What Types of Challenges are Teachers Facing with 21st Century Professional Development?

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Abstract

This study aimed to identify the challenges facing teachers in their professional development across the primary, post-primary and tertiary educational sectors. Through the literature six main areas of investigation were identified: motivation, 21st century competencies, peer coaching, knowledge-sharing, professional learning communities and measurement/ assessment.

The data was collected through 12 semi-structured interviews with teachers across the three sectors. A thematic analysis of the data was conducted. A number of themes were extracted, for example: environment, systems, culture and time. The findings of the study are discussed through interpretation of teacher's experiences.

The results identified challenges around individualistic work cultures, lack of purposeful systems of measurement, trust and fear issues, all of which were underpinned by time constraints. It was observed that there were more organisational structures at tertiary level. There was more commonality between primary and post-primary sectors. Despite the differences all three sectors have common challenges, such as effective knowledge-sharing and timely measurement to inform effective 21st century professional development.

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Chapter 1: Introduction

Increasing globalisation has led to a more dynamic workplace with a shift in the priority of skills, as illustrated in Figure 1. Furthermore, employers are noting that there is a shortage of 21st century skills and competencies such as teamwork, communication, leadership, critical and problem-solving skills (Mitchell, Skinner, and White, 2010). Governments and business owners have looked to education to close the skills gap (Wright and Lee, 2014). Education needs to be able to adapt to meet that need and provide students with the essential skills and behaviours (Gayeski *et al*., 2007) which in turn provides the competitive edge for companies (Sutton, 2002; Glenn, 2008). However, Rotherham and Willingham (2010) argue that teachers are not getting relevant or sufficient training and professional development to effectively integrate 21st century practices into schools and that teachers' needs must be addressed first in order for them to develop the workforce of the future.

Top 10 skills

in 2020
1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

in 2015
1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity

Figure 1: Evolution of future skills (Soffel, 2016)

In the 21st century knowledge-based economy (Wei-Li *et al*., 2009; Iqbal *et al*., 2011; Nielsen and Cappelen, 2014), knowledge is seen as a critical component for an organisation's competitive advantage. Educational achievement adds to the knowledge-economy and the competitiveness of the country and its economic activity (Bates, 2016). To meet this, the European Union (EU) set out their knowledge goal at the Lisbon European Council in 2000 to

become: *"the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion"* (European Union, 2000*).* Ireland has built upon this and looked to close the skills gap and to set itself apart as a European leader in education. In the Department of Education's STEM Education Policy Statement for 2017-26 and Implementation Plan 2017-2019, Minister for Education and Skills, Richard Bruton outlined the country's objective:

"I have set the ambition to make Ireland's education and training service the best in Europe by 2026. We are living in a rapidly changing world and key to delivering on our ambition to be the best will be the ability of our education system to adapt to a transformed economy and society. Our children must be equipped with the necessary analytical, creativity and critical thinking skills to thrive in such an environment."
(Department of Education and Skills, 2017)

The challenges facing teachers in developing their skills is compounded by a difficult external environment. The education sector is facing a number of immediate issues such as retention, availability of permanent jobs, quality and keeping teachers' skills current. Globally, there is a concerning teacher turnover rate (Hong, 2010) leading to a teacher shortage (Smethem, 2007) as parodied in Figure 2. This has a negative knock-on effect on student achievement and school culture (Griffeth, Hom and Gaertner, 2000). The quality of teaching and updating of skills for the 21st century has been affected by the retention issues and current training processes (Bradley, 2016; Vekeman *et al*., 2018).

Figure 2: Extreme retention methods (https://www.cartoonstock.com)

What is also compounding the retention issue is the transactional rather than transformative human resource nature of the sector. The education sector tends to act reactively and is compliant with rules and regulation, rather than pro-actively using the potential of job applicants to help close achievement gaps (Tran, 2015). Policy-makers have noted the potential value of adopting strategic human resource management (SHRM) to improve the quality of education sector (Smylie, Miretzky and Konkol, 2004). However, Hanushek (2007) noted how public education seems to be lagging behind in its implementation of SHRM. This is despite researchers noting the importance of aligning teacher values and goals with organisational values and goals (school culture) (Vekeman *et al.,* 2018). In response, Tran (2018) argues that a paradigm shift is required to encourage pro-active rather than reactive talent management in order to compete with the future demands of the sector. Lindon (2011) added to this by recognising that teachers need to have the ability to be able to adapt to the changing environment. Transformative human resources (HR) could be used to foster 21st century skills two-fold: through identifying relevant professional development practices for current staff; and linking them to the school's objectives, alongside effective recruitment focusing on hiring skills gap in the school.

The use of SHRM can help to improve the skills and qualities of employees and in turn enhance competitive advantage (Robins and Coulter, 2005; Rasheed *et al.,* 2010; Rasheed *et al*., 2016) in the education sector. Therefore, the use of SHRM practices such as professional development can aid in improving educators' 21st century skills and knowledge gap needs. Boon *et al*., (2011) noted that the use of these processes ensures that employees are confident and current in the skills they have and need to perform their job, improving employee motivation through positive appraisals of performance. These SHRM practices can help improve teacher job satisfaction and to reduce turnover rates (Chan *et al*., 2008). Though, it is important to understand that SHRM practices do not work in isolation, but in "*mutually reinforcing HR practices"* (Vekeman *et al*., 2018, p. 823). Performance development as part of a bundle of HR practices can help to retain and motivate teaching staff and improve student learner outcomes (Rasheed *et al.,* 2016). However, the lack of strategic processes in the education sector, which employs transactional HR processes, could mean that it is difficult to have effective professional development in schools (Tran, 2015). Despite this potential criticism, Morton (2011) described how well performing schools were able to use SHRM

effectively as part of their strategic management. As such, the SHRM practices are often used but not commonplace across the sector.

This study aims to explore and understand the challenges teachers and lecturers face across the three education sectors: primary; post-primary; and tertiary. These challenges particularly relate to upskilling for the 21st century, despite the difficult environment within the educator sector. Based on a review of the existing literature, this is not yet an established link between the following themes: motivation, competencies, peer coaching, knowledge-sharing, professional learning communities, and measurement in relation to the professional development of educators across the three key sectors. To fill this research gap, this study will gather evidence from teachers and lecturers about their professional development and learning, in addition to the methods and measures they currently use to identify effectiveness.

To provide a brief overview, the themes identified in the literature review will be used to identify the challenges facing the 21st century professional development of teachers. For the purpose of this study 21st century competencies and 21st century skills are used interchangeable as they both emphasize creativity, critical thinking, collaboration, problem solving and technology (Kan and Murat, 2018). These insights go on to influence the research questions and research methodology sections of this study.

Chapter 2: Literature Review

In order to address this research question 'The types of challenges teachers are facing with 21st century professional development', this section will outline some of the key issues and current thinking related to professional development via six sub-sections: motivation; competencies; peer coaching; knowledge-sharing; professional learning communities (PLCs); and measurement.

Professional development can be defined as: "*the processes and activities designed to improve teachers' knowledge, the practice of instruction, and the learning outcomes of students*" (Wei, Darling-Hammond, Andree, Richardson and Orphanos, 2009 cited in Kang *et al*. 2013, p. 12). The existing literature on the professional development (PD) of teachers notes how ineffective it has been with regards to improving teaching practices, which has subsequently had a negative impact upon the improvement of learner outcomes (O'Dwyer *et al*., 2010; Garet *et al*., 2011; Desimone and Garet, 2015). One argument is that PD does not reflect the needs, interests or wants of teachers. In other words, it is not 'responsive' (Wlodkowski and Ginsberg, 1995). This is a major challenge faced by teachers in relation to their PD in the 21st century. This is part of Desimone (2009) conceptual framework for evaluating PD based on firstly defining what PD is, secondly how PD affects teacher and student outcomes and thirdly the contextual factors affecting PD.

One of the main purposes of training is to maximise the learning process of the students or, in this case, the teachers (De Rijdt, *et al*. 2016). Another purpose is identified by Lynn (2002), which is that training and PD is key to fostering the motivation of teachers. PD offers a ground-up, rather than top-down approach supporting the constructionist view "*based on affirmation, appreciation and dialogue*" (Mchunu and Steyn, 2017, p. 9315). Middlewood (2002) uses PD to promote real change through individual needs and reflection as well as social exchange through collaboration. Compounding the motivational issue, a study by Krishnaveni and Anitha (2007) noted that organisational commitment varied depending on the experience of educators. Liu (2016) also identified that new and experienced teachers had greater levels of commitment compared with mid-career teachers who desired more autonomy.

A teachers' PD is founded upon an understanding of their organisation's required core competencies, in addition to the various ways of tracking their progress and their mastery of these in order to transfer knowledge to learning outcomes for students in the classroom. Teachers are key to the success of a student's learning, outcome and successes, which show that teacher competencies have a close relationship with student learning outcomes (Nye, *et al*. 2004; Bügener and Bath, 2018). Therefore, teachers need an acute awareness and understanding of 21st century competencies in order to fully prepare their students.

This study seeks to add to the existing literature on PD by adding more criteria to Desimone's (2009) conceptual framework. In addition, it will explore the challenges faced by Irish teachers in their PD by examining the three sectors primary, post-primary and tertiary, in the context of the 21st century.

2.1 Motivation

The old adage 'you can bring a horse to water, but you can't make it drink' is apt in professional development. As Pink (2009) (cited in Bates, 2016, p. 569) argued, *"true motivation that leads to excellent creative performance comes from mastery, autonomy and purpose"* and that a focus on these improves quality and effectiveness. Furthermore, Leithwood, Jantzi and Steinback (1999) study showed that motivation was a critical part of teachers' commitment to change and that it enabled teachers to adapt to the needs of new environments.

Motivation is also a key facet of empowerment and Braga *et al*. (2017) study found that empowerment in professional development is essential for teachers to take ownership over improving the learning outcomes of their students. Hackman and Johnson (2013) suggested that empowerment had three components presented in Figure 3.
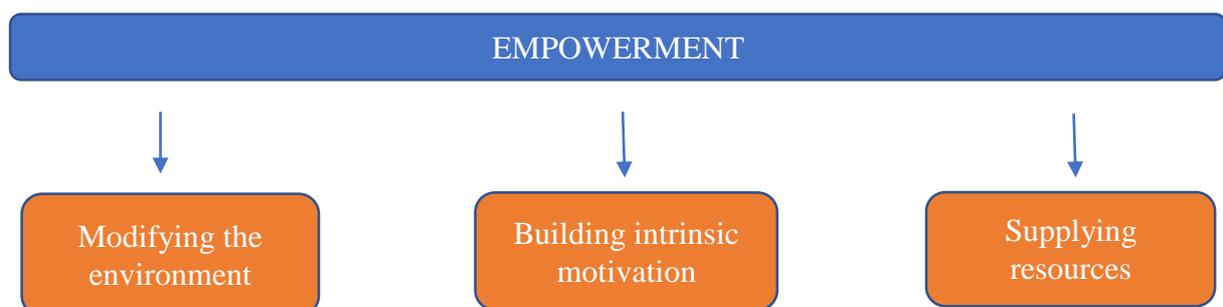

Figure 3: Elements of Empowerment

As identified by Hackman and Johnson (2013) building intrinsic motivation, is seen as a key success factor in teacher PD as it fosters creativity and people become more dedicated to the task, take more ownership of it and produce more effective long-term results and this is readily supported by Bates (2016).

Self-motivated PD can be contrasted to compulsory PD where intrinsic motivation to learn is absent and collaborative learning atmospheres are not created (Duncombe and Armour, 2004). The lack of collaborative learning atmosphere supports the idea of Hackman and Johnson (2013) of 'modifying the environment' element as seen in Figure 3 that is needed to support empowerment of teachers. Caddle *et al.* (2016) further supported the view of the importance of intrinsic motivation with their study of Mathematics teachers, which highlighted that teachers were accurate in *"assessing their own strengths and weaknesses"* (p. 131). As a result, teachers should be trusted to identify their own motivations and needs for PD (Bautista and Ortega-Ruíz, 2015). As Sobkin and Adamchuk (2015) also identified, the majority of teachers took PD courses specific to their subject areas, as opposed to generalised education information.

However, Armour (2006) noted that traditional PD at academic institutions can result in a disconnect from actual student outcomes and teacher knowledge, thus reducing motivation and increasing resistance to professional development opportunities. What is more, alternative studies have shown that this can also be the case for online courses, in-house PD and other organised educational courses (Sobkin and Adamchuk, 2015).

When motivation is utilised effectively it has a positive impact upon performance and motivation (Filak, 2003). However, certain external factors such as lack of clear processes can easily demotivate people. According to Shriner *et al.* (2009), teachers who acquired mastery over knowledge had positive changes in attitudes and motivation in terms of how they transferred the knowledge to the classroom (cited in Braga *et al*., 2017, p. 302). Hackman and Johnson (2013) supported this theory by suggesting that motivation is developed through choice, mastery and the ability to see the immediate impact of their work. However, teachers can become demoralised through a lack of recognition, respect and ineffective appraisal systems (Rao, 2004; Rasheed *et al.,* 2016). Part of establishing effective appraisal systems is establishing the parameters. Research suggests that competencies provide a way to achieve this

and in particular, the use of 21st century competencies ensures that teachers are passing on vital skills and behaviours to their students (Wright and Lee, 2014).

This research therefore contributes to the literature by exploring motivational factors related to upskilling across the three sectors. This will help to determine whether there are any significant similarities or differences in teachers' motivations in an Irish education context.

2.2 <u>Competencies</u>

This section looks at the role of competencies in relation to successful performance development processes. It will define the concept of 'competence' and examine its value-added benefits. It also highlights how these can be used as a basis for knowledge, shared visions, communication and measurement to ensure continuous learning, thus enabling teachers to prepare their students for the future.

David McClelland (1973) initially proposed competencies as a critical differentiator of performance. Expanding on this, Prahalad and Hamel (1990) developed the concept of 'core competencies' which can be defined as *"the collective learning in the organization, especially how to co-ordinate diverse production skills and integrate multiple streams of technologies"* (p. 81). Berger and Berger (2011) also identified core competencies as involving *"knowledge, skills, abilities, attitudes, that an employee needs to successfully perform his or her job at present and also in the future"* (p. 7).

The skills and competencies learners need in order to adapt to changes keep pace with changing technology and critically evaluate large chunks of information are known as 21st century skills (Kan and Murat, 2018). Soffel (2016) highlighted the set of skills and competencies required by the future workforce in Figure 4 below. Skills that need updating are easier to identify and track when specific competencies are named (Rutledge, *et al.,* 2016). 21st century skill competence requires the learner to find new knowledge with an emphasis on *"creativity, critical thinking, collaborative work and problem knowledge"* (Jia *et al., 2016,* p. 252). This is in contrast to learnt knowledge and could be viewed from a globally informed perspective (Kan and Murat, 2018). 21st century competencies and skills are a key priority for schools in order to prepare their students for the future workforce (Wright and Lee, 2014). Ananiadou and

Magdalean (2009) were critical of 21st century competencies as they saw it as the economic approach to education. In other words, they are preparing students for knowledge intensive workplaces rather than focusing on producing well-rounded members of society.
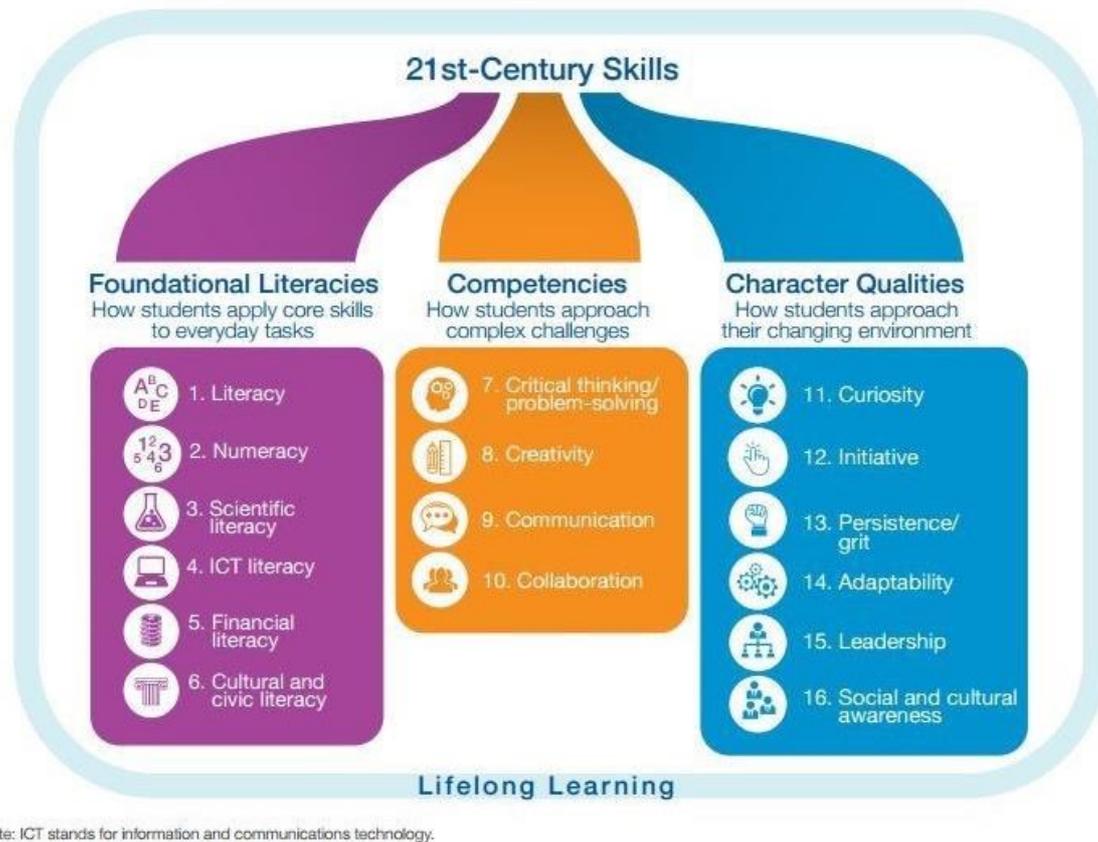
Figure 4: 21st Century Skills (Soffel, 2016)

According to Jia *et al.* (2016), teachers form an integral part of the 21st century skill development for the workforce. This is because they prepare students with the core competencies and skills required for the workplace. Various studies have identified that it is essential to keep teachers' skills and knowledge up to date as they will influence students to be ready for the needs of the future by ensuring that they have 21st competencies themselves (Darling-Hammond, 2000; Darling-Hammond *et al.,* 2017: Norahmi, 2017). Other studies have shown that teachers must also be able to teach soft skills to prepare students as responsible citizens for the 21st century (Mizel, 2010; Norahmi, 2017). Furthermore, at present there is a strong emphasis placed on digital literacy and technological tools (Kan and Murat, 2018). In particular, teachers *"seem to be forced to master the technology since it modernizes the teachers' teaching skill"* (Norahmi, 2017, p. 80). However, Greenlaw (2015) noted caution in

seeking "salvation through technology" and instead supported a more balanced view in schools using knowledge and pedagogy to prepare students for real life. Norhami (2017) disputed this saying that technology was the core of 21st century education.

However, despite 21st century skills being recognised as a necessity for students to learn, they are also under-prioritised in education systems (Wright and Lee, 2014). A further concern is that teachers need to be better equipped to be able to cope with the *"needs of modern education"* (Norahmi, 2017, p.77). The majority of academic staff work within focused disciplines, which means that they have a narrower breadth of skills (McCormack *et al.,* 2014). Another concern is discussed by Pellert (2007), which is that academics will focus on acquiring competencies in their own field. It is interesting to note that studies in the existing literature tend to focus on individual sectors, rather than on all educational levels. As a result, this research seeks to contribute to the literature by focusing on the opinions of Irish teachers regarding 21st century competencies, as well as their opinions on how they engage with them.

In the following sub-section, a more detailed discussion will look into one of the 21st century competencies, collaborating, done through peer coaching, to help increase teacher knowledge. It will also look at supportive environment needed for improving communication and teamwork skills, thus furthering teachers' mastery over 21st century educational needs.

2.3 Peer Coaching

Peer coaching *"involves two colleagues engaged in a mutually supportive relationship"* (Neubert and McAllister, 1993 cited in Ma, Xin and Du, 2018, p. 293). It allows the continuation of building upon skills thus supporting the constructivist approach. Its purpose is to *"accelerate learning by building the teachers' instructional capacity through the implementation of appropriate and effective teaching strategies* (Neufeld & Roper, 2003; Knight and Cornett, 2009; Shidler, 2009 citied in Gutierez and Kim, 2018, p. 217). Reflection and constructive criticism are key components of successful peer coaching and raise the standard of professional development (Lu, 2010). However, Gutierez and Kim (2018) noted that, without cooperation from teachers, peer coaching is ineffective. Nevertheless, when done successfully, peer coaching is a way of sustainability instructional improvement (Knight, 2006).

To provide an overview, peer coaching occurs when a coach facilitates the reflection process, thus maximising the potential of the professional learning community (Gutierez and Kim, 2018). This process enables timely feedback and reflection which supports the commitment to adult learning as the learner sees immediate relevance to their situation (Wynne, 2002). In turn, this reinforces and builds upon their intrinsic motivation. Some studies have noted that teachers will be intrinsically motivated to learn if they are able to reflect on their prior knowledge and understand their knowledge gap (Ryan and Decci, 2000; Drewery *et al*. 2017). However, various alternate studies have criticised peer coaching. For example, it can be argued that they focus on the trainer relationship, rather than peer interactions (Rangel *et al*. 2015), that it has ineffective outcomes in the class (Atueyi, 2016) and that coaches are unable to maintain the provision of personalised training programs (Dennis *et al*. 2018).

Studies have highlighted the benefits of peer coaching amongst teachers (Yu, 2003; Alsaleh *et al.* 2017; Liu and Wang, 2017). More precisely, other studies have also identified that peer coaching, along with peer review and assessment forms part of a successful learning environment (Hsu, 2016; Lagkas and Demetriadis, 2017; Yu and Wu, 2016). The existing literature focuses more on pre-service teachers rather than in-service teachers (Lu, 2010). Consequently, this study will seek to contribute to the literature by studying peer coaching amongst in-service teachers in the context of education in Ireland.

At present, traditional forms of PD are disconnected from classroom practice and school context by the top-down approach to development (Braga *et al.,* 2017). This is made further ineffective when coaches in PD are perceived as critical rather than supportive towards teachers. If coaches were to promote a learner-friendly environment this would encourage risk-taking and reflection (Neufeld and Roper, 2003). Over the last five years, studies have reflected the changing learning situations and recognised the importance of personalized learning and practices (Hwang, Chu and Yin, 2017). They have also recognised the ability of teachers to problem solve (Wongsopawiro, Zwart and van Driel, 2017). Several studies in particular identify peer coaching as the preferred PD format (Bowles, 2002; Bush, 2007; Conway, 2012). However, Bautista, Toh and Wong's (2018) study of primary music teachers disputed this because it found that coaching was the teachers' middle-ranked option.

Figure 3 above, a vital part of the empowerment process is resource sharing. There is therefore an important relationship between peer coaching and knowledge-sharing, which will be discussed in the following section.

2.4 <u>Knowledge-Sharing</u>

In 21st century knowledge-based economy, knowledge, including its creation and dissemination, is vital to success, development and innovation. What is more, knowledge creation is a central pillar of the learning process (Dimmock, 2016). Knowledge-sharing is "*an interactive process between tacit knowledge and explicit knowledge*" (Chen, 2011, p. 994). Knowledge-sharing in education is understood *"in terms of links between policy, research and practice"* (Gutierez and Kim, 2018, p. 215). This acts as a useful focal point in performance development and highlights the importance of relationships between teachers, researchers and policy makers. Dimmock (2016) supports this and identifies the dynamic nature needed between teachers, researchers and policy makers for professional development. On a similar note, Handal and Lauvas (1987) have identified that professional learning and development could be improved by teachers' sharing tacit *"personal knowledge"* (Polanyi, 1966) and explicit *"personal knowledge"*. A number of studies have highlighted that knowledge-sharing is vital to the education profession (Hord and Sommers, 2008: Oancea, 2014). In particular, it has been argued that once teachers pass their formal qualifications their *"professional knowledge is almost entirely gained via experience"* (Underwood and Joshevska, 2019, p. