



# TRINITY ACCESS

TEACHER DATA 2019

# ANALYSIS OF TEACHER DATA

## INTRODUCTION

The first section of this report provides a descriptive breakdown of the teachers who responded to the TA21 survey. The second section explores teachers' levels of engagement with various kinds of professional development and communities of practice, and the relationship that this has with their levels of confidence and self-efficacy in relation to certain variables and their perceptions and frequency of integration of key skills into their teaching. The final section of the report looks at teachers' perceived levels of job satisfaction and stress, identifying positive and negative indicators.

### 1. Overview of Teachers

A total of 510 teachers provided consent for their data to be collected and analysed. The gender split was approximately 70% female and 30% male, with the age range and number of years teaching described in figure 1.

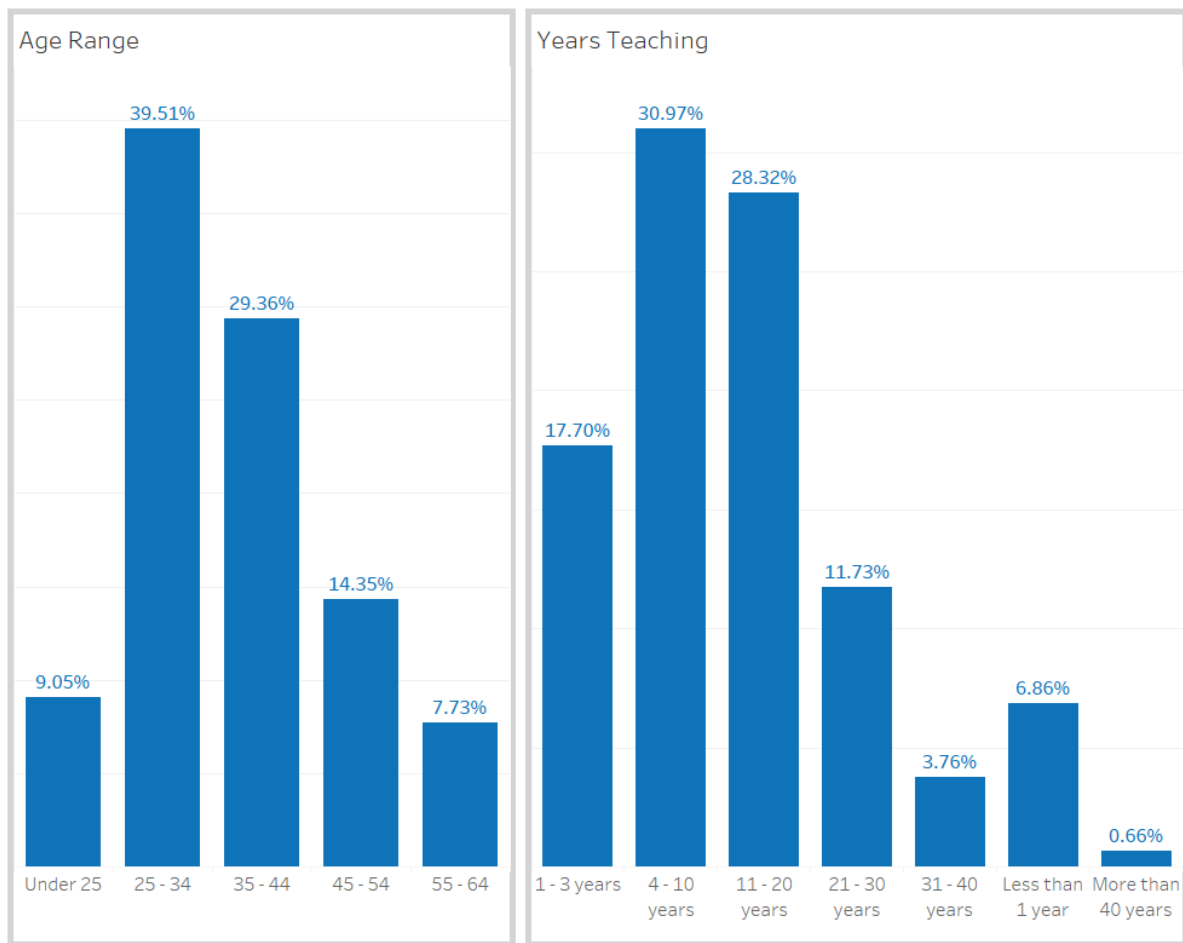


Figure 1: Teacher background

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Responding teachers were from a broad range of disciplines, with English and Maths highest represented.

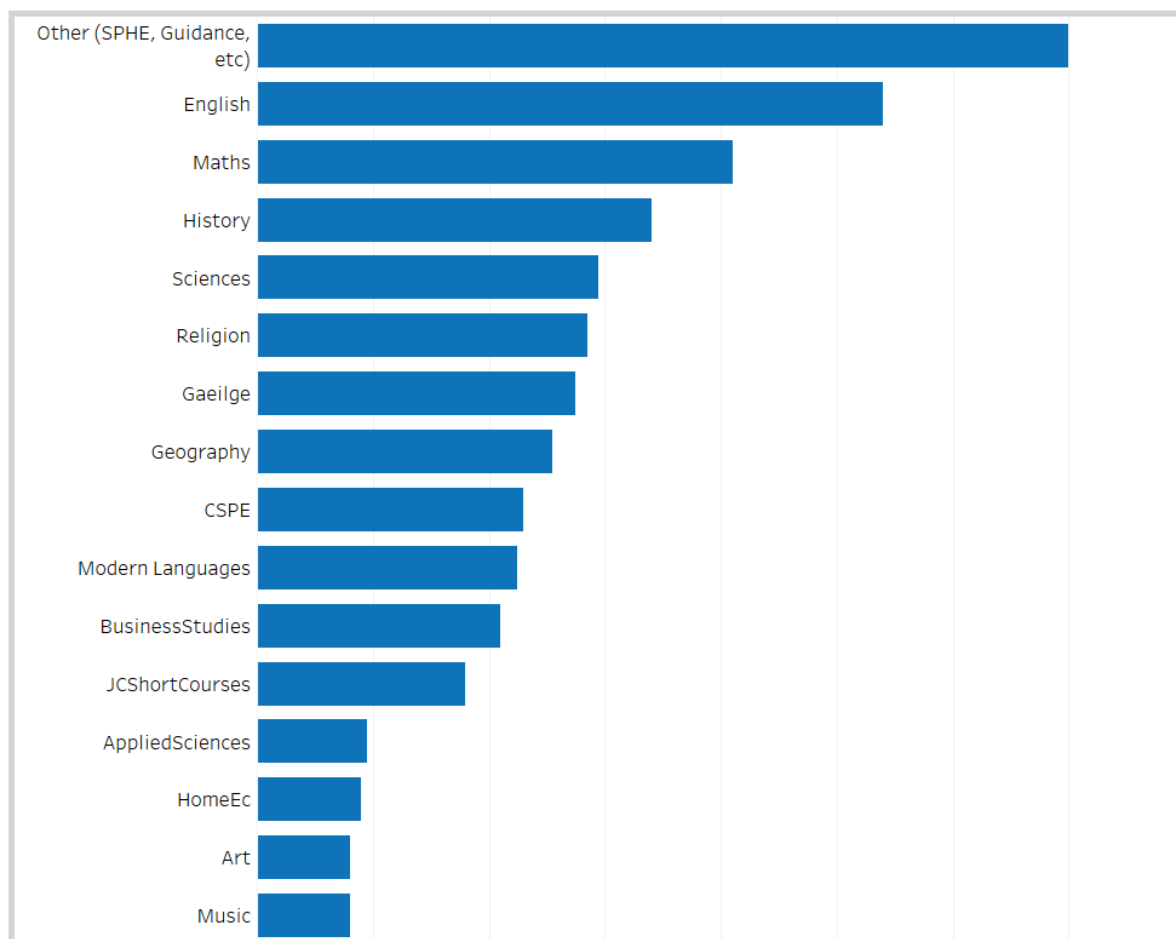


Figure 2: Subjects taught

## 2. Impact of Practices

The following section presents some of the various practices in which teachers participate and the impact that participation may have. Each subsection is broken down into a descriptive part, providing information about the numbers and/or percentages of teachers engaged in each type of activity, and an impact part, which outlines the relationships between participation and certain outcomes.

