community and Comprehensive’ (Table 11), in order to remain consistent with the previous figures in the DES reports. The following graphs display the mean scores for number of students divided by the number of schools over the

last five academic years. Additionally, if the number of students enrolled exceeds the physical capacity of a school, the mean is coloured ‘red’. For ‘Secondary’ schools, Table 9 shows that between the 2010/2011 and 2013/2014 academic year, the number of students enrolled in schools were within the physical limits of the school size; However, the 2014/2015 academic year shows the opposite in all school types.

Although the mean scores do show gradual increases, the difference between the 2013/2014 and 2014/2015 academic year is too great to be an authentic representation. For example, in the first school type, schools with enrolment under 100 students (>100), the table above shows an increase to 789 students in a school that has the physical space for 100 students. The logical assumption, in this case, would be that a number of schools OR the number of students is inaccurate. It does, however, leave the question of whether student enrolment and the school classroom capacity is an issue. This

The Ratio of Students : School Size

Vocational	10/11	11/12	12/13	13/14	14/15
>100	69	67	61	60	404
100-200	161	161	157	154	384
200-300	255	251	248	249	248
300-400	343	339	341	339	287
400-500	446	445	444	436	911
500-600	540	538	543	544	365
600-700	647	639	646	648	435
700-800	739	726	748	745	3,124
800<	1,099	1,067	1,074	1,086	22

Table 10; Vocational School S:S Ratio

The Ratio of Students: School Size

Community and Comprehensive	10/11	11/12	12/13	13/14	14/15
>100	0	0	0	81	0
100-200	134	139	125	114	0
200-300	279	282	266	264	694
300-400	349	353	344	351	557
400 500	458	457	451	449	555
500-600	545	546	540	547	523
600-700	641	643	635	651	692
700-800	745	738	743	750	1,908
800<	985	972	979	986	9

Table 11; Community and Comprehensive S:S Ratio

difference is also seen in Table 10 and Table 11, which display the mean scores for ‘Vocational’ and ‘Community and Comprehensive’ schools. While the results, in this case, do show differences, the main curiosity is that the only differences are seen in the 2014/2015 cohort; which leads to question the reliability of the data collection methodology for this particular cohort. Interestingly, the cells in Table 11 that are highlighted ‘green’ were incomputable because either the student numbers or numbers of schools were not recorded. It is hoped that these statistics are wrong, but there are no way of knowing as these are the published version. The purpose of these datasets is to highlight the inaccurate nature of educational statistics in Ireland. There appears to be an attitude to research, at some level, that misunderstands the value and necessity of submitting data to the Department of Education and Skills⁵¹.

5.6. The Educational Ecosystem

This Chapter has been fundamental to this research project; it has shaped this researchers understanding of a particular pose of each component of Step 1 of the SET framework. The aim is to challenge the current conceptual understanding of education based on the data available. As the position of any research project brings certain biases in relation to how the research is approached, the aim of the preceding chapters in this Ph.D. was to give some insight into the psychological perspective of this study. Siegel (2005) highlights that because researchers understand the differing beliefs and perspectives of individuals and how they are influenced by numerous factors, the educational researcher must focus on more than just questionnaires or interviews and look towards the diversities of cultures and groups. Just as Boudah (2010) mentions that there are numerous ways to conduct research, Siegel (2005) explains that this research diversity impacts the way in which a researcher articulates the research question under study. Similar to the way the teaching style of an educator is developed through their own personal beliefs and experiences, a researcher will strive to answer a question that has been formed from their “*interests, education, temperament, curiosity, ambition, originality, beliefs, values, and so forth*” (pg. 5).

Oancea (2005) explains that there is a difference in conceptualisation between

⁵¹ The importance of accurate data is paramount to any research endeavour. I’m sure (and hope) that this is not a problem that only faces education in Ireland. There may be several reasons why this issue exists but, quite honestly, it is a little embarrassing to think that, amidst all of the sophisticated research methodologies that exist and the levels of funding that goes into projects, counting students is still difficult.

researchers. On one hand, there is a technician who conducts research that is defined in terms of accountability of ‘what works’ and, in the other is a researcher who is considered an intellectual, who focuses on the dissemination of knowledge that is localised, transferable, and meaningful (Mortimore, 2000; Furlong, 2004). Within the context of this research, there is a large body of evidence to suggest the importance of a researcher looking towards the beliefs, perspectives, and judgements of educators (Pajares, 1992) because these ultimately “*affect their behaviour in the classroom*” (pg. 307). Considering the vast quantity of data found above, the view of an educator being a ‘contributor to the classroom ecosystem’ and less of ‘just a member of a group’ gives a researcher the ability to conduct a study that is personal and context specific; tying into the ecosystemic perspective this research has adopted.

5.6.1. The Importance of Interaction

The WSE sample identified themes which allowed the researcher to understand how schools operate and whether similar points are overlapped throughout each report. For example, several WSE comments reported that “*pupils' positivity towards school is reflective of teachers' efforts to deliver a broad, balanced and interesting curriculum*”, suggesting that the positivity and engagement of a student directly reflects the ability of a teacher to deliver a lesson. During the inter-rater analysis, one of the participants⁵² mentioned that a school could have a highly academic and organised culture, where the students achieve and maintain above average grades but, if the same school failed to promote an environment that is dynamic, motivating, and engaging, the students may not achieve to the best of their ability. The inter-rater gives an example that a number of teachers can develop an identical lesson plan based directly on the set curriculum, the performance of the student in a standardised test (such as the junior or leaving certificate) becomes then a matter of how the teacher adapted the material to the needs of the student. It is also mentioned how “*it is a real shame when a subject is great and [a student is] not bad at it, but they hate the teacher and they give up the subject*”, and that some teachers “*just don't realise the impact they have and we all know that often a kid likes a subject because they like the teacher*”. This indicates a difference between an educational culture and educational environment, with the culture referring to the operational and managerial aspect of a school and the environment referring to the

⁵² The participant was male and, at the time of this study, had been a principal for over ten years and had been a principal of two second level schools with a student body ranging from 100-200.

school as a whole; how the students and staff engage and relationship that is built between both. Having reviewed WSE reports and collated DES statistics for the last several years, analysing the systematic factors that could be examined, it is interesting to discover that it is the relationships within education that are evident across each dataset. This is where the difference in primary and secondary schools become more prevalent. For example, in primary schools, a student would typically have the same teacher for each subject, while in secondary school a student would have various teachers for each of the subjects. The problem is that a student in primary school, while they do not necessarily need to adapt to an individual teachers' teaching style for each class, they will have the same teacher for each subject. This means that if a students' opinion of a teacher is negative, he/she may become less engaged across each subject. Similarly, if a teacher's opinion towards a student is negative, it will have an impact on the class. According to the inter-rater, *"you cannot really go into class and be an effective teacher if you do not like those students; first of all, the students will work that out. Who wants to be taught be somebody that you know doesn't like you? ... basically, the student has to know 'this teacher likes me, likes the subject, likes being in the classroom with us"*.

5.6.2. The Dynamics of Pedagogy

There is an evident importance towards the student having a positive relationship with a teacher. The student-teacher relationship is mentioned in various WSEs as being *"dynamic ... [which] has resulted in caring, confident learners"*. It is clear how the key strength in the provision of the curriculum is how teachers deliver the curriculum. There are recommendations of how teachers should consider using the local community and landmarks into their lessons by *"researching and collating local history as part of the Local Studies strand of the history curriculum"*, which speak more towards enhancing the curriculum rather than its delivery. Several WSEs report how there should be *"greater use of collaborative, activity-based methods together with further Information and Communication Technology (ICT) initiatives"*. Opportunities provided by extracurricular activities are said to cater for the *"holistic education of pupils"* and that by providing opportunities *"to participate in a broad range of community-related events and extra-curricular activities"* allow students to *"benefit"* in various ways. Teachers were also praised for their collaboration with members of staff in order to

“provide a broad and balanced curriculum” and for their dedication in voluntarily leading *“curriculum initiatives and pupil-support measures”*.

It is difficult to apply the findings from both the DES and GUI data for the purpose of supporting this research; what can be applied, however, are possibilities. It is mentioned in the GUI (2009, Report 3) that 27% of students like school, 66% like school sometimes, and that 7% never like school; it is also reported that 53% of students like their teacher, 41% like their teacher sometimes, and that 6% never like their school teacher. The problem with using a Likert scale of three is that it can be difficult to determine whether the middle value is either positive or negative. For example, it is reported on the second page of this report that *“a large majority of 9-year olds (93%) said they liked school at least ‘sometimes’*. *The remainder said they ‘never’ liked it”*; this finding could also be written as ‘a large majority of 9-year olds (73%) said they never liked school at least sometimes’⁵³. The same is true for a student liking a teacher, 53% like their teacher ‘Always’ in comparison to ‘Never’ (6%)⁵⁴. With regards to the 2012 dataset, 64.8% of students reported liking school more than ‘quite a bit’; while 7.1% reported not liking school very much and 2.4% reporting hating school. The specific percentages will need to be interpreted with some caution, however, but it can be argued that the general experience of students liking school within the GUI sample is positive. It can also be argued that the only certain finding in these statistics is that a student likes the teacher more than they like school (in the primary cohort only).

When observing each of the themes, from both primary and secondary school, it is apparent that a teacher is somewhat of a gatekeeper, being responsible for the planning, organisation, and assessment (all of which must be in line with the curriculum) of the students in their classroom.

5.6.3. The Need for Psychological Support

In addition, the role of the management is to support the students by assisting the teacher, inside and outside of the classroom, by giving direct support to students that may need additional help. There is a slight difference in this WSE sample with secondary schools employing academic and personal guidance support, receiving

⁵³ The SPSS file differs from the published findings however. Including the non-respondents (and excluding), the number of students who ‘Always’ like school was reported as ‘27%’ while it is ‘25.8%’ (26%) in the data file; the number of students who ‘Sometimes’ like school was reported as ‘66%’ while it is ‘68%’ (68.5%) in the data file; and the number of students who ‘Never’ like school was reported as ‘7%’ while it is ‘5.5%’ (5.6%) in the data file.

⁵⁴ The same issue cited in Footnote 21 is seen in this section too.

special educational needs resource hours, support from the School Completion Programme, and having designated times for classes in ‘Social, Personal, and Health Education’. Primary schools appear to focus more on in-class support and whole class initiatives that support individual targeted students; taking the form of sports activities or after school groups. In both WSE samples, however, there is a need for additional student and teacher support in the form of organisation at a management level; by designating the available resources more appropriately, timetabling initiatives to support student wellbeing, revising and updating policies, and following the departmental guidelines for particular curriculum balances. However, while the qualitative WSE findings above indicate the importance of the development and delivery of a lesson, highlighting how teachers must prepare and organise the content of the lesson whilst taking into account the various other factors such as school policies and the availability of resources, there is no mention of teacher supports.

There are advantages of having a management with a clear structure that allows its members to communicate and be communicated to, be active and support the school as a whole. In supporting the school as a whole also includes the staff. The theme of ‘Ownership and Management’ and ‘In-School Management’ talk mainly about the abilities of the board of management to adhere to the needs of the students and the requirement of the teachers in facilitating this need, to a certain extent. By taking this information and applying it to the articles that had been shared throughout social media creates an additional context outside of the WSE findings. For example, several articles draw attention to teacher strikes as a result of issues such as Junior Cycle reform. These issues would naturally cause some form of influence within the school environment, and therefore, the classroom. Although more research has been conducted on this topic outside of the Irish context, Baker (2013) and Wills (2014) both highlight the negative effects that industrial action has at a classroom level. For example, when factoring for individual school and cohort characteristics, Baker (2013) found that teacher strikes can have a significant negative affect on a students’ test scores. Similarly, Wills (2014) claims that the *“magnitude of the effect is roughly equivalent to a quarter of a years’ lost learning despite the average strike duration in these schools representing only seven per cent of official school days that year”* (pg. 20). Wills (2014) found that in particular types of schools the performance of a student where a subject taught by a striking teacher was 10% of a standard deviation lower when compared against a subject being taught by a non-striking teacher and that there may be *“lingering*

disruptive effects on student learning” as a result of strikes⁵⁵. These studies provide a particular perspective to this research project that had previously gone unnoticed. They raise the question of how effective a school community is at being able to communicate issues and support the staff who may be undergoing various levels of anxiety and stress. What this means is that, if the board of management was successful at communicating and supporting the teaching staff, the atmosphere would most likely be positive and reassuring but, if not, one could argue that this may cause an atmosphere of confusion, isolation, and increased levels of stress throughout the school⁵⁶. From the data gathered above, it is clear that there are multiple factors that influence the atmosphere and culture of a school, and by extension, educational research.

5.7. Conclusion

In some ways, the importance of the teacher in the classroom is made evident through statements such as *“pupils' positivity towards school is reflective of teachers' efforts to deliver a broad, balanced and interesting curriculum”*. As mentioned earlier in this chapter, Pratt (2002) argues that each individual teacher will naturally hold a unique *“set of beliefs and intentions that give direction and justification to our actions”* (pg. 6), meaning that each individual classroom is a completely unique environment; further developing this ecosystemic perspective and that each school is made up of a series of ecosystems.

In moving forward with this research, what is now currently known about the educational environment is that nothing is completely certain; the collected data above reveals possible indications of what may be happening on a classroom level. While students have identified liking their teacher more than they like school, possibly indicating that the student places greater emphasis on the student-teacher relationship, it is unclear whether this dynamic extends into secondary school. The lack of information and data surrounding the interactions between the students and teachers is interesting from an Irish context, considering the length of time one spends with the other. There is a reported gender imbalance throughout each level of education, with the number of

⁵⁵ Interestingly, Wills (2014) also suggests that teachers who go on strike may be of a lower quality than non-striking teachers. In an Irish context, it is understood that teachers are represented and supported by a union that makes the decision whether or not the membership body should go on strike.

male primary school teachers reducing as seen in the DES statistics and, as suggested by the GUI, a possible difference in teaching strategies and styles in both male and female teachers. It is known that both teachers and principals experience high levels of stress, but also experience high levels of satisfaction.

This dynamic of the student-teacher relationship is not made explicitly clear. Despite the importance of a teacher preparing lessons that are ‘engaging’, as identified in the WSE, the delivery of this class is dependent on numerous factors. For example, a lesson plan is developed for a class based on what the teacher feels the class is capable of; it states the learning outcomes, how these are measured, what materials are used, or whether the teacher needs to cater for any special educational needs. Because every class is different, if a teacher intends on giving the same lesson to another group, the plan itself will need to be adapted to suit the needs and requirements of the next class. In other words, the teacher needs to understand the students and who they are in order to effectively deliver the content of a lesson; this implies numerous factors that were not addressed in the above datasets.

Keeping aligned with the methodological framework of this Ph.D., the purpose of this chapter was to critically review and evaluate pre-existing data, concerning the education environment, with the intention of giving a direction to this research. What the findings of this current study are initially showing is that there is need to explore the dynamics of the relationship between students and their teachers. This desk research has provided three specific research directions which have, to this point, led to more questions than it has answered. In order to test the directions set out in this study, the next step is to conduct a pilot study with the purpose of identifying a research questions and to guide the literature review.

Chapter 6: The Irish Educational Microsystem

“We persevere in looking at small questions instead of large ones and our view of the forest is forever obscured by the trees” (Bevan, 1991, pg. 475)

Based on the themes identified in the previous chapter, the purpose of this chapter is to; (1) introduce the pilot research, (2) test the reliability of a selection of measures in order to confirm the research framework, and (3) support the construction of a literature review based on the participant findings. Due to the traditional write up of this grounded theory project, the brief literature review is aimed at identifying the most appropriate scales, inventories, or questionnaires that can address the themes under study.

6.1. Action 1 – Brief Literature Review

6.1.1. Importance of Interaction

Wubbels and Brekelmans (2005) adopt the systems approach, proposed by Watzlawick, Beavin and Jackson (1967), arguing that every behaviour displayed by an individual while in the presence of another is a form of communication. Falling under this category, education is considered a continuous cycle of interaction where *“one cannot not communicate when in the presence of someone else”* which also infers that *“whatever a person’s intentions are, others will infer meaning from this behaviour”* (Wubbels & Brekelmans, 2005, pg. 7). By integrating the view of ‘teaching as communicative system’ with the model for interpersonal diagnosis of personality (Leary, 1957)⁵⁷, Wubbels, Creton, and Hooymayers (1985) developed a way to measure the perceptions of interpersonal behaviour between students and their teachers; consisting of four categories (Cooperation, Opposition, Dominance, and Submission) which makes up eight subcategories (Leadership ‘DC’, Helpful/Friendly ‘CD’, Understanding ‘CS’, Student Responsibility and Freedom ‘SC’, Uncertain ‘SO’, Dissatisfied ‘OS’, Admonishing ‘OD’, and Strict behaviour ‘DO’). The descriptions of these traits were further emphasised by Wubbels and Brekelmans (2005) (Fig 8). The

⁵⁷ Within the Leary model, an individuals’ behaviour is represented by two independent dimensions; the *Dominance–Submission axis* and the *Hostility–Affection axis*.

value of this measure is evident as this model suggests that the behaviours expressed by a teacher is influenced and influences student behaviour (Fisher, Fraser, & Creswell, 1995).

While the original ‘*Questionnaire on Teacher Interaction*’ (QTI) (Wubbels, Brekelmans, & Hooymaners, 1991) was a 77-item scale and showed strong internal consistency (averaging at .765; teacher sample), a shortened 48-item version was developed which tested the same subcategories and boasted an equally strong internal consistency (averaging at .743; student sample). The QTI is used to provide

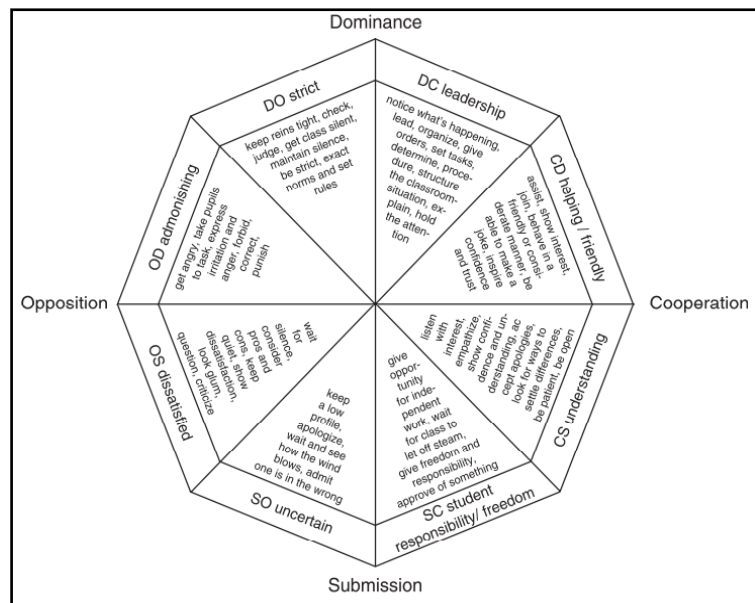


Figure 11; QTI Graph (Wubbels et al, 1991)

educators with a picture of their ideal teacher, how they see themselves, and how their students see them. This allows educators to be reflective in their practice by observing multiple perspectives and elements of their teaching.

The QTI can be completed by a student in order to evaluate the interpersonal relationship with their teacher or to evaluate the most important interpersonal traits of a fictional teacher, and can be completed by a teacher in order to measure their actual interpersonal behaviour traits or the ideal interpersonal behaviour they hope to have. It is believed that the QTI would be an invaluable measure that can be used in this research in order to provide an understanding of the importance of student teacher relationships and may provide insight into the educational environment of a particular classroom.

6.1.2. Dynamics of Pedagogy

As mentioned earlier in Chapter 2, because the learning environment and classroom dynamics are in a constant state of change, teachers are often placed into a position where they need to adapt (Edwards & Edick, 2013). The TPI (Pratt & Collins, 2000) was initially considered, but it was felt that using a scale that focused on the

implementation of pedagogical skill rather than the identification of a particular type of pedagogical skill would be more practical in this research. For this reason, a scale was needed that could measure the way in which a teacher integrated a number of elements into their everyday classroom practice. The Technological Pedagogical and Content Knowledge (TPACK) was designed to observe the relationships between a teacher's ability to integrate technology, pedagogy, and content knowledge into their teaching practice (Koehler & Mishra, 2008). While the TPACK does observe the use of technology in certain subscales, several WSE reports mentioned that there should be “*greater use of collaborative, activity-based methods together with further Information and Communication Technology (ICT) initiatives*”, it is believed that this addition may be significant in discovering how a teacher can use (and whether they can use) particular resources in their teaching. The *Technology knowledge* (TK) element, according to Koehler and Mishra (2009), is difficult to define due to the nature of technology developing and evolving rapidly. However, it is further mentioned how certain ways of thinking and navigating technology can apply to a wide range of technological tools and resources. The working interpretation of TK in this research refers to the Fluency of Information Technology (NRC, 1999). Under this term, TK refers to the ability of an individual to understand information technology to the extent of being able to effectively apply it in numerous settings. *Pedagogical knowledge* (PK) is referred to as being an educator's understanding of the processes and practices of teaching and learning (Koehler & Mishra, 2009).

Involving subjects pertaining to the overall purpose, value, and aims of education, ‘pedagogy’ strives to comprehend how students learn, accounting for skills in the areas of assessment, classroom management, and lesson organisation and planning. According to Koehler and Mishra (2009), a teacher with a thorough pedagogical knowledge will naturally understand how students construct their own knowledge and how to tailor this understanding to benefit student learning. *Technological pedagogical knowledge* (TPK) is a form of knowledge that refers to the way in which various technologies are used within an individual's teaching. High scores in TPK signify an enhanced understanding of using technology in classroom settings and integrating them to change the way teachers teach. *Technological, pedagogical, and content knowledge* (TPaCK) is a form of knowledge that, of course, linked to TK and PK, extends to account for the interaction between each core concept. Koehler and Mishra (2009) state that this particular concept is the basis of effective

teaching using technology, it requires an “*understanding of the representation of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that students face*” (pg. 66).

6.1.3. Need of Psychological Support

Moving forward with the topic of relationships, interaction, and environment, Maslach (1976) was curious about how individuals working within the human services (dentistry, nursing, teaching, etc.) felt throughout times high emotional arousal and the various coping strategies the individuals employed. Through this research, among others, Maslach (1976) labelled a concept known as ‘burnout’ that caused individuals to feel emotionally exhausted to the point where negative perceptions towards clients, patients, or students, were formed. Later research by Maslach, Jackson, and Leiter (1996) explain burnout further as being a “*syndrome of emotional exhaustion, depersonalisation, and reduced personal accomplishment that can occur among individuals who work with people in some capacity*” (pg. 4). In developing a scale to measure burnout, the original ‘Maslach Burnout Inventory’ (MBI) consisted of 47-items that represented the tri-dimensional nature of burnout as being highly emotionally exhausting, depersonalising, and reduces an individuals’ personal accomplishment. A version tailored for education was developed that consisted of 22-items (Maslach & Jackson, 1981) with high reported internal consistency (Emotional Exhaustion, .90; Depersonalisation, .76; and Personal Accomplishment, .76) that will be used in this research. The MBI is highly inter-correlated and is measured by high and low scores; a high score of Emotional Exhaustion and Depersonalization indicates greater risk of burnout, a low score of Personal Accomplishment indicates greater risk of burnout. This is supported by other studies found that combining the scores of emotional exhaustion and either of the remaining two factors indicated a greater level of burnout (Roelofs, Verbraak, Keijsers, de Bruin, & Schmidt, 2005).

In relation to this current research, the MBI will be a useful tool for analysing subjective perceptions of individuals and whether burnout is somehow related to ecosystemic factors. However, it could be argued that the MBI fails to account for subjective experiences and personal coping strategies that an individual may have

developed over time. Open ended questions may need to be asked in order to get a better understanding of an individuals' burnout score. As the MBI is tailored for individuals working with the 'human service' sector, it is context specific; meaning, in the case of this research, that an individual will answer each questions while thinking of their work in education. It was felt that a generalised scale focusing on a wide range of mental health constructs was needed in order to provide a personalised understanding of an individual outside of the educational context.

The Mental Health Inventory (MHI-38) is a 38-item questionnaire consisting of six subscales (Anxiety, Depression, Loss of Behavioural / Emotional Control, General Positive Affect, Emotional Ties and Life Satisfaction), two global scales (Psychological Distress and Psychological Well-being), and a global Mental Health Index score (Veit & Ware, 1983). The MHI has strong internal consistencies ranging from .83 to .96, is highly inter-correlated, and scoring of the scale is relatively straightforward; with high item scores on each of the subscales indicating high occurrence of that variable (within anxiety, for example, the lowest possible score is 9 while the highest is 54; an individual with a score of 9 would show low anxiety, and a score of 54 would show high anxiety).

6.2. Action 2 – Data Collection

The process of data collection was carried out in order to enhance the understanding of the factors associated with the themes outlined above. This study was conducted using digitalised questionnaires on educational staff within both Primary and Secondary school settings. Contact information was collected for schools (Primary, n= 3,074; Post-Primary, n= 685, and Special Schools, n= 130) across the country, who were then sent a link to the online study. It was requested for the email to be circulated throughout the staff. Out of the entire school sample (n= 3,889), several principals responded to the email to say they would participate (n= 12) and several responded to say they were currently unable to participate (n= 19). There were a number of responses to the 'Research Invitation' (n= 23), the majority of which being supportive and offering encouragement, but also denying the request. Out of the entire school sample, a small sample of educational staff responded (n= 60). Although the purpose of this study was to develop a research framework and provide a slight glimpse into the research area, the low response rate is relative cause for concern.

The average age of this sample was 36.42 ($SD = 11.48$) with a wide age range of 38 years. The number of teaching experience varied with an average of 13 years ($SD = 11.31$) with a wide experience range of 40 years. The average number of years spent in college was 4.56 ($SD = 1.49$) with a range of 7 years. With regards to teaching qualifications, the majority of participants held an ‘Undergraduate’ degree ($n= 27$), the following held a ‘Higher Diploma’ degree ($n= 18$), the following held a ‘Master’ degree ($n= 14$), the remaining ($n= 1$) held a ‘Ph.D.’.

The largest population sample were working in ‘Primary Schools’ ($n= 28$), followed by ‘Post-Primary’ ($n= 24$), schools that specifically cater for students with ‘SEN’ ($n= 5$), and ‘Non-DEIS Primary Schools’ ($n= 3$). In relation to specific educational role, the largest samples were from ‘Full-time Teachers’ ($n= 29$) and school ‘Principals’ ($n= 15$), followed by ‘Part-time Teachers’ ($n= 8$) and ‘Resource Teachers’ ($n= 5$). There were also other participants within this sample, a ‘Deputy-Principal’ ($n= 1$), ‘Guidance Counsellor’ ($n=1$), and ‘Further Education Teacher’ ($n= 1$). When accounting for the role of each participant based on the class group taught ($n= 59$), the biggest group within Primary school work with ‘Junior – Second class’ cohorts ($n=10$), then ‘Third – Sixth class’ cohorts ($n=6$), followed by participants who work with a range of Primary class groups ($n= 3$), such as resource staff. The biggest group within Secondary school work with a range of class cohorts ($n= 19$), followed by ‘Fourth – Sixth year’ cohorts ($n= 6$). The remaining group displays information regarding levels of management and support offered by Principals ($n= 14$), and Guidance counsellors ($n= 1$).

6.3. Action 3 – Analysis

Despite this study being circulated to thousands of schools each with a ranging proportion of staff, it could be argued that this outcome may actually tell more than it would seem. For example, the nature of this research requires a teacher to evaluate and self-reflect on their own teaching practice; which, may be seen as a step towards a critic of their skill as a teacher. Research conducted by Hart (1987), whilst using a sample of student teachers, found that one of the main sources of anxiety during their time as student teachers was being observed while teaching. Another study by Capel (1997), being somewhat more recent, supported the findings by Hart (1987), but also found that evaluation and being assessed were also significant factors associated with the

perception of anxiety. The concept of ‘evaluation anxiety’ (Kyriacou, & Stephens, 1999) could be a significant reason why there is a low response rate for this current study.

Of the schools that responded how they were unable to participate (n= 19), numerous explanations were given. Excluding the comment regarding a school closure (n= 1), the most frequent being how the schools were under pressure as a result of ‘Existing Research Projects’ (n= 8; “*we accept a set number of request each year on surveys, etc and have reached the limit on that already*”), ‘Workload’ (n= 4; “*I’m sorry *name omitted*. I cannot ask the staff to do anymore*”), ‘Time Restraints’ (n= 2; “*Due to time restraints we cannot help you with your research*”), ‘Time of Year’ (n= 2; “*Unfortunately the time of year that’s in it all staff are up to their eyes... if I was to give them more they’d kill me*”) , or ‘No Explanation’ (n= 2; “*Unfortunately we are not interested in participating in the Research*”). Although it is difficult to extract a generalisable set of themes, this ‘list’ provides possible explanations why a school may be unable to participate in research. It could be argued that of each of the themes above, the only controllable variable is the time in which a researcher invites a school to participate in a research project. When looking at the reasons given for not forwarding the research invitation to staff, three evident factors emerged; (1) ‘Involvement in Existing Projects’ (n= 8), (2) ‘Increasing Workload of Staff’ (n= 7), and (3) ‘Timing of the Research’ (n= 6). Although the reasons given cannot be fully reliable, they certainly provide an element of possible reluctance of research involvement.

Although being the most common reason for non-participation, it is difficult to determine whether ‘Involvement in Existing Projects’ is positive or negative situation. For example, one response mentions how “*We [the staff] are not in a position to facilitate your research at this time as we currently have 3 staff members undertaking such projects, as part of their Post-Graduate studies*”, from one perspective it implies that a school is engaged in some form of research, showing a staff that are involved in continuous learning which would naturally foster an environment of research development. But, responses show how several schools will only “*accept a set number of request[s] each year...*” meaning that once a school “*...reached the limit on that*” it is difficult to recruit that particular school for further research. This issue, coupled with responses such as “*I regret that we are so overloaded with projects at the moment that we will not be participating in your project*”, suggests that research is a problem for

research, that despite the ‘importance’ of some research topics or projects, if the allocated number of research studies have been reached, the allocated number of research studies have been reached, and no further studies can take place⁵⁸.

The next response factor within this study was the ‘Increasing Workload of Staff’. In these cases, it was not specified whether this is related to existing research projects, but responses took the form of “*if I was to give them [the staff] more they’d kill me*” or how, at the minute, there is an “*OVERLOAD for teachers*” with regards to paperwork and further commitments. This particular response is somewhat tied to the next factor ‘Timing of the Research’, in that there were responses such as “*unfortunately the time of year that’s in it all staff are up to their eyes with paperwork*”. It is interesting to note how several responses expressed a willingness to participate if the time was different “*best of luck with the research and if timing was different, we would have gladly participated*”. Although it is to be expected for the curricular calendar to be a factor in the recruitment of schools for research, but it is unclear whether outside societal influences impacted recruitment in this research⁵⁹. Observing the above comments could be used to articulate the views on the general educational body with regards to this research. It provides an added background context that may have influenced participants to choose whether or not to participate in this study.

6.3.1. When factoring for School Type

6.3.1.1. Primary School

With participants in Primary school (n= 28), the majority were female (n= 24) and had a mean age of 37. The highest and most common qualification within this group was an ‘Undergraduate’ degree (n= 19), followed by a ‘Higher Diploma’ (n= 5) and ‘Master’ degree (n= 4); this is naturally linked with the average number of years studying in college ($M = 4.33$ years). With regards to teaching experience, while the average was 14.75 years, there was a deviation of 13.495 years and median of 12 years. In addition to simple demographic questions, 3 open ended questions were asked in order to further

⁵⁸ I have contacted several colleagues in relation to this ‘research quota’, both educators and researchers within education. Ironically, the educators had ever heard of the existence of a ‘research quota’; the researchers had.

⁵⁹ It was at this point where social media articles were reviewed in order to observe background factors that may have influenced non-participation.

enhance both the demographic questions and the subsequent measures;

When asked “*Do you have many options for career progression?*” a number of participants reported ‘Yes’ (n= 11); of this sample, the most common response was ‘working the same job’ (n= 4), followed by ‘Principal’ (n= 3), the remaining answers (n= 1 x 4) reported ‘Unsure’, ‘Third level academics’, ‘Working in a different school’, and ‘Retired’. A larger sample reported ‘No’ however (n= 17); and of this sample, the most common response was ‘working the same job’ (n= 6), followed by ‘Retired’ (n= 3), ‘Principal’ (n= 2), ‘Unsure’ (n= 2), and the remaining answers (n= 1 x 4) reported ‘Learning Support’, ‘Third level academics’, ‘Working in a different school’, and ‘Management Position’. When asked “*Do you participate in Professional Development?*”, all participants reported yes; however, when asked for additional information, such as when the course took place, a large sample either said what course was completed or left the option blank (n= 23). Further responses included ‘within the last 0-3 months’ (n= 2), ‘3-6 months’ (n= 2), and ‘6+ months’ (n= 1). When asked “*Have you ever experienced Burnout?*”, a number of participants reported ‘Yes’ (n= 13) and a somewhat larger number reported ‘No’ (n= 15). Of the participants who had experienced Burnout in the past, the main reported causes were as result of ‘Workload’ (n= 4), ‘Unsure of the Cause’ (n= 4), ‘Difficult Class or Student’ (n= 2), ‘Multiple Causes’ (n= 2), and ‘Bullying’ (n= 1).

6.3.1.2. Primary Non-DEIS

With participants in Primary Non-DEIS, all were female (n= 3) with a mean age of 29.33. The qualifications within this group ranged from ‘Undergraduate’ degree (n= 1), ‘Higher Diploma’ (n= 1) and ‘Masters’ degree (n= 1); this would be linked with the average number of years studying in college ($M = 4$ years). With regards to teaching experience, while the average was 8.67 years, there was a deviation of 3.512 years and median of 9 years. In addition to simple demographic questions, 3 open ended questions were asked in order to further enhance both the demographic questions and the subsequent measures;

When asked “*Do you have many options for career progression?*” a number of participants reported ‘Yes’ (n= 1); of this sample, the only response was ‘Principal’ (n= 1). The remaining sample (n= 2) reported ‘No’, however; and of this sample, the responses were ‘working the same job’ (n= 1) and ‘Retired’ (n= 1). When asked “*Do you participate in Professional Development?*”, all participants reported ‘Yes’;

however, when asked for additional information, such as when the course took place, the entire sample either said what course was completed or left the option blank (n= 3). When asked “*Have you ever experienced Burnout?*”, all participants reported ‘No’ (n= 3).

6.3.1.3. *Post-Primary School*

With participants in Post-Primary (n= 24), the majority were female (n= 17) and had a mean age of 36.17. The highest and most common qualification within this group was a ‘Higher Diploma’ (n= 9), followed by ‘Masters’ degree (n= 8), an ‘Undergraduate’ degree (n= 6), and a ‘Ph.D.’ (n= 1); this is naturally linked with the average number of years studying in college ($M = 4.96$ years). With regards to teaching experience, while the average was 11.58 years, there was a deviation of 8.382 years and median of 9 years. In addition to simple demographic questions, 3 open ended questions were asked in order to further enhance both the demographic questions and the subsequent measures;

When asked “*Do you have many options for career progression?*” a number of participants reported ‘Yes’ (n= 8); of this sample, the most common responses were ‘working the same job’ (n= 3) and ‘Principal’ (n= 3), the remaining answers (n= 1 x 2) reported ‘Third level academics’ and ‘Year Head’. A larger sample reported ‘No’, however (n= 15). Of this sample, the most common response was ‘working the same job’ (n= 6), followed by ‘Principal’ (n= 5), ‘Third level academics’ n=2), ‘Retired’ (n= 2), and ‘Unsure’ (n= 1). When asked “*Do you participate in Professional Development?*”, all participants reported yes; however, when asked for additional information, such as when the course took place, a large sample either said what course was completed or left the option blank (n= 21). Further responses included ‘within the last 0-3 months’ (n= 2), and ‘6+ months’ (n= 1). When asked “*Have you ever experienced Burnout?*”, a number of participants reported ‘Yes’ (n= 14) and a smaller number reported ‘No’ (n= 10). Of the participants who had experienced Burnout in the past, the main reported causes were as result of ‘Workload’ (n= 6), ‘Multiple Causes’ (n= 4), ‘Unsure of the Cause’ (n= 2), ‘Difficult Class or Student’ (n= 1), and ‘Bullying’ (n= 1).

6.3.1.4. *Special Educational Needs School*

With participants in Special Educational Needs Schools, all were female (n= 5) with a mean age of 38.6. The qualifications within this group ranged from ‘Higher Diploma’

(n= 3), to ‘Undergraduate’ degree (n= 1), and ‘Masters’ degree (n= 1); this would be linked with the average number of years studying in college ($M = 4.2$ years). With regards to teaching experience, while the average was 14.2 years, there was a deviation of 14.061 years and median of 7 years. In addition to simple demographic questions, 3 open ended questions were asked in order to further enhance both the demographic questions and the subsequent measures;

When asked “*Do you have many options for career progression?*” a number of participants reported ‘Yes’ (n= 2) and of this sample, the responses were ‘working the same job’ (n=1), followed by ‘Retired’ (n= 1). A larger sample reported ‘No’ however (n= 3); and of this sample, the most common response was ‘working the same job’ (n= 2), followed by ‘Third level academics’ (n= 1). When asked “*Do you participate in Professional Development?*”, all participants reported ‘Yes’; however, when asked for additional information, such as when the course took place, a large sample either said what course was completed or left the option blank (n= 4). The remaining response was ‘within the last 0-3 months’ (n= 1). When asked “*Have you ever experienced Burnout?*” a number of participants reported ‘Yes’ (n= 4) and a smaller number reported ‘No’ (n= 1). Of the participants who had experienced Burnout in the past, the reported causes were as result of ‘Workload’ (n= 2) and ‘Multiple Causes’ (n= 2).

6.3.2. When factoring for Educator Type,

6.3.2.1. Teacher

With participants who are Teachers (n= 29), the majority were female (n= 25) and had a mean age of 31.48. The qualification within this group were an ‘Undergraduate’ degree (n= 11), followed by a ‘Higher Diploma’ (n= 11) and ‘Master’ degree (n= 7); this is then linked with the average number of years studying in college ($M = 4.24$ years). With regards to teaching experience, while the average was 8.48 years, there was a deviation of 8.271 years and median of 7 years. In addition to simple demographic questions, 3 open ended questions were asked in order to further enhance both the demographic questions and the subsequent measures;

When asked “*Do you have many options for career progression?*” a number of participants reported ‘Yes’ (n= 9); of this sample, the response were ‘working the same job’ (n= 3), followed by ‘Principal’ (n= 2), the remaining answers (n= 1 x 4) reported ‘Unsure’, ‘Third level academics’, ‘Management Position’ and ‘Retired’. However, a

larger sample reported 'No' (n= 19); and of this sample, the most common response was 'working the same job' (n= 10), followed by 'Principal' (n= 3), 'Unsure' (n= 2), 'Retired' (n= 2), 'Third level academics' (n= 1), and 'Management Position' (n= 1). One participant did not respond. When asked "*Do you participate in Professional Development?*", all participants reported 'Yes' (n= 29); however, when asked for additional information, such as when the course took place, a large sample either said what course was completed or left the option blank (n= 23). Further responses included 'within the last 0-3 months' (n= 2), '3-6 months' (n= 2), and '6+ months' (n= 1). When asked "*Have you ever experienced Burnout?*" a number of participants reported 'Yes' (n= 13) and a larger number reported 'No' (n= 16). Of the participants who had experienced Burnout in the past, the main reported causes were as result of 'Workload' (n= 6), 'Unsure of the Cause' (n= 3), 'Multiple Causes' (n= 2), 'Difficult Class or Student' (n= 1), and 'Bullying' (n= 1). Interestingly, despite reporting 'No', several participants (n= 6) reported that they had felt symptoms of Burnout caused by 'Multiple Causes' (n= 3), 'Workload' (n= 1), 'Unsure of the Cause' (n= 1), and 'Difficult Class or Student' (n= 1).

6.3.2.2. *Part/Time Teacher*

With participants who are Part/Time Teachers (n= 8), the majority were female (n= 5) and had a mean age of 32.75. The qualification within this group was an 'Undergraduate' degree (n= 5), followed by a 'Higher Diploma' (n= 2) and 'Ph.D.' (n= 1); this is then linked with the average number of years studying in college ($M = 5.25$ years). With regards to teaching experience, while the average was 9.63 years, there was a deviation of 10.663 years and median of 6 years. In addition to simple demographic questions, 3 open ended questions were asked in order to further enhance both the demographic questions and the subsequent measures;

When asked "*Do you have many options for career progression?*" a number of participants reported 'Yes' (n= 5); of this sample, the response were 'Principal' (n= 3), 'Working the same job' (n= 1), followed by 'Third level academics' (n= 1). Of the participants who reported 'No' (n= 3), the sample reported 'Unsure' (n= 1), working the same job' (n=1), followed by 'Principal' (n= 1). When asked "*Do you participate in Professional Development?*", all participants reported 'Yes' (n= 8); however, when asked for additional information, such as when the course took place, a large sample

either said what course was completed or left the option blank (n= 4). Further responses included ‘within the last 0-3 months’ (n= 2), ‘3-6 months’ (n= 1), and ‘6+ months’ (n= 1). When asked “*Have you ever experienced Burnout?*” a number of participants reported ‘Yes’ (n= 4) and a sample reported ‘No’ (n= 4). Of the participants who had experienced Burnout in the past, the participants reported being ‘Unsure of the Cause’ (n= 3), and ‘Workload’ (n= 1).

6.3.2.3. *Principal*

With participants who are Principals (n= 15), the majority were female (n= 12) and had a mean age of 44.73. The qualification within this group was an ‘Undergraduate’ degree (n= 8), ‘Master’ degree (n= 5), followed by a ‘Higher Diploma’ (n= 2); this is then linked with the average number of years studying in college ($M = 4.67$ years). With regards to teaching experience, while the average was 22 years, there was a deviation of 12.604 years and median of 18 years. In addition to simple demographic questions, 3 open ended questions were asked in order to further enhance both the demographic questions and the subsequent measures;

When asked “*Do you have many options for career progression?*” a number of participants reported ‘Yes’ (n= 6); of this sample, the response were ‘Working the same job’ (n= 5), followed by ‘Retired’ (n= 1). Of the participants who reported ‘No’ (n= 9), the sample reported ‘Working the same job’ (n= 5), ‘Third level academics’ (n= 2), followed by ‘Retired’ (n= 2). When asked “*Do you participate in Professional Development?*”, all participants reported ‘Yes’ (n= 15); however, when asked for additional information, such as when the course took place, a large sample either said what course was completed or left the option blank (n= 13). Further responses included ‘within the last 0-3 months’ (n= 1), and ‘3-6 months’ (n= 1). When asked “*Have you ever experienced Burnout?*” a number of participants reported ‘Yes’ (n= 8) and a smaller sample reported ‘No’ (n= 7). Of the participants who had experienced Burnout in the past, the participants reported there being ‘Multiple Causes’ (n= 3), ‘Unsure of the Cause’ (n= 3), ‘Workload’ (n= 2), and a ‘Difficult Class or Student’ (n= 1). Similar to the teacher group, despite reporting ‘No’ several participants reported that they had felt symptoms of Burnout and were ‘Unsure of the Cause’ (n= 2).

6.3.2.4. *Resource Teacher*

With participants who are Resource Teachers (n= 5), all were female (n= 5) and had a mean age of 40.4. The qualification within this group was an 'Undergraduate' degree (n= 3), followed by a 'Higher Diploma' (n= 1) and 'Master' degree (n= 1); this is then linked with the average number of years studying in college ($M = 4$ years). With regards to teaching experience, while the average was 18.4 years, there was a deviation of 11.059 years and median of 18 years. In addition to simple demographic questions, 3 open ended questions were asked in order to further enhance both the demographic questions and the subsequent measures;

When asked "*Do you have many options for career progression?*" a number of participants reported 'Yes' (n= 1); the response were 'Working in a different school'. Of the participants who reported 'No' (n= 4), the sample reported 'Working the same job' (n= 2), 'Working in a different school' (n= 1), followed by 'Retired' (n= 1). When asked "*Do you participate in Professional Development?*", all participants reported 'Yes' (n= 5); however, when asked for additional information, such as when the course took place, a large sample either said what course was completed or left the option blank (n= 3). Further responses included 'within the last 0-3 months' (n= 1), and '3-6 months' (n= 1). When asked "*Have you ever experienced Burnout?*" a number of participants reported 'Yes' (n= 2) and a larger sample reported 'No' (n= 3). Of the participants who had experienced Burnout in the past, the participants reported being 'Unsure of the Cause' (n= 1), and 'Workload' (n= 1) as the main contributors. Of the sample that reported 'No' several participants reported that they had felt symptoms of Burnout and were 'Unsure of the Cause' (n= 2), and another reported 'Bullying' (n= 1).

5.2.4.5 *Remaining sample*

Due to the small sample size in these cases, demographic factors such as qualification or number of years in college, are not reported here. As like the previous groups, 3 open ended questions were asked in order to further enhance both the demographic questions and the subsequent measures. When asked "*Do you have many options for career progression?*" the Deputy Principal (n= 1) reported 'Yes', saying that he or she will be 'working in the same job'; the Further Education teacher (n= 1) reported 'No', saying that he or she will be 'Retired'; and the Guidance Counsellor (n= 1) reported 'No', saying that he or she will be working in 'Third level academics'. When asked "*Do you*

participate in Professional Development?”, all participants reported ‘Yes’; however, when asked for additional information, the Deputy Principal reported what course was completed and left the time completed blank. This was done also by both the Further Education Teacher and the Guidance Counsellor. When asked “*Have you ever experienced Burnout?*” the Deputy Principal reported ‘No’ but also claimed having felt symptoms of Burnout caused by ‘Workload’; the Further Education Teacher reported ‘Yes’ and was ‘Unsure of the Cause’, and the Guidance Counsellor reported ‘No’.

6.3.4. Reviewing the Measures Used

In addition to collecting demographic data, questionnaires were completed by each participant and analysed for insights into questionnaire functionality and to gauge the direction of the research. The following data shows basic descriptive statistics within the entire population sample (n= 60).

6.3.1.1. The Questionnaire on Teacher Interaction

The Questionnaire on Teacher Interaction (Fisher, Fraser, & Cresswell, 1995) focuses specifically on the interpersonal relationship between teachers and students. It is a 48 question measure, with 4 dimensions represented by 8 categories. This questionnaire was filled in twice by educational professionals in order to measure the actual quality of teacher interaction, and the ideal quality of teacher interaction;

- **Teacher Self-Perception Score** - Mean scores are displayed below and graphically in Figure 9. As seen, Leadership ‘DC’ scored high M=23.35 (SD =2.557), Helpful/Friendly ‘CD’ scored high M=26.07 (SD =3.194), Understanding ‘CS’ scored high M=25.23 (SD =2.520), Student Responsibility and Freedom ‘SC’ scored moderate M=15.53 (SD =3.544), Uncertain ‘SO’ scored low-moderate M=10.15 (SD =2.590), Dissatisfied ‘OS’ scored low-moderate M=10.13 (SD =3.942), Admonishing ‘OD’ scored moderate M=12.37 (SD

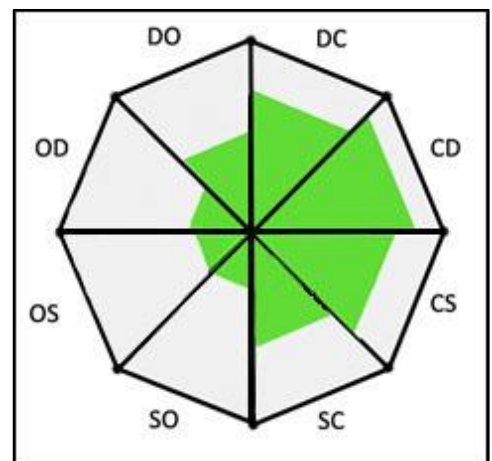


Figure 12; Teacher Self-Perception Score

=3.003), and Strict behaviour 'DO' scored moderate M=16.53, (SD =2.890).

- **Teacher Ideal-Perception Score** - Mean scores are displayed below and graphically in Figure 10. As seen, Leadership 'DC' scored high M=26.68 (SD =2.721), Helpful/Friendly 'CD' scored high M=27.78 (SD =2.565), Understanding 'CS' scored high M=28.13 (SD =2.633), Student Responsibility and Freedom 'SC' scored moderate M=14.55 (SD =3.739), Uncertain 'SO' scored low M=7.98 (SD =2.69), Dissatisfied 'OS' scored low M=8.28 (SD =2.882), Admonishing 'OD' scored low M=8.93 (SD =3.215), and Strict behaviour 'DO' scored moderate M=17.10, (SD =3.134).

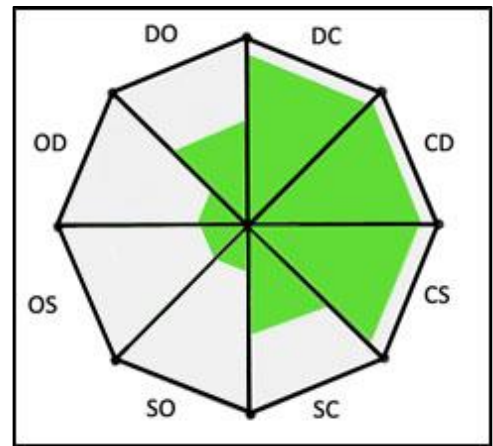


Figure 13; Teacher Ideal-Perception Score

A Paired-Sample T-test was performed on each of the Self-Ideal traits. It was found that, among six of the sample traits (**Leadership** - Self: M=23.35; SD =2.557, Ideal: M=26.68; SD=2.721, t(59)= -8.893, p =.000, **Helpful/Friendly** – Self: M=26.07; SD =3.194, Ideal: M=27.78; SD=2.565, t(59)= -4.204, p =.000, **Understanding** – Self: M=25.23; SD =2.520, Ideal: M=28.13; SD=2.633, t(59)= -7.402, p =.000, **Uncertain** – Self: M=10.15; SD =2.590, Ideal: M=7.98; SD=2.69, t(59)=5.306, p =.000, **Dissatisfied** – Self: M=10.13; SD =3.942, Ideal: M=8.28; SD=2.882, t(59)=4.495, p =.000, and **Admonishing** Actual: M=12.37; SD =3.003, Ideal: M=8.93; SD=3.215, t(59)=7.485, p =.000), there was significant difference between a teachers' self and ideal perception. There was no difference between the remaining two traits (**Student Responsibility and Freedom** - Self: M=15.53; SD =3.544, Ideal: M=14.55; SD=3.739, t(59)= 2.363, p =.021, and **Strict behaviour** - Self: M=16.53; SD =2.890, Ideal: M=17.10; SD=3.134, t(59)= -1.535, p =.130). The interpretation of this sample is quite revealing when the four categories proposed by Wubbels, Creton, and Hooymayers (1985). The differences indicates a sample that desires to be more direct, understanding and interested by being expressive and open with their students, while also being authoritative by setting out rules and keeping students on task. It is interesting to not how there are no differences in the entire sample with regards to giving students responsibilities and setting

classroom norms. There may be differences between school type, which will be discussed below.

6.3.1.2. *Maslach Burnout Inventory – Educator Survey.*

Schaufeli, Leiter and Maslach (2009) report that the diagnostic criteria can be used to observe burnout risk as a type of dichotomy that “*discriminates between burnout ‘cases’ and ‘non-cases’*” (pg. 212), an individual is therefore placed into categories of risk by splitting the scores into thirds to represent low, moderate and high risk (Maslach *et al.*, 1996).

Within the entire sample, the Emotional Exhaustion fell into the moderate risk category ($M = 29.9$; $SD = 4.92$), Depersonalization fell into the moderate risk category ($M = 25.15$; $SD = 5.27$) and Personal Accomplishment also fell into the moderate risk category ($M = 35.02$; $SD = 5.4$). To measure the internal relationship between each of the burnout factors, a Pearson product-moment correlation coefficient was computed on each variable pair. A strong positive relationship was found between Emotional Exhaustion and Depersonalisation ($r = .632$, $n = 60$, $p = .001$), signifying that if an individual scores high on emotional exhaustion, they are more likely to score high on depersonalisation. In addition, two moderate negative correlations were found between Depersonalisation and Personal Accomplishment ($r = -.672$, $n = 60$, $p = .001$) and Emotional Exhaustion and Personal Accomplishment ($r = -.727$, $n = 60$, $p = .001$). Both these correlations indicate that a high level of personal accomplishment is associated with a lower level of emotional exhaustion and depersonalisation.

6.3.1.3. *The Mental Health Inventory*

According to Veit and Ware (1983) high item scores on each of the subscales indicates high occurrence of that variable. In order to better understand the occurrence, the score scale and occurrence in this sample were as follows; a score of ‘Anxiety’ was low (Low: 9, High: 54; $M = 20.73$, $SD = 6.362$); the mean score for ‘Depression’ was low (Low: 4, High: 23; $M = 8.97$, $SD = 3.522$), the mean score for ‘Loss of Emotional Control’ was low (Low: 9, High: 53; $M = 19.17$, $SD = 5.576$); the mean score for ‘Personal Distress’ was low (Low: 24, High: 142; $M = 56.4$, $SD = 14.472$); the mean score for ‘General Positive Affect’ was moderate (Low: 10, High: 60; $M = 37.87$, $SD = 7.110$); and the mean score for ‘Wellbeing’ was high (Low: 14, High: 84; $M = 55.15$, $SD = 8.97$).

6.3.1.4. *The Technological Pedagogical Content Knowledge Inventory*

The TPACK was designed to measure teacher self-assessment of effective integration of technology into teaching practices. The TPACK framework observes the relationships between technology, pedagogy, and content knowledge (Koehler & Mishra, 2008) and categorises them into 7 subgroups. The mean score for 'Technology knowledge' was moderate-high ($M = 24.12$) but held a sizable variance in sample scores ($SD = 3.32$, $Var = 49.732$), the mean score for 'Pedagogical knowledge' was high ($M = 29.83$) and held a small variance in sample scores ($SD = 3.32$, $Var = 11.023$), and the mean score for 'Technological, pedagogical, and content knowledge' was high ($M = 26.05$) and held a small variance ($SD = 4.703$, $Var = 22.116$).

6.4. Implications of the findings

Although, keeping in mind that this pilot research involved a small sample of individuals from across the primary and post-primary school sector, is it impossible to make any significant interpretations. At this stage of research, a broad approach was taken by comparing demographic, open-ended and closed questioned variables and then using psychometrically validated questionnaires with the purpose of identifying whether these instruments would be suitable for a larger scale study. The basic statistical frequencies above show the generalised model of teacher interaction, the levels of burnout risk, the average ability of an individual to incorporate technology or pedagogies into their teaching practice, and various mean scores for mental health elements.

At present, it would appear that these measures would be useful for a larger scale study. However, in order to evaluate whether the scales could be used to compare variable relationships, Pearson correlation coefficients were computed. The variables were also checked for violations of normality, linearity, and homoscedasticity. A large number of correlations were found ($n=147$), with varying levels of strength and direction (**Positive: Weak-42, Moderate-20, Strong-4, VeryStrong-15; Negative: Weak-28, Moderate-23, Strong-10, Very Strong-4**) at both '0.01' and '0.05'. The correlations that were found will be used to direct the development of research questions and hypotheses, and literature review. Correlation does not imply causation, however, but several correlations include:

- **Emotional Exhaustion**, for example, was found to positively correlate to an individuals' self-perception of Leadership-A ($r = .428, p < 0.01$) moderately, and weakly to an individuals' self-perception of Uncertain-A ($r = .370, p < 0.01$), and Pedagogical Knowledge ($r = .305, p < 0.05$). Weak negative correlations were found between the self-perception of Understanding-A ($r = -.271, p < 0.05$), and an individuals' General Positive Affect ($r = -.256, p < 0.05$). These correlations indicate that when an individual is highly organised, provides structure in classroom settings, has good pedagogical skill, and is submissive in keeping a low profile; they will also experience emotional exhaustion. It also shows that a teacher that is experiencing emotional exhaustion will also have reduced empathy and patience in class, as is less likely to experience positive emotions such as joy, happiness, and interest.
- **Depersonalisation**, for example, was found to positively correlate with an individuals' self-perception of Personal Distress ($r = .438, p < 0.01$) and Anxiety ($r = .408, p < 0.01$), moderately, and weakly to an individuals' self-perception of Leadership-A ($r = .328, p < 0.05$), Pedagogical Knowledge ($r = .270, p < 0.05$), Depression ($r = .394, p < 0.01$), and Loss of Emotional Control ($r = .270, p < 0.05$). There was a weak negative correlation found in the global Mental Health Inventory score ($r = -.353, p < 0.01$). These correlations indicate that when an individual feels distressed and anxious, is unable to control their emotions, provides enhanced structure and organization in classroom settings, also maintaining good pedagogical skill, he/she will also experience depersonalisation. As it also shows that, if a teacher is experiencing depersonalisation also has a reduced global mental health score, there may be some indication with further research that if an individual scores high in the global mental health scale, they will score low in depersonalization.
- **Personal Accomplishment**, for example, was found to positively correlate with an individuals' self-perception of Leadership ($r = .313, p < 0.05$), Mental Health Inventory score ($r = .346, p < 0.01$), and General Positive Affect ($r = .281, p < 0.05$) weakly. There were also weak negative correlation found in several variables including; Uncertain-A ($r = -.303, p < 0.05$), Student Responsibility-A ($r = .313, p < 0.05$), Personal Distress ($r = -.347, p < 0.01$), Anxiety ($r = -.344, p < 0.01$), Depression ($r = -.310, p < 0.05$), and Loss of

Emotional Control ($r = -.265, p < 0.05$). These correlations indicate that when an individual feels a greater sense of personal accomplishment, they will also have higher experiences of positive emotions such as joy, happiness, and interest. However, it also suggests that when a teacher tries to keep a low profile, give students limited responsibilities and time to work independently, and feels anxious or distressed, they will also experience lowered levels of personal accomplishment.

6.5. Conclusion: Confirming the Research Questions

As previously mentioned in Chapter 2 Section 2, the pilot study under this methodological approach has been invaluable to the development of this research, allowing for a number of research avenues to be condensed in order to pinpoint the core focus of this particular project. Among the most important realisations within this project is the importance of context within educational research⁶⁰ that each classroom is an entirely separate ecosystem made up of individuals with shared beliefs, values, and attitudes. While Chapter 5 was heavily focused on, to use the Bronfenbrenner phrasing, ‘macro-systemic’ datasets, it identified some broad concepts that allowed for the identification of measures that could be used to view the classroom as a ‘microsystem’. Using a ‘microsystem’ perspective emphasises (1) the ‘Importance of Interaction’ and how the culture and atmosphere of a classroom is created through the interactions and influences of the individuals within said classroom. Upon furthering this theory, the way in which an educator implements (2) the ‘Dynamics of Pedagogical Skill’ is influenced by the educator themselves, considering Alexander’s (2008) view of pedagogy being subjective and caused by “*underlying theories and beliefs that can be inferred from their actions even if teachers are not consciously aware of them*” (pg. 3), it can be argued that ‘interaction’ and ‘pedagogy’ are highly interrelated, one influences and is influenced by the other. But, there is one piece of the puzzle remaining.

Stremmel, Burns, Nganga, and Bertolini (2015) describe education as being reductive and resembling a regime of discipline. Arguing that out-dated and flawed educational policies cause mass disillusion and turn students into ‘cogs in a machine’. Stremmel *et al.* (2015) advocate for holistic education, where students have more opportunities to be reflective, self-directed, and creative. However, researchers are

⁶⁰ And of course, other forms of research.

identifying an increasing perception of educational accountability (Labaree, 2014), with students being held accountable for their own learning and, in order to ensure that learning is of the highest quality, teachers and schools are also held accountable. Unfortunately, the way in which a school is often held accountable is through student results on standardised tests; often later published in the form of ‘League Tables’⁶¹. For example, Kohn (2000) criticises this accountability and argues against the focus and high level of importance placed on standardised testing. While “*standardised reading tests do not reflect current teaching methodology*” (Johns & Pariza, 2007; pg. 65), they are useful in identifying where a student needs improvement or what strategies can be used to better prepare a class for a new academic term. Labaree (2014) explains that test designers face the challenge of creating a measure that factors for the differences between students in a class, teachers in a school, schools in a county, etc. In other words, a test that was developed with urban male students, living in a low socioeconomic area between the ages of ten and twelve, may not work on rural female students, living in a high socioeconomic area between the ages of five and seven. While the concept of accountability and the use of standardised testing does have its merits in terms of planning and organisation, Ayers (1993), explains that it only reveals one side of a student, that it is impossible to measure factors such as “*initiative, creativity, imagination, conceptual thinking, curiosity, effort, irony, judgement, commitment, nuance, good will, [and] ethical reflection*” (pg. 116).

Regardless of the benefits and limitations of accountability and testing, it is clear that there is (3) the ‘Need for Psychological Support’. Whether a student is ‘under-performing’ or ‘over-performing’, or whether a teacher is finding it difficult to adapt to the needs of a particular class group, it is vital for there to be adequate supports in place; this particular topic was found in the qualitative element of the pilot study. For example, when participants were asked about the possible causes of burnout, the responses were grouped together and used to form the following (Figure 11; below). Although ‘Workload’ (n= 46) was the most reported contributor to perceptions of burnout, the previous six (‘Physical-Psychological’, ‘Relationships’, ‘Work-Life Balance’, ‘Lack of Support’, and ‘Management’) could arguably signify the need for educators to be supported in a range of different ways. For example, individuals who

⁶¹ <http://www schooldays.ie/articles/about-school-league-tables>

mentioned causes under the theme of ‘Physical-Psychological’ mentioned how they found it “*difficult to fall asleep at night*”, that they “*lacked the energy to function*”, or individuals who mentioned causes under the theme of ‘Work Life Balance’ reported how “*school has just taken over everything*” or “*I can’t remember the last time I had a weekend*”.

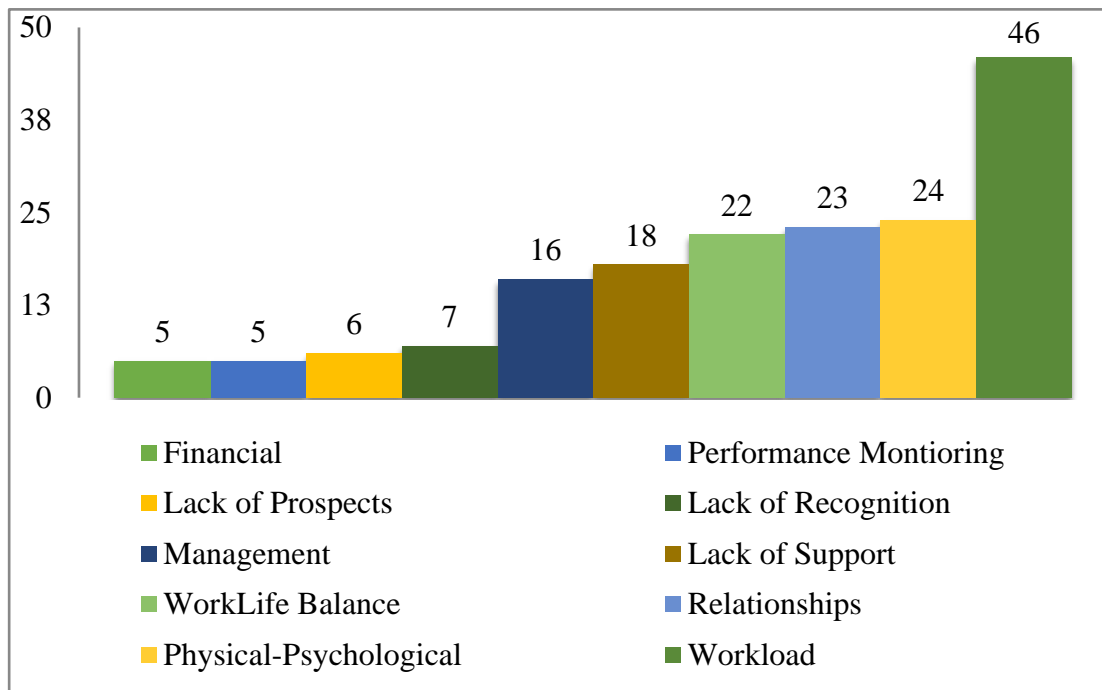


Figure 14; Reported Burnout Causes (Pilot)

As stated in the first chapter, the approach taken in this study is that of a psychologist within the field of education, using psychological theory and research in order to inform and support the work of educational professionals in various teaching and learning environments. Again, as specific findings of the pilot study were unable to be calculated due to the low response rate of the sample, they did secure the rationale towards using the proposed questionnaires within this research environment. The findings of the pilot study and the analysis of the Whole School Evaluations led to the identification of the following three research directions:

- (1) *the ‘Importance of Interaction’*,
- (2) *the ‘Dynamics of Pedagogical Skill’*, and
- (3) *the ‘Need for Psychological Support’*.

To address these specific directions, it was necessary to analyse each measure and determine whether significances existed between the educator groups. The following research questions and (a sample of) hypotheses were developed:

‘The Importance of Interaction’

6.5.1. Research Question 1: Do interpersonal behaviours differ between educator types?

- ***Hypothesis 1:*** There will be a difference in the self-perception of interpersonal behaviour when factoring for school type.
- ***Hypothesis 2:*** There will be a difference in the self-perception of interpersonal behaviour when factoring for educator role.
- ***Hypothesis 3:*** There will be a difference in the self-perception and ideal-perception of interpersonal behaviours when factoring for educational groupings of educator role and school type.
- ***Hypothesis 4:*** There will be a difference in self-perception and student-perceptions of interpersonal behaviour when factoring for educator groupings of role and school type.
- ***Hypothesis 5*** - There will be a relationship between interpersonal behaviours and mental health inventory dimensions.
- ***Hypothesis 6*** - There will be a relationship between interpersonal behaviours and mental health inventory dimensions when factoring for educator role.
- ***Hypothesis 7*** - There will be a relationship between interpersonal behaviours and mental health inventory dimensions when factoring for school type.
- ***Hypothesis 8*** - There will be a relationship between interpersonal behaviours and burnout dimensions.
- ***Hypothesis 9*** - There will be a relationship between the burnout dimensions and interpersonal behaviour.
- ***Hypothesis 10*** - There will be a relationship between the burnout dimensions and interpersonal behaviour when factoring for educator role.
- ***Hypothesis 11*** - There will be a relationship between the burnout dimensions and interpersonal behaviour when factoring for school type.

‘The Dynamics of Pedagogical Skill’

6.5.2. Research Question 2: Are particular interpersonal behaviours indicative of pedagogical or technological approaches within education?

- ***Hypothesis 12*** – There will be a difference in TPaCK dimensions when factoring for educator types.
- ***Hypothesis 13*** – There will be a difference in TPaCK dimensions when factoring for interpersonal behaviours.

‘The Need for Psychological Support’

6.5.3. Research Question 3: In what way are interpersonal behaviours linked to psychological health.

- ***Hypothesis 14*** - There will be a difference in MHI dimensions when factoring for demographic variables.
- ***Hypothesis 15*** - There will be a difference in MHI dimensions when factoring for role and school type.
- ***Hypothesis 16*** - There will be a difference in MHI dimensions when factoring for the perception of career progression.
- ***Hypothesis 17*** - There will be a difference in MHI dimensions when factoring for the participation in activities that are perceived to boost wellbeing.
- ***Hypothesis 18*** - There will be a difference in MHI dimensions when factoring for the experience of burnout in the past.
- ***Hypothesis 19*** - There will be a difference in the experience of burnout when factoring for demographic variables
- ***Hypothesis 20*** - There will be a difference in the experience of burnout when factoring for the perception of career progression.
- ***Hypothesis 21*** - There will be a difference in the experience of burnout when factoring for the participation in activities that are perceived to boost wellbeing.
- ***Hypothesis 22*** - There will be a difference in the experience of burnout when factoring for the experience of burnout in the past.
- ***Hypothesis 23*** - There will be a difference in mental health dimensions when factoring for levels of burnout risk.

Chapter 7: A Snapshot of Educator Perception

“To make the preliminary test on variances is rather like putting to sea in a rowing boat to find out whether conditions are sufficiently calm for an ocean liner to leave port”

(Box, 1953, pg. 333)

7 Research Findings

The overall methodological framework of this research project has been extensively detailed in Chapter 3. Fowler (2013) argues that, in practice, the relationships between explanatory variables and the measured outcomes are not as straightforward outside of theory. This suggests that it can be difficult to make causal inferences between the level, direction, and strength of which explanatory variables interact with the outcome variable. Lietz and Keeves (1997), mentioning sampling bias, argues that it is essential for a researcher to be mindful of the population sample that is recruited and whether they reflect the whole population. Within this study, the sampling population that had been decided to review are teachers. However, despite making this clear in the recruitment communications, other educational groups (such as principals or special needs assistants) completed the questionnaires and had scored similarly to the teacher sample.

By widening the recruitment to facilitate a number of educational professional groups, it was felt that the comparison of these groups would provide stronger suggestions regarding causal outcomes; what traits are indicative of a particular sample as a whole and what traits are indicative on an individual level. An attractive quality of this methodology is its resemblance to a ‘national census’ where individuals of *“different ages, different occupations, different educational and income levels”* (Cohen, Manion & Morrison, 2013, pg. 267). Within the context of this research, observation, and analysis of these differences will provide meaning, context, and further understanding towards the myriad of factors associated with interpersonal behaviour. Cohen, Manion and Morrison (2013) maintain that cross-sectional studies within educational settings provide a ‘snapshot’ of instances that give researchers the ability to observe *“how changing properties of individuals fit together into changing properties of social systems as a whole”* (pg. 269). Like all research methodologies, this design has limitation; its ‘snapshot’ nature or retrospective/prospective analysis suggests that repetition of this study in the future will likely yield different results. However, as this

study is exploratory, it is using several questionnaires that have yet to be used in an Irish context. The use of a cross-sectional methodology is logical. In order to add an additional dimension to this research, it was decided to include the responses from the pilot study in order to compare descriptive and inferential statistics against those of the larger sample⁶².

7.1 Participants

As expected, a large body of individuals participated in this research; despite not being teachers. Having seen this pattern during the pilot study, the researcher catered for particular roles in the form of a tick-box option. This inclusive approach, however, is limiting, as several scales that have been used in this study are designed for teaching groups. However, dividing

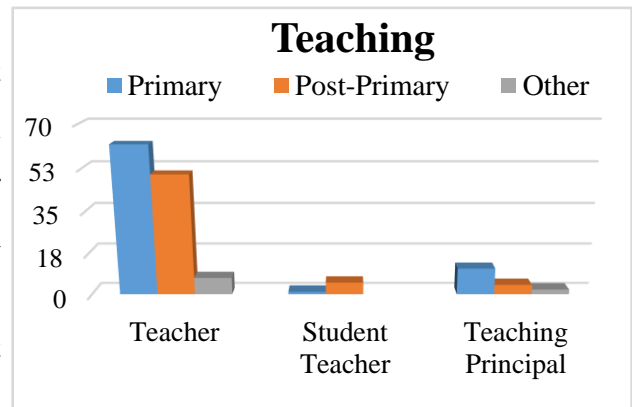


Figure 15; Teaching Sample by School Type

the educator sample into 'Teaching' and 'Non-Teaching' meant that the main differences between participants was their level of interaction with students. A sizable number of participants took part in this research (n= 758). This study grouped participants into three categories

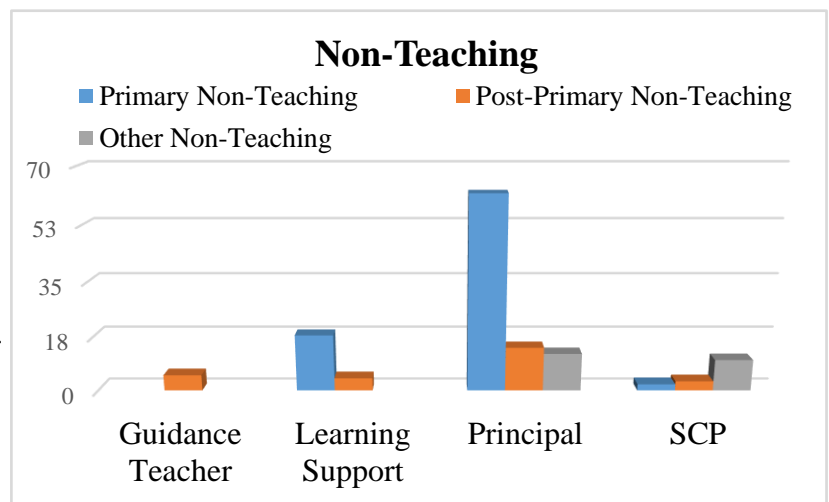


Figure 16; Non-Teaching Sample by School Type

(*Primary* n= 235, *Post-Primary* n= 495, and *Other* n= 25). Having divided the participants into groups that reflect the school type, it was necessary to consider dividing the participants into categories that reflect the role they have in the school

⁶² While being included, the pilot study participants were labelled in order to distinguish between both data collection phases.

(‘Teaching’ n= 155, ‘Non-Teaching’ n= 111, ‘Student’ n= 489)⁶³. While the student sample groups are relatively straight forward to understand (Primary Student n=79, Age $M=10.59$, $SD=.899$; and Post-Primary Student (n=410, Age $M=14.76$, $SD=1.576$), the role composition of the ‘Teaching’ and ‘Non-Teaching’ educators, in addition to the descriptive statistics of the subcategories, are as follows:

Subcategories	n=	Gender		Age
		M	F	M
Primary Teaching	73	8	65	36.71
Primary Non-Teaching	82	23	58	45.15
Primary Student	79	45	34	10.59
Post-Primary Teaching	59	23	35	35.69
Post-Primary Non-Teaching	26	4	22	43.88
Post-Primary Student	410	177	168	14.76
Other Teaching	22	5	17	45.22
Other Non-Teaching	3	2		43.67

Table 12; Educator Group Subcategories

Within the educator sample, the majority responded using Qualtrics⁶⁴ (n=204), Postal (n=12), and the remaining participants were from the pilot study (n=59). Although there were a greater number of responses from Qualtrics (n=282), a number of participants did not complete a large proportion of the questionnaires (n=78) and were removed from the final sample (n=204). Of the participants who posted their completed questionnaire (n=12), they also sent student responses (n=163). The remaining student responses (n=326) were collected by the researcher during visits to schools⁶⁵.

⁶³ A small number of participants (n=3) failed to report their grouping category, but reported being male teachers

⁶⁴ An online survey tool

⁶⁵ As an incentive to participate in this research, the researcher offered to travel to schools to deliver psychology based workshops to class groups (n=17).

There is a wide representation of educational populations (N=9) made up of Guidance Teachers (n=5), Learning Support (n=22) Principal, (n=88) School Completion Programme (n=15), Teacher (n=122), Student Teacher (n=6), Teaching Principal (n=17), Primary School Students (n=79), and Post-Primary School Students (n=410). The mean age of the total sample was $M=29.09$ ($SD=15.729$), but this of course differed when the samples were split between educators ($M=40.88$, $SD=10.945$) and students ($n=489$, $M=13.99$, $SD=2.19$).

Four descriptive questions were asked to each of the ‘Teaching’ and ‘Non-Teaching’ samples in order to further understand the context of the participant groups:

Number of Students in Participants’ School				
	<i>M</i>	<i>Md</i>	<i>Mod</i>	<i>SD</i>
Primary Teaching	311.25	237	160	265.9
Primary Non-Teaching	236	195	200	225.4
Post-Primary Teaching	541.7	550	600	243.7
Post-Primary Non-Teaching	479.71	450	300	239.1
Other Teaching	144	66	4	188.3
Other Non-Teaching	709.8	324.5	80	835.9

Table 13; Number of Students

- In relation to the number of students per school, the participants were asked: “*How many Students are in your School?*?”. While the mean scores for each display student numbers in the hundreds (Table 13), each sample group displays a large standard deviation (*SD*). For this reason, the median (*Md*) and mode (*Mod*) are also displayed.

Number of Staff in Participants' School				
	<i>M</i>	<i>Md</i>	<i>Mod</i>	<i>SD</i>
Primary Teaching	21.36	15	13	18.3
Primary Non-Teaching	16.21	13	4	13.9
Post-Primary Teaching	42.73	40	50	14.83
Post-Primary Non-Teaching	42	40	50	19.7
Other Teaching	24	20	20	15.1
Other Non-Teaching	67	44.5	6	65.5

Table 14; Number of Staff

- In relation to the number of staff per school, the participants we asked: “How many Members of Staff are in your School?”. While the mean scores for each display staff numbers range from the upper teens to the upper sixties (Table 14), each sample group displays a large *SD*. For this reason, the *Md* and mode *Mod* are also displayed.

Number of Years' Experience Working				
	<i>M</i>	<i>Md</i>	<i>Mod</i>	<i>SD</i>
Primary Teaching	11.82	8.5	10	10.5
Primary Non-Teaching	12.8	10	8	9.35
Post-Primary Teaching	10	8	1	8.7
Post-Primary Non-Teaching	10.46	8	5	7.2
Other Teaching	13.2	15	15	5.8
Other Non-Teaching	10.68	8	5	9.1

Table 15; Number of Years' Experience

- In relation to how many years' experience each participant has in their role, the participants were asked “How many years' experience do you have in this Role?”. While the mean scores for each remain somewhat consistent (Table 15), each sample group displays a large *SD*. For this reason, the median *Md* and mode *Mod* are also displayed.

Number of Years' in College				
	<i>M</i>	<i>Md</i>	<i>Mod</i>	<i>SD</i>
Primary Teaching	4.2	4	3	1.5
Primary Non-Teaching	4.1	4	3	1.4
Post-Primary Teaching	4.86	5	4	1.6
Post-Primary Non-Teaching	5.5	4	4	3
Other Teaching	6.1	6	5	2.1
Other Non-Teaching	4.6	4	4	1.7

Table 16; Number of Years' in College

- In relation to how many years' spent in college training for their role, the participants were asked: “*How many years' did you spend in college?*”. The mean scores for each remain somewhat consistent (Table 16). There is a relatively large *SD* in the post-primary non-teaching sample; the *Md* and *Mod* are also displayed.

‘The Importance of Interaction’

7.2 Research Question 1: Do interpersonal behaviours differ between educator types?

A Spearman Rho correlation was conducted on the descriptive variables in order to identify intercorrelations with QTI interpersonal behaviours. According to Wubbels, Creton, Levy, and Hooymayers (1993) the way the QTI is represented graphically, adjacent behaviours should positively correlate, and opposite behaviours should negatively correlate. Various studies report high levels of inter-correlation between the QTI behaviours (Fraser, Aldridge, & Soerjaningsih, 2010) which is also seen in this study. The highest correlations are seen between Leadership and Helpful/Friendly ($\rho = .540, p = .01$), Leadership and Understanding ($\rho = .506, p = .01$), and Understanding and Helpful/Friendly ($\rho = .625, p = .01$); the remaining behaviours do correlate, but are somewhat weaker.

Intercorrelations in the Questionnaire of Teacher Interaction								
	DC	CD	CS	SC	SO	OS	OD	DO
	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$
<i>Leadership</i>	1	.540**	.506**	-.161*	-.458**	-.277**	-.154*	.082
<i>Helpful Friendly</i>		1	.625**	.081	-.454**	-.411**	-.259**	-.009
<i>Understanding</i>			1	-.021	-.471**	-.453**	-.404**	-.140*
<i>Responsibility Freedom</i>				1	.228**	.129	.075	-.222**
<i>Uncertain</i>					1	.339**	.340**	-.038
<i>Dissatisfied</i>						1	.362**	.207**
<i>Admonishing</i>							1	.210**

* Sig at .05, ** Sig at .01

Table 17; QTI Intercorrelations

A series of ANOVA and T-Tests were carried out on each QTI dimension in order to determine whether differences exist in ‘self-perception’ or ‘ideal-perception’ on a

participant role level ('teaching' and 'non-teaching') and school type level ('primary', 'post-primary', and 'other').

7.2.1 Hypothesis 1: There will be a difference in the self-perception of interpersonal behaviour when factoring for school type.

With the variables being subjected to an ANOVA analysis, there was one significant difference found across each of the QTI behaviours:

There was a statistically significant difference at the $p < .05$ level in Self-perception of Dissatisfied behaviour scores for the three groups: $F(2, 154.9) = 4.249$, $p = .016$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was small at 0.029.

7.2.2 Hypothesis 2: There will be a difference in the self-perception of interpersonal behaviour when factoring for educator role.

With the variables being subjected to a T-Test analysis, there were three significant differences found across each of the QTI behaviours:

There was a statistically significant difference found in scores for the self-perception of understanding behaviour between 'teaching' ($M=26.05$, $SD=1.781$) and 'non-teaching' ($M=24.8$, $SD=2.539$), $t(160.602) = 3.922$, $p=.000$ (two-tailed). The magnitude of the differences in the means (mean difference = 1.244, 95% CI: .617 to 1.87) was large (eta squared $d = .09$).

There was a statistically significant difference found in scores for the self-perception of dissatisfied behaviour between 'teaching' ($M=9.75$, $SD=2.793$) and 'non-teaching' ($M=10.64$, $SD=3.216$), $t(192) = -2.073$, $p=.039$ (two-tailed). The magnitude of the differences in the means (mean difference = -.894, 95% CI: -1.745 to -.044) was small (eta squared $d = .02$).

There was a statistically significant difference found in scores for the self-perception of admonishing behaviour between 'teaching' ($M=11.44$, $SD=2.934$) and 'non-teaching' ($M=12.38$, $SD=3.243$),

$t(198) = -2.145, p=.033$ (two-tailed). The magnitude of the differences in the means (mean difference = $-.937$, 95% CI: -1.799 to $-.076$) was small (eta squared $d = .02$).

7.2.3 Hypothesis 3: There will be a difference in the self-perception and ideal-perception of interpersonal behaviours when factoring for educational groupings of educator role and school type.

Having explored the differences of interpersonal behaviour while factoring for educator role and for school type as individual categorical variables, each interpersonal behaviour was subjected to a series of T-Test analyses using both educator role and school type as a single categorical variable (*Primary Teaching*, *Primary Non-Teaching*, *Post-Primary Teaching*, *Post-Primary Non-Teaching*, *Other Teaching*, and *Other Non-Teaching*). As each educator grouping showed a significant number of differences across each interpersonal behaviour, it was decided to visually display each behaviour graphically, while using the standardised T-Test output terminology;

Leadership - DC										
There was a statistically significant difference found in scores for leadership behaviour in the primary teaching group when factoring for ‘self-perception’ ([1] $M = 23.74$, [2] $SD = 2.02$) and ‘ideal-perception’ ([3] $M = 27.74$, [4] $SD = 1.93$), [5] $t(53) = [6] -11.82$, [7] $p = .000$ (two-tailed). The magnitude of the differences in the means was [9] large (eta squared $d = [8] .72$).										
		<i>Self-Perception</i>		<i>Ideal-Perception</i>						
	n=	1 <i>M</i>	2 <i>SD</i>	3 <i>M</i>	4 <i>SD</i>	5 <i>t</i>	6 =	7 <i>p</i> <	8 eta ^2	9 effect size
<i>Primary Teaching</i>	54	23.8	2.0	27.7	1.9	53	-11.8	0.00	0.72	L
<i>Primary Non-Teaching</i>	65	23.5	2.6	27.7	2.6	64	-13.9	0.00	0.75	L
<i>Post-Primary Teaching</i>	44	23.9	2.3	27.3	3.0	43	-6.9	0.00	0.53	M
<i>Post-Primary Non-Teaching</i>	21	23.8	2.3	27.4	2.2	20	-6.4	0.00	0.67	L
<i>Other Teaching</i>	3	23.7	0.6	28.9	2.3	2	5	0.038	0.93	L
<i>Other Non-Teaching</i>	16	25.4	2.3	29.1	1.0	15	-5.8	0.00	0.69	L

Table 18; T-Test Leadership DC

Helpful Friendly - CD

There was a statistically significant difference found in scores for helpful/friendly behaviour in the primary teaching group when factoring for ‘self-perception’ ([1] $M = 26.72$, [2] $SD = 1.812$) and ‘ideal-perception’ ([3] $M = 28.13$, [4] $SD = 1.787$), [5] $t(52) = [6] -5.894$, [7] $p = .000$ (two-tailed). The magnitude of the differences in the means was [9] large (eta squared $d = [8] .4$).

	n=	Self-Perception		Ideal-Perception		5	6	7	8	9
		1	2	3	4					
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	=	<i>p</i> <	eta ^2	effect size
<i>Primary Teaching</i>	53	26.72	1.81	28.13	1.79	52	-5.89	0.00	0.40	M
<i>Primary Non-Teaching</i>	63	26.41	3.03	28	2.46	62	-5.61	0.00	0.33	S
<i>Post-Primary Teaching</i>	46	26.48	2.38	27.52	2.57	45	-3.71	0.00	0.23	S
<i>Post-Primary Non-Teaching</i>	20	25.35	4.03	27.7	2.41	19	-2.91	0.00	0.31	S
<i>Other Teaching</i>	4	29.0	0.1	29.5	0.5	3	-3.0	0.058	0.75	N/A
<i>Other Non-Teaching</i>	15	27.27	2.28	28.93	1.71	14	-2.71	0.017	0.34	S

Table 19; T-Test Helpful Friendly CD

Understanding - CS

There was a statistically significant difference found in scores for understanding behaviour in the primary teaching group when factoring for ‘self-perception’ ([1] $M = 26.02$, [2] $SD = 1.72$) and ‘ideal-perception’ ([3] $M = 28.55$, [4] $SD = 1.67$), [5] $t(52) = [6] -8.44$, [7] $p = .000$ (two-tailed). The magnitude of the differences in the means was [9] large (eta squared $d = [8] .58$).

	n=	Self-Perception		Ideal-Perception		5	6	7	8	9
		1	2	3	4					
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	=	<i>p</i> <	eta ^2	effect size
<i>Primary Teaching</i>	53	26.02	1.715	28.55	1.671	52	-8.442	0.00	0.5782	M
<i>Primary Non-Teaching</i>	65	25.03	2.43	28.45	2.229	64	12.057	0.00	0.6943	L
<i>Post-Primary Teaching</i>	46	26.07	1.925	27.89	2.47	45	-4.905	0.00	0.3484	S
<i>Post-Primary Non-Teaching</i>	20	24.35	2.815	27.9	1.917	19	-5.748	0.00	0.6349	L
<i>Other Teaching</i>	4	26.5	1.732	29.25	0.957	3	-2.48	0.089	0.6721	NA
<i>Other Non-Teaching</i>	14	25.71	2.431	28.64	1.781	13	-3.857	0.00	0.5337	M

Table 20; T-Test Understanding CS

Responsibility Freedom - SC

There was a statistically significant difference found in scores for responsibility freedom behaviour in the primary teaching group when factoring for ‘self-perception’ ([1] $M = 15.3$, [2] $SD = 3.23$) and ‘ideal-perception’ ([3] $M = 14.74$, [4] $SD = 2.9$), [5] $t(52) = [6] 2.25$, [7] $p = .029$ (two-tailed). The magnitude of the differences in the means was [9] Moderate (eta squared $d = [8] .088$).

		<i>Self-Perception</i>		<i>Ideal-Perception</i>						
		1	2	3	4	5	6	7	8	9
	n=	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	=	<i>p</i> <	eta ^2	effect size
<i>Primary Teaching</i>	53	15.3	3.226	14.74	2.903	52	2.246	0.029	0.0884	S
<i>Primary Non-Teaching</i>	63	15.57	3.12	14.43	3.872	62	3.383	0.00	0.1558	S
<i>Post-Primary Teaching</i>	46	15.7	3.161	15.37	3.389	45	1.131	0.264	0.0276	NA
<i>Post-Primary Non-Teaching</i>	19	16.63	3.32	14.63	2.793	18	3.815	0.00	0.4471	M
<i>Other Teaching</i>	4	16.25	1.258	15.25	1.258	3	2.449	0.092	0.6666	NA
<i>Other Non-Teaching</i>	14	15.93	2.645	15.71	3.148	13	0.467	0.648	0.0165	NA

Table 21; T-Test Responsibility Freedom SC

Uncertain - SO

There was a statistically significant difference found in scores for uncertain behaviour in the primary teaching group when factoring for ‘self-perception’ ([1] $M = 9.96$, [2] $SD = 2.27$) and ‘ideal-perception’ ([3] $M = 7.89$, [4] $SD = 1.96$), [5] $t(54) = [6] 7.15$, [7] $p = .000$ (two-tailed). The magnitude of the differences in the means was [9] Large (eta squared $d = [8] .49$).

		<i>Self-Perception</i>		<i>Ideal-Perception</i>						
		1	2	3	4	5	6	7	8	9
	n=	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	=	<i>p</i> <	eta ^2	effect size
<i>Primary Teaching</i>	55	9.96	2.27	7.89	1.96	54	7.148	0.00	0.486	M
<i>Primary Non-Teaching</i>	64	10.06	2.79	7.86	2.43	63	7.768	0.00	0.489	M
<i>Post-Primary Teaching</i>	47	9.91	2.55	8.66	3.0	46	3.152	0.00	0.178	S
<i>Post-Primary Non-Teaching</i>	21	11.62	3.4	8.62	3.04	20	4.557	0.00	0.509	M
<i>Other Teaching</i>	4	10.75	1.71	9.75	2.6	3	0.926	0.423	0.222	NA
<i>Other Non-Teaching</i>	15	10.93	3.26	8.8	3.26	14	3.193	0.00	0.421	M

Table 22; T-Test Uncertain SO

Dissatisfied - OS

There was a statistically significant difference found in scores for dissatisfied behaviour in the primary teaching group when factoring for 'self-perception' ([1] $M = 9.34$, [2] $SD = 2.72$) and 'ideal-perception' ([3] $M = 8.09$, [4] $SD = 1.88$), [5] $t(52) = [6] 4.7$, [7] $p = .000$ (two-tailed). The magnitude of the differences in the means was [9] Large (eta squared $d = [8] .3$).

		<i>Self-Perception</i>		<i>Ideal-Perception</i>		5	6	7	8	9
		1	2	3	4					
	n=	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	=	<i>p</i> <	eta ^2	effect size
<i>Primary Teaching</i>	53	9.34	2.724	8.09	1.884	52	4.696	0.000	0.2978	S
<i>Primary Non-Teaching</i>	64	10.33	3.183	8.41	2.605	63	6.143	0.000	0.3746	S
<i>Post-Primary Teaching</i>	45	9.98	2.65	8.69	2.835	44	3.604	0.000	0.2279	S
<i>Post-Primary Non-Teaching</i>	21	11.86	3.366	9.33	2.763	20	4.697	0.000	0.5245	M
<i>Other Teaching</i>	4	8.25	0.5	7.25	0.957	3	1.414	0.252	0.3999	NA
<i>Other Non-Teaching</i>	14	9.64	1.598	8.57	2.138	13	2.446	0.029	0.3152	S

Table 23; T-Test Dissatisfied OS

Admonishing - OD

There was a statistically significant difference found in scores for admonishing behaviour in the primary teaching group when factoring for 'self-perception' ([1] $M = 11.23$, [2] $SD = 3.09$) and 'ideal-perception' ([3] $M = 8.13$, [4] $SD = 2.39$), [5] $t(55) = [6] 7.83$, [7] $p = .000$ (two-tailed). The magnitude of the differences in the means was [9] Large (eta squared $d = [8] .53$).

		<i>Self-Perception</i>		<i>Ideal-Perception</i>		5	6	7	8	9
		1	2	3	4					
	n=	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	=	<i>p</i> <	eta ^2	effect size
<i>Primary Teaching</i>	56	11.23	3.09	8.13	2.39	55	7.83	0.00	0.53	L
<i>Primary Non-Teaching</i>	65	12.11	3.08	8.38	2.75	64	11.21	0.00	0.66	L
<i>Post-Primary Teaching</i>	46	11.67	2.91	9.00	3.22	45	6.31	0.00	0.47	M
<i>Post-Primary Non-Teaching</i>	21	12.95	3.83	9.10	3.15	20	5.16	0.00	0.57	M
<i>Other Teaching</i>	3	10.33	0.58	9.67	3.512	2	0.378	0.74	0.07	NA
<i>Other Non-Teaching</i>	15	13.47	3.80	9.53	3.74	14	3.41	0.00	0.45	M

Table 24; T-Test Admonishing OD

Strict - DO										
There was a statistically significant difference found in scores for strict behaviour in the primary teaching group when factoring for ‘self-perception’ ([1] $M = 16.15$, [2] $SD = 3.38$) and ‘ideal-perception’ ([3] $M = 16.88$, [4] $SD = 2.82$), [5] $t(51) = [6] -2.51$, [7] $p = .002$ (two-tailed). The magnitude of the differences in the means was [9] Large (eta squared $d = [8] .11$).										
		<i>Self-Perception</i>		<i>Ideal-Perception</i>						
	n=	1 <i>M</i>	2 <i>SD</i>	3 <i>M</i>	4 <i>SD</i>	5 <i>t</i>	6 <i>=</i>	7 <i>p</i> <	8 <i>eta</i> ^2	9 <i>effect size</i>
<i>Primary Teaching</i>	52	16.15	3.38	16.9	2.819	51	-2.513	0.015	0.11	S
<i>Primary Non-Teaching</i>	62	16.65	2.41	16.8	3.147	61	-0.439	0.662	0.003	NA
<i>Post-Primary Teaching</i>	43	17.21	3.25	17.6	2.864	42	-1.235	0.224	0.035	NA
<i>Post-Primary Non-Teaching</i>	22	17.36	2.72	17.9	2.436	21	-1.027	0.316	0.048	NA
<i>Other Teaching</i>	4	15.75	4.03	15.8	4.031	-	-	-	-	NA
<i>Other Non-Teaching</i>	14	17.36	3.48	17.4	3.817	13	-0.173	0.865	0.002	NA

Table 25; T-Test Strict DO

7.2.4 Hypothesis 4: There will be a difference in Self-perception and Student-perceptions of interpersonal behaviour when factoring for educator groupings of role and school type.

In order to further understand the differences in each educator group, a series of one-way between groups ANOVA (with post-hoc tests) were carried out in order to evaluate whether differences, as seen in the T-Tests, were also evident when the student samples were added to the analysis. The ‘*Other Teaching*’ and ‘*Other Non-Teaching*’ group did not have student representation and were unable to be compared to a student group. Participants were divided into three groups (Group 1: ‘*Teaching*’, Group 2: ‘*Non-Teaching*’, and Group 3: ‘*Student*’). Similar to Hypothesis 3, the findings are displayed graphically and use the standardised ANOVA output terminology;

Leadership - DC															
There was a statistically significant difference at the $p < .05$ level in leadership behaviour across the scores for the three primary groups: $F ([1] 2, 205) = [2] 15.9, p = [3] .000$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was [4] 0.13 and therefore considered [5] large.															
	Teaching			Non-Teaching			Student-Perception				1	2	3	4	5
	n	M	S	n	M	S	n	M	S	Hom-Var	F	=	p<	eta ²	effect size
Primary	5	23.	2.	7	23.	2.	79	26.	3.	Levene	2,	15.	0.	0.1	L
	8	84	05	1	54	56		06	79		205	90	00	3	
Post-Primary	4	23.	2.	2	23.	2.	40	26.	2.	Brown s-For	2,	28.	0.	0.0	M
	6	87	37	3	43	84	8	31	88		59.	47	00	9	
											8				

Table 26; ANOVA Leadership DC

Helpful Friendly - CD															
There was a statistically significant difference at the $p < .05$ level in helpful friendly behaviour across the scores for the three post-primary groups: $F ([1] 2, 42.32) = [2] 5.97, p = [3] .001$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was [4] 0.03 and therefore considered [5] small.															
	Teaching			Non-Teaching			Student-Perception				1	2	3	4	5
	n	M	SD	n	M	SD	n	M	SD	Hom-Var	F	=	p<	eta ²	effect size
Primary	5	26.	1.7	6	26.	3.0		26.	3.6	Leven	2,	0.4	0.6	0	NA
	6	73	94	7	33	82	79	25	39	e's	2,	44	42		
Post-Primary	4	26.	2.2	2	25.	3.8	40	27.	2.8	Brown	2,	5.9	0.0	0.0	S
	8	44	8	3	26	3	9	32	9	s-For	42.	7	1	3	

Table 27; ANOVA Helpful Friendly CD

Understanding - CS

There was a statistically significant difference at the $p < .05$ level in understanding behaviour across the scores for the three primary groups: $F ([1] 2, 204) = [2] 8.62, p = [3] .000$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was [4] 0.08 and therefore considered [5] moderate.

	Teaching			Non-Teaching			Student-Perception			Hom-Var	1	2	3	4	5
	n	M	S	n	M	S	n	M	S		F	=	p <	eta ^2	effect size
<i>Primary</i>	58	26.03	1.68	70	24.97	2.45	79	26.82	3.46	Levene	2, 204	8.62	0.00	0.08	M
<i>Post-Primary</i>	46	26.07	1.93	22	24.27	2.80	410	27.16	2.87	Browns-For	2, 49, 417	17.69	0.00	0.05	M

Table 28; ANOVA Understanding CS

Responsibility Freedom - SC

There was a statistically significant difference at the $p < .05$ level in responsibility freedom behaviour across the scores for the three post-primary groups: $F ([1] 2, 475) = [2] 4.14, p = [3] .000$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was [4] 0.02 and therefore considered [5] small.

	Teaching			Non-Teaching			Student-Perception			Hom-Var	1	2	3	4	5
	n	M	S	n	M	S	n	M	S		F	=	p <	eta ^2	effect size
<i>Primary</i>	57	15.25	3.13	67	15.58	3.31	79	16.51	4.18	Levene	2, 200	2.34	0.01	0	NA
<i>Post-Primary</i>	48	15.67	3.12	22	16.68	3.33	408	17.59	4.37	Levene	2, 475	4.14	0.00	0.02	S

Table 29; ANOVA Responsibility Freedom SC

Uncertain - SO

There were no statistically significant differences at the $p < .05$ level in uncertain behaviour across the scores for the three groups: $F ([1] 0, 0) = [2], p = [3] 0.0$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was [4] 0.00 and therefore considered [5] 0.

	Teaching			Non-Teaching			Student-Perception			Hom-Var	1	2	3	4	5
	n	M	SD	n	M	SD	n	M	SD		F	=	p<	eta ²	effect size
Primary	60	9.10	2.2	70	9.93	2.9	79	10.9	4.35	Levene	2, 206	1.76	60	0	NA
Post-Primary	48	9.9	2.5	24	11.9	3.3	410	10.3	3.75	Levene	2, 479	3.07	48	0	NA

Table 30; ANOVA Uncertain SO

Dissatisfied - OS

There was a statistically significant difference at the $p < .05$ level in dissatisfied behaviour across the scores for the three primary groups: $F ([1] 2, 201) = [2] 6.503, p = [3] .002$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was [4] 0.06 and therefore considered [5] moderate.

	Teaching			Non-Teaching			Student-Perception			Hom-Var	1	2	3	4	5
	n	M	SD	n	M	SD	n	M	SD		F	=	p<	eta ²	effect size
Primary	57	9.35	2.683	68	10.28	3.12	79	11.57	4.463	Levene	2, 201	6.503	0.002	0.06	M
Post-Primary	47	10.23	2.876	22	11.8	3.31	409	9.38	3.06	Browns-For	2, 57.57	7.374	0.001	0.03	S

Table 31; ANOVA Dissatisfied OS

The ANOVA analyses indicated various differences in educator types, a Post-hoc comparison using the Tukey test was used to ascertain indications and directions of significant mean differences when the student sample was added. The following figure displays the results of only significant results found in the Post-Hoc tests. Negative mean values indicate that students scored higher on a particular QTI behaviour, suggesting that the self-perception of teaching and non-teaching groups on this behaviour is lower than the ideal perception reported by the student sample. The findings are displayed graphically and use the standardised Tukey output terminology;

The mean score for the primary teaching group was statistically different from the primary student group in the self-perception of leadership behaviour ($M = -2.218, p = .000$), showing that the teaching group rated themselves lower than what the student group perceive an ideal teacher to be.

	Teaching		Non-Teaching	
Leadership	<i>M</i>	<i>Sig.</i>	<i>M</i>	<i>Sig.</i>
<i>Primary</i>	-2.218	0.000	-2.528	0.000
<i>Post-Primary</i>	-2.442	0.000	-0.288	0.000
	Teaching		Non-Teaching	
Helpful/Friendly	<i>M</i>	<i>Sig.</i>	<i>M</i>	<i>Sig.</i>
<i>Post-Primary</i>	-	-	-2.062	0.003
	Teaching		Non-Teaching	
Understanding	<i>M</i>	<i>Sig.</i>	<i>M</i>	<i>Sig.</i>
<i>Primary</i>	-	-	-1.851	0.000
<i>Post-Primary</i>	-1.098	0.031	-2.891	0.000
	Teaching		Non-Teaching	
Student Responsibility	<i>M</i>	<i>Sig.</i>	<i>M</i>	<i>Sig.</i>
<i>Post-Primary</i>	-2.203	0.003	-	-
	Teaching		Non-Teaching	
Dissatisfied	<i>M</i>	<i>Sig.</i>	<i>M</i>	<i>Sig.</i>
<i>Primary</i>	-2.219	0.001	-	-
<i>Post-Primary</i>	-	-	2.389	0.001
	Teaching		Non-Teaching	
Admonishing	<i>M</i>	<i>Sig.</i>	<i>M</i>	<i>Sig.</i>
<i>Post-Primary</i>	-	-	1.566	0.043

Table 34; ANOVA Post-Hoc 1

7.2.5 Hypothesis 5 - There will be a relationship between mental health inventory dimensions and interpersonal behaviours.

An initial Spearman Rho correlation was conducted between the MHI and QTI behaviours in order to determine whether initial relationships exist in the entire educator sample. However, only two small negative correlations were found between the self-perception of understanding behaviour and positive effect ($n = 157, r = -.158, p = .049$), and the self-perception of understanding behaviour and psychological wellbeing ($n = 157, r = -.157, p = .049$). These correlations indicate that higher levels of understanding behaviour are related to lower levels of positive effect and psychological wellbeing.

7.2.6 Hypothesis 6 - There will be a relationship between in mental health inventory dimensions and interpersonal behaviour when factoring for educator role.

To understand this particular finding further, it was decided to split the sample by to determine whether these findings are also found in teaching or non-teaching roles.

Using a Spearmans Rho, several significant correlations were found; indicating that varying relationships exist between scores in interpersonal behaviours and mental health inventory dimensions;

Teaching Group – QTI and MHI							
	Anxiety	Depression	Loss of Control	Positive Effect	Psych Distress	Psych Wellbeing	MHI Index
	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$
Leadership	-	-	-.283*	-	-	.236*	.249*
Dissatisfied	.256*	.234*	-	-	-	-	-
Admonishing	.222*	.304**	.250*	-.288*	-	-.301**	-.283*

* Sig at .05, ** Sig at .01

Within the teaching group, eleven correlations were found; the highest being a small/moderate positive relationship between admonishing behaviour and depression ($n = 81, \rho = .304, p = .006$), and the lowest being a small positive relationship between admonishing behaviour and anxiety ($n = 80, \rho = .222, p = .047$). These correlations indicate that higher levels of admonishing behaviour are related to higher levels of anxiety and depression.

Table 35; Pearson Correlations QTI/MHI pt1

Non-Teaching – QTI and MHI							
	Anxiety	Depression	Loss of Control	Positive Effect	Psych Distress	Psych Wellbeing	MHI Index
	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$
Helpful Friendly	.275*	.279*	-	-.282*	-	-	-.281*
Dissatisfied	-	-.315*	-	-	-	-	.264*
Admonishing	-	-	-.294*	.379**	-.305*	.358**	.407**
Strict	-.296	-.379**	-.331**	-	-.280*	-	-

* Sig at .05, ** Sig at .01

Within the non-teaching group, fifteen correlations were found; the highest being a moderate positive relationship between admonishing behaviour and MHI Index ($n = 59, \rho = .407, p = .001$), and the lowest being a small positive relationship between helpful friendly behaviour and anxiety ($n = 59, \rho = .275, p = .035$). These correlations indicate that higher levels of admonishing behaviour are related to a higher MHI index, and higher levels of helpful friendly behaviours are related to higher levels of anxiety.

Table 36; Pearson Correlations QTI/MHI pt2

7.2.7 Hypothesis 7 - There will be a relationship between mental health inventory dimensions and interpersonal behaviour when factoring for school type.

To understand this particular finding further, it was decided to split the sample to determine whether these findings are also found in primary, post-primary, and non-teaching roles. Using a Spearman's Rho, several significant correlations were found; indicating that varying relationships between scores in interpersonal behaviours and mental health inventory dimensions;

Primary School - QTI and MHI							
	Anxiety	Depression	Loss of Control	Positive Effect	Psych Distress	Psych Wellbeing	MHI Index
	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$
Leadership	-	-	-.216*	-	-	-	-

* Sig at .05, ** Sig at .01

Within the primary group, a small negative relationship was found between leadership behaviour and loss of control ($n = 87, \rho = -.216, p = .045$); indicating that higher levels of leadership behaviour are related to lower levels of loss of control.

Table 37; Pearson Correlations QTI/MHI pt3

Post-Primary School - QTI and MHI						
	Anxiety	Depression	Loss of Control	Positive Effect	Life Satisfac	Psych Wellbeing
	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$
Helpful Friendly	-	-	-	-	-	-.282*
Understanding	.318*	-	-	-	-.336*	-
Student Responsibility	-	-	-	-.309*	-	-.333*
Admonishing	.369**	.373**	.312*	-	-	-

* Sig at .05, ** Sig at .01

Within the post-primary group, eight correlations were found; the highest being a small/moderate positive relationship between admonishing behaviour and depression (n = 51, $\rho = .373$, $p = .007$), and the lowest being a small negative relationship between helpful friendly behaviour and psychological wellbeing (n = 52, $\rho = -.282$, $p = .043$). These correlations indicate that higher levels of admonishing behaviour are related to higher levels of depression, and higher levels of helpful friendly behaviours are related to lower levels of psychological wellbeing.

Table 38; Pearson Correlations QTI/MHI pt4

Other School - QTI and MHI						
	Anxiety	Depression	Loss of Control	Positive Effect	Psych Distress	MHI Index
	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$
Admonishing	.671**	-	.652**	-	.693**	-.663**

* Sig at .05, ** Sig at .01

Within the other group, four correlations were found; the highest being a moderate/large positive relationship between admonishing behaviour and psychological distress (n = 16, $\rho = .693$, $p = .003$), and the lowest being a moderate/large positive relationship between admonishing behaviour and loss of control (n = 17, $\rho = .652$, $p = .005$). These correlations indicate that higher levels of admonishing behaviour are related to higher levels of psychological distress and loss of control.

Table 39; Pearson Correlations QTI/MHI pt5

7.2.8 Hypothesis 8 - There will be a difference in interpersonal behaviours when factoring for the level of burnout risk.

In order to further understand the differences between interpersonal behaviours and psychological health, each behaviour was subjected to a series of one-way between groups ANOVA (with post-hoc tests) while factoring for the level of risk in each burnout dimension (emotional exhaustion, depersonalisation, and personal accomplishment. Each risk factor was divided into three groups (Group 1: ‘Low Risk’, Group 2: ‘Moderate Risk’, and Group 3: ‘High Risk’). There were no statistically significant differences at the $p < .05$ level in interpersonal behaviours across the scores for the three depersonalisation or personal accomplishment risk factor groups. There was, however, a statistical significant in emotional exhaustion. Similar to previous analyses, the findings are displayed graphically and use the standardised ANOVA output terminology;

Interpersonal Behaviour and Emotional Exhaustion										
There was a statistically significant difference at the $p < .05$ level in student responsibility and freedom behaviour across the scores for the three emotional exhaustion risk factor groups: $F(1, 2, 204) = [2] 3.372, p = [3] .036$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was [4] 0.032 and therefore considered [5] small.										
	<i>Low</i>			<i>Moderate</i>			<i>High</i>			
	<i>n</i>	<i>M</i>	<i>S</i>	<i>n</i>	<i>M</i>	<i>S</i>	<i>n</i>	<i>M</i>	<i>S</i>	
	=		<i>D</i>	=		<i>D</i>	=		<i>D</i>	
<i>Student Responsibility Freedom</i>	2	1	3.	8	1	2.	9	1	3.	<i>Hom-Var</i>
	4	7.	4	4	5.	8	7	5.	2	Levene
	2			3			6			2, 3, 0.0 0.03 S
										= <i>p</i> < <i>eta</i> ² <i>effect size</i>
										1 2 3 4 5
										F = 2, 3, 0.0 0.03 S
										20 3 36 2
										4 7

Table 40; ANOVA QTI-SC and MBI

7.2.9 Hypothesis 9 - There will be a relationship between the burnout dimensions and interpersonal behaviour.

An initial Spearman Rho correlation was conducted between the MBI and QTI behaviours in order to determine whether initial relationships exist in the entire educator sample. However, no correlations were found.

7.2.10 Hypothesis 10 - There will be a relationship between the burnout dimensions and interpersonal behaviour when factoring for educator role.

To understand this particular finding further, a Spearman Rho correlation was conducted between the MBI and QTI behaviours in order to determine whether initial relationships exist in teaching or non-teaching roles.

Teaching			
	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
	$\rho =$	$\rho =$	$\rho =$
<i>Helpful Friendly</i>	-	-	.303*
<i>Uncertain</i>	-	-	-.229*
Non-Teaching			
	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
	$\rho =$	$\rho =$	$\rho =$
<i>Uncertain</i>	-.224*	-	-
<i>Strict</i>	-	-	.226*

* Sig at .05, ** Sig at .01

There were a total of four significant correlations found, indicating varying relationships between scores in interpersonal behaviours and burnout dimensions; the highest being a small positive relationship between helpful friendly behaviour and personal accomplishment ($n = 94, \rho = .303, p = .003$), and the lowest being a small negative relationship between uncertain behaviour and emotional exhaustion ($n = 90, \rho = -.224, p = .034$).

Table 41; QTI-SC and MBI Correlations

7.2.11 Hypothesis 11 - There will be a relationship between the burnout dimensions and interpersonal behaviour when factoring for school type.

A Spearman Rho correlation was conducted between the MBI and QTI behaviours in order to determine whether initial relationships exist in primary, post-primary, or other school types. Interestingly, there were no correlations found when factoring for school type.

‘Dynamics of Pedagogical Skill’

7.3 Research Question 2: Could interpersonal behaviours be indicative of particular pedagogical or technological practices within education?

On average, this sample reports a moderate level of TK ($n = 212$, $m = 24.26$, $SD = 6.452$), a high level of PK ($n = 215$, $m = 29.85$, $SD = 3.691$), a moderate level of TPK ($n = 156$, $m = 17.85$, $SD = 3.498$), and a low-moderate level of TPaCK ($n = 153$, $m = 28.46$, $SD = 5.734$). To measure the intercorrelational relationship between each of the TPACK dimensions, a Spearman’s Rho correlation coefficient was computed on each variable pair. There were several subtle correlations found throughout the sample: a small positive correlation was found between the number of years’ experience in the participants’ current role and ‘Pedagogical Knowledge’ ($n = 211$, $\rho = .146$, $p = .002$) which signifies that the more years’ experience an individual has, the higher their score in pedagogical knowledge; a small positive correlation between age and ‘Pedagogical Knowledge’ ($n = 214$, $\rho = .161$, $p = .019$) which signifies that the older a participant is, the higher their score in pedagogical knowledge; and a small positive relationship between ‘Technological Knowledge’ and ‘Pedagogical Knowledge’ ($n = 211$, $\rho = .211$, $p = .002$) which signifies that if an individual scores high in technological knowledge, they are somewhat more likely to score high in pedagogical knowledge.

Two small-moderate positive correlations were found between ‘Pedagogical Knowledge’, ‘Technological-Pedagogical Knowledge’ ($n = 154$, $\rho = .312$, $p = .000$) and ‘Technological-Pedagogical and Content Knowledge’ ($n = 151$, $\rho = .388$, $p = .000$), signifying that higher levels of pedagogical knowledge are related to an individuals’ ability to choose and implement technological resources for teaching and for content specific instructional practice. A strong positive correlation was found between ‘Technological Knowledge’ and ‘Technological and Pedagogical Knowledge’ ($n = 154$, $\rho = .634$, $p = .000$) which signifies that if an individual scores high in technological knowledge, they are also likely to score high in pedagogical knowledge.

Two strong positive correlations were found between ‘Technological Knowledge’, ‘Technological and Pedagogical Knowledge’ ($n = 154$, $\rho = .634$, $p = .000$) and ‘Technological and Pedagogical Content Knowledge’ ($n = 148$, $\rho = .625$, $p = .000$) which signifies that if an individual scores high in technological knowledge, they are

also likely to be able to choose and implement technological resources for teaching and for content specific instructional practice. A strong positive correlation was also found between ‘Technological-Pedagogical Knowledge’ and ‘Technological and Pedagogical Content Knowledge’ ($\rho = .710$, $n = 154$, $p = .000$).

	TK	PK	TPK	TPaCK
	$\rho =$	$\rho =$	$\rho =$	$\rho =$
TK	1	.211**	.634**	.625**
PK		1	.312**	.388**
TPK			1	.710**
TPaCK				1
* Sig at .05, ** Sig at .01				

Table 42; TPACK Intercorrelations

7.3.1 Hypothesis 1 – There will be a difference in TPaCK dimensions when factoring for educator types.

A series of One-Way ANOVAs were conducted on each burnout dimension while factoring for and finally educator groupings (‘Primary Teaching’, ‘Primary Non-Teaching’, ‘Post-Primary Teaching’ and ‘Post-Primary Non-Teaching’, ‘Other Teaching’ and ‘Other Non-Teaching’) in order to test whether there were any significant differences existed between the TPACK dimensions and demographic variables (gender, age, number of years’ experience in this role, number of years’ spent in college). There were no significant differences between these groups. It was then decided to remove the educator groupings and perform an ANOVA analysis on role and school type individually, but, no significant differences were found among these groups.

7.3.2 Hypothesis 2 – There will be a difference in TPaCK dimensions when factoring for interpersonal behaviours.

An initial Spearman Rho correlation was conducted between the TPACK and QTI behaviours in order to determine whether initial relationships exist between the variables. Only one small positive correlation was found between self-perception of strict behaviour and technology knowledge ($n = 163$, $\rho = .174$, $p = .027$).

7.3.3 Hypothesis 3 – There will be a difference in TPACK dimensions when factoring for levels of burnout risk behaviours.

An initial Spearman Rho correlation was conducted between the TPACK and QTI behaviours in order to determine whether initial relationships exist between the variables. Only one small positive correlation was found between self-perception of strict behaviour and technology knowledge ($n = 163, \rho = .174, p = .027$).

Personal Accomplishment and Pedagogical Knowledge										
There was a statistically significant differences at the $p < .05$ level in pedagogical skill when factoring for risk of personal accomplishment across the three groups: $F ([1] 2, 18.3) = [2] 4.13, p = [3] 0.003$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was [4] .009 and therefore considered [5] small.										
	Low			Moderate			High			
	<i>n</i>	<i>M</i>	<i>S</i>	<i>n</i>	<i>M</i>	<i>S</i>	<i>n</i>	<i>M</i>	<i>S</i>	<i>Hom-Var</i>
	=	<i>D</i>		=	<i>D</i>		=	<i>D</i>		<i>F</i>
										=
										<i>p</i> <
										eta ^2
										effect size
<i>Primary</i>	9	28.8	4.1	25	28.3	2.7	16	30.7	3.7	Brown e
										2, 18.3
										4.13
										0.003
										.009
										S

Table 43; MBI and TPACK ANOVA

‘Need for Psychological Support’

7.4 Research Question 3: In what way are individuals, within this sample, currently experiencing their psychological health?

With regards to the scores of the MHI-38, using the scoring criteria outlined by Parveen and Shafiq (2014), this sample reported;

	<i>M</i>	<i>Low</i>	<i>Moderate</i>	<i>High</i>	<i>SD</i>
<i>Anxiety</i>	20.6	9-24	25-39	40-54	6.747
<i>Depression</i>	10	4-10	11-16	17-23	3.547
<i>Loss of Control</i>	18.43	9-22	23-38	39-53	6.41
<i>Positive Effect</i>	39.78	10-19	20-39	40-60	6.43
<i>Emotional Ties</i>	6.61	2-5	6-9	10-12	2.519
<i>Life Satisfaction</i>	4.06	1-2	3-4	5-6	1.064
<i>Psychological Distress</i>	49.2	24-60	61-100	105-142	14.874
<i>Psychological Wellbeing</i>	54.74	24-64	65-104	105-142	10.52
<i>MHI Index</i>	169.53	38-100	101-164	165-226	24.836

Table 44; MHI-38 Descriptive Statistics

A Spearman Rho correlation was conducted on the MHI-38 in order report the levels of intercorrelation between each dimension. Each dimension is correlated in some way to another with varying levels of strength and direction. Both positive and negative correlations are seen between each of these dimensions (*See Appendices*), with the highest correlations seen between Anxiety and Psychological distress ($r = .907$, $n = 186$ $p = .000$), and the MHI Index and Psychological distress ($r = -.948$, $n = 182$ $p = .000$).

	Depression	Loss of Control	Positive Effect	Emotional Ties	Life Satisfaction	Psychological Distress	Psychological Wellbeing	MHI Index
	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$	$\rho =$
<i>Anxiety</i>	.809*	.717**	-.618**	-.286**	-.514**	.907**	-.656**	-.844**
<i>Depression</i>	1	.763**	-.659**	-.389**	-.557**	.859**	-.706**	-.850**
<i>Loss of Control</i>		1	-.718**	-.242**	-.647**	.897**	-.727**	-.864**

<i>Positive Effect</i>			1	.231**	.595**	-.738**	.961**	.889**
<i>Emotional Ties</i>				1	.279**	-.210**	.459**	.330**
<i>Life Satisfaction</i>					1	-.591**	.636**	.634**
<i>Psychological Distress</i>						1	-.744**	-.948**
<i>Psychological Wellbeing</i>							1	.911**

* Sig at .05, ** Sig at .01

Table 45; MHI-38 Intercorrelations

In addition to the internal correlations, there were several others found among MHI-38 behaviours and participant demographic information of the entire sample, for example:

The relationship between participant age and loss of control (as measured by the MHI-38) was investigated using Spearman’s Rho correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. There was a small, negative correlation between both variables (n = 201, $\rho = -.174$, $p = .014$) indicating that higher age is associated with a lower score in loss of control. A small positive correlation was also found between age and life satisfaction (n = 212, $\rho = .156$, $p < .023$).

With regards to the scores of the MBI, using the scoring criteria outlined by Maslach *et al.*’s (1996), this sample reported;

	<i>n</i>	<i>M</i>	<i>Strength</i>	<i>SD</i>
<i>Emotional Exhaustion</i>	262	28.4	M	10.7
<i>Depersonalisation</i>	269	9.26	M	4.28
<i>Personal Accomplishment</i>	258	45.43	H	7.176

Table 46; MBI Descriptive Statistics

The levels of deviation in emotional exhaustion and personal accomplishment are interesting; indicating a varied perception of burnout within this sample. To measure the intercorrelational relationship between each of the burnout factors, a Spearman’s Rho correlation coefficient was computed on each variable pair. A moderate positive relationship was found between ‘Emotional Exhaustion’ and ‘Depersonalisation’

($n=257$, $\rho =.464$, $p=.001$) which signifies that if an individual scores high on emotional exhaustion, they are more likely to score high on depersonalisation. In addition, two negative correlations were found between ‘Personal Accomplishment’ and Emotional Exhaustion’ ($n=247$, $\rho =-.278$, $p=.001$), and between ‘Personal Accomplishment’ and ‘Depersonalisation’ ‘Depersonalisation’ and ($n=253$, $\rho =-.351$, $p=.001$) which indicates that an individual scoring high on personal accomplishment are more likely to score low on emotional exhaustion and depersonalisation. These particular correlations have been seen in other studies using this scale version.

7.4.1 Hypothesis 1 - There will be a difference in MHI dimensions when factoring for demographic variables.

Having found a slight relationship between two MHI dimensions and, a series of One-Way ANOVAs were conducted in order to test for significant differences when using age and gender as categorical variables. There were no significant differences found.

7.4.2 Hypothesis 2 - There will be a difference in MHI dimensions when factoring for role and school type.

Two One-Way ANOVAs were conducted in order to test for significant differences in MHI dimensions between Teaching and Non-Teaching groups; no significant differences found. However, when factoring for Primary, Post-Primary, and Other groups, a significant difference was found in one MHI-38 dimension:

A statistically significant difference was found at the $p < .05$ level in Life Satisfaction between the three groups: $F(2, 118.322) = 4.823$, $p = .01$ (in cases where the assumption of homogeneity of variance was violated the Brown-Forsythe F-ratio is reported). The effect size difference in mean scores between the groups was calculated using the eta squared, which was Moderate at 0.05. Post-hoc analyses revealed that the level of life satisfaction is lower in post-primary participants than for primary ($p = -.398$) and for other ($p = -.677$) participants.

7.4.3 Hypothesis 3 - There will be a difference in MHI dimensions when factoring for the perception of career progression.

In order to test for differences in MHI dimensions when factoring for perception of career progression a series of independent samples T-Test were conducted on to determine whether there are difference between the mean scores of the MHI when factoring for career progression. There was one significant difference in the Teaching group;

There was a statistically significant difference in the teaching group score for Loss of Control between career progression perceptions of ‘Yes’ (M = 21.08, SD = 7.67) and ‘No’ (M = 18.26, SD = 6.037), $t(94) = 2.03, p = .0047$ (two-tailed). The magnitude of the differences in the means (mean difference = 2.820, 95% CI: .033 to 5.608) was moderate (eta squared $d = .042$).

Within the Non-teaching group, however, there were several significant differences found, most displaying a large effect size:

Mental Health and Career Progression										
There was a statistically significant difference in the non-teaching group score for Anxiety between career progression perceptions of ‘Yes’ (M = 18.3, SD = 5.3) and ‘No’ (M = 22.1, SD = 6.7), $t(72) = -2.455, p = .0017$ (two-tailed). The magnitude of the differences in the means was moderate (eta squared $d = .008$).										
	n =	Yes		No		t	=	p<	eta ^2	effect size
Anxiety	24, 50	18.3	5.3	22.1	6.7	72	-	0.01	0.08	L
							2.455	7		
Depression	26, 49	8.9	3	10.8	3.5	73	-	0.02	0.07	L
							2.291	5		
Loss of Control	26, 49	15.5	4.6	18.8	5.5	73	-	0.01	0.08	L
							2.592	2		
Positive Effect	26, 49	42.9	6.3	37.8	8.6	65.4	2.952	0.00	0.12	L
							2	4		
Life Satisfaction	27, 52	4.5	0.9	4.0	0.9	77	2.469	0.01	0.07	L
								6		
Psychological Distress	24, 47	44.2	12.1	52.3	13.0	69	-	0.01	0.09	L
							2.567	2		
Psychological Wellbeing	26, 49	58.0	8.4	52.5	11.0	73	2.246	0.02	0.06	L
								8		
MHI Index	24, 47	177.8	20	163.7	22.6	69	2.592	0.01	0.09	L
								2		

Table 47; MHI Career Progression

7.4.4 Hypothesis 4 - There will be a difference in MHI dimensions when factoring for the participation in activities that are perceived to boost wellbeing.

In order to test for differences in MHI dimensions when factoring for the participation in activities perceived to boost wellbeing, a series of independent samples T-Test were conducted on Teaching and Non-Teaching groups in order to determine whether there are differences between the mean scores of the MHI when factoring for career progression. There was one significant difference in the Teaching group:

There was a statistically significant difference in the teaching group score for Emotional Ties and wellbeing activity scores of ‘Yes’ ($M = 6.86, SD = 2.608$) and ‘No’ ($M = 5.10, SD = 1.729$), $t(100) = 2.078, p = .04$ (two-tailed). The magnitude of the differences in the means (mean difference = 1.759, 95% CI: .08 to 3.438) was moderate (eta squared $d = .041$).

Within the Non-teaching group, however, there were several significant differences found, most displaying a large effect size:

Mental Health and Wellbeing Activities										
There was a statistically significant difference in the non-teaching group score for Anxiety between career progression perceptions of ‘Yes’ ($M = 20.5, SD = 6.1$) and ‘No’ ($M = 25.8, SD = 8.5$), $t(73) = -2, p = .049$ (two-tailed). The magnitude of the differences in the means was moderate (eta squared $d = .005$).										
	n =	Yes		No		t	=	p<	eta ^2	effect size
		M	SD	M	SD					
Anxiety	69, 6	20.5	6.1	25.8	8.5	7.3	-2	0.049	0.05	M
Loss of Control	70, 6	17.1	4.9	24.0	7.2	7.4	-	0.002	0.12	L
Positive Effect	70, 6	40.4	7.3	30.3	12.4	7.4	3.03	0.003	0.11	L
Psychological Distress	66, 6	48.3	11.7	63.7	19.8	7.0	-	0.005	0.11	L
Psychological Wellbeing	70, 6	55.5	9.6	43.2	12.9	7.4	2.92	0.005	0.10	L
MHI Index	66, 6	171.0	19.9	142.7	33.6	7.0	3.13	0.003	0.12	L

Table 48; MHI Wellbeing Activities

7.4.5 Hypothesis 5 - There will be a difference in MHI dimensions when factoring for the experience of burnout in the past.

In order to test for differences in MHI dimensions when factoring for perception of career progression a series of independent samples T-Test were conducted on Teaching and Non-Teaching groups in order to determine whether there are difference between the mean scores of the MHI when factoring for career progression. There were no significant differences in the Teaching group. The Non-teaching group, however, revealed several significant differences, most displaying a large effect size:

Mental Health and Burnout in the Past										
There was a statistically significant difference in the teaching group score for Emotional Ties and wellbeing activity scores of ‘Yes’ ($M = 10.9, SD = 3.6$) and ‘No’ ($M = 9.3, SD = 3.1$), $t(74) = 2.012, p = .048$ (two-tailed). The magnitude of the differences in the means was moderate (eta squared $d = .052$).										
	n =	Yes		No		t	=	p<	eta ^2	effect size
		M	SD	M	SD					
<i>Anxiety</i>	39, 37	10.9	3.6	9.3	3.1	7.4	2.01	0.048	0.052	M
<i>Loss of Control</i>	39, 37	19.0	5.8	16.2	4.5	7.4	2.34	0.022	0.07	L
<i>Positive Effect</i>	39, 37	36.9	7.8	42.4	7.7	7.4	-3.06	0.003	0.11	L
<i>Psychological Distress</i>	41, 37	5.9	2.3	7.4	2.9	7.6	-2.54	0.13	0.08	L
<i>Psychological Wellbeing</i>	39, 37	50.9	10.1	58.3	9.3	7.4	-3.32	0.001	0.13	L
<i>MHI Index</i>	37, 35	162.6	22.3	175.0	21.1	7.0	-2.42	0.018	0.08	L

Table 49; MHI Burnout in the Past

7.4.6 Hypothesis 6: There will be a difference in the experience of burnout when factoring for demographic variables

Similar to the previous research question, a series of One-Way ANOVAs were conducted on each burnout dimension while factoring for educator groupings (‘Primary Teaching’, ‘Primary Non-Teaching’, ‘Post-Primary Teaching’ and ‘Post-Primary Non-Teaching’, ‘Other Teaching’ and ‘Other Non-Teaching’) in order to test whether there were any significant differences between burnout and demographic variables (gender, age, number of years’ experience in this role, number of years’ spent in college). Among the analyses, there was only one significant finding; depersonalisation scores

differed between participants aged 21-25 and participants aged 46+ [$F(2, 261) = 0.211$, $p = .018$; $\eta^2 = 0.05$] which indicates that younger participants show higher levels of depersonalisation. A Spearman's Rho correlation further supported this finding as the higher number of years' experience a post-primary teaching participant has in their role was associated with a lower the score in depersonalisation ($n = 58$, $\rho = -.411$, $p = .001$). There was also strong positive correlation found between the number of years' spent in college and high levels of personal achievement in the 'other teaching' group ($n = 8$, $\rho = .946$, $p = .000$), but the low sample size in this group is likely to cause a misrepresentation of the data. As there were no other significant findings with regards to demographic variables, this sample somewhat contradicts previous studies in this area.

7.4.7 Hypothesis 7: There will be a difference in the experience of burnout when factoring for the perception of career progression.

In the first question, participants were asked “*Do you have many options for career progression?*” the majority of respondents reported not having many options ($n = 178$) while a number of participants reported ‘yes’ ($n = 95$). When factoring this into the three burnout dimensions, no significant differences were found. A One-Way ANOVA was carried out in order to determine whether perception of Career Progression directly affected the risk of each burnout dimension. When using this question as a categorical

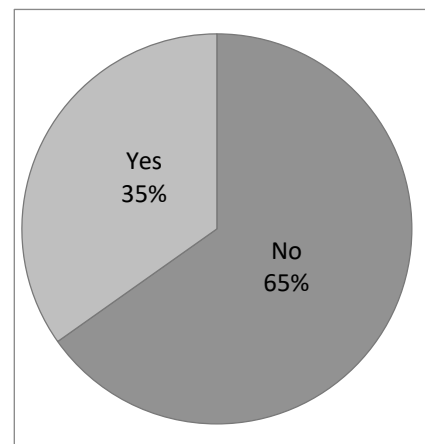


Figure 17; Career Progression

variable, no significant differences were found.

In order to test for differences in burnout when factoring for career progression in different educator types ('Teaching' and 'Non-Teaching') a further One-Way ANOVA was conducted. Although the mean scores for each burnout dimension was somewhat higher, no significant differences were found. It was felt that the provision of an open-ended questions, linked to the 'yes' and 'no' responses, would add an additional layer of understanding to the above responses. As a result, the following questions were asked;

“Where do you see yourself in five years?”

Of the total number of participants who answered ‘Yes’ (n = 95) to the initial question, ‘do you have many options for career progression’, a smaller sample responded to the open-ended question (n = 73). The majority of participants responded working in the same role (n = 27), followed by wanting to pursue a management position (n = 16). The remaining values were under ten and included wanting a ‘role change’ (n = 9), ‘retirement (n = 9), a ‘new career’ (n = 7), ‘unsure (n = 3), and working in a ‘new school’ (n = 9). Of the total number of participants who answered ‘No’ (n = 178) to the initial question, ‘do you have many options for career progression’, a smaller sample responded to the open-ended question (n = 141). The majority of participants responded working in the same role (n = 80), followed by ‘retirement; (n = 32) and wanting to pursue a management position (n = 13). The remaining values were under ten and included wanting a ‘role change’ (n = 5), a ‘new career’ (n = 5), working in a ‘new school’ (n = 4), and the remaining were ‘unsure (n = 3).

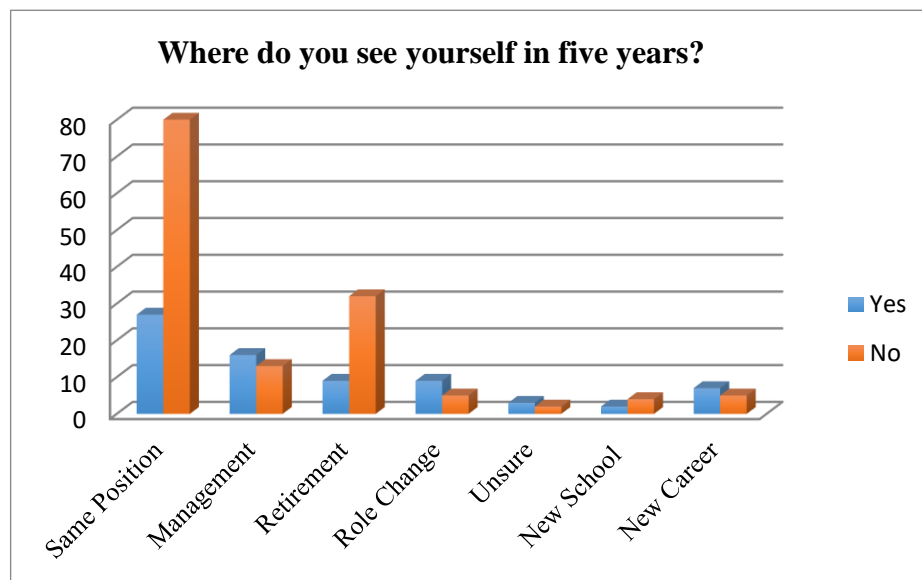


Figure 18; Career Progression in 5 years

7.4.8 Hypothesis 8: There will be a difference in the experience of burnout when factoring for the participation in activities that are perceived to boost wellbeing.

In the second question, participants were asked “Do you participate in work/non-work related activities you feel may boost your wellbeing?” the majority of respondents reported that they do take part in activities (n=244) while a number of participants reported ‘No’ (n=30). A One-Way ANOVA was carried out in order to determine whether taking part in activities that are perceived to boost wellbeing directly affected the risk of each burnout dimension. When using this question as a

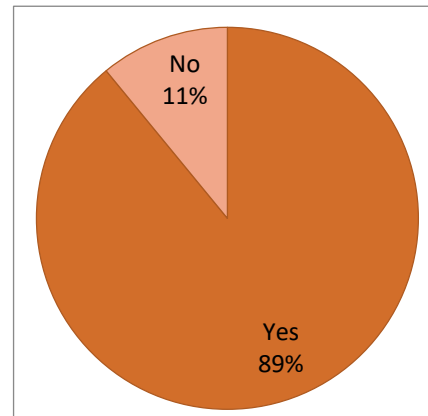


Figure 19; Wellbeing Activities

category variable, no significant differences were found. Although this appears to indicate that, in this sample, an individual that does (or does not) take part in activities that are perceived to boost wellbeing are not at greater risk of burnout, it actually suggests that participation in activities does not directly relate to burnout. In order to test whether no differences were found in participation in activities when factoring for educator type (*Teaching* and *Non-Teaching*) a further One-Way ANOVA was conducted. Although the mean scores for each burnout dimension was somewhat higher, only one significant difference was found:

There was a statistically significant difference at the $p < .05$ level in Emotional Exhaustion between Non-Teaching participants and whether they take part in activities they believe boost their wellbeing: $F(1, 101) = 5.728, p = .019$. The effect size difference in mean scores between the groups was Moderate; $\eta^2 = 0.05$.

This finding shows that the participation in activities will directly influence an individual's level of emotional exhaustion; this direct affect is only seen for non-teaching individuals, not with teaching staff. It was felt that the provision of an open-ended question, linked to the 'yes' and 'no' responses, would add an additional layer of understanding to the above responses. As a result, the following questions were asked;

“What kind of activities do you do?”

Of the total number of participants who answered ‘Yes’ (n = 244) to the initial question, ‘Do you participate in work/non-work related activities you feel may boost your wellbeing?’ a smaller sample responded to the open-ended question (n = 183). Those of whom answered ‘No’ (n = 30), there was only one response from a participant who intends on creating a staff book club among the school staff. Because there were a vast number of individual responses, the responses were compiled and grouped together in the following graph;

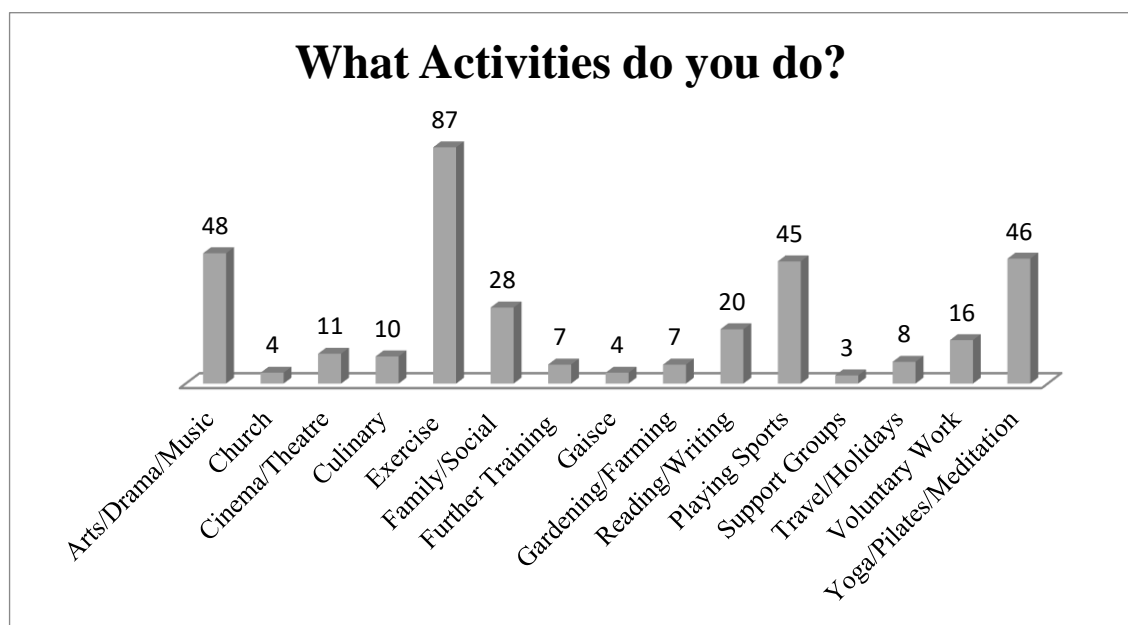


Figure 20; Types of Wellbeing Activities

7.4.9 Hypothesis 9: There will be a difference in the experience of burnout when factoring for the experience of burnout in the past.

In the third question, participants were asked “Have you ever experienced Burnout?” the majority of participants reported ‘Yes’ (n=138) and a slightly lower number reported ‘No’ (n=136). A One-Way ANOVA was carried out in order to determine whether taking part in activities that are perceived to boost wellbeing directly affected the risk of each burnout dimension. When using this question as a categorical variable, there was one significant difference found:

There was a statistically significant difference at the $p < .05$ level in Emotional Exhaustion between both groups who have and have not experienced burnout in the past: $F(1, 260) = 29.115, p = .000$ The effect size difference in mean scores between the groups was Large; $\eta^2 = 0.1$.

Although this appears to indicate that, in this sample, an individual that has (or has not) experienced burnout in the past are not at greater risk of depersonalisation or reduced personal accomplishment, it does suggest that experiencing burnout in the past does not directly relate to burnout. However, an Independent Samples T-Test was conducted to test whether differences were found when factoring for educator type ('Teaching' and 'Non-Teaching'). As displayed in Table 50, it

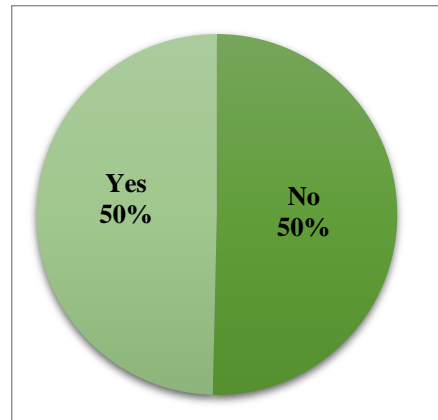


Figure 21; Burnout in the Past

was found that emotional exhaustion is directly influenced by having experienced it in the past by both teaching and non-teaching educators. In other words, if an individual has experienced burnout in the past, they are more likely to experience emotional exhaustion.

Having Experienced Burnout in the Past										
There was a statistically significant difference found in scores for Emotional Exhaustion in the primary teaching group when factoring for the 'having experienced burnout' ([1] $M = 31.57$, [2] $SD = 10.5$) and 'not experiencing burnout' ([3] $M = 24.8$, [4] $SD = 8.8$), [5] $t(124) = [6] 3.94$, [7] $p = .000$ (two-tailed). The magnitude of the differences in the means was [9] large ($\eta^2 d = [8] .99$).										
		Have Experienced		Have NOT Experienced						
	n =	1	2	3	4	5	6	7	8	9
		M	SD	M	SD	t	=	p<	eta ^2	effect size
Teaching	126	31.57	10.5	24.8	8.8	124	3.94	0.000	0.99	L
Non-Teaching	103	32.74	9.7	25.8	9.3	101	7.71	0.000	0.99	L

Table 50; T-Test Burnout in the Past

It was felt that the provision of an open-ended questions, linked to the ‘yes’ and ‘no’ responses, would add an additional layer of understanding to the above responses. As a result, the following questions were asked;

“Can you explain the situation?”

This particular open-ended question enhances the context of the qualitative findings and paints an additional picture of the quantitative results. RQ3: Hypothesis 3, for example, suggests that there are no sufficient differences in the experience of burnout when factoring for the perception of career progression. As seen above, the majority of participants reported not having many options for career progression (n=141), that they are most likely going to be working in the same job for the next five years, or they will be retiring. The reason for asking this question is to determine whether the perception of having options would influence the level of experienced burnout. As this sample reported high levels of personal accomplishment, it is possible that working in the same role is positive in some cases and not negative, as some responses suggested. Conducting interviews and focus groups will likely elaborate and further answer this particular research question. In Hypothesis 3, taking part in activities that are perceived to boost wellbeing was only significant in one educator group. Previous research suggests that exercise and healthy living contributes to a positive lifestyle and reduces levels of stress, anxiety, and exhaustion. This finding suggests that taking part in activities does not directly affect levels of burnout; it is, however, likely that burnout is indirectly affected by exercise and activities.

In RQ3: Hypothesis 5, a number of participants (n = 277) responded to the open-ended question regarding burnout sensations they believe people feel (n = 21) and highlighted potential causes (n = 17). The data obtained from the participant perspective on what it feels like to have burnout and what the causes are were analysed using the Charmaz (2012) constructive GT approach (highlighted in section 3.8.4.2). The process of thematic analysis was straightforward as each participant was asked to respond based on specific parameters (feelings of burnout and causes of burnout); each theme was coded using a broad interpretive approach on the frequency of feeling reports, and later categorised based on the similarities between the themes. The feelings associated with

burnout are displayed graphically below (Figure 21). The themes, ranked in alphabetical order, follow a pattern of ‘physical’ and ‘psychological’ effects as a result of burnout⁶⁶.

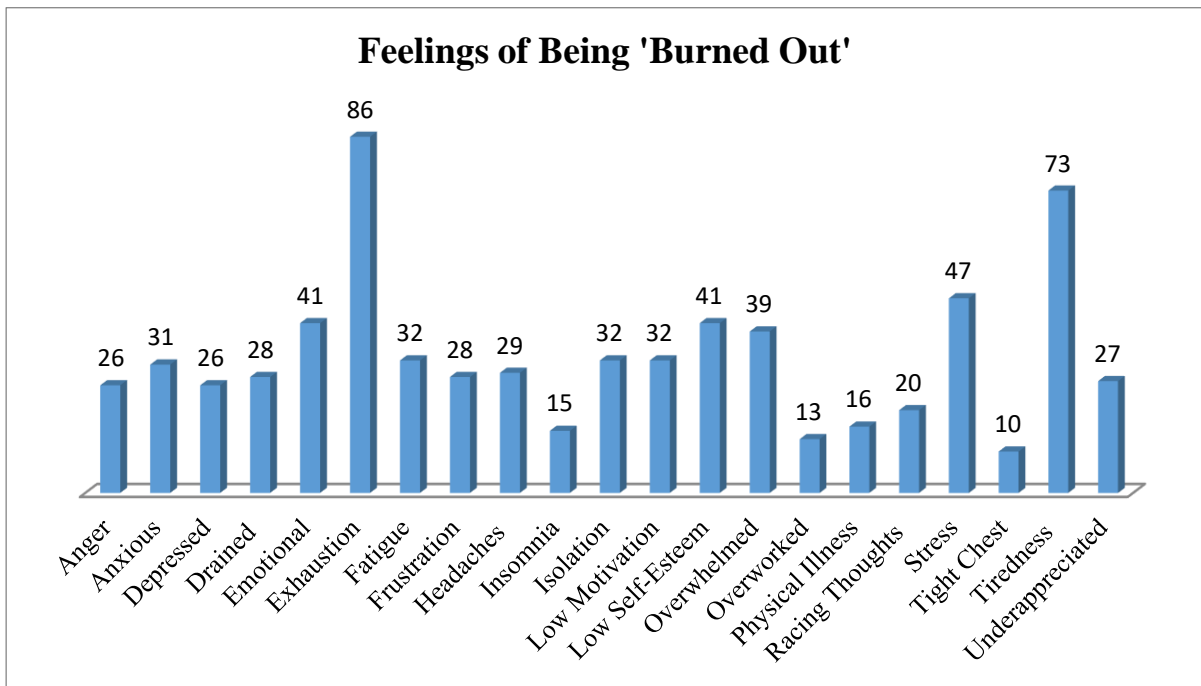


Figure 22; Feelings of Burnout

The causes of burnout (Figure 22) followed the same analysis procedure. This was somewhat more difficult to interpret as each participant cited multiple causes, which implies that there may not be one main cause of burnout. ‘Workload’ was cited as being the most common cause (n=79), followed by a ‘Lack of Support’ (n=70), and poor ‘Work/Life Balance’. However, the context of each response varied somewhat within the sample. For example, with regards to ‘High Expectations’, these comprised responses that relate to an individual placing too high of an expectation into their own ability, or principals or parents having expectations that are not realistic.

⁶⁶ For clarity: ‘exhaustion’ (n=86) and ‘tiredness’ (n=73) are among the most frequently mentioned responses and are similar constructs. However, upon consultation with an inter-rater, ‘exhaustion’ it is considered a psychological response to burnout as it implies that are multiple influences; tiredness was considered physical.

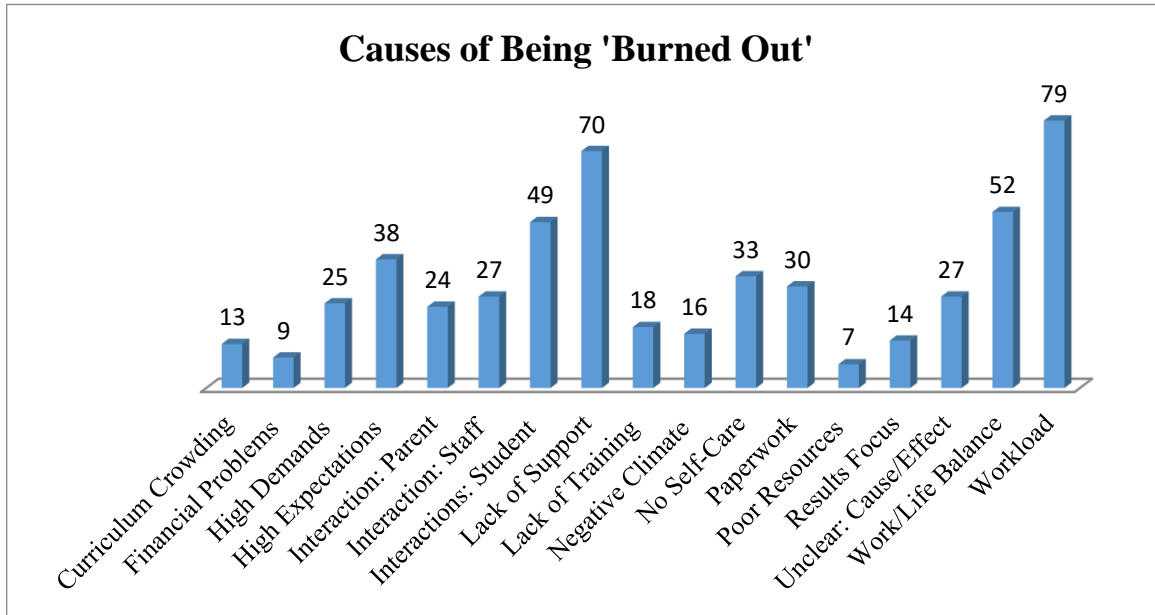


Figure 23; Causes of Burnout

Taking into account the varied responses in relation to the causes of burnout, it was decided that it was considered necessary to group related themes together into a set of overarching themes. Samples of participant quotes have been added in order to convey the context of each particular theme; these quotes were selected as they were considered to be the best representation of a theme.

7.4.9.1 Theme 1 – Work/Life Balance

In relation to the feelings of burnout⁶⁷, a large number of responses spoke of complete exhaustion and physical tiredness; before entering a classroom to begin, and after getting home from work. One participant spoke about the difficulty and the level of exhaustion when they were experiencing burnout would deter them from going to work, that they felt it “*had got to a stage where you find it hard to get a reason to go in the next day*” (Participant, 197). Other participants hinted at the importance of a work/life combination; that feeling satisfied in their work influenced their thoughts and behaviours, both in work and at home “*lost my appetite for life & for my work. I felt despite huge efforts, I lost satisfaction in my role. I couldn't enjoy life anymore*” (Participant, 174). This loss in satisfaction, coupled with stress, fatigue, and other perceived influences, would naturally influence the perception of burnout. Furthermore,

⁶⁷ Some of these responses were difficult to navigate, and caused me to take time off my own work. I have purposely selected these quotes as they are not-as distressing as other comments

if these stressors and other symptoms are not treated, it is only natural for a participant to feel burnout again (in the form of emotional exhaustion – as found by the quantitative data above). For example, one teaching principal explained having experienced burnout in the past due to the workload and had “*worked 7 days a week in order to keep up ... Worked through all the holidays during this 13 year period because of building works, interviews etc*” (Participant, 82). While that particular educator was combining the role of teaching and leading a staff, several other participants reported being “*overwhelmed with workload, not able to separate own personal time*” (Participant, 167). These responses further suggest the importance (and difficulty) of maintaining some form of work/life balance, which was mentioned directly by several participants. These participant responses suggest that their work life had begun to affect participants’ life and overall health;

“last January I ended up in hospital with meningitis (viral), I had been struggling for months with exhaustion and stress (from the workload) and I felt my body crashed in January because it couldn't take any more!”
(Participant, 218).

7.4.9.2 Theme 2 – Workload and Policies

The most common reported cause of burnout was related to a high job demands ($n = 25$) and workload ($n = 79$). Within the subtheme of ‘workload’, a number of participants reported ‘taking on too much’ ($n=17$), which is a significant influence to the perception of workload. The majority of participants reported, “*high demands with regard to paperwork and striving for best practice in a new school*” (Participant, 209) while others, also agreeing about high levels of paperwork, continue to explain that the “*redrafting anti-bullying policy ... subject policies to be redrawn in the light of improvement plans, OD⁶⁸, special needs, embargo on special duties posts, croke park negativity*” (Participant, 220). In addition to these influences, one participant mentioned that another cause is the particular time of year, that “*at the busy times of the year everyone is pulling out of you and once it passes you are spent*”. From reviewing the open-ended responses, it is unclear from these responses that these workload influences are a result of a participant “*taking on too much*” (Participant, 3). For example, several

⁶⁸ It is unclear what “OD” refers to, possibly ‘occupational development’ or ‘office duties’.

participants reported taking part in further training in addition to working in schools; one participant reported doing “a post grad related to work last year along with working full time. The workload was immense and I felt like quitting a few times” (Participant, 21). Although it is clear that taking part in further education will increase an individuals’ workload, one particular response suggests that, in some situations, while further education can be viewed as a necessity, it can also be unachievable;

“about 8 or 9 years ago I hated my job. I felt tired all the time. After staff meetings and Learning Support meetings I felt overwhelmed and inadequate. I never seemed to have enough paper work done and after meetings I seemed to have a list of things to do, not many of which I liked or felt confident about. I looked up other jobs etc and realised I was not qualified for too much else. I seriously considered going back to college etc but family needs had to be considered. I felt stressed and anxious. Once I was walking with family near the end of the summer hols when my mobile rang. It was my school number. I could not continue the day without ringing to find out what it was about. I had an awful sense of dread. The day was ruined because I knew I could not take a chance and not know what the phone call was about but I hated ringing. After the worst year of this situation my husband told me that I had spent most of our leisure time talking and stressing about my work situation. I realised that it had taken over our lives in a negative way”

(Participant, 184).

What is clear, under this theme, is that a myriad of factors exist that contribute to an individual educators’ perception of having a high workload. This sample scored a high averaged level of emotional exhaustion, and one of the main causes was reported to be workload. The direction of this relationship, if a relationship does exist, is unmeasurable with the current dataset. Further research could empirically test this relationship further.

7.4.9.3 Theme 3 – School Climate

The themes above focused on how individuals are influenced by workload and how this can affect the sense of work/life balance. Although this theme was reported within

Figure 22, it was felt the nature of this theme in isolation was too broad to not consider factors, such as, an individuals' interaction with 'Students' (n = 49), 'Staff' (n = 27), and 'Parents' (n = 24), or a schools with a 'Results Focus' (n = 14). One educator mentions that a definite cultures exist in schools, that *"teaching is the easy part... it's the school politics and dealing with negativity that's hardest"* (Participant, 45). Other participant responses suggest that other school environments can put educators in positions where *"sometimes the considerable emotions around the situations I see affect me"* (Participant, 122). Other responses point towards issues of leadership and direction in school management that they can be *"very unhelpful when problems arise and would rather you fix the problem than bothering them with it"* (Participant, 13).

While this could possibly be added under the theme of 'workload', this quote suggests the ramifications that the lack of a supportive management can have on the educator staff. Another participant response suggests that burnout can sometimes be mislabelled; that it can be used in situations where, in actuality, it was a once off negative interaction that had a large emotional effect; *"I had a really difficult child and one day I lost the plot and ended up in tears after school over it but that wouldn't be burnout in my opinion, just a shitty day!"* (Participant, 212). Although this recognised that this experience was not burnout, it does highlight the level of influence that factors such as student behaviour, workplace bullying, or poor communication, can have on educators.

7.4.9.4 Theme 4 – Passion

Despite the negativity in these themes, there is an evident passion throughout several responses; one participant mentioned that *"by the end of each academic year I feel I would like a different career - I actively look for other options"* (Participant, 148). But they have yet to pursue another career; this educator is still an educator. Other participants have responded with stories of how they were required to work with parents who were unable to *"understand where I was coming from"* but, rather than changing their career, they;

"changed job from being a teaching principal to an admin principal and that gave me the opportunity I needed to deal with parents and running a school without feeling I was letting the children down"

(Participant, 71).

This passion is also seen in other forms where another educator mentioned that;

“a child in 6th had some kind of breakdown and the parents were in denial. There ensued weeks of very disruptive stressful situations in my classroom. It had a real knock on effect on the class. Strained my relations with the parents and led me to taking a year career break”

(Participant, 35).

Rather than leave the profession entirely, this particular educator recognised the effect these negative interactions were having on their teaching and their own personal life and decided that it was time to take a break, stepping back in order to take care of themselves.

7.5 Outcomes of Hypothesis Testing

Having identified three research questions, this research sought to answer twenty-two specific research hypotheses. In total, four alternative hypotheses were accepted, seven alternative hypotheses were partially-accepted, and eleven alternative hypotheses were rejected. The following is a breakdown of each hypothesis:

‘The Importance of Interaction’

Research Question 1: Do interpersonal behaviours differ between educator types?

H1: The alternative hypothesis is rejected, and the null hypothesis is accepted; there was only one significant difference amongst eight of the QTI behaviours when factoring for school type.

H2: The alternative hypothesis is partially accepted; there were three differences amongst eight of the QTI behaviours when factoring for role type.

H3: The alternative hypothesis is accepted; there were several significant differences in self-perception and ideal-perception amongst each of the QTI behaviours when factoring for educator groupings.

H4: The alternative hypothesis is accepted; there were several significant differences in self-perception amongst each of the QTI behaviours when factoring for educator and student perceptions.

H5: The alternative hypothesis is rejected, and the null hypothesis is accepted; there was only one relationship amongst eight of the QTI behaviours. There is no

significant relationship between interpersonal behaviours and the mental health inventory dimensions.

- H6:** The alternative hypothesis is accepted; there are significant relationships between interpersonal behaviours and the mental health inventory dimensions when factoring for educator role.
- H7:** The alternative hypothesis is accepted; there are significant relationships between interpersonal behaviours and the mental health inventory dimensions when factoring for school type.
- H8:** The alternative hypothesis is rejected, and the null hypothesis is accepted; there was only one significant difference found across the burnout risk factors and eight QTI behaviours. There is no significant relationship between interpersonal behaviours and burnout factor groups.
- H9:** The alternative hypothesis is rejected, and the null hypothesis is accepted; there is no relationship between the burnout dimensions and interpersonal behaviours.
- H10:** The alternative hypothesis is partially accepted; there were several small significant differences found across the burnout risk factors and QTI behaviours when factoring for educator role.
- H11:** The alternative hypothesis is rejected, and the null hypothesis is accepted; there is no relationship between the burnout dimensions and interpersonal behaviours when factoring for school type.

‘Dynamics of Pedagogical Skill’

Research Question 2: Are particular interpersonal behaviours indicative of pedagogical or technological approaches within education?

- H1:** The alternative hypothesis is rejected, and the null hypothesis is accepted; there were no differences in TPACK dimensions when factoring for educator types. There are no significant differences in TPACK scores when factoring for school type.
- H2:** The alternative hypothesis is rejected, and the null hypothesis is accepted; there was only one small difference amongst eight of the QTI behaviours. There are no significant differences in TPACK scores when factoring for interpersonal behaviours.

H3: The alternative hypothesis is rejected, and the null hypothesis is accepted; there was only one significant difference in the level of burnout risk and TPACK score. There is no significant relationship between interpersonal behaviours and burnout factor groups.

‘Need for Psychological Support’

Research Question 3: *In what way are individuals, within this sample, currently experiencing their psychological health.*

H1: The alternative hypothesis is rejected, and null hypothesis is accepted. There are no differences in MHI dimensions when factoring for demographic variables.

H2: The alternative hypothesis is rejected, and null hypothesis is accepted. There will be a difference in MHI dimensions when factoring for role and school type.

H3: The alternative hypothesis is partially accepted. There is a significant difference in MHI dimensions when factoring for the perception of career progression.

H4: The alternative hypothesis is partially accepted. There is a significant difference in MHI dimensions when factoring for the participation in activities that are perceived to boost wellbeing.

H5: The alternative hypothesis is partially accepted. There is a significant difference in MHI dimensions when factoring for the experience of burnout in the past.

H6: The alternative hypothesis is rejected, and null hypothesis is accepted. There are no sufficient differences in the perception of burnout when factoring for demographic variables.

H7: The alternative hypothesis is rejected, and null hypothesis is accepted. There are no sufficient differences in the experience of burnout when factoring for the perception of career progression.

H8: The alternative hypothesis is partially accepted. There is a significant difference in levels of emotional exhaustion **only** for non-teaching participants **only** that take part in activities that are perceived to boost wellbeing.

H9: The alternative hypothesis is partially accepted. There is a significant difference in levels of emotional exhaustion only in participants who have experienced burnout in the past.

Chapter 8: Discussion and Recommendations

“This whole train of experiencing, and the meanings that I have thus far discovered in it, seem to have launched me on a process which is both fascinating and at times a little frightening”.

(Rogers, 1961, pg. 277)

8 Research Implications

The purpose of this chapter is to articulate the findings and implications of this research. Broken into separate parts, there are comments on the methodological framework and each research question. The quote by Rogers (1961) is used to characterise this chapter as it is believed to reflect the personal experiences, exploratory based decisions, and level of professional development and progression that has taken place throughout this three-year journey. Rogers, among the founders of the humanist branch of psychology, explained that education and therapy are similar due to the nature of personal relationships; he elaborated by explaining his self-reflections about his teaching and learning experiences within a classroom and his experiences during individual and group therapy sessions.

While Rogers begins by mentioning that he considers it futile to teach another individual ‘how to teach’, he explains that it is because anything teachable is “*relatively inconsequential, and has little or no significant influence on behaviour*” (pg. 276). Rogers continues to mention that he was becoming increasingly interested in forms of learning⁶⁹ that significantly influences behaviour, but simultaneously becoming less interested in becoming a teacher. Rogers (1961) takes the very humanistic psychological approach in this belief and, from one perspective, does criticise the importance of teaching subjects due to their irrelevancy and lack of importance⁷⁰. For example, because a learner exists in the center of their own ever-changing environment of experience, an educator exists outside of this experience center and should, therefore, aim to facilitate learning (Rogers, 1951). Rogers’ believed that the highest form of significant learning involved the personal involvement of an individual from both an affective and cognitive perspective (Rogers, 1983); implying that the process of instruction has a stronger influence on a learner than the learning content itself. Regardless of the term used to describe the ‘teacher’, ‘facilitator’, or ‘educator’, Rogers

⁶⁹ He explicitly highlights self-discovered and self-appointed learning; and explains that these forms of learning cannot be directly communicated and need to be ‘experienced’

⁷⁰ Which I am sure caused some controversy

believed that it is important that they be ‘real and genuine’; to be aware of their own feelings and monitor how they interact with their students. As Rogers (1983) explained that learners may show fear or hesitance towards their learning, he considered it important for educators to understand this and be trusting, show interest, and be empathetic. Rogers’ work shifts the focus of education into something more personal and intimate; he places greater influence on the educational relationships, positive and ‘whole’ experiences, and promotes the need for self-reflection.

Upon considering the findings of this current research, another interpretation of Rogers’ (1961) self-reflection of teaching and learning is that the value of this educational process comes from the way an individual experiences their education. This interpretation would imply that, perhaps, the role of an educator is to create an experience that allows a learner to respond to a learning event. Interestingly, Rogers’ (1961) provision of insight into the conclusion of his experiences naturally coincides with the purpose of this discussion and overall findings of this Ph.D. research;

“... by themselves these interpretations of my experience may sound queer and aberrant, but not particularly shocking. It is when I realize the implications that I shudder a bit at the distance I have come from the commonsense world that everyone knows is right” (pg. 277).

Somewhat viewed as a two-part piece, one component of this research concerns the design of an ecological and context-driven grounded theory (methodological and theoretical), while the other is an interpretation of the findings having implemented and interacted with this methodology (empirical and experimental). This chapter will be laid out in a linear fashion, discussing the methodological approach taken, the interpreted findings and rationales, the implications of the findings on theory and practice, and then recommendations for future research.

8.1 Limitations

The purpose of a limitation section, according to Hermam and Edwards (2014), is to provide a reader with an overview of the characteristics that may have negatively influenced the outcome of a research study. Typically, being placed at the beginning of a discussion, the limitation section gives the researcher the opportunity to evaluate and defend the decisions made throughout the research process. This section leaves recommendations for further research and ways to improve and build from the research

carried out. Although specific recommendations related to the methodological framework and research questions will be reviewed in detail later in their sections (section 8.2 – 8.5), there are some general limitations.

8.1.1 General Limitations

The limitations perceived in this study concern the strategies used for methodological sampling. Because an opportunistic sampling strategy was adopted, arguably, the final sample is not representative of the whole population. Opportunistic sampling strategies are considered necessary, however, in exploratory based research (Suri, 2011); future studies should now consider using a different sampling strategy to extend the findings of this research into focused sampling groups. In addition to this sampling limitation, there are also some limitations with regards to sample size and role composition. There were several instances where group comparisons were unable to be computed due to variabilities in the number of participants in each group; this was primarily in the ‘Other Teaching’ ($n=8$) and ‘Other Non-Teaching’ ($n=18$) groups. Although there were no external comparisons made between these groups, the low sample size is likely to cause some error to the overall statistical findings of these groups. It is also important to note that grouping the participants under the classification of ‘teaching’ and ‘non-teaching’ and ‘school type’ will have diluted the individual sample scores somewhat. A stratified sampling strategy should be used in future research to account for the wide range of teaching experiences, locations, and role compositions, of an education population; factoring for these differences at a recruitment stage would be beneficial.

There is also the issue that, other than the student samples, the majority of the participants were recruited using online questionnaires. This is an issue when considering the TPACK scale. As the TPACK scale measures an individuals’ ability to implement technological tools into classroom instructional practice, participants who took part in this research using online questionnaires may be more familiar with using technology and may have a natural favourability towards the use of technology. Also, individuals who dislike (or have an aversion to) technology may not have participated for this reason. However, because each school was contacted directly to participate in this research and a paper based option was offered, it is unclear whether the use of online questionnaires biased the sample. In contrast, it could also be argued that, because a large proportion of administrative tasks are now conducted technologically,

the participation in an online questionnaire may not be as much of an influence as thought. While it is recommended to use paper based questionnaires and deliver these to each school, it would be advantageous to attain the support of teaching unions and the DES to assist in distribution.

Another limitation is the use of particular questionnaires. As no other studies used these measures in an Irish context, the overall scores for each scale may differ from that of other sample populations. For example, in the Maslach Burnout Inventory, a low risk of emotional exhaustion is said to be a score between 0-16, moderate is 17-26, and high risk is a score over 27 (Maslach, Jackson, & Leiter 1996). However, because this scale has not been used previously with an Irish education sample, the level of risk may differ. While further research is needed to determine whether there are differences of culture in each questionnaire used, this research is the necessary first step.

8.1.2 Indirect Limitations

Despite some of the main differences being between the ‘teaching’ and ‘non-teaching’ samples, at both a primary and post-primary school level, the variability in Cronbach alpha scores in the Questionnaire on Teacher Interaction is incredibly interesting. These fluctuations are seen predominantly in the QTI and, as a result, Table 2 (section 3.8.2) was constructed to show where the variabilities are. It is possible that there are role based definitions for specific terminologies. For example, a principal of a post-primary school may hold an entirely different belief of what ‘leadership’ is when compared to a primary school teacher. As a result, it is possible that the differences between these groups are a result of the frequency of student interaction. While this outcome is not answered directly as a result of this research, there are some indications that the interactions with students in a classroom-based setting may influence an individuals’ perception of burnout and mental health. For example, the levels of perceived stress are higher in the ‘non-teaching’ group, and there are higher reported levels of personal accomplishment in the ‘teaching’ group. It may be that, because teaching groups can see the progress of their students on a daily basis, their level of personal accomplishment would be higher than non-teaching groups. Further research should focus on the specific causes and influences of perceived stress and burnout among the differing educational roles; it is likely that each group experiences the same level of stress, but the causes may be different. Further research should focus on whether

student interaction is a key component to the perception of burnout and stress with ‘classroom-based’ educators and ‘non-classroom-based’ educators. It may be useful to recruit a differentiated sample of educators, focusing on urban/rural schools, teaching/non-teaching roles, etc., and conduct a repeated measures design study. It would also be useful to conduct a qualitatively driven research study that focuses on the definitions of specific terms explored in this research to determine whether there are differences in educator groups⁷¹.

8.2 The SET – GT Framework

Having dived into the philosophical world of epistemologies and ontologies, the one framework that continuously appeared was that of ‘grounded theory’ (GT). Upon reviewing the works of Glaser and Strauss (1967), before and after their division, their particular views on the involvement of the researcher in the research, or the way data emerges from the research, was considered counter-intuitive and flawed. Naturally, the experiences of a researcher will shape and guide their decisions throughout the research process; it felt as though the Strauss and Glaser’s approach was an attempt to distance the researcher from their research. Another issue was the evident push towards the use of qualitative data within GT research (Bryant and Oliver, 2009). Despite other researchers suggesting that the application of quantitative research to the GT process was possible (Simmons, 2014), a practical way of applying GT to facilitate quantitative data collection methods were unable to be found, which was problematic. With the purpose of this research being exploratory, the decision was made to explore the educational environment from a constructivist GT perspective (Charmaz, 2006); with several revisions. As mentioned in Chapter 3, adapting the constructivist GT model was to cater for ecological influences and the cyclical nature of action research. Due to the understanding that not all GT studies create theory, the practical application of this framework provides an analytic understanding of the environment under study. For the purpose of this current research, this would mean that, in theory, the use of the SET-GT would assist a researcher in enlightening the ‘real world’ social context of the educational environment.

From a personal perspective, one of the main limitations throughout this Ph.D.

⁷¹ In some schools, learning support staff are fully qualified teachers that may be taken out of the classroom for one year. It would be interesting to conduct research into their experiences.

process was the decision of what methodological framework to use. The development of the SET-GT framework may be considered a significant risk; especially for a researcher who had never needed to question the application of a pre-existing methodological framework at an undergraduate or Master's degree level. However, the developed SET-GT model was in response to the sparsity of papers explicitly detailing the practical application of philosophical constructs into a set of scientifically testable procedures.

8.2.1 Interpretation of Findings

The theoretical foundation of the SET-GT model encourages an iterative, flexible, and ecological view of a research environment; not to mention a practical way of applying this theory into practice. The constructivist flair emphasises the subjective interrelationship between a researcher and their research participants in constructing meaning from the available data. An initial snapshot of the educational environment manifested through an exploratory review of pre-existing qualitative (a sample of primary and post-primary school Whole School Evaluations (WSEs) and quantitative data (the Department of Education and Skills statistical datasets and the raw data from a national longitudinal study). Outlined in Chapter 4, the volume and quality of the data obtained the findings of this review was unexpected.

The set of identified themes throughout the WSE evaluation are similar to the findings of Matthews (2010). Matthews (2010) perceived the WSE as being a process of accountability; far removed from its initial purpose of reviewing the quality, efficiency, and effectiveness of recognised schools within the Irish education system (Education Act, 1998). The WSE is said to address areas such as 'management' or 'teaching and learning', and then provide advice on issues that concern educational communities (Department of Education and Skills, 2015). There are methodological issues surrounding school evaluations, which have also been reported by van Bruggen (2000). For example, considering the levels of burnout, anxiety, and stress reported by the participants within this research sample, the importance of students showing 'exceptional penmanship' may not be a practical focus for school evaluations. While this is just one example⁷², the broad nature of the WSE recommendations may not

⁷² and, considering the experience focus in the work by Rogers (mentioned above) or the reported levels of stress and burnout in this current research (see Chapter 7), this is evidently a psychologically charged example at that!

capture the student or educator voice in such a way that can be used to improve practice. Considering the high level of resources that are put into the evaluation process (Matthews, 2010), is it possible to redirect these resources into something used to practically support schools in how they work with students?

The SET-GT framework provided a systematic anchor that allowed for a cyclic and integrative level of critical thinking. Writing about interviews in constructivist GT, Charmaz and Mitchell (2001) note that the observation of the research environment can assist in the interpretation of behaviour; as what is said by a participant may contrast the behaviours expressed. How this relates to non-interview (non-qualitative) research scenarios, however, is the expression that there is ‘great importance in what is not said’ (Charmaz & Mitchell, 2001). This process pushed the researcher to consistently view the implications of influences on the ‘real world’ educational environment and, ultimately, what ‘was not found’ being the most important finding.

In describing the value of the methodological and theoretical SET-GT framework, the nature of this research being a two-part piece becomes evident. Based on the interpretation and interaction with the SET-GT methodology, the most valuable finding in the WSE and DES analysis is the lack of information surrounding the interactions between students and educators. The importance and value placed on an individual educators’ pedagogical skill is unclear. It is also unclear about the need for psychological support throughout primary and post-primary schools; are there procedures in place for a school to assist educators in the way they work? Do educators feel supported?

It is possible that an individual reading this research will review the findings of the application of the SET-GT (Chapter 4) and draw similar or differing research directions. The interpretation of Chapter 4 led to the three research questions; leading to the development of a pilot study which secured the use of psychometrically reliable measures, then leading to the procedure for carrying out a larger study. Additionally, it also led to another research issue; finding participants. In response, a social media evaluation (section 5.4.2) was conducted in hindsight to ascertain whether there were environmental influences that may have contributed to the low number of participants in the pilot study. Exploring various aspects of teaching and learning during the time of the pilot research uncovered news articles that included headlines surrounding ‘Ireland’s teachers needing to be re-educated’, ‘strike action surrounding fitness to

teach’, or ‘gender imbalances in the classroom’. Although it is unclear whether these articles may or may not have had an influence on participant recruitment, it contextualised the atmosphere that was absent from the WSE or DES analyses.

While it was expected to provide anecdotal evidence to support the value of the SET-GT framework, there may be some circumstantial evidence. Section 3.5 suggests the process of ‘School Self-Evaluation’ (SSE) to be used to tackle aspects of the school environment that the WSE is unable to review; because it is driven by schools themselves and focuses on self-reflection (Chapman & Sammons, 2013). The process of SSE could be used to answer proposed research questions, identify the way students and educators interact, the importance of pedagogical skill, or ways to psychologically support students and educators within education. Of the four qualitative themes in RQ3H9 (7.4.9), three support the value of the SET-GT Framework; ‘Work/Life Balance’ (7.4.9.1), ‘Workload and Policies’ (7.4.9.2), and ‘School Climate’ (7.4.9.3). These three themes explain that the participants find it difficult to separate their work and personal life, that they are experiencing high levels of emotional exhaustion and fatigue as a result of increasing workload and implementing departmental policies, and that an unsupportive school climate has detrimental effect on anxiety, stress, and perceived level of burnout. By simultaneously conducting the literature review during data analysis, the value of self-reflection was made explicitly clear in Chapter 3; with numerous researchers finding that the process of self-reflection supports educators by providing them with an understanding of their strengths and ways to improve their instructional practice. The Department of Education and Skills (2016) issued Circular 0039/2016⁷³ which outlines the processes and stages necessary for the completion of the school self-evaluation process for 2016-2020. In response, the Irish National Teachers Organisation (2016a) issued a counter-directive⁷⁴ to all members to ‘cease cooperation with the School Self-Evaluation process’. It is interesting that this study identified the need for a self-reflection process as a means for schools to be supported a year before this educational issue arose. Arguably, it is unlikely that this is a coincidental finding; as each process and decision that was made that led to this point was based on the data itself.

⁷³ http://www.into.ie/ROI/InfoforTeachers/Circulars/Circulars2016/cl0039_2016.pdf

⁷⁴

http://into.newsweaver.ie/icfiles/1/3461/166421/5460505/700b338d0383ff394f9707b5/directivetomembers_forweb_2.pdf

8.2.2 Implication of Findings

Similar to the view of Charmaz (2001), the SET-GT framework is considered a highly valuable tool for understanding the context and experiences of participants within a research environment. In the example given above, applying the proposed SET-GT framework allowed the researcher to identify several research directions; one of which was shown to be an important contributor to the non-compliance directive with the DES SSE process. While it is possible that this is a coincidental finding, the value of this research, in this instance, could be of enormous benefit to the INTO and DES. Because the SET-GT framework focused on a snapshot of the educational environment, it led to the conclusion that schools are learning organisations with individual ecosystems, self-reflection and evaluation is paramount to the progression of education, and there is need for a supportive educational environment. The directions identified through use of the SET-GT framework could applied to the current WSE process. Using this research as a template could assist the DES to revise and change the design, supervision, and implementation of the WSE process across the Irish educational landscape. Having identified a firm need for additional support in schools, the WSE should be revised to mirror the practicality of the SSE process. With the resources that are exerted on the WSE process, applying this to the SSE could be an invaluable way for schools and individual educators to be supported.

8.2.3 Recommendations for Further Research

It is possible that the use of other methodological frameworks would have drawn the same conclusions as this research. By focusing on macrosystemic influences on the educational experience, for example, may have asked educational staff what the most pressing concerns for Irish education is currently; this, however, was not the intention of this research. The purpose of this research was to explore the ‘real world’ experience of Irish education for teaching and non-teaching staff, and it is felt the SET-GT methodology succeeded in fulfilling this research endeavour.

It is clear that there is a much deeper problem than schools simply refusing to participate in the SSE process. As the INTO represent primary schools, interaction with post-primary union representatives will provide additional context to determine the perception of the SSE process in other school environments. Using the SET-GT framework, supported by the DES and educational unions, will allow this researcher to;

- uncover the dynamics associated with non-compliance of the SSE,
- determine possible solutions to the non-compliance directive on SSE, and
- remove the perception of accountability in WSEs by offering practical support to learning organisations,

8.3 Research Direction One: The Importance of Interaction

Questioning the importance of interaction was based on the findings in section 7.2. Primarily using the QTI to measure eight traits of interaction, a comparison with the MBI, TPACK, and MHI variables, evaluated whether interpersonal behaviours were related to increased or decreased scores in each subscale variable. With section 3.3 providing a summarised account of the literature in support of positive social interactions within the educational environment, eleven hypotheses were tested to further understand the importance of interactions within education.

8.3.1 Interpretation of Findings

In total, four of the hypotheses under study are accepted, two were partially accepted, and five are rejected. As only one difference was found in interpersonal behaviours when factoring for each of the three school types, RQ1H1 is rejected. Although more significant differences are found when the groups were divided into ‘teaching’ and ‘non-teaching’ groups (the teaching sample reported higher levels of understanding behaviour, while the non-teaching sample reported higher dissatisfied and admonishing behaviour), RQ1H2 was only partially accepted. The first and second hypothesis justifies the decision to divide the sample into ‘Role + School Type’ but, the one pitfall of this action was that the sample sizes were too small to confidently compare the mean differences between the groups. Differences in the self and ideal perception of interpersonal behaviour across each group, displayed in the findings of RQ1H3, are found within each sample group (primary teaching, primary non-teaching, etc.). The differing ranges in effect size (Figure 25; 26) indicates multiple significant perceptual differences of interpersonal behaviour. In general, participants appear to desire higher leadership, helpful/friendly, understanding, and strict behaviour and want to reduce their responsibility/freedom, uncertain, dissatisfied, and admonishing behaviour. Even though the QTI focuses on an individuals’ interaction with students, the mean differences in ideal-perceptions of behaviour were only marginally different between

‘teachers’ and ‘non-teachers’. This is unexpected, considering the environmental differences between primary and post-primary schools and the differences in the role of teaching and non-teaching participants. It is possible, due to initial teacher training, that ‘teaching’ and ‘non-teaching’ educators hold a transferable perception of what an ideal behaviour is; this suggests that ideal-perceptions are a relatively fixed construct and that the self-perception of interpersonal behaviour fluctuates.

Having found a range of differences between self-perception and ideal-perception of behaviour, an ANOVA analysis was used to compare the self-perception against the student perception. As shown in Table 35-39, the QTI scores of student perception is used as a baseline value and then include the differences in educator groups. In general, the main differences are in leadership and understanding behaviour at both a ‘teaching’ and ‘non-teaching’ level (in both primary and post-primary groups). However, post-primary school educators showed a higher number of differences than primary school educators and, other than leadership behaviour in the post-primary non-teaching group, the non-teaching groups reported a higher mean deviation across each of the interpersonal behaviours (that showed significance). Having found previously that there are differences in perception, the addition of the student sample suggests that there are deviations in the way educators view their behaviour. Moreover, and curiously, the ‘non-teaching’ sample reports more and significantly larger mean differences in self-perception than the ‘teaching’ group. One of the main differences between each of these groups is the type of interaction with students; the teaching group are classroom based and have designated student groups, while the non-teaching group have no designated student group but either work with specific students or hold an administrative role. This finding may appear to show that teaching groups are more likely to match with student perceptions of interpersonal behaviour; this is not necessarily true. Primary teaching and non-teaching groups report two differences each in interpersonal behaviour (PT; leadership and dissatisfied, and PnT: leadership and understanding) making four differences in total. The post-primary teaching group, however, show three differences and post-primary non-teaching show five (PPT; leadership, understanding, and student responsibility/freedom, and PPnT: leadership, helpful/friendly, understanding, dissatisfied, and admonishing), making eight differences in total. In other words, in this research, when compared against a student sample, a primary educator is more likely

going to match the student-perception of interpersonal behaviour than a post-primary educator.

Upon comparing interpersonal behaviours of the entire sample with the mental health inventory in RQ1H5, there were only two small negative correlations found. However, when factoring for ‘teaching’ and ‘non-teaching’ (RQ1H6) and school type (RQ1H7), numerous differences were found. Within RQ1H6, there are several curious differences between the groups. For example, in the teaching group, admonishing behaviour is shown to be related to higher levels of anxiety, depression, and loss of control, and lower levels of positive effect, psychological wellbeing, and overall mental health index. In the non-teaching group, however, admonishing behaviour is related to lower levels of loss of control, and psychological distress, and higher levels of positive effect, psychological wellbeing, and overall mental health index. It is possible that this particular behaviour is manifested differently within each group, or that the definition of what admonishing behaviour is differs between each group.

In primary schools, one correlation shows a relationship between leadership and loss of control. However, in post-primary schools, several correlations were found; suggesting that educators with lower scores of psychological wellbeing are less likely to display helpful/friendly, or student responsibility and freedom behaviours, or educators with lower scores in life satisfaction are less likely to display understanding behaviour. Additionally, educators who display high admonishing behaviours are more likely to score high in anxiety, depression, and loss of control. With regards to ‘other school’ educators (those who work in more than one school), strong negative correlations show a relationship between admonishing behaviour and anxiety, loss of control, and psychological distress. Additionally, a strong positive correlation shows a relationship between admonishing behaviour and an overall mental health index. Although the strength of the correlations in both hypotheses vary, they paint a worrying picture of post-primary and other school educators. Although these findings do not imply a causal relationship in particular behaviours and mental health, it does highlight the value of an individual reflecting on behaviour as it is possible that a negative incongruence will relate to some form of mental health outcome.

The remaining hypotheses (RQ1H8, RQ1H9, RQ1H10, and RQ1H11) focused on the way interpersonal behaviours were related to the three dimensions of burnout: emotional exhaustion, depersonalisation, and personal accomplishment. One significant

difference was found, suggesting that educators with a low level of risk for emotional exhaustion would display higher student responsibility and freedom behaviours when compared against educators with moderate and high levels of risk emotional exhaustion. In the teaching educator group, those with high scores in personal accomplishment are more likely to display increased helpful/friendly behaviours and lowered uncertain behaviours. Also, ‘non-teaching’ educators with high emotional exhaustion are reported to be less uncertain, and a high level of personal accomplishment is related to high strict behaviours (see section 7.5 for each hypothesis accept/reject status).

8.3.2 Implication of Findings

The range of differences and similarities between each of the educator groups in their perception of educational interpersonal behaviours are surprising. In general, the findings imply that studies focusing on particular types of traits, such as leadership, understanding, or admonishing behaviour within education, should first look at what the educators believe these behaviours are and how they might manifest into their everyday interactions. For example, Yukl (1999) argues that modern views of leadership behaviour would typically take transformational view that places greater emphasis on outcomes of events that are meaningful and consider the emotional and personal values of others, unlike the more traditional views of leadership that focus on the rational process. While this is just one small example, it shows that because multiple theories of leadership exist, it is likely that multiple interpretations exist also.

The difference in interpersonal educator behaviours, viewed by students, is one of most important implications of this research. Even though several behaviours are related to higher reports of burnout and mental health, the way in which students want to perceive their teacher and other educators in a school is very different to the way each educator perceives themselves. Although this research cannot fully explain the student focused outcome of this difference, it is possible that these finding indicate instructional practices that are largely teacher-centred as opposed to student-centred. Detailing particular differences in student and teacher-centred pedagogies, Section 2.1 and 2.2 mentioned research by Ertmer and Newby (2013) and that an educator is unable to adapt to the instructional needs of their students without an accurate indication of what the instructional needs are. It is possible that incongruent perceptions of educator and student perceptions of interpersonal behaviours result in an inadaptability to the

instructional needs of students; influencing student academic and developmental outcomes.

8.3.3 Recommendations for Future Research

Due to the nature of this exploratory research, the hypotheses focused on interpersonal behaviours at a single point of time; using a repeated measures approach would provide more accurate results. Although previously mentioned above, the varying Cronbach alpha levels imply that educator groups may perceive the QTI items in different ways; further qualitative research is needed to investigate these differences further. As previous research has shown that patterns of behaviour can adapt and change depending on the environment in which an individual interacts with, it is possible that the self-perception and ideal-perception of interpersonal behaviour can change throughout the academic year. As this research found numerous correlations between the mental health and interpersonal behaviour of educator groupings, further research should extend these findings by focusing on one population and use a qualitative approach, coupled with a quantitative repeated measure design, to focus on possible reasons why these differences exist.

8.4 Research Direction Two: The Dynamics of Pedagogy

Based on the findings in section 4.6.2, the TPACK was used to question the importance of pedagogical skill. It was decided to measure the way teachers implement instructional strategies as, in the absence of observational data, an accurate account of subjective pedagogical approach would be unmeasurable. As section 2.2.1 and 2.2.2 support this approach, it is considered important for educators to focus on theories of teaching and learning that place a greater emphasis on self-reflection and adaptability. In total, three hypotheses were tested to further understand the dynamics of pedagogical skill in instructional practice.

8.4.1 Interpretation of Findings

The implications of these findings are unclear, considering the few significant differences. It is possible that, as a result of educator training, the scores in particular TPACK components are similar across each educator group. For example, educators in learning support, while they have not been designated a student group during this research, are fully qualified teachers and will have been trained in implementing various

instructional methodologies. Additionally, school principals are also likely to have been first trained as teachers prior to being promoted to their current role. It is surprising, however, that there is only one positive correlation between strict behaviour and an educators' use of technology. An ANOVA analysis of burnout risk found that individuals who experience a high risk of personal accomplishment will show higher levels of pedagogical knowledge than other risk groups. While this did not warrant a full acceptance of hypothesis three, it indicates that an educator who feels accomplished in what they do is more likely to understand the processes and practices of teaching and learning.

8.4.2 Implication of Findings

The reason why the TPACK was used, rather than other pedagogical measures, is because it was envisioned that variants in scores would be indicative of particular interpersonal behaviours or psychological symptomatology. However, this is not the case. It is curious that no differences were found between individuals who are considered to be at low, moderate, or high risk of emotional exhaustion, or depersonalisation. This implies that, if one educator was at high risk of emotional exhaustion and another individual is at low risk, they will both still understand the processes and practices of how different technologies are used in teaching and learning. In isolation, these findings may be considered as having no implication. However, when coupled with the findings above (regarding the differences in the self-perception and ideal-perception of interpersonal behaviour or influence of burnout and mental health on interpersonal behaviour), it is possible that educators misreport their ability to implement pedagogical strategies. It is also possible that there is a difference between theory and practice with regards to pedagogical implementation, meaning that implementation of particular instructional strategies may not be directly influenced by psychological factors or interpersonal behaviour; that, instead, they are indirectly influenced.

8.4.3 Recommendations for Future Research

The lack of observational data means that it is difficult to review an individual's actual ability to implement pedagogical strategies. However, this is a limitation of self-report measures in general. As there were no significant findings within the tested hypothesis, it is likely caused by initial teacher training. While the number of years a participant spent

training was asked, the location of the training and qualification type was not. Further research should, in this case, focus on the role of CPD and training on instructional practice. There is also the possibility of using a questionnaire other than the TPACK in addition to observational methods; something similar to the TPI (Pratt & Collins, 2000) perhaps.

While the TPI was not used because it was designed for higher education and does not focus on the implementation of pedagogies, it may provide a better framework for understanding subjective teaching approaches. The use of regression or path analysis statistical models may be able to determine direct or indirect influences of psychological factors or interpersonal behaviours on the TPACK components.

8.5 Research Direction Three: The Need for Psychological Support

The need for psychological support, although being quite broad and vague, was included in this research based on the findings in section 4.6.3. Using a combination of the MBI and MHI, participants were grouped by various categorical variables to determine whether there were differences in the need for psychological support. The decision to include this aspect in the research was supported in various sections; section 6.4.2, for example, explains that the availability of psychological resources is shown to have significant influence on an individual. While this conclusion is not necessarily new information, as several mentioned studies have shown this previously, what was found is that the perception of the need of psychological support would differ depending on subjective factors. That is where this research begins; whether occupational factors contribute to overall scores in mental health or burnout. In total, nine hypotheses were tested to further understand the need for psychological support within education. In total, five hypotheses were partially accepted and four were rejected.

8.5.1 Interpretation of Findings

In general, through the observation of the mean values for each of the MHI components (Table 48), this sample scores low in the negative subscales and scores moderate in the positive subscales; with a high overall MHI index. These findings are interesting, they display a sample that do not score high (or even moderate) in scales of anxiety, depression, or loss of control, for example, but they do not score high in psychological wellbeing either. Some of the subscale averages are close to the category cut-off point

which, because the standard deviations within each of the subscales are varied, will likely place participants into moderate-high risk categories. There were no differences in MHI scores when dividing the sample into ‘teaching’ and ‘non-teaching’ educator groups, but there was one slight difference in life satisfaction; post-primary educators reported lower life satisfaction than educators working in primary and other school types. The scores of the MBI reveal a contrasting view of the sample, with the mean scores in the subscales suggesting that the sample is at moderate risk of emotional exhaustion and depersonalisation; which is curious, considering the low scores in negative psychological health as found by the MHI. However, what is surprising is that, amidst the moderate risk of emotional exhaustion and depersonalisation, the sample reports a high level of personal accomplishment.

Upon splitting the sample by individuals currently ‘teaching’ and ‘non-teaching’ (RQ3H3), a series of T-Test analysis revealed that the perception of career progression had no significant influence on mental health scores. Within the non-teaching group, however, there were significant differences across each variable; suggesting that individuals who feel as if they have options for career progression will show lowered negative psychological health and increased positive psychological health. A similar pattern was seen in when factoring for the participation in activities that the participants feel boosts their wellbeing (RQ3H4); a significant difference across most MHI subscales. Further, in RQ3H5, factoring for the experience of burnout in the past, no differences were seen in the ‘teaching’ group but multiple differences were found in the ‘non-teaching’ group. It is interesting that, when using the MBI subscales to compare the perception of career progression (RQ3H7) between ‘teaching’ and ‘non-teaching’ groups, no significant differences were found. Because the mean score for each burnout dimension is moderate or high across the sample, it is possible that no difference indicates that both groups experience the burnout dimensions equally; that the perception of career progression does not directly influence burnout. However, taking account of the influence of career progression perception on MHI components in the ‘non-teaching’ group, it is likely that burnout has an indirect influence on ‘non-teaching’. The pattern seen previously in RQ3H4 was seen again in RQ3H8, where a significant difference found in the scores for emotional exhaustion in the ‘non-teaching’ group and whether they partake in activities they feel boost their wellbeing. Unlike RQ3H5, the findings of RQ3H9 found that participants in both the ‘teaching’ and ‘non-teaching’ group who reported having experienced burnout in the past were much more

likely to report high levels of emotional exhaustion.

In the context of this research, these findings are interesting. Having found the various differences between the self-perception and ideal-perception of an individual in the first research question, it is impossible to denounce similarities of this research to the concept of congruence. Rogers (1959) argued that individuals want to experience and behave in ways that relate to the subjective self-perception of an ideal-self; the level of congruence refers to the closeness of an individuals' self and ideal perception are. Rogers believed that the incongruence of behaviour, a difference between the self and ideal-perceptions of self, will be the cause of some form of 'neurotic' behaviours. While Freud (1929) frequently published on the concept of neurosis, mentioning how his patients would be suffering from neurotic behaviours, more modern variants would refer to specific conditions anxiety, depression, phobias, or stress, for example (Green & Cheshire, 2001). It is possible that the incongruence of interpersonal behaviours is a cause of this sample reporting increased levels of burnout and mental health symptomatology.

The need for psychological support within this research is made evident throughout the quantitative and qualitative findings; when using the qualitative findings in RQ3H7 and RQ3H8 an alternate view of the quantitative data is displayed. For example, when asked where the participants saw themselves in the next five years, a particular response pattern was seen in participants who reported not having many options for career progression. Because there were no significant differences between having options for career progression, it is unclear whether particular responses are positive or negative. There is some evidence to support these responses being negative. For example, several responded using all-caps with statements such as "*IN THE SAME JOB*" or "*SAME*", while others responded with additional statements such as "*RETIRED... hopefully*" or "*Retired, or demented*". It is possible that these participants are currently experiencing some form of negativity in their current role.

It is unclear whether the incongruence of interpersonal behaviour is a result of subjective factors or just one of many that exist within the educational environment. Rogers (1983) claimed that external macrosystemic influences, such as policies, standardisation, and environmental directives, "*make the teacher's profession a very difficult one*" (pg. 3); he argued that increasing accountability restricts an individuals'

ability to grow in a classroom setting. This is similar to the way in which the WSE is viewed in this research. As, by nature, the accountability and standardisation process within education means that an educator is required to meet an external criteria. If it is the case that incongruence is a direct cause of Freuds' neurosis, it is unlikely to change unless the accountability and standardisation process is changed.

8.5.2 Implication of Findings

As previous studies that use the MBI have typically focused on using one sample type, the differences in 'teaching' and 'non-teaching' groups within this research is surprising, and a cause for concern. The findings above show that 'non-teaching' groups are more at risk of negative psychological health than their teaching colleagues. While there are multiple demographic factors that may contribute to this difference, the only difference that was controlled in this research is the level of interaction with students. Although this suggests that student interaction could act as a positive psychological support, this is not supported by the hypotheses. However, the opportunistic sampling strategy used in this research may be a confounding variable within this research.

As a significant difference was found in depersonalisation scores between participants aged 21-25 and participants aged 46+, it could be highly valuable to teacher training institutions. It could be a case where newly qualified educators could work alongside and be mentored by their more experienced colleagues. While it is understood that this is currently being done as part of an induction process for newly qualified teachers (McAuliffe, 2016), this research gives this process further direction on what areas to focus on.

The finding that individuals who have experienced burnout in the past report higher levels of emotional exhaustion could be used to develop a support structure for educators. It is possible that, by using the list of activities that are reported to increase wellbeing, the DES or teaching unions could use this information to develop training programmes or social-based workshops for educators to assist them in lowering their burnout risk.

8.5.3 Recommendations for Future Research

It has been previously mentioned that the scales used had not been used in an Irish context before and, as such, it is unclear whether scores are comparable against

international literature. Although similar Cronbach alpha scores and mean values were found, further research should explore these questionnaires further by using a comparative sample outside of the Irish educational context. Although this research did ask questions regarding the participation in CPD or activities that were perceived to boost wellbeing, no direct scale was used to account for subjective defence mechanisms that an individual may have. For example, if an individual scores high on emotional exhaustion and depersonalisation, it indicates a high risk of that individual experiencing burnout; it does not mean that the individual is ‘burned-out’. Further research should use the MHI and MBI, but also factor for possible defence mechanisms; perhaps a mixed method repeated measure study that explores specific cause and effect relationships.

In relation to the direct and indirect influences of the MHI and MBI, further research should incorporate a path analysis or regression design to determine a cause effect link between each subscale variable. Another suggestion is to further explore the perception of availability for career progression options by comparing a sample of teachers who are enrolled in CPD programmes. The qualitative responses in RQ3H8 shows a wide range of activities that are reported to increase wellbeing; taking the form of physical activity (such as sports or exercise) and activities that are creative and self-reflective (arts, drama, yoga or meditation). This list could be further studied to determine whether particular activities increase wellbeing more than others.

8.6. Statement of Implications for Policy, Practice, and Research

It is important to recognise the limitations of exploratory research in highlighting possible influences to behaviour rather than accurately explaining intricate factors. However, the many findings of this PhD will have significant implications for Policy, Practice, and Research. As mentioned during the first chapter, the operational definition that underpins this research is that of an educational researcher guided through experiences and training within the area of psychology. One of the main influences of this PhD is its contribution to educational research. The initial review of macrosystemic factors within Irish education drew a large body of data into focus. Despite the evident lack of critical analysis within some of these datasets, the value derived led to the construction of a combination of measures that address the areas of interpersonal interaction, pedagogy, and psychological support. Within the experimental study, using the combination of measures on a larger participant sample, the findings led to the

construction of a prospective tool for educator self-reflection. At a macrosystemic level, the integration of this methodological that were constructed and labelled throughout this research will assist in future researchers in carrying out rigorous and ecologically informed research. Unlike the original forms of GT (Glaser & Strauss, 1967), constructivist grounded theory encourages a researcher to become involved and immersed with a research project to accurately tell a story about people and their interactions with social processes and situations. Chamaz (2008) argues that, because the researcher creates the labels that categorise the theory, this framework can allow for the voice of participants within a study to be heard.

The main significance of this research comes from a microsystemic perspective. This research has shown that many variables exist that are associated with the broad constructs of burnout, pedagogical implementation, and interpersonal interactions. From a policy and practice perspective, these findings are considered preliminary. However, the combination of measures within this research can be utilised in such a way that can assist an educator in self-reflecting on their own educational behaviours. As mentioned in Chapter 3, several studies have shown the increasing importance of educators self-reflecting on their own behaviour (Zwart, Wubbels, Bergen, & Bolhuis, 2007). Not only does this proposed tool allow current educators to reflect and evaluate their own behaviour, it could be incorporated into teacher training programmes to allow future educators to monitor their own progress and personal growth (Doig & Groves, 2011). To further explain the benefits of this tool, the following figures have been developed using the findings of an anonymized participant from this research:

Descriptive Information	
Name	J. Doe
Age	23
Gender	Female
Role	Teaching
Number of Years' Experience	3
Number of Years' Training	3
Qualifications	(Not Answered)
Do you participate in Continuing Professional Development?	No
Do you participate in Activities you feel boost your Wellbeing?	No
Have you ever experienced Burnout?	Yes
School Type	Primary School
School Size	700 Students
Staff Size	40 Staff

The information in this section relates to demographic variables. They are used as a way to broadly categorise the participant to enhance the discussion with the participant. It also caters for a comparative evaluation of the participant against peers in a similar educator role

Summary
<p>J.D is currently working as a primary school teacher in a south County Dublin school. She has been working in this role for 3 years having completed her initial undergraduate qualification in university.</p> <p>Based on the 2014/2015 DES reports, her school is one of 118 that fit this description. According to the DES statistics, the average student/teacher ratio in this school type is 27.2 students per class. J.D's school has a larger than average staff body.</p> <p>J.D reports not participating in continuous professional development and aims to be still teaching in next 5 years. She does not participate in activities, and reports having experienced burnout in the past.</p>

The summary provides a synopsis of the demographic variables in comparison to the DES annual statistics. It gives the educator an external reference point to how many educators are in similar class/school types throughout the country.

Figure 24: Assessment Tool Descriptive & Summary

Questionnaire on Teacher Interaction					
	<i>Self-Perception</i>		<i>Ideal - Perception</i>		<i>Student Perception</i>
	<i>Individual</i>	<i>Averaged</i>	<i>Individual</i>	<i>Averaged</i>	<i>Averaged</i>
<i>Leadership</i>	24	23.8	25	27.8	26.06
<i>Helpful Friendly</i>	27	26.4	27	27.9	26.25
<i>Understanding</i>	27	25.4	28	28.4	26.82
<i>Student Responsibility</i>	17	16.4	15	15.14	16.51
<i>Uncertain</i>	11	9.9	8	8.15	10.86
<i>Dissatisfied</i>	9	10.3	9	8.23	11.57
<i>Admonishing</i>	12	11.7	7	8.34	12.41
<i>Strict</i>	11	16.3	13	16.65	16.8

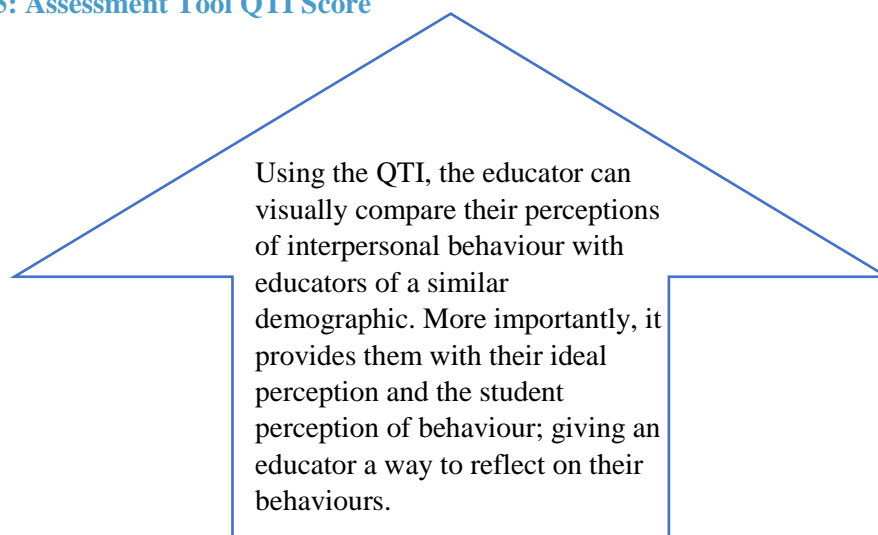
J.D scored relatively in-line with the overall primary teaching sample in the self-perception of her interpersonal behaviour. Her score of 'Uncertain' is slightly higher than that of her peers, and her 'Strict' behaviour is significantly lower. The differences between her 'self' and 'ideal' perceptions do not vary greatly in 'Leadership', 'Helpful Friendly', 'Understanding', and 'Dissatisfied'; which suggests that she is comfortable in the portrayal of these behaviours with her students. She does recognise that she may give students a little more responsibility and freedom than is needed, and she feels it necessary to be slightly stricter with her class. Her self-reported level of 'admonishing' behaviour is significantly higher than her ideal-perception, which may require some discussion in order to evaluate why this is. The graphs on the next page display her scores.

Generally, her ideal perceptions do reflect the average scores for other primary school teachers. The main difference is with strict behaviours, as her peers consider it important to appear stricter in classroom settings.

When compared to the student sample, JDs results are positive. There are some slight variations in her scores but, as a whole, her interpersonal behaviours are indicative of a teacher that students want.

Further research using JDs own class group would provide more accurate behavioural results. An observation of her classroom instructional practices would also be a useful technique in giving her further advice on how to improve her practice.

Figure 35: Assessment Tool QTI Score



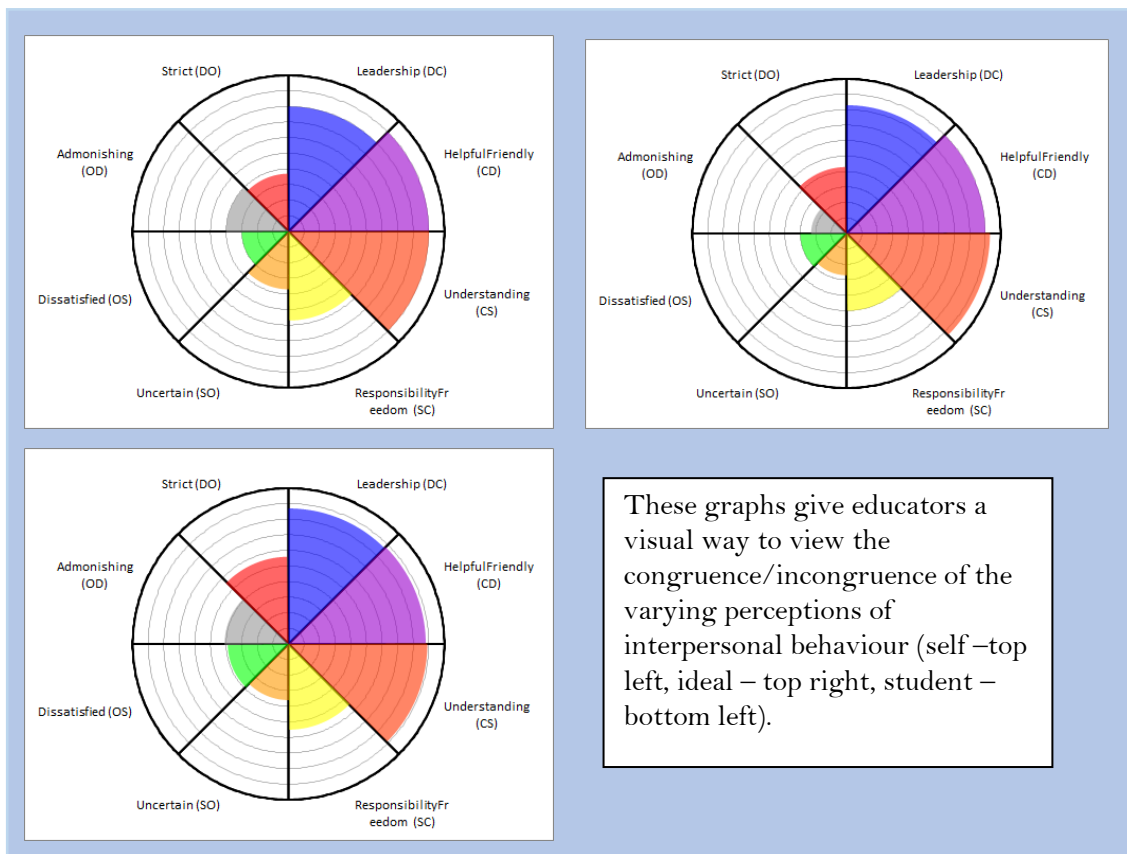


Figure 46: Assessment Tool QTI Graphs

Maslach Burnout Inventory			
	Raw Score	Average Score	Total Possible
<i>Emotional Exhaustion</i>	30	28	63
<i>Depersonalisation</i>	9	8.7	35
<i>Personal Accomplishment</i>	51	45.5	56

Based on the average score for other female teachers that currently work within primary schools, J.D scored slightly above average in Emotional Exhaustion and Depersonalisation. This means that her emotional exhaustion score places her at high risk of burnout, and her depersonalisation score places her at moderate risk of burnout.

Her score in Personal Accomplishment, however, is significantly higher than the average score (5 points lower than the highest score). These findings suggest that JD is at a significant risk of burnout, as it appears her high level of personal accomplishment may be acting as a barrier against the perception of full burnout symptomatology.

The MBI allows an educator to view their level of burnout risk in comparison to peers. The responses provide a baseline score which allows a psychologist to devise ways to approach possible improvements.

Figure 57: Assessment Tool MBI Scores

Mental Health Inventory - 38			
	Raw Score	Average Score	Total Possible Score
<i>Anxiety</i>	28	19.7	54
<i>Depression</i>	13	9.6	23
<i>Loss of Control</i>	24	18.2	53
<i>Positive Effect</i>	23	40.2	60
<i>Emotional Ties</i>	2	6.7	12
<i>Life Satisfaction</i>	3	4.2	6
<i>Psychological Distress</i>	67	48.7	142
<i>Psychological Wellbeing</i>	30	55.2	84
<i>Mental Health Index</i>	125	169.5	226

Based on the average score for other female teachers that currently work within primary schools, JD scored higher than her peers in anxiety, depression, loss of control, and psychological distress; and lower than her peers in positive effect, psychological wellbeing, and her mental health index. While these scores are a snapshot of her current psychological health, the perceived effects will differ for each individual. It is necessary to discuss these points with JD during the one-to-one meeting with the intent of developing a practical way to improve her mental health scores.

The MHI provides an educator with various mental health elements and a comparison of peer responses. This questionnaire gives the educator an understanding of the level of psychological health they are experiencing.

Figure 68: Assessment Tool MHI Scores

Technological Pedagogical Content Knowledge			
	Raw Score	Average Score	Total Possible Score
<i>Technological Knowledge</i>	20	25	35
<i>Pedagogical Knowledge</i>	28	30	35
<i>Technological Pedagogical Knowledge</i>	17	17	25
<i>Technological Pedagogical Content Knowledge</i>	28	28	40

Based on the average score for other teachers that currently work within primary schools, JD lower in her Technological Knowledge but mirrored her peers in pedagogical knowledge, technological pedagogical knowledge, and Technological Pedagogical Content Knowledge.

As JD reports not participating in continuing professional development, it is likely that these scores will remain the same.

The TPACK encourages educators to review and self-reflect on the ways they implement instructional practices with class groups.

Figure 79: Assessment Tool TPACK Scores

Psychologist Discussion

*** (Building Rapport) ***

*** (Open-Ended Questions) ***

Q1 Psychologist: *“In relation to burnout, if someone was experiencing this, how do you think they would feel and what do you think was the causes?”*

Participant: *“[feelings:] tired and undervalued ... [causes] Lack of support from management and parents”*

Overview of Results.

JDs burnout score is worrying. She reports not participating continuous professional development, or in activities that may boost her wellbeing. She also reports experiencing burnout in the past. Coupling these findings with her MBI scores, she is at high risk of experiencing burnout. It is recommended that she partakes in some activities (such as walking, reading, exercise, etc.) for the purpose of clearing her mind and winding down after days in school. It is clear, through her interpersonal behaviour and TPACK scores, that her instructional practice theory and implementation is successful (a date for teacher observation has been provided to JD and this report will be updated).

My concern is with JDs psychological health. Her scores in the MBI and MHI-38, are indicative of an individual who may be currently experiencing stress and fatigue; impacting her work and personal life. Her scores in personal accomplishment shows that she is clearly passionate about her work in schools, but, it is likely that negative interactions or experiences with students or staff in her school may lower this score; leaving her vulnerable to burnout and anxiety, depression, etc.

I have attached a list of short courses from the Professional Development Service for Teachers (<http://www.pdst.ie/>), and highlighted courses that would be useful for JDs personal development. This suggestion is twofold;

- 1) It will help in her own personal development, increasing her instructional skillset, but
- 2) It will increase her social network. She will be able to interact with other teachers and share her experiences in a supportive environment.

Moving forward, I recommend a further completion of these scales in the next academic term and another one-to-one meeting in the coming weeks (the academic staff will arrange a suitable date).

A one-to-one discussion is necessary as a part of the self-reflection process. It gives the educators the opportunity to discuss their findings with a psychologist.

This section provides a summary of the psychologists' interpretations of the self-reflection process. It offers practical ways an educator can improve on their teaching.

Figure 30: Assessment Tool Discussion & Write Up TPACK Scores

8.7. Conclusion

As this was an explorative study, there are now many more research directions and questions that need to be answered. It would be useful for further research to take place with the support of the DES, teaching unions and, most importantly, non-teaching unions. It was especially surprising that there were no substantial significant differences between primary school and post-primary school educators in their reported interpersonal behaviour and psychological health. This research adds to the literature by extending the way interpersonal behaviours are viewed within an educational context. It is possible that there is either a direct or non-direct influence of student interaction and psychological health on an educators' interpersonal behaviour; further research that specifically focuses on this model of mediation is suggested. In section 6.1, it is mentioned that Pratt and Collins (2011) viewed their TPI as a way for educators to self-reflect on their own teaching perspectives; the findings of this Ph.D. research shares a similar view. An educators' ideal perception of what it is to be an 'effective' educator exists in their subjective view of teaching. The incongruence between educator and student perception of interpersonal behaviour suggests that educators may need to adapt to the needs of their students; not what they believe their students need. This comes with some reservation, as the implication is not to suggest that an educator become easily led by their class. Instead, similar to the findings of Hsieh *et al* (2011), this research encourages an educator to be adaptable and reflect on their interactions with students to determine what instructional practices will work best for the students. The literature surrounding models of teacher change, highlighted in section 6.1, argues that educators will only adapt to a new educational development if there is evidence that this change will improve student outcomes (Guskey, 2002). In the absence of perceived support, however, any form of significant change is unlikely (Bechtel & O'Sullivan, 2007). It is possible that the provision of a self-reflective tool could be a way for educators to feel supported. Section 6.5 proposes that, by placing emphasis on practical ways an individual educator can enhance instructional practices and interpersonal behaviours, a psychologist could take an educators questionnaire responses and produce a type of 'individualised teacher report'. In order to explain further, the data from a random research participant was selected to produce a sample report (See Appendices A)

8.6.1 Personalised Conclusion

I have been wondering and looking back through the three researcher classifications mentioned in Chapter One. Roberts (2002) proposed that ‘*Type A*’ researchers are motivated by publishing and conducting research, ‘*Type B*’ are motivated by sharing knowledge and teaching, and ‘*Type C*’ are motivated by sharing real world knowledge and practical expertise to others. Having completed this research project, I am unsure what researcher category I fit into. It is likely that I would have joined the ranks of the ‘*Type A*’ researcher, had this been a Ph.D. by publication. Had I been given much more lecturing hours, teaching teachers ‘out of the book’ concepts of psychology, I may have been classified as a ‘*Type B*’ researcher. Does this mean I am a ‘*Type C*’ researcher?

Although the research process uses a broad categorisation process to make meaning and comparisons of participant samples, it is impossible to fully quantify and categorise individuals based on their experiences. A scientist will devise a set of hypotheses to test, work towards disproving them, and then make an assumption based on the data they have at hand. Prior to conducting this research, to be honest, I probably would have considered myself as a ‘*Type C*’ researcher. Working in primary and post-primary schools for the last several years however, interacting with educators and school students, has given me a practical and ‘real world knowledge’ of education. I have seen students, labelled ‘at risk’ of dropping out of school, persevere and complete their leaving certificate. I have also seen educators, after having tough days and wanting to leave teaching, walk through the school doors the next day at 8:15am. Having been the support for educators and students, I believe that the process of categorisation and labelling, in a way, is a necessary step towards understanding where an individual is; but, overreliance, in a way, dehumanises the value of their experience.

I am truly fortunate to have experienced the passion that exists within education. I am still unsure what type of researcher I am; but I am incredibly excited to spend the rest of my career finding out.

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Appendices A - Individualised Report Sample

It has been requested by _____ (print name) to take part in the process of self-evaluation.

This process will report on the possible influences to your instructional practice and provide you with suggestions for improvement that has been informed by academic research.

Involvement in this process requires the completion of basic descriptive information, four questionnaires (outlined below), and a one-to-one meeting with a qualified psychologist. The purpose of this meeting is to discuss your results and provide you with practical ways to inform your instructional practices.

Ethical Considerations

Have you (please tick):

- discussed the participation in this evaluation with the relevant school staff?
- been made aware of your rights as a participant in this research?
- been made aware that the outcome of this assessment will not be shared with anyone other than the core research staff?
- been made aware that the data you provide may be used to further develop the evaluation process?
- been made aware that the completion of this process at multiple points over the academic year will provide you with more accurate results?

If you have not ticked any of these ethical considerations, please contact the lead researcher: Dean McDonnell (mcdonnd5@tcd.ie)

I, _____ (signature), declare that I give my full consent to participate in this evaluation. I understand that my participation in this research is voluntary, I understand my rights as a participant, I know the nature and purpose of this evaluation, and that I can withdraw at any time and have my documents destroyed.

For Office Use Only	
Name of Researcher	Dean McDonnell
Date	12/8/2016
Academic Phase	Sept – Dec

Descriptive Information	
Name	J. Smith
Age	36
Gender	Male
Role	Teaching
Number of Years' Experience	15
Number of Years' Training	(Not Answered)
Qualifications	(Not Answered)
Do you participate in Continuing Professional Development?	No
Do you participate in Activities you feel boost your Wellbeing?	Yes
Have you ever experienced Burnout?	No
School Type	Post-Primary School
School Size	700 Students
Staff Size	(Not Answered)

Example Summary:

JS is currently working as a post-primary school teacher in a County Cork school. He has been working as a teacher for the last 15 years within numerous schools.

Based on the 2014/2015 DES reports, his school is one of 60 that fit this description. There is no data available for the average student/teacher ratio in this school type for 2014/2015.

JS reports not participating in continuous professional development and aims to be still teaching in next 5 years. He has reported that he keeps an active lifestyle by running and playing GAA in his free time. He reports never experiencing burnout in the past.

Questionnaire Results

The four questionnaires used in this evaluation are as follows:	
<i>Questionnaire on Teacher Interaction</i>	Used to measure the reported perceptions of interpersonal relationships between students and teachers.
<i>Maslach Burnout Inventory</i>	Used to measure the perception of burnout symptomatology
<i>Technological Pedagogical Content Knowledge</i>	Used to measure the implementation of instructional skills
<i>Mental Health Inventory - 38</i>	Used to measure various aspects of mental health

Questionnaire on Teacher Interaction					
	<i>Self-Perception</i>		<i>Ideal - Perception</i>		<i>Student Perception</i>
	<i>Individual</i>	<i>Averaged</i>	<i>Individual</i>	<i>Averaged</i>	<i>Averaged</i>
<i>Leadership</i>	25	24	27	27	26
<i>Helpful Friendly</i>	26	26	26	28	27
<i>Understanding</i>	25	26	25	28	27
<i>Student Responsibility</i>	15	16	14	15	18
<i>Uncertain</i>	9	10	9	9	10
<i>Dissatisfied</i>	9	10	9	9	9
<i>Admonishing</i>	12	12	10	9	11
<i>Strict</i>	19	17	19	18	16

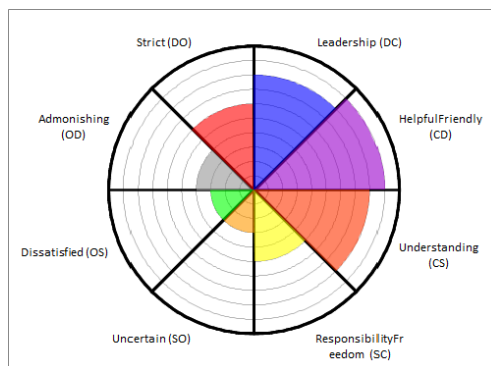
JS scored relatively in-line with the overall post-primary teaching sample in the self-perception of his interpersonal behaviour. Likewise, there were no significant differences in his own self-perception and ideal-perception of interpersonal behaviour. There are some slight variations in his self-perception and the student ideal perception of interpersonal behaviour. Most noticeably is the 'understanding' and 'student responsibility and freedom'; indicating that students would like for JS to display a greater sense of understanding and give his students more responsibility and freedom.

JS's self (and ideal) perception of strict behaviour is higher than that of the student perception, which may require some discussion in order to evaluate why this is.

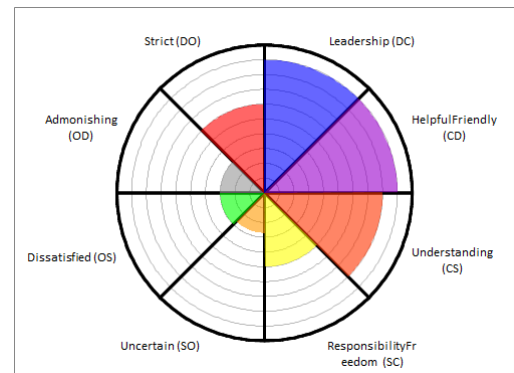
Generally, he appears to be on par with his peers in the way he interacts with his students. When fully compared to the student sample, JS's results are positive. There are some slight variations in her scores but, as a whole, his interpersonal behaviours are indicative of a teacher that students want. He recognises that some improvements can be made.

Further research using JS's own class groups would provide more accurate behavioural results. An observation of his classroom instructional practices would also be a useful technique in giving her further advice on how to improve her practice.

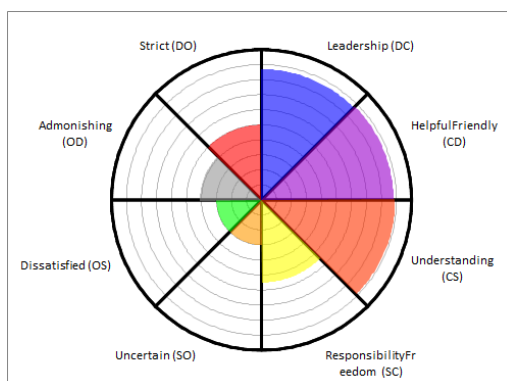
Self-Perception



Ideal-Perception



Student-Perception



Maslach Burnout Inventory			
	Raw Score	Average Score	Total Possible
<i>Emotional Exhaustion</i>	31	27.7	63
<i>Depersonalisation</i>	9	10.7	35
<i>Personal Accomplishment</i>	45	44.5	56
<p>Based on the average score for other male teachers that currently work within post-primary schools, JS scored slightly above average in Emotional Exhaustion and lower in Depersonalisation. This means that his emotional exhaustion score places him at high risk of burnout, and his depersonalisation score places him at moderate risk of burnout. His score in Personal Accomplishment is almost identical to the average score for this sample group.</p> <p>These findings suggest that JS is at a Moderate risk of developing burnout; his lowered level of depersonalisation, coupled with his average score in personal accomplishment may reducing the full extent of full burnout symptomatology.</p>			

Mental Health Inventory - 38			
	Raw Score	Average Score	Total Possible Score
<i>Anxiety</i>	NA	22	54
<i>Depression</i>	10	10.7	23
<i>Loss of Control</i>	NA	20.7	53
<i>Positive Effect</i>	38	38.6	60
<i>Emotional Ties</i>	6	6.7	12
<i>Life Satisfaction</i>	4	3.6	6
<i>Psychological Distress</i>	NA	51	142
<i>Psychological Wellbeing</i>	53	53	84
<i>Mental Health Index</i>	NA	168	226
<p>Based on the average score for other male teachers that currently work within post-primary schools, JS scored average in depression, positive</p>			

effect, emotional ties, life satisfaction, and psychological wellbeing.

However, totalled scores were unable to be computed for JS because he did not fully complete the scale.

It is necessary to discuss these points with JS during the one-to-one meeting with the intent of understanding his mental health scores so a practical way to improve his mental health scores can be developed.

Technological Pedagogical Content Knowledge			
	Raw Score	Average Score	Total Possible Score
<i>Technological Knowledge</i>	24	25	35
<i>Pedagogical Knowledge</i>	28	28.7	35
<i>Technological Pedagogical Knowledge</i>	13	17.9	25
<i>Technological Pedagogical Content Knowledge</i>	NA	27	40

Based on the average score for other teachers that currently work within post-primary schools, JS scored on average in Technological Knowledge and in pedagogical knowledge. However, because he scored significantly lower in technological pedagogical knowledge, it is possible that his implementation of technology and other instructional practices may need improvement.

As JS reports not participating in continuing professional development, it is likely that these scores will remain the same.

Psychologist Discussion

*** (Building Rapport) ***

*** (Open-Ended Questions) ***

Q1 Psychologist: “In relation to burnout, if someone was experiencing this, how do you think they would feel and what do you think was the causes ?”

Participant: “[feelings:] Tired, stressed, unfocused... [causes] Lack of school support, poorly behaved students, lack of career opportunities, undervalued in staff society”

Overview of Results.

JSs burnout score is satisfactory, but the lack of available data in the MHI means that the context of these findings are not fully understood. He reports not participating continuous professional development which most likely influences his lowered scores in the TPACK. His participation in types of exercise (running) and sports (GAA) is positive, and will likely help him to stay focused during times of stress. It is also positive that he has never experienced burnout in the past. In general, his moderate burnout score and overall perception of mental health is inconclusive; as he has not fully completed the necessary scales.

His interactions with students appears to match his peers and the ideal student perception relatively well. His interpersonal behaviour and TPACK scores are positive but the subtle differences in scores may be having some influences (a date for teacher observation has been provided to JS and this report will be updated). It is recommended that he partakes in some professional development courses which will assist in the implementation of pedagogical strategies in class. Further suggestions will be provided after the observation.

I have attached a list of short courses from the Professional Development Service for Teachers (<http://www.pdst.ie/>), and highlighted courses that would be useful for JSs personal development. This suggestion is twofold;

- 1) It will help in his own personal development, increasing his instructional skillset, and
- 2) He can share and exchange his knowledge and experiences in a supportive environment.

Moving forward, I recommend a further completion of these scales in the next academic term and another one-to-one meeting in the coming weeks (the academic staff will arrange a suitable date).

Signed _____

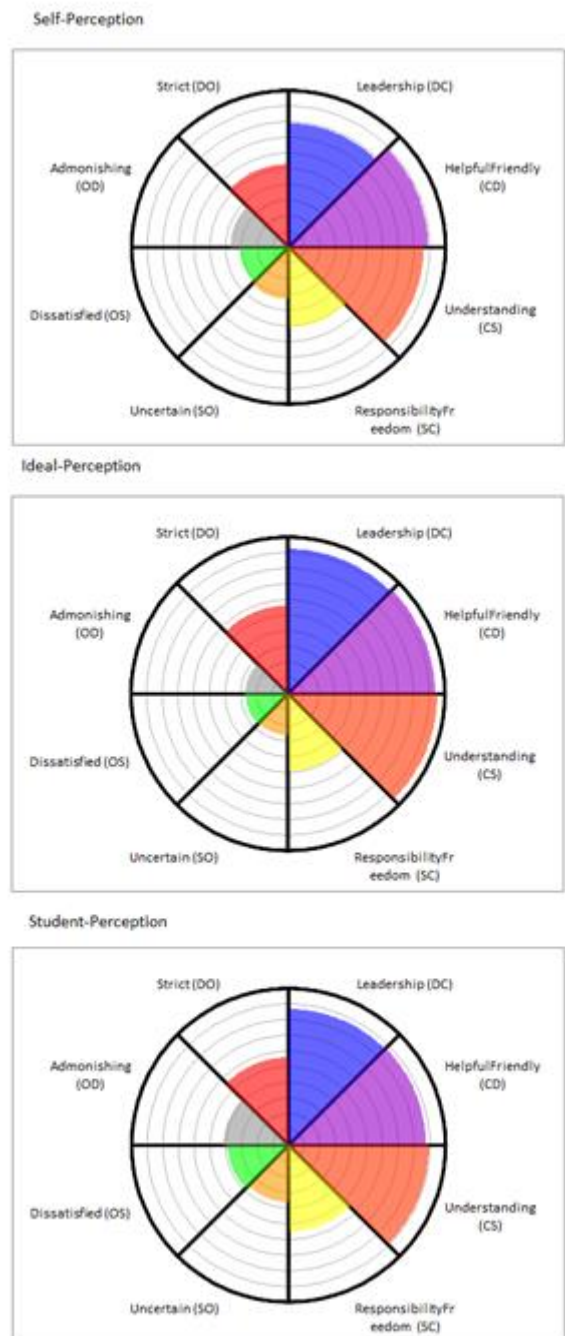
Dean McDonnell (B.Sc, M.Sc)

Psychology of Education, Trinity College Dublin

Appendices B – QTI Educator Profiles

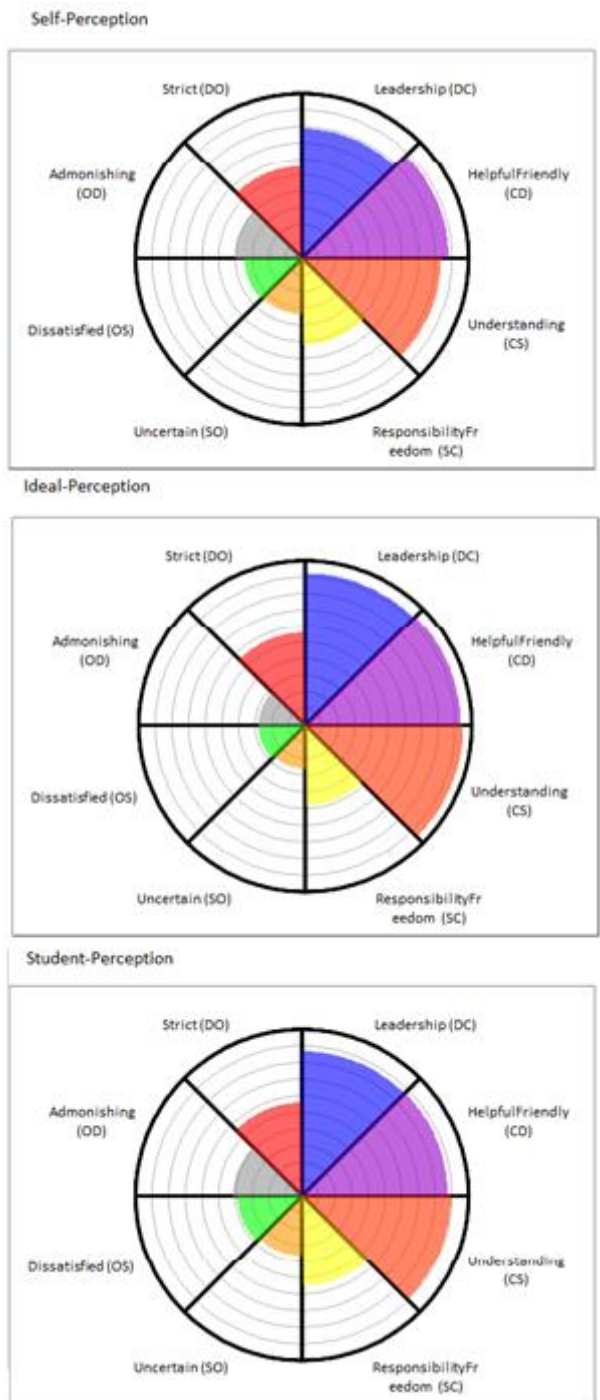
- **Primary Teaching**

As seen in the T-Tests and ANOVA analyses, there are differences between each of the self and ideal perceptions. While there are slight variations, according to the descriptions in Breklemans *et al.*, (1993), each of these groups display a sample that fits the description for an educator that is ‘Tolerant/Authoritative’. This sample of Primary Teaching staff consider their actual leadership level to be lower than that of student perception, but consider their ideal level of leadership behaviour to be higher than that of student perception. A similar pattern is seen between the ideal behaviours helpful/friendly, understanding behaviour, where teaching staff see their ideal as higher than student perceptions. With regards to self-perception, teaching staff viewed themselves as being more dissatisfied and give their students less responsibilities and freedom. Interestingly, with regards to ideal-perception, other behaviours, such as uncertain, dissatisfied, and admonishing behaviours are lower than in the student-perception of behaviour.



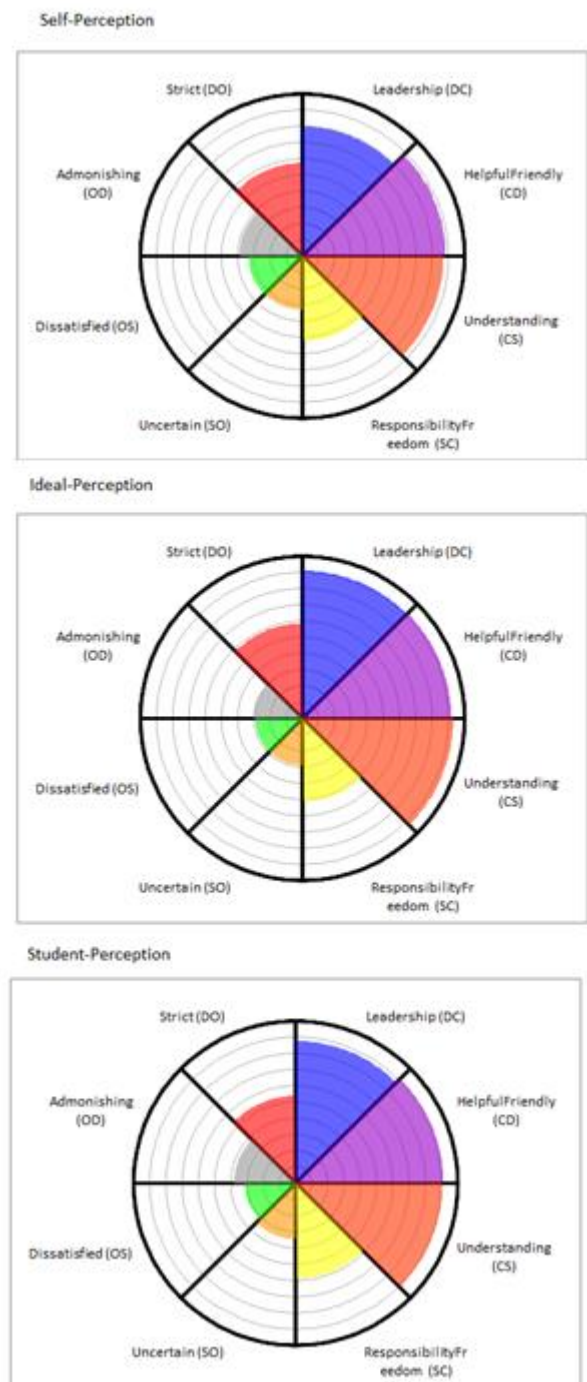
- **Primary Non-Teaching**

As seen in the T-Tests and ANOVA analyses, there are differences between each of these perceptions. While there are slight variations, according to the descriptions in Breklemans *et al.*, (1993), the self-perception resembles that of an educator that is between ‘directive’ and ‘authoritative’, while the remaining groups display a sample that fits the description for an educator that is ‘Tolerant/Authoritative’. This sample of Primary Non-Teaching staff closely resembled the primary teaching sample, in that they considered their actual leadership level to be lower than that of student perception, and their ideal level of leadership behaviour is higher than that of student perception. Again, the same pattern is seen between the ideal behaviours helpful/friendly, understanding behaviour, they viewed themselves as being more dissatisfied and give their students less responsibilities and freedom. Their ideal-perception in uncertain, dissatisfied, and admonishing behaviours are also lower than in the student-perception of behaviour. The major difference between the teaching and non-teaching sample is in relation to the strength of the significances, however; the non-teaching staff significances are marginally lower than that of their teaching colleagues.



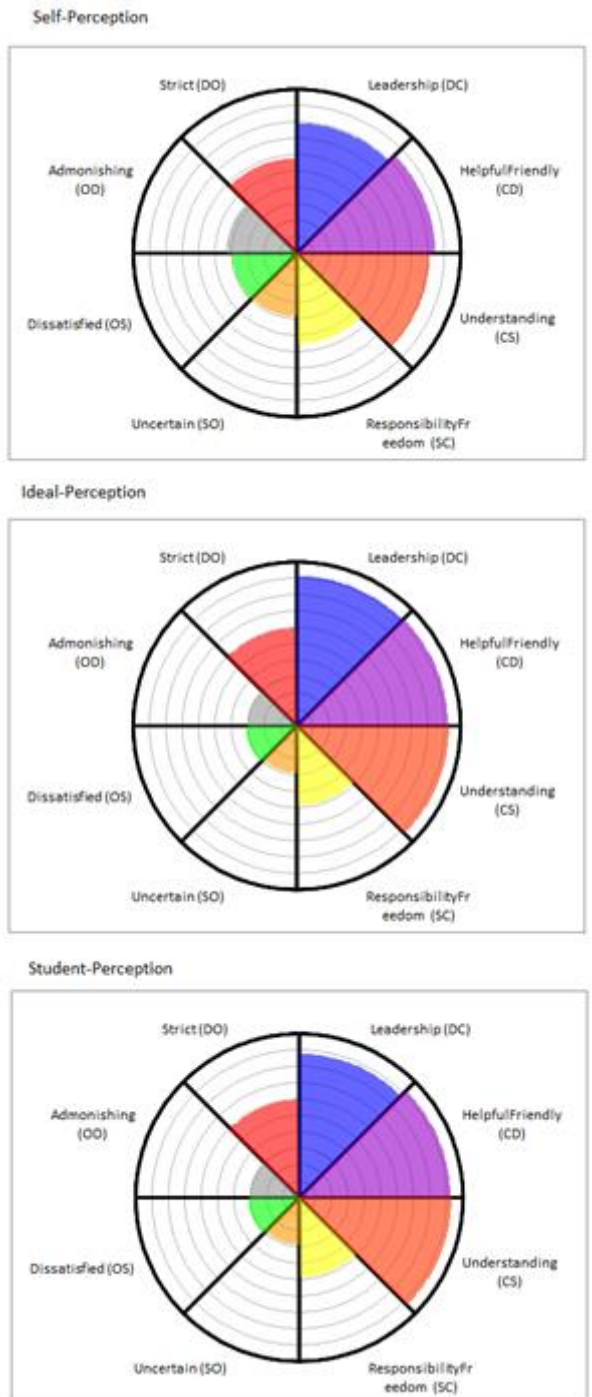
- ***Post-Primary Teaching***

As seen in the T-Tests and ANOVA analyses, there are differences between each of these perceptions. While there are slight variations, according to the descriptions in Breklemans *et al.*, (1993), the self-perception resembles that of an educator that is between ‘directive’ and ‘authoritative’, while the remaining groups display a sample that fits the description for an educator that is ‘Tolerant/Authoritative’. This sample of Post-Primary Teaching staff, similar to the previous groups, considered their actual leadership level to be lower than that of student perception, and their ideal level of leadership behaviour as higher than that of student perception. There was no significant difference in help/friendly behaviours across any of the behavioural perceptions. The ideal level of understanding behaviour matched that of the student perception but was lower than the self-perception of understanding behaviour. Teaching staff reported giving students more responsibility and freedom than what their ideal is, but this was still less than what their students want. They are more dissatisfied than their students perceive ideal teachers to be; they report wanting to be more ‘strict’, but students perception of this behaviour matches teacher self-perception.



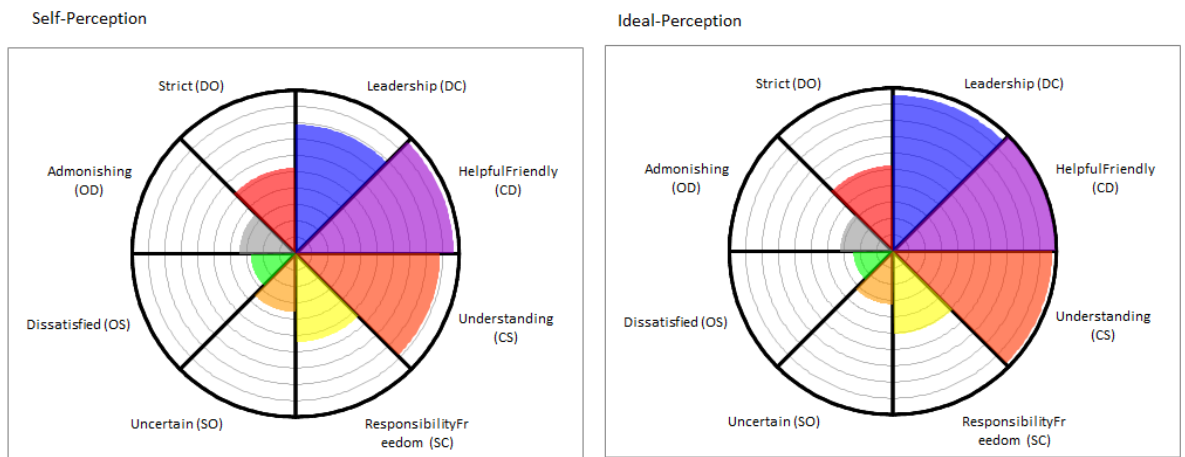
- ***Post-Primary Non-Teaching***

As seen in the T-Tests and ANOVA analyses, there are differences between each of these perceptions. While there are slight variations, according to the descriptions in Breklemans *et al.*, (1993), the self-perception resembles that of an educator that is between ‘directive’ and ‘authoritative’, while the remaining groups display a sample that fits the description for an educator that is ‘Tolerant/Authoritative’. This sample of Post-Primary Non-Teaching staff closely resembled the post- primary teaching sample; their leadership level was lower than that of student perceptions, and their ideal level of leadership was higher than student perception, no significant difference in help/friendly behaviours across any of the behavioural perceptions. They reported wanting to be more understanding of their students and give them more responsibility and freedom. Students report this sample to be more admonishing than the non-teaching staff members perceive themselves, and they want to be less dissatisfied, admonishing, and uncertain than their students perceive ideal teachers to be.



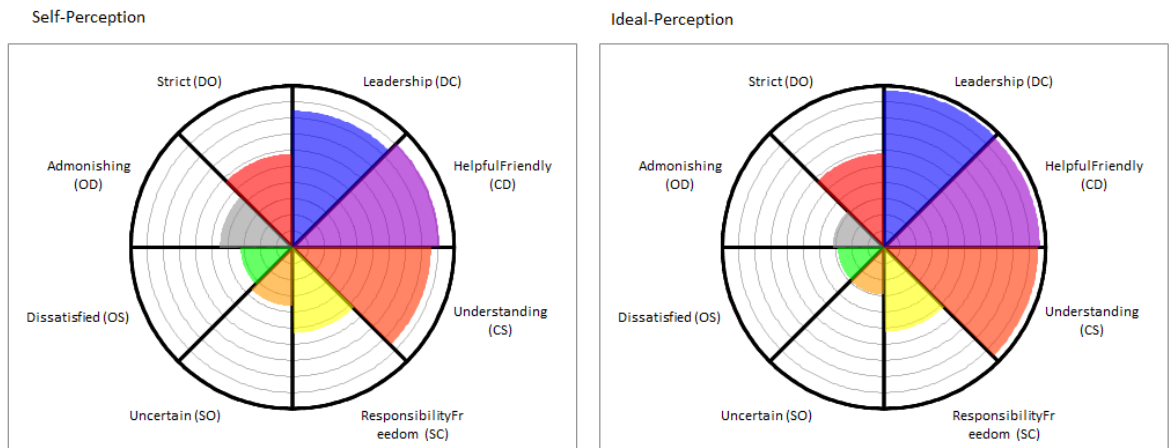
- **Other Teaching**

As seen in the T-Tests and ANOVA analyses, there are differences between each of these perceptions. While there are slight variations, according to the descriptions in Breklemans *et al.*, (1993), the self and ideal perceptions resemble that of an educator that is ‘Tolerant/Authoritative’. Although a student sample was unobtainable for this group, it is clear that this group is similar to that of previous group profiles. However, they do score themselves significantly higher in helpful and friendly behaviour, and want to have higher leadership, helpful and friendly, and understanding behaviours that far exceed that of previous education groups and student samples. They want to be less dissatisfied and uncertain and give their students more responsibility and freedom.



- **Other Non-Teaching**

As seen in the T-Tests and ANOVA analyses, there are differences between each of these perceptions. While there are slight variations, according to the descriptions in Breklemans *et al.*, (1993), the self and ideal perceptions resemble that of an educator



that is 'Tolerant/Authoritative'. Similar to above, a student sample was unobtainable for this group. This group is again similar to that of the other-teaching group profile in that they score themselves high in helpful and friendly behaviour, and want to have higher leadership, helpful and friendly, and understanding behaviours. Still, they want to be less dissatisfied and uncertain, but there is a significant difference in the perception of admonishing behaviour that differs from the previous group.

Appendices C - Consent Forms and Cover Letters

Principal Investigators: Dean McDonnell and Dr. Stephen Minton

School of Education, Trinity College Dublin.

The aim of this research project is to enhance the understanding of the factors associated with Wellbeing within Education by focusing on the role of the Student/Teacher relationship within the Primary and Secondary school settings.

While your participation is incredibly important to this research, your participation in this study is voluntarily, you have the right to withdraw your school at any point in this research AND have your data destroyed. The responses of each participant will remain confidential to the investigator. All participants are free to not answer any questions they may find objectionable. Information gleaned from this study will help understand the student/teacher relationship, and identify possible factors associated with burnout and wellbeing.

The information in this consent form is provided so that you can decide whether you wish your school to participate in this study. It is important that you understand your participation is completely voluntary.

This research involves your teachers to fill out the following (please find attached a copy of the questionnaires);

- Maslach Burnout Inventory,
- Questionnaire on Teacher Interaction,
- The Mental Health Inventory (MHI-38),
- TPACK

This study has been passed by the ethics committee of Trinity College Dublin, and the Ethical Guidelines of the Psychological Society of Ireland, and the European Federation of Psychology Associations are available on request. If you have questions about the study, please contact the researcher listed below:

Thank you for your participation.

Dean McDonnell (B.Sc, M.Sc)

mcdonnd5@tcd.ie or 0851242764

If you consent to this research being carried out in your school, please complete the following and return to me;

I _____, understand that my school's participation in this research is voluntary, I understand my rights, the nature and purpose of this study, and I can withdraw at any point.

Signed _____ **Date** _____

Printed Name: _____

School: _____

Position: _____

School Consent for PhD Research

Principal Investigators: Dean McDonnell and Dr. Stephen Minton

School of Education, Trinity College Dublin.

The aim of this research project is to enhance the understanding of the factors associated with Wellbeing within Education by focusing on the role of the Student/Teacher relationship within the Primary and Secondary school settings.

While your participation is incredibly important to this research, your participation in this study is voluntarily, you have the right to withdraw your school at any point in this research AND have your data destroyed. The responses of each participant will remain confidential to the investigator. All participants are free to not answer any questions they may find objectionable. Information gleaned from this study will help understand the student/teacher relationship, and identify possible factors associated with occupational fatigue (compassion fatigue) and wellbeing.

The information in this consent form is provided so that you can decide whether you wish your school to participate in this study. It is important that you understand your participation is completely voluntary.

This research involves your teachers to fill out the following (please find attached a copy of the questionnaires);

- a. Maslach Burnout Inventory,
- b. Questionnaire on Teacher Interaction,
- c. The Mental Health Inventory (MHI-38),
- d. Student Teacher Relationship Scale

This study has been passed by the ethics committee of Trinity College Dublin, and the Ethical Guidelines of the Psychological Society of Ireland, and the European Federation of Psychology Associations, are available on request. If you have questions about the study please contact the researcher listed below:

Thank you for your participation.

Dean McDonnell (B.Sc, M.Sc)

mcdonnd5@tcd.ie or 0851242764

If you consent to this research being carried out in your school, please complete the following and return to me;

I _____, understand that my school's participation in this research is voluntary, I understand my rights, the nature and purpose of this study, and I can withdraw at any point.

Signed _____ **Date** _____

Printed Name: _____

School: _____

Position: _____

Parental Consent for PhD Research

Researchers: Dean McDonnell and Dr. Stephen Minton
School of Education, Trinity College Dublin.

My name is Dean McDonnell, I work as a part of the School Completion Programme in several schools based in Dublin inner-city. I run programmes such as computers, cooking, and other activities with the purpose of keeping students engaged and motivated in school. I am currently conducting some research as a part of my college course looking at the importance of the relationship between students and the SCP Staff.

As a part of this, I will need your child to fill out a short questionnaire telling me about how their engagement with education and what teacher characteristics they feel to be most important.

I have asked the principal and your child's teacher for permission to do this bit of research. If you don't want your child to participate that is perfectly ok, or if you decide later that you don't want your child to participate, I will destroy the questionnaire your child has completed.

Dean McDonnell (B.Sc, M.Sc) mcdonnd5@tcd.ie

(-----*Please tear this bit off!*-----)

If you consent to this research being carried out, please complete the following and give to your child to bring into school;

I _____, understand that my child's participation in this research is voluntary, I understand my child's rights, the nature and purpose of this study, and I can withdraw my child at any point.

Signature: _____

Child's Name: _____

Staff Consent for PhD Research

Principal Investigators: Dean McDonnell and Dr. Stephen Minton

School of Education, Trinity College Dublin.

The aim of this research project is to enhance the understanding of the factors associated with Mental Health within Education by focusing on the role of the Student/Teacher relationship within the Primary and Secondary school settings.

While your participation is incredibly important to this research, your participation in this study is voluntarily, you have the right to withdraw your school at any point in this research AND have your data destroyed. The responses of each participant will remain confidential to the investigator. All participants are free to not answer any questions they may find objectionable. Information gleaned from this study will help understand the student/teacher relationship, and identify possible factors associated with occupational fatigue and wellbeing.

This research involves your staff to fill out the following questionnaires which I will go through with you;

- a. Maslach Burnout Inventory,
- b. Questionnaire on Teacher Interaction,
- c. The Mental Health Inventory (MHI-38),
- d. Student Teacher Relationship Scale

This study also asks your students to fill out a version of the QTI (Questionnaire on Teacher Interaction) which asks questions such as “This teacher trusts us” or “If we don't agree with this teacher, we can talk about it”. This research has not yet been conducted in Ireland (to the best of my knowledge) and will greatly benefit research into the area of student/teacher relationships. It also gives you the opportunity to see how your students view your teaching style and approach. I am fully prepared to sit down with your after analysis and discuss your personal findings if you feel it will benefit your teaching. I will not however be able to identify particular students responses as their questionnaire will remain 100% anonymous.

This study has been passed by the ethics committee of Trinity College Dublin, and the Ethical Guidelines of the Psychological Society of Ireland, and the European Federation of Psychology Associations, are available on request. If you have questions about the study please contact the researcher listed below:

Thank you for your participation.

Dean McDonnell (B.Sc, M.Sc)

mcdonnd5@tcd.ie or

0851242764

-----*Please tear this bit off!*-----

If you consent to this research being carried out in your school, please complete the following and return to me;

I _____, understand that my school's participation in this research is voluntary, I understand my rights, the nature and purpose of this study, and I can withdraw at any point.

Signed _____ **Date** _____

Name: _____

School: _____

Position: _____

Cover Letter for PhD Research Phase 1

Principal Investigators: Dean McDonnell and Dr. Stephen Minton

School of Education, Trinity College Dublin.

The aim of this exploratory research project is to enhance the understanding of the factors associated with Mental Health within Education by focusing on the role of the Student/ Teacher relationship within the Primary and Secondary school settings.

While your participation is incredibly important to this research, your participation in this study is voluntarily, you have the right to withdraw at any point in this research AND have your data destroyed. Your responses will remain confidential to the investigator. You are free to not answer any questions you may find objectionable. Information gleaned from this study will help understand the student/teacher relationship, and identify possible factors associated with Technology Adoption, Educational Burnout, and Teacher Workload.

The information in this consent form is provided so that you can decide whether you wish to participate in this study. It is important that you understand your participation is completely voluntary. As a participant, you will be asked to complete the following questionnaires;

- a Maslach Burnout Inventory,
- b. Questionnaire on Teacher Interaction,
- c. The Mental Health Inventory (MHI-38),
- d. Student Teacher Relationship Scale

This study has been passed by the ethics committee of Trinity College Dublin, and the Ethical Guidelines of the Psychological Society of Ireland, and the European Federation of Psychology Associations, are available on request. If you have questions about the study please contact the researcher listed below:

Thank you for your participation.

Dean McDonnell (B.Sc, M.Sc) mcdonnd5@tcd.ie

(PLEASE TEAR OFF THIS PAGE FOR YOUR OWN RECORDS)

Cover Letter for PhD Research

Principal Investigators: Dean McDonnell and Dr. Stephen Minton

School of Education, Trinity College Dublin.

Dean McDonnell (B.Sc, M.Sc) mcdonnd5@tcd.ie

(PLEASE TEAR OFF THIS PAGE FOR YOUR OWN RECORDS)

Research Phase 1 – Educational Professional Survey

Thank you for taking time to complete this questionnaire. Please answer each question to the best of your knowledge. Your thoughtfulness and candid responses will be greatly appreciated. Your individual name or identification number will not at any time be associated with your responses. Your responses will be kept completely confidential and will not be seen by anyone other than the researcher.

I _____, understand that my participation is voluntary and I can withdraw at any point in this research.

Signed _____ **Date** _____

Appendices D - PhD Research: Educational Questionnaires

Thank you for taking time to complete this questionnaire. Please answer each question to the best of your knowledge. Your thoughtfulness and candid responses will be greatly appreciated. Your individual name or identification number will not at any time be associated with your responses. Your responses will be kept completely confidential and will not be seen by anyone other than the researcher.

I _____, understand that my participation is voluntary and I can withdraw at any point in this research.

Signed _____ Date _____

Demographic Information

Gender		
Age		
What is your Highest Qualification?		
Number of Years Teaching Experience?		
Number of Years in College?		
Number of Students in your Class?		

Do you have many options for career progression?	Yes	No
<i>(Could you please explain...?)</i>		
Do you participate in Professional Development?	Yes	No
<i>(Could you please explain...?)</i>		
Have you ever experienced Burnout?	Yes	No
<i>(Could you please explain the situation, causes, and feelings?)</i>		

Never	A few times per year	Once a month	A few times per month	Once a week	A few times per week	Every day
1	2	3	4	5	6	7

Maslach Burnout Inventory - ES

The Maslach Burnout Inventory - Educators Survey is designed to assess burnout among educational professionals (Maslach, Jackson, & Leiter, 1996).

	Statements	1	2	3	4	5	6	7
1	I feel emotionally drained from my work							
2	I feel used up by the end of the workday							
3	I feel fatigued when I get up in the morning and have to face another day on the job							
4	I can easily understand how my students feel about things							
5	I feel I treat some students as if they were impersonal objects							
6	Working all day with people is a real strain for me							
7	I deal very effectively with the problems of my students							
8	I feel burned out from my work							
9	I feel I'm positively influencing other people's lives through my work							
10	I've become more callous toward people since I took this job							
11	I worry that this job is hardening me emotionally							
12	I feel very energetic							
13	I feel frustrated by my job							
14	I feel I'm working too hard on my job							
15	I don't really care what happens to some students							
16	Working with people directly puts too much stress on me							
17	I can easily create a relaxed atmosphere with my students							
18	I feel exhilarated after working closely with my students							
19	I have accomplished many worthwhile things in this job							
20	I feel like I'm at the end of my rope							
21	In my work, I deal with emotional problems very calmly							
22	I feel students blame me for some of their problems							

Questionnaire on Teacher Interaction

The Questionnaire on Teacher Interaction focuses specifically on the interpersonal relationship between teachers and students. It is a 48 question measure, with 4 dimensions represented by 8 categories. What qualities are most important in a teacher?

Never	Seldom	Half the Time	Usually	Always
1	2	3	4	5

		1	2	3	4	5
1	This teacher talks enthusiastically about her /his subject.					
2	This teacher trusts us.					
3	This teacher seems uncertain					
4	This teacher gets angry unexpectedly.					
5	This teacher explains things Clearly					
6	If we don't agree with this teacher, we can talk about it					
7	This teacher is hesitant.					
8	This teacher gets angry quickly.					
9	This teacher holds our attention.					
10	This teacher is willing to explain things again.					
11	This teacher acts as if she/he does not know what to do.					
12	This teacher is too quick to correct us when we break a rule.					
13	This teacher knows everything that goes on in the classroom.					
14	If we have something to say, this teacher will listen.					
15	This teacher lets us boss her /him around.					
16	This teacher is Impatient.					
17	This teacher is a good leader					
18	This teacher realises when we don't understand.					
19	This teacher is not sure what to do when we fool around					
20	It is easy to pick a fight with this teacher.					
21	This teacher acts confidently.					
22	This teacher is patient.					
23	It's easy to make a fool out of this teacher					
24	This teacher is sarcastic.					
25	This teacher helps us with our work.					
26	We can decide some things in this teacher's class					
27	This teacher thinks that we cheat					
28	This teacher is strict.					
29	This teacher is friendly.					
30	We can influence this teacher.					
31	This teacher thinks that we don't know anything.					

32	We have to be silent in this teacher's class.					
33	This teacher is someone we can depend on.					
34	This teacher lets us fool around in class					
35	This teacher puts us down.					
36	This teacher's tests are. hard.					
37	This teacher has a sense of humour.					
38	This teacher lets us get away with a lot in class.					
39	This teacher thinks that we can't do things well.					
40	This teacher's standards are very high.					
41	This teacher can take a joke					
42	This teacher gives us a lot of free time in class.					
43	This teacher seems dissatisfied.					
44	This teacher is severe when marking papers					
45	This teacher's class is pleasant.					
46	This teacher is lenient					
47	This teacher is suspicious					
48	We are afraid of this teacher					

The Technological Pedagogical Content Knowledge

Schmidt, D.A., Baran, E., et al. (2013). This measure is used to understand the teacher knowledge required for the effective integration of technology within the classroom setting.

1. Technology Knowledge, 2. Pedagogical Knowledge, 3. Technological Pedagogical Knowledge, and 4. Technological Pedagogical Content Knowledge.

Disagree Strongly	Disagree	Neither	Agree	Agree Strongly
1	2	3	4	5

Technology Knowledge (TK)		1	2	3	4	5
1	Strongly Disagree Disagree Neither Agree Strongly Agree					
2	I know how to solve my own technical problems					
3	I can learn technology easily.					
4	I keep up with important new technologies.					
5	I frequently play around with the technology.					
6	I know about a lot of different technologies.					
7	I have the technical skills I need to use technology.					
8	I have had sufficient opportunities to work with different technologies					

Pedagogical Knowledge (PK)		1	2	3	4	5
1	I know how to assess student performance in a classroom.					
2	I can adapt my teaching based upon what students currently understand or do not understand					
3	I can adapt my teaching style to different learners					
4	I can assess student learning in multiple ways					
5	I can use a wide range of teaching approaches in a classroom setting					
6	I am familiar with common student understandings and misconceptions					
7	I know how to organize and maintain classroom management					

Technological Pedagogical Knowledge (TPK)		1	2	3	4	5
1	I can choose technologies that enhance the teaching approaches for a lesson					
2	I can choose technologies that enhance students' learning for a lesson					
3	I am thinking critically about how to use technology in my classroom					
4	My teacher education program has caused me to think more deeply about how technology could influence the teaching approaches I use in my classroom.					
5	I can adapt the use of the technologies that I am learning about to different teaching activities					

Technological Pedagogical Content Knowledge (TPACK)		1	2	3	4	5
1	I can teach lessons that appropriately combine mathematics, technologies, and teaching approaches.					
2	I can teach lessons that appropriately combine literacy, technologies, and teaching approaches					
3	I can teach lessons that appropriately combine science, technologies, and teaching approaches					
4	I can teach lessons that appropriately combine social studies, technologies, and teaching approaches					
5	I can select technologies to use in my classroom that enhance what I teach, how I teach, and what students learn					
6	I can use strategies that combine content, technologies, and teaching approaches that I learned about in my coursework in my classroom					
7	. I can provide leadership in helping others to coordinate the use of content, technologies, and teaching approaches at my school and/or district					

The Mental Health Inventory (MHI-38)

Please read each question and tick the box by the ONE statement that best describes how things have been FOR YOU during the past month. There are no right or wrong answers. Used to measure Wellbeing and General Positive Affect.

1. How happy, satisfied, or pleased have you been with your personal life during the past month?

1. Extremely happy, could not have been more satisfied or pleased	
2. Very happy most of the time	
3. Generally, satisfied, pleased	
4. Sometimes fairly satisfied, sometimes fairly unhappy	
5. Generally dissatisfied, unhappy	
6. Very dissatisfied, unhappy most of the time	

2. How much of the time have you felt lonely during the past month?

1. All of the time	4. Some of the time
2. Most of the time	5. A little of the time
3. A good bit of the time	6. None of the time

3.	How often did you become nervous or jumpy when faced with excitement or unexpected situations during the past month?	
	1. Always	4. Sometimes
	2. Very Often	5. Almost Never
	3. Fairly Often	6. Never
4.	During the past month, how much of the time have you felt that the future looks hopeful and promising?	
	1. All of the time	4. Some of the time
	2. Most of the time	5. A little of the time
	3. A good bit of the time	6. None of the time
5.	How much of the time, during the past month, has your daily life been full of things that were interesting to you?	
	1. All of the time	4. Some of the time
	2. Most of the time	5. A little of the time
	3. A good bit of the time	6. None of the time
6.	How much of the time, during the past month, did you feel relaxed and free from tension	
	1. All of the time	4. Some of the time
	2. Most of the time	5. A little of the time
	3. A good bit of the time	6. None of the time
7.	During the past month, how much of the time have you generally enjoyed the things you do?	
	1. All of the time	4. Some of the time
	2. Most of the time	5. A little of the time
	3. A good bit of the time	6. None of the time
8.	During the past month, have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel, or of your memory?	
	1. No, not at all	4. Yes, and I have been a little concerned
	2. Maybe a little	5. Yes, and I am quite concerned
	3. Yes, but not enough to be concerned or worried about	6. Yes, I am very much concerned about it
9	Did you feel depressed during the past month?	
	1. Yes, to the point that I did not care about anything for days at a time	

2. Yes, very depressed almost every day
3. Yes, quite depressed several times
4. Yes, a little depressed now and then
5. No, never felt depressed at all

10 During the past month, how much of the time have you felt loved and wanted?

1. All of the time	4. Some of the time
2. Most of the time	5. A little of the time
3. A good bit of the time	6. None of the time

11 How much of the time, during the past month, have you been a very nervous person?

1. All of the time	4. Some of the time
2. Most of the time	5. A little of the time
3. A good bit of the time	6. None of the time

12 When you have got up in the morning, this past month, about how often did you expect to have an interesting day?

1. Always	4. Sometimes
2. Very often	5. Almost never
3. Fairly often	6. Never

13 During the past month, how much of the time have you felt tense or “high-strung”?

1. All of the time	4. Some of the time
2. Most of the time	5. A little of the time
3. A good bit of the time	6. None of the time

14 During the past month, have you been in firm control of your behaviour, thoughts, emotions or feelings?

1. Yes, very definitely	4. No, not too well
2. Yes, for the most part	5. No, and I am somewhat disturbed
3. Yes, I guess so	6. No, and I am very disturbed

15 During the past month, how often did your hands shake when you tried to do something?

1. Always	4. Sometimes
2. Very often	5. Almost never
3. Fairly often	6. Never

16	During the past month, how often did you feel that you had nothing to look forward to?		
	1. Always		4. Sometimes
	2. Very often		5. Almost never
	3. Fairly often		6. Never
17	How much of the time, during the past month, have you felt calm and peaceful?		
	1. All of the time		4. Some of the time
	2. Most of the time		5. A little of the time
	3. A good bit of the time		6. None of the time
18	How much of the time, during the past month, have you felt emotionally stable?		
	1. All of the time		4. Some of the time
	2. Most of the time		5. A little of the time
	3. A good bit of the time		6. None of the time
19	How much of the time, during the past month, have you felt downhearted and blue?		
	1. All of the time		4. Some of the time
	2. Most of the time		5. A little of the time
	3. A good bit of the time		6. None of the time
20	How often have you felt like crying, during the past month?		
	1. Always		4. Sometimes
	2. Very often		5. Almost never
	3. Fairly often		6. Never
21	During the past month, how often have you felt that others would be better off if you were dead?		
	1. Always		4. Sometimes
	2. Very often		5. Almost never
	3. Fairly often		6. Never
22	How much of the time, during the past month, were you able to relax without difficulty		
	1. All of the time		4. Some of the time
	2. Most of the time		5. A little of the time
	3. A good bit of the time		6. None of the time

23	How much of the time, during the past month, did you feel that your love relationships, loving and being loved, were full and complete?		
	1. All of the time	4. Some of the time	
	2. Most of the time	5. A little of the time	
	3. A good bit of the time	6. None of the time	
24	How often, during the past month, did you feel that nothing turned out for you the way you wanted it to?		
	1. Always	4. Sometimes	
	2. Very often	5. Almost never	
	3. Fairly often	6. Never	
25	How much have you been bothered by nervousness, or your “nerves”, during the past month?		
	1. Extremely so, to the point	4. Bothered some, enough to notice where I could not take care of things	
	2. Very much bothered	5. Bothered just a little by nerves	
	3. Bothered quite a bit by nerves	6. Not bothered at all by this	
26	During the past month, how much of the time has living been a wonderful adventure for you?		
	1. All of the time	4. Some of the time	
	2. Most of the time	5. A little of the time	
	3. A good bit of the time	6. None of the time	
27	How often, during the past month, have you felt so down in the dumps that nothing could cheer you up?		
	1. All of the time	4. Some of the time	
	2. Most of the time	5. A little of the time	
	3. A good bit of the time	6. None of the time	
28	During the past month, did you think about taking your own life?		
	1. Yes, very often	Yes, at one time	
	Yes, fairly often	No, never	
	Yes, a couple of times		
29	During the past month, how much of the time have you felt restless, fidgety, or impatient?		
	1. All of the time	4. Some of the time	

	2. Most of the time		5. A little of the time	
	3. A good bit of the time		6. None of the time	
30	During the past month, how much of the time have you been moody or brooded about things?			
	1. All of the time		4. Some of the time	
	2. Most of the time		5. A little of the time	
	3. A good bit of the time		6. None of the time	
31	How much of the time, during the past month, have you felt cheerful, light-hearted?			
	1. All of the time		4. Some of the time	
	2. Most of the time		5. A little of the time	
	3. A good bit of the time		6. None of the time	
32	During the past month, how often did you get rattled, upset or flustered?			
	1. Always		4. Sometimes	
	2. Very often		5. Almost never	
	3. Fairly often		6. Never	
33	During the past month, have you been anxious or worried?			
	1. Yes, extremely to the point of being sick or almost sick		4. Yes, some, enough to bother me	
	2. Yes, very much so		5. Yes, a little bit	
	3. Yes, quite a bit		6. No, not at all	
34	During the past month, how much of the time were you a happy person?			
	1. All of the time		4. Some of the time	
	2. Most of the time		5. A little of the time	
	3. A good bit of the time		6. None of the time	
35	How often during the past month did you find yourself trying to calm down?			
	1. Always		4. Sometimes	
	2. Very often		5. Almost never	
	3. Fairly often		6. Never	
36	During the past month, how much of the time have you been in low or very low spirits?			
	1. All of the time		4. Some of the time	
	2. Most of the time		5. A little of the time	

3. A good bit of the time	6. None of the time
---------------------------	---------------------

37 How often, during the past month, have you been waking up feeling fresh and rested?

1. Always, every day	4. Some days, but usually not
2. Almost every day	5. Hardly ever
3. Most days	6. Never wake up feeling rested

38 During the past month, have you been under or felt you were under any strain, stress or pressure?

Yes, almost more than I could stand or bear	Yes, some, but about normal
Yes, quite a bit of pressure	Yes, a little bit
Yes, some more than usual	No, not at all