Exploration of these relationships permits the development of hypotheses about how the practices impact on the teacher outcomes such as confidence and self-efficacy. In each case, only statistically significant results are reported with small to medium effect sizes. In the context of social research of this kind, even very small effect sizes can have substantial practical impact, “particularly the case if a treatment is relatively inexpensive, is easy to

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execute, is politically feasible, and can be employed on a large scale, thereby affecting large numbers of individuals” (Litschge, Vaughn, & McCrea, 2010, p. 22).

## 2.1 Non-TA21 Continuing Professional Development (CPD)

290 (57%) of the 510 respondents reported having taken part in professional development hosted by non-TA21 providers in the last year. 134 (26%) teachers reported engaging in both voluntary and compulsory CPD, with 75 engaging only at a voluntary level and 81 only taking part in compulsory professional development.

Participation in (non-TA21) CPD

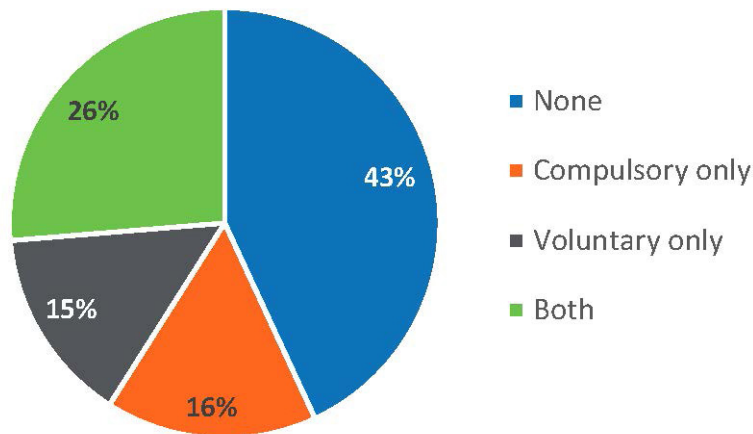


Figure 3: CPD Engagement

There was slightly higher attendance of CPD hosted outside school than in-school professional development, and significantly less was conducted online. Subject-specific CPD was by far the most attended and was most frequently compulsory in nature and conducted outside school.

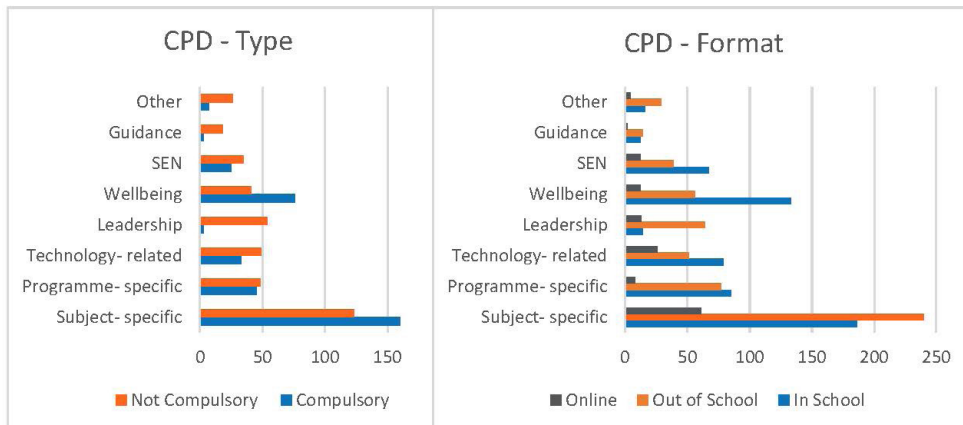


Figure 4: Breakdown of CPD by area of focus

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## 2.2 TA21 Continuing Professional Development

In the survey, items relating to take-up of TA21 CPD comprised of four options: the Postgraduate Certificate in 21st Century Teaching and Learning (PGCert), in-school workshops, event attendance, and non-certified weekend workshops. Of the total 510 respondents, 164 took part in TA21 CPD. Of these 67 (41%) engaged with more than one of the TA21 offerings. The breakdown of engagement type is provided in Figure 5

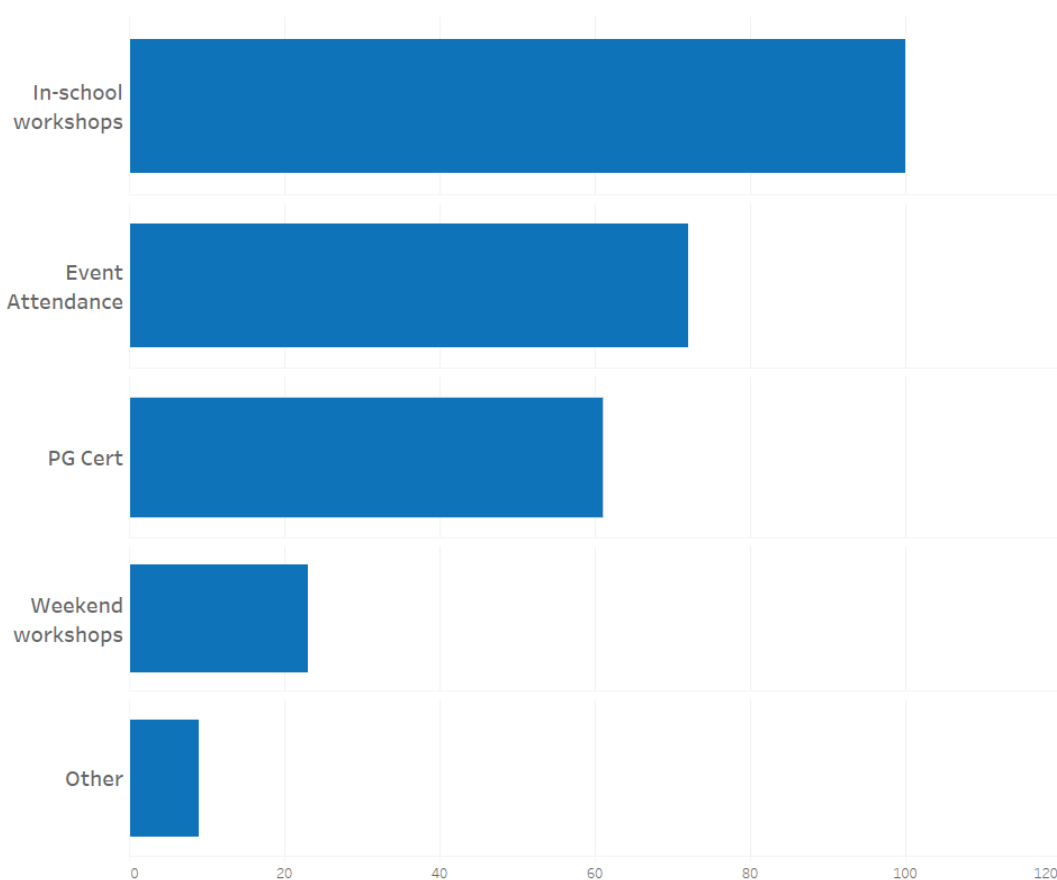


Figure 5: TA21-related CPD

Exploration of the differences between teachers who had and those who had not participated in TA21 CPD revealed some interesting relationships. Those who had not participated in the TA21 professional development were significantly more likely to perceive barriers to their integration of the key skills in general, as well as more specifically at personal (relating to beliefs and confidence etc.), resource (including a lack of relevant CPD), and classroom management levels.

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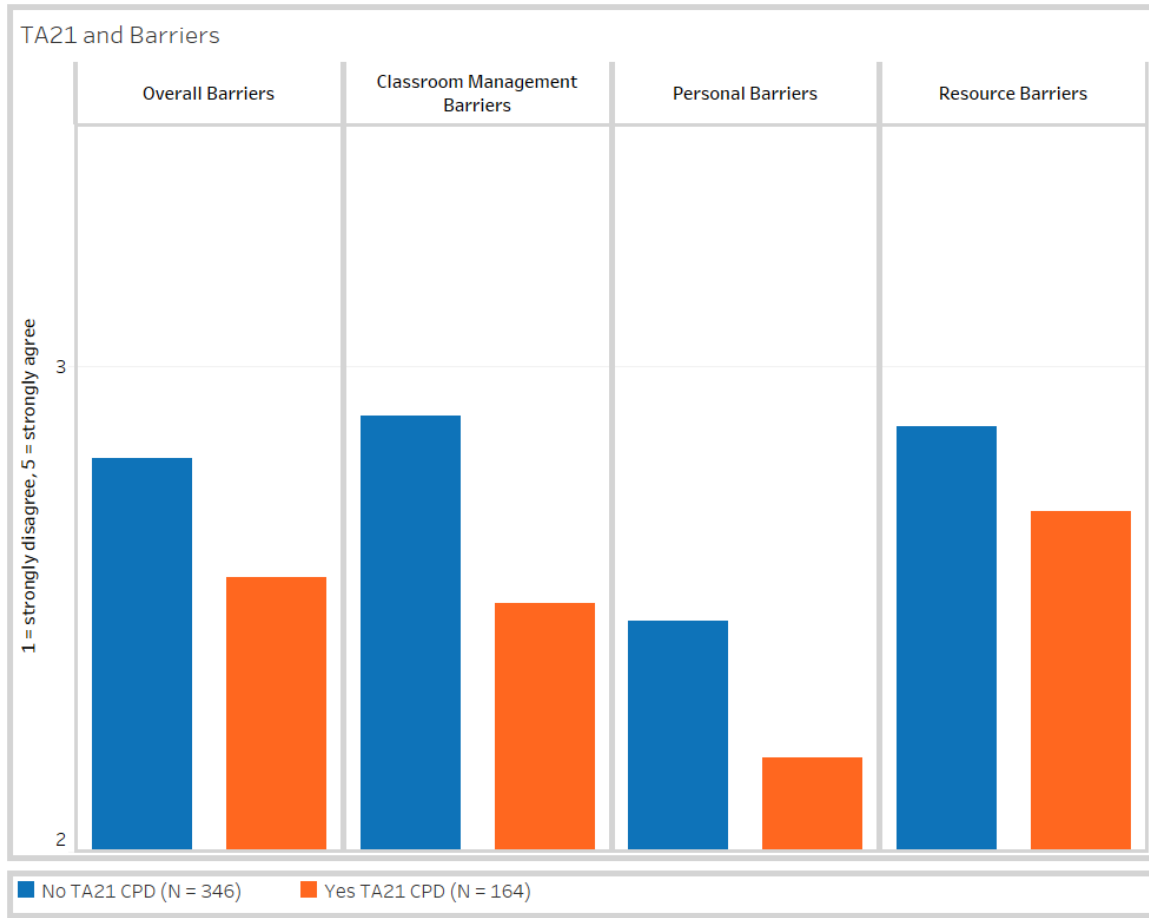


Figure 6: Barriers to KS Integration

This pattern continues when we explore teachers’ perception of their successful integration of the key skills into their teaching practice (Figure 7a), their usage of 21st Century teaching and learning practices (Figure 7b) and their frequency of integration of practices that develop students’ key skills in the classroom (Figure7c), with TA21-CPD participants reporting significantly higher levels than their counterparts.

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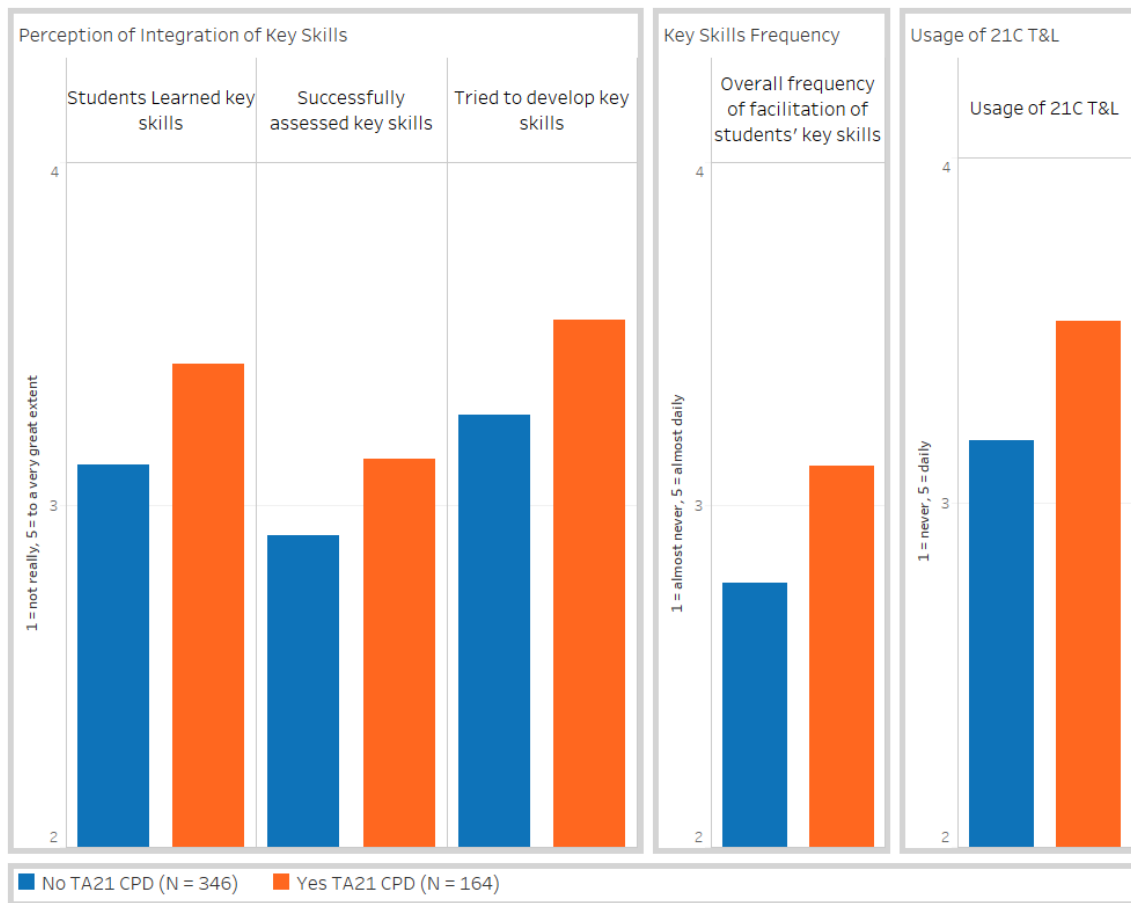


Figure 7: Key Skills integration (a), frequency (b), and 21C Teaching and Learning (c)

In addition to the significant differences between those who have and have not engaged with TA21 CPD in relation to their usage of 21st Century teaching and learning practices and the development of students' key skills, significant differences have also been identified in relation to (Figures 8 and 9):

- Teacher self-efficacy in relation to classroom management
- “Teacher voice”, which relates to their perception of having an influence in the school, being listened to in relation to school matters, and being able to access required resources.
- Confidence in relation to general assessment requirements
- Confidence in using technology in the classroom.

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Figure 8: Teacher Self-efficacy



Figure 9: Teacher Confidence



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Analysis also revealed that those who have not participated in TA21 CPD are also significantly less likely to engage with any CPD, particularly of a voluntary nature (Figure 10), despite being statistically significantly more likely to see a need for professional development in relation to 21st Century teaching and learning practices.

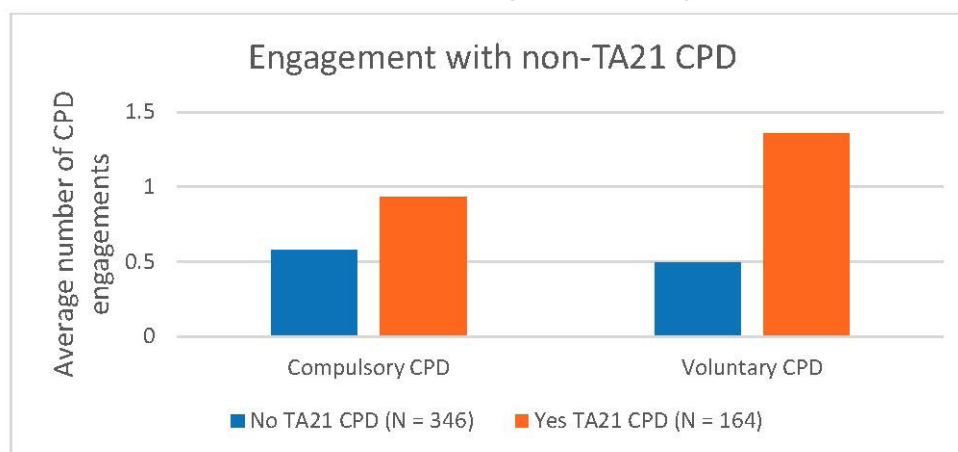


Figure 10: Average participation rates in voluntary and compulsory CPD grouped according to TA21 engagement

Exploration of the impact of the kind of TA21 professional development with which respondents engaged, revealed that participants who took part in the PGCert also place a higher value on technology usage in teaching and learning.

## 2.3 Communities of Practice (CoP)

In our survey, teachers reported on their levels of engagement with three forms of Community of Practice (CoP): in-school, out-of-school and online (external to school). Analysis of the 510 responses revealed that respondents were considerably more likely to engage in collaborative planning and education-related discussion within the school than outside school, and less likely again in an online platform. However, the levels of participation in any form of CoP were quite low, with only in-school engagement reaching the “often” point, and average out-of-school engagement at the level of “sometimes”, and online “rarely” (Figure 6). There is also a significant relationship between the three types of engagement, indicating that if teachers are active in one forum, they are also more likely to engage in other ways.

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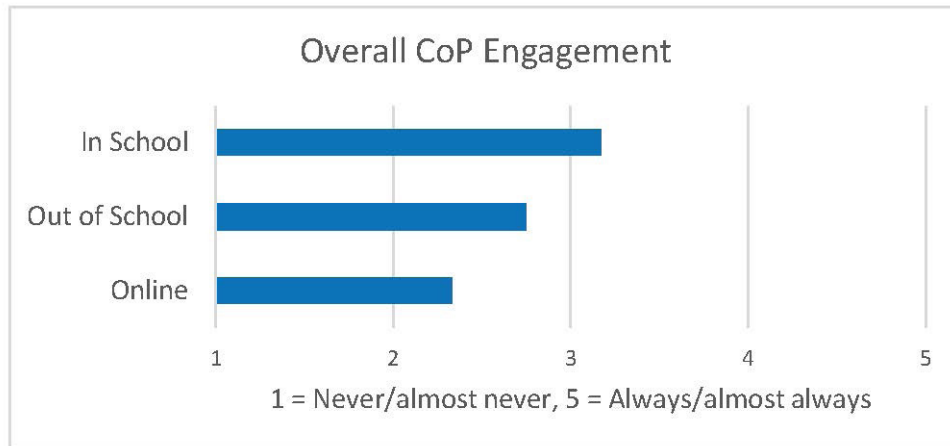


Figure 11: Levels of Engagement with Communities of Practice

The positive outcomes relating to engagement with communities of practice can be broken into three main sections relating to integration of key skills and use of 21C T&L, teachers' experiences in school, and a perceived reduction in barriers to developing key skills in the classroom. The correlation coefficient has a range of -1 to +1, with values above zero representing a positive relationship (i.e., both variables increase simultaneously), with values below indicating a negative relationship (as values in one variable go up, those in the other variable decrease). Largest correlation values were associated with in-school engagement, as illustrated in Figure 12, with the depth of colour indicating to the strength of the relationship: blue signifying a significant positive relationship, and red relating to a significant negative correlation.

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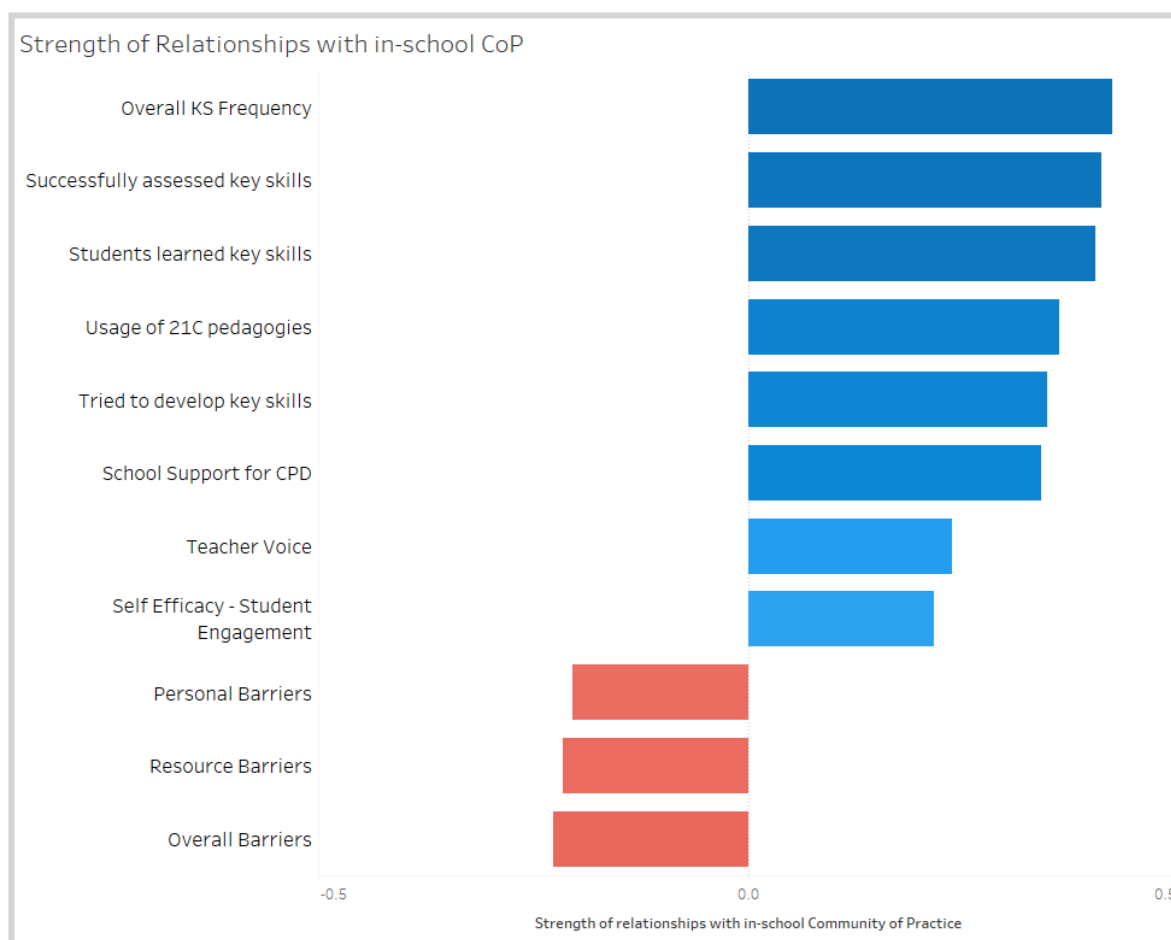


Figure 12: Impact of engagement with in-school CoP

Figure 13 illustrates the positive correlation between engagement with in-school community of practice and the frequency of teachers' facilitation of the development of the key skills in their classrooms. This implies that higher levels of participation in an in-school community of practice are related to higher levels of teacher facilitation of key skills. Conversely, figure 13 illustrates the negative correlation between participation levels in the CoP and perceived barriers to the integration of the key skills – a reduction in barriers to the integration of key skills in the classroom appears to be related to an increase in participation in a community of practice.

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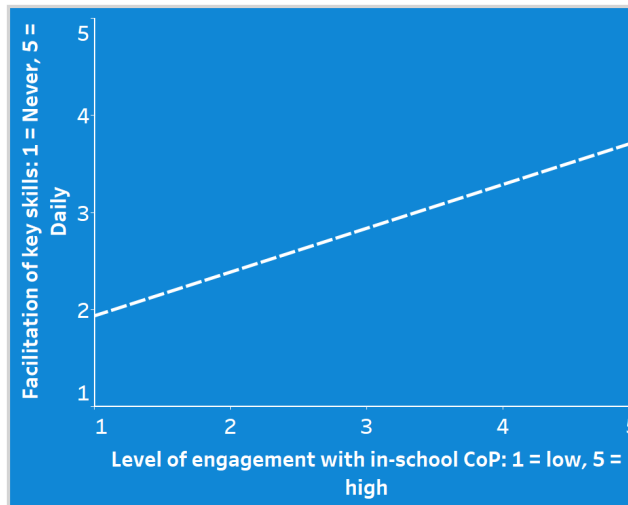


Figure 13: Positive correlation between engagement with CoP and facilitation of Key Skills in the classroom

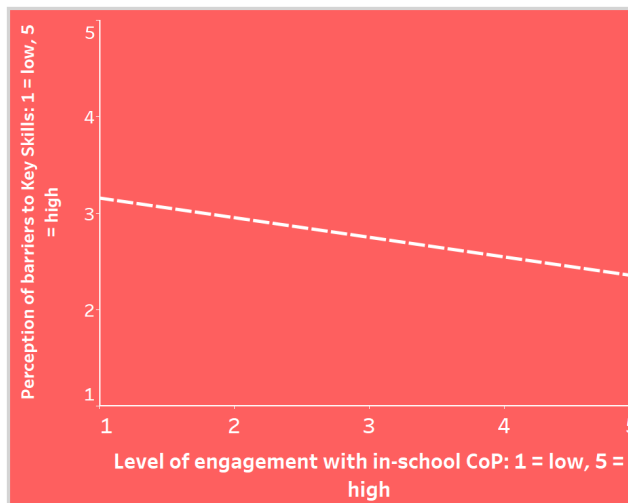


Figure 14: Negative correlation between engagement with CoP and barriers to the integration of Key Skills in the classroom

### 3. Practices as Predictors

This section reports the results a series of multiple regressions that consider various school practices and the level of influence that they might have on certain outcomes. Predictor variables that were considered were:

1. Participation in CPD
  - a. Non-TA21 compulsory CPD
  - b. Non-TA21 voluntary CPD
  - c. TA21 PGCert
  - d. TA21 in-school workshops

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- e. TA21 events
- f. TA21 weekend workshops
- 2. Engagement with communities of practice
  - a. In-school
  - b. Out-of-school
  - c. Online
- 3. Level of School support for CPD

### 3.1 Predictors of Teacher Voice

Exploration of the most significant predictors (most influential factors) for Teacher Voice revealed that the level of school support for CPD, participation in TA21 in-school workshops, and engaging in collaborative practices with colleagues in a CoP, were most significant.

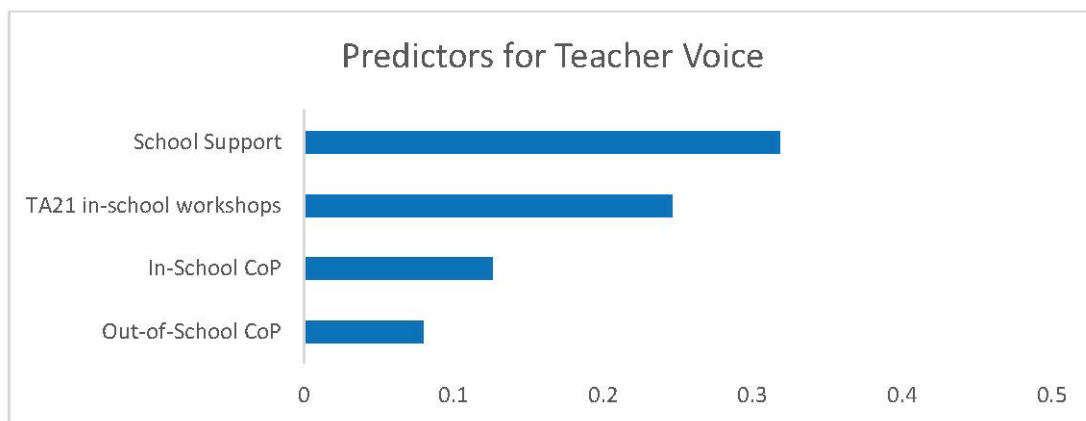


Figure 15: Significant Predictors for Teacher Voice

### 3.2 Usage of 21C Teaching and Learning Practices

The most significant factors influencing the usage of 21C pedagogies in the classroom are participation in TA21 events and the PGCert, and engaging with communities of practice.

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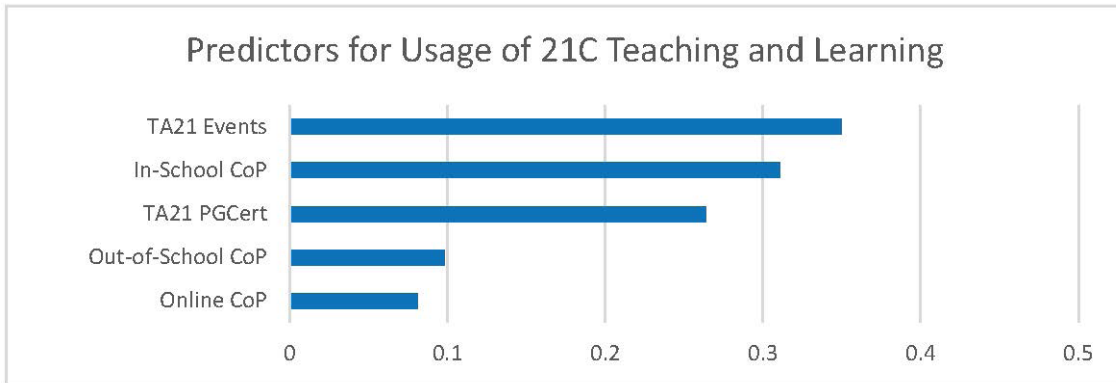


Figure 16: Significant Predictors for Usage of 21C T&L

### 3.3 Successful Integration of Key Skills

The concept of successful integration of key skills is broken down into 4 key areas relating to teachers' perceptions of:

- Whether they tried to develop the key skills in their classes
- Whether the students successfully learned the key skills in their classes
- Whether they were able to successfully assess the key skills
- Their frequency of usage of the key skills.

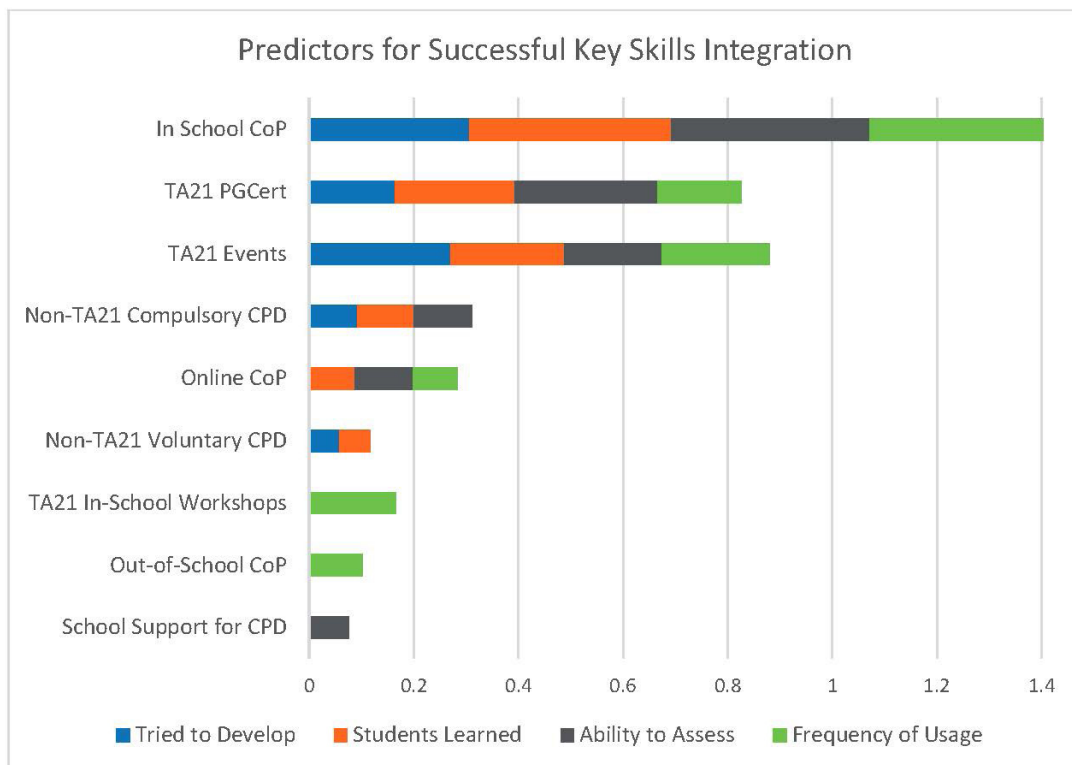


Figure 17: Significant Predictors of Successful Integration of Key Skills

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It is clear from Figure 16 that engaging in a community of practice within the school has the most significant impact on each of the four areas of key skills integration. TA21 CPD – both the PGCert and attendance at events – is also particularly influential on all four aspects. The other types of CPD and CoP have a less significant impact, and it is less consistent across all of the areas of integration.

## 3.4 Barriers to the Integration of Key Skills

Teachers' perception of barriers to the integration of key skills in the classroom is broken down into four factors:

- Personal barriers, relating to beliefs and confidence
- Resource barriers, including a lack of relevant CPD
- Classroom Management barriers
- System barriers, including curriculum, assessment and timetabling.

Figure 17 illustrates the results that emerged from the analysis, showing that the participation in the PGCert has the most significant impact overall, predicting significant reductions in perceived classroom management barriers as well as personal and resource barriers. Attendance at TA21 events has a similar impact, with in-school workshops an important factor in reducing perceived classroom management barriers. In addition to influencing resource and classroom management barriers, in school support also has a positive impact in reducing perceived barriers at the system level; participation in an in-school CoP is the only other factor that positively impacts at the system level.

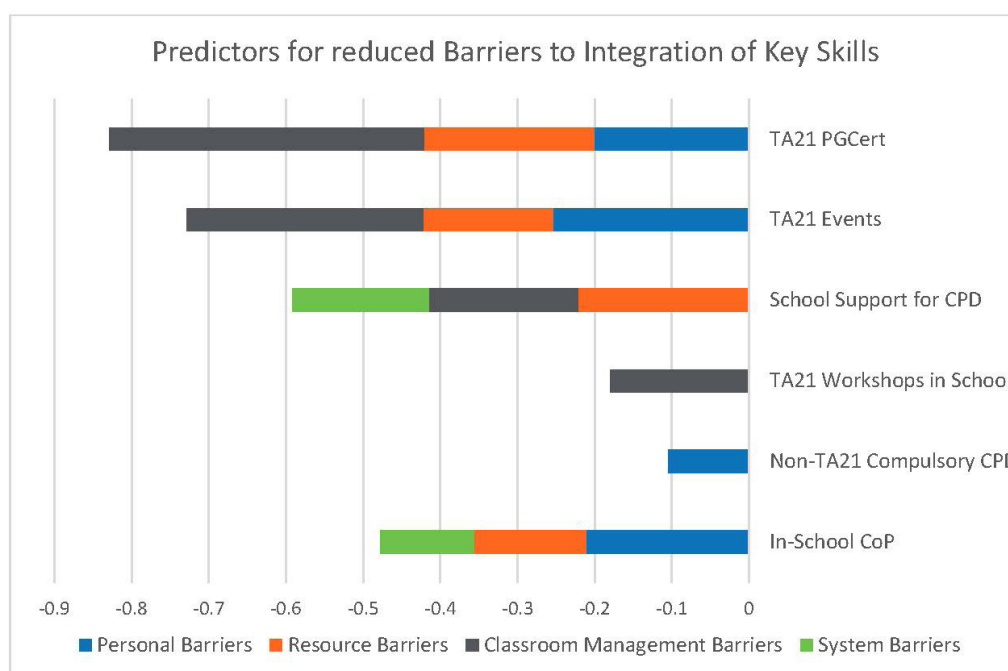


Figure 18: Significant predictors for perceived reduction in barriers

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## 4. Satisfaction and Stress

Analysis revealed that on average, although the teachers were fairly satisfied with their jobs, they also reported being somewhat stressed (Figure 12).

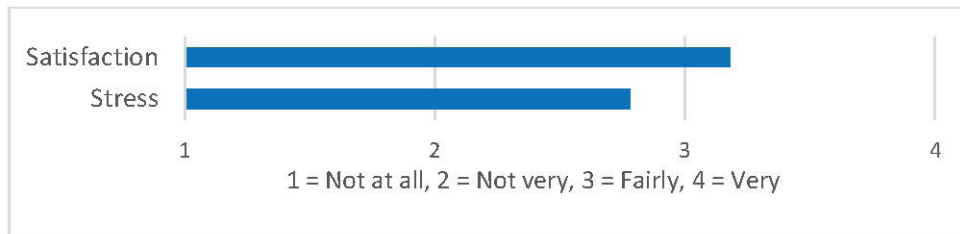


Figure 19: Average Stress and Satisfaction Levels

In order to conduct further analysis, teachers were categorised as “low” if they selected not at all or not very and a “high” if they scored a fairly or a very on the two scales. It is clear that although most teachers are highly satisfied with their job, there is a high level of stress amongst respondents.

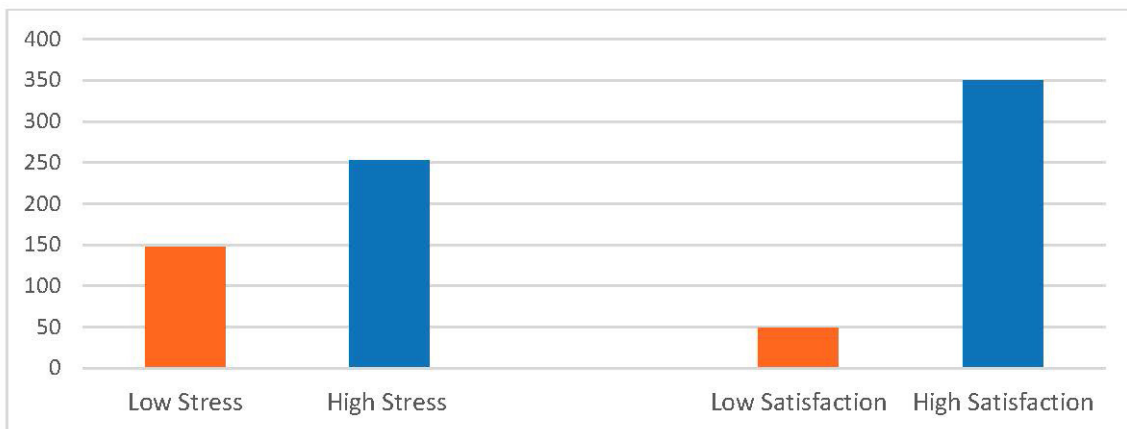


Figure 20: Stress/Satisfaction Categories

### 4.1 Predictors for Stress

In order to identify the factors that are significant predictors of high levels of stress, binomial logistical regressions were conducted. The analysis revealed that Teacher Voice – or the teachers’ perception of being listened to within the context of the school – was a significant predictor of stress levels.

That is, teachers who do not feel that their voices were being heard were more likely to be in the highly stressed group. In a similar vein, higher levels of perceived school support for CPD is a predictor of being in the low-stress category.

High levels of perceived barriers to the integration of 21C teaching and learning is a



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significant predictor of being in the high-stress category. In particular, Personal Barriers – i.e., a feeling that this kind of teaching and learning is not relevant at a personal level – appears to be particularly impactful.

## 4.2 Predictors for Satisfaction

Some similar predictors were identified in relation to teachers' levels of job satisfaction, with high levels of school support, teacher voice and self-efficacy in relation to students' engagement and classroom management all emerging as significant.

Once again, barriers to the integration of 21C also emerged as significant predictor of satisfaction levels, with those who had a lower perception of barriers more likely to be in the highly satisfied category.

Higher scores in Teacher Voice are associated with participation in TA21 CPD and in Communities of Practice, with higher perception of school support associated with engaging with in-school CoPs. In addition, teachers who have participated in TA21 CPD were significantly less likely to perceive barriers to the integration of 21C teaching and learning and more likely to have higher levels of self-efficacy in relation.

Predictor of lower stress and higher satisfaction	Associated Practices
High Teacher Voice	TA21 CPD, CoP
High Self-efficacy	TA21 CPD, CoP
High School Support	CoP
Low Barriers	TA21 CPD, CoP

## 5. Discussion

It is clear from the analysis presented in this report that the kinds of support for teachers that are provided by TA21 can have a very positive impact. This analysis has explored the impact of various teacher practices in two ways: firstly by investigating the differences between groups who did and did not participate, and secondly by looking at the outcomes that we want to see in our schools and identifying significant predictors from within the practices upon which the teachers reported.

Analysis of the differences between groups revealed that those who participated in TA21 CPD and in Communities of Practice (particularly within their school), were more likely to also report higher levels of self-efficacy and teacher voice, higher levels of facilitation of the development of key skills in their classrooms, and fewer barriers to such practices.

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Participation in Communities of Practice and TA21 CPD also emerged as important factors that influence the integration of key skills and a perceived reduction in related barriers, as well as higher levels of the usage of 21C pedagogies.

School support at management level, for CPD also emerged as a significant predictor of teacher voice, and of key skills integration, particularly in relation to a reduction in barriers.

Finally, teacher wellbeing was explored by way of stress levels and job satisfaction. Although none of the teacher practices were direct predictors of either stress or satisfaction levels, the predictors that were identified (see Table 2) are strongly associated with engagement in communities of practice and TA21 CPD.

In conclusion, this report provides very strong evidence to suggest that having a school environment in which the teachers feel supported by management and by their colleagues, and in which they are encouraged to be innovative and engage in professional development, is one in which they and their students, are likely to thrive.

## REFERENCES

Litschge, C. M., Vaughn, M. G., & McCrea, C. (2010). The empirical status of treatments for children and youth with conduct problems: An overview of meta-analytic studies. *Research on Social Work Practice*, 20(1), 21-35.

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## APPENDIX

SCALE	QUESTIONS	SCORING
Barriers	<p>Resource Barriers</p> <ul style="list-style-type: none"> <li>• I don't have adequate teaching materials</li> <li>• Key skills are not included in the text books I use</li> <li>• I don't have access to any adequate professional development programmes</li> <li>• There isn't adequate technical infrastructure in the school</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Strongly disagree (1)</p> <p>Disagree (2)</p> <p>Neither agree nor disagree (3)</p> <p>Agree (4)</p> <p>Strongly Agree (5)</p>
	<p>Personal Barriers</p> <ul style="list-style-type: none"> <li>• I am not personally very confident in using the key skills</li> <li>• The key skills are not relevant in my subject</li> <li>• I don't know how to assess the key skills</li> <li>• The curriculum I currently use does not encourage such practices</li> </ul>	
	<p>Classroom Management Barriers</p> <ul style="list-style-type: none"> <li>• I think group work is difficult to manage</li> <li>• I worry about students' behaviour being more difficult in lessons in which I prioritise key skills development</li> <li>• My students do not understand the role and purpose of the key skills in their learning</li> </ul>	
	<p>System Barriers</p> <ul style="list-style-type: none"> <li>• There is not enough time in the curriculum</li> <li>• My students have to take assessments that don't reward their key skills development</li> <li>• The school system does not encourage changes</li> </ul>	

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<p>Frequency of Developing Students' Key Skills: How often do you ask students to...</p>	<p>Collaboration</p> <ul style="list-style-type: none"> <li>• Work in pairs or small groups to complete a task together</li> <li>• Work with other students to set goals and create a plan for your team</li> <li>• Create joint products using contributions from each student</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Almost never (1) A few times a term (2) 1 – 3 times per month (3) 1 – 3 times per week (4) Almost daily (5)</p>
	<p>Communication</p> <ul style="list-style-type: none"> <li>• Communicate their ideas using media other than a written paper (e.g., posters, video, blogs, etc.)</li> <li>• Prepare and deliver an oral presentation to the teacher or others</li> <li>• Answer questions in front of an audience</li> </ul>	
	<p>Creativity and Innovation</p> <ul style="list-style-type: none"> <li>• Test out different ideas and work to improve them</li> <li>• Invent a solution to difficult problems</li> <li>• Create something new that can help them express their ideas</li> </ul>	
	<p>Self-direction</p> <ul style="list-style-type: none"> <li>• Track their own progress and change things if they are not working the way that they should be to complete a task</li> <li>• Assess the quality of their work before it is completed</li> <li>• Use peer, teacher or expert feedback to change your work</li> </ul>	
	<p>Critical Thinking</p> <ul style="list-style-type: none"> <li>• Try to solve problems or answer questions that have no single correct solution or answer</li> <li>• Draw their own ideas based on analysis of numbers, facts, or relevant information</li> <li>• Analyse different arguments, perspectives or solutions to a problem</li> </ul>	

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	<p>Technology for learning</p> <ul style="list-style-type: none"> <li>• Use technology to work in a team (e.g., shared work spaces, email exchanges, giving and receiving feedback, etc.)</li> <li>• Use technology to keep track of your work on assignments</li> <li>• Use technology to help to share information (e.g., multi-media presentations using sound or video, presentation software, blogs, podcasts, etc.)</li> </ul>	
<p>Perception of Key Skills Integration: To what extent do you agree with the following statements...</p>	<p>Tried to develop key skills</p> <ul style="list-style-type: none"> <li>• I have tried to develop students' collaboration skills</li> <li>• I have tried to develop students' communication skills</li> <li>• I have tried to develop students' creativity and innovation skills</li> <li>• I have tried to develop students' self-direction skills</li> <li>• I have tried to develop students' critical thinking skills</li> <li>• I have tried to develop students' skills in using technology as a tool for learning</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Not really (1) To a minor extent (2) To a moderate extent (3) To a great extent (4) To a very great extent (5)</p>

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	<p>Students learned key skills</p> <ul style="list-style-type: none"> <li>• Most students have learned collaboration skills while in my class</li> <li>• Most students have learned communication skills while in my class</li> <li>• Most students have learned creativity and innovation skills in my class</li> <li>• Most students have learned self-direction skills in my class</li> <li>• Most students have learned critical thinking skills in my class</li> <li>• Most students have learned to use technology as a tool for learning in my class</li> </ul>	
	<p>Successfully assessed key skills</p> <ul style="list-style-type: none"> <li>• I have been able to effectively assess students' collaboration skills</li> <li>• I have been able to effectively assess students' communication skills</li> <li>• I have been able to effectively assess students' creativity and innovation skills</li> <li>• I have been able to effectively assess students' self-direction skills</li> <li>• I have been able to effectively assess students' critical thinking skills</li> <li>• I have been able to effectively assess students' skills in using technology as a tool for learning</li> </ul>	

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<p>Usage of 21C T&amp;L practices: To what extent do you use the following?</p>	<p>Teamwork</p> <ul style="list-style-type: none"> <li>• Technology mediated learning</li> <li>• Project based learning</li> <li>• Teacher as facilitator or mentor</li> <li>• Peer feedback or individual student reflection</li> <li>• Focus on key skills development</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Never/almost never (1) Rarely – once or twice a term (2) Occasionally – once or twice a month (3) Frequently – once or twice a week (4) Daily/almost daily (5)</p>
<p>Self-efficacy (classroom management)</p>	<p>How much can you do to control disruptive behavior in the classroom?</p> <ul style="list-style-type: none"> <li>• How much can you do to get children to follow classroom rules?</li> <li>• How much can you do to calm a student who is disruptive or noisy?</li> <li>• How well can you establish a classroom management system with each group of students?</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Nothing (1) Very little (2) Neither a little nor a lot (3) Quite a lot (4) A great deal (5)</p>
<p>“Teacher Voice: How certain are you that you can...”</p>	<p>Influence the decisions that are made in the school</p> <ul style="list-style-type: none"> <li>• Express my views freely on important school matters</li> <li>• Get the instructional materials and equipment I need</li> </ul>	<p>“Average score of all responses to each question used.</p> <p>Not at all (1) Very little (2) Moderately (3) Quite a lot (4) Very (5)</p>

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<p>Level of School Support for CPD</p>	<p>The leaders at my school actively support and encourage all staff to take part in professional development.</p> <ul style="list-style-type: none"> <li>• Sufficient time is available in my school to support teachers' professional learning</li> <li>• Follow up support for professional development is available within my school.</li> <li>• Teachers at my school work collaboratively to resolve teaching and learning issues.</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Strongly disagree (1) Disagree (2) Neither agree nor disagree (3) Agree (4) Strongly Agree (5)</p>
<p>Assessment Confidence</p>	<p>Using a range of assessment approaches to assess student learning</p> <ul style="list-style-type: none"> <li>• Marking students work with an agreed marking scheme</li> <li>• Supporting students to develop self-assessment skills in order to identify their own strengths and weaknesses</li> <li>• Supporting students in providing useful feedback to their peers</li> <li>• Explaining my grading decisions to students</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Not at all confident (1) Not very confident (2) Neutral (3) Confident (4) Very confident (5)</p>
<p>Technology Confidence</p>	<p>I am confident that I can use technology as an effective teaching tool.</p> <ul style="list-style-type: none"> <li>• I am confident that I can use one computer effectively during large group instruction.</li> <li>• I am confident that I can develop effective lessons that incorporate technology.</li> <li>• I am confident that I can use technology effectively to teach content across the curriculum.</li> <li>• I am confident that I can overcome difficulties using technology in the classroom (time, scheduling, accountability).</li> <li>• I am confident that I can manage the grouping of students while using technology as a teaching tool.</li> <li>• I am confident that I can meet the challenges of technology integration.</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Completely disagree (1) Strongly disagree (2) Somewhat disagree (3) Undecided (4) Somewhat agree (5) Strongly agree (6) Completely agree (7)</p>



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Community of Practice	<p>In-school</p> <ul style="list-style-type: none"> <li>• Share new ideas on effective teaching methods</li> <li>• Share and discuss the quality of students' work products</li> <li>• Think critically about our instructional practice at this school</li> <li>• Formally observe another teacher's classroom</li> <li>• Plan lessons and units together</li> <li>• Discuss student achievement score data with other teachers to make instructional decisions</li> <li>• Co-teach with another teacher at my school</li> <li>• Use technology to facilitate collaboration</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Never (1) Rarely (2) Sometimes (3) Often (4) Always/almost always (5)"</p>
	<p>Out-of-school</p> <ul style="list-style-type: none"> <li>• Share new ideas and teaching approaches</li> <li>• Discuss pedagogical practice</li> <li>• Co-create lessons or activities</li> <li>• Ask for pedagogical advice</li> <li>• Discuss subject-specific topics</li> <li>• Discuss classroom management issues</li> <li>• Discuss general education-related topics</li> </ul>	
	<p>Online</p> <ul style="list-style-type: none"> <li>• Share new ideas and teaching approaches</li> <li>• Discuss pedagogical practice</li> <li>• Co-create lessons or activities</li> <li>• Ask for technical advice</li> <li>• Ask for pedagogical advice</li> <li>• Discuss subject-specific topics</li> <li>• Discuss classroom management issues</li> <li>• Discuss general education-related topics</li> </ul>	
Job Satisfaction	<p>Satisfaction</p> <ul style="list-style-type: none"> <li>• How satisfied do you feel with your job?</li> </ul>	<p>Average score of all responses to each question used.</p> <p>Very (1) Fairly (2) Not very (3) Not at all (4)</p>
	<p>Stress</p> <ul style="list-style-type: none"> <li>• How stressed do you feel by your job?</li> </ul>	

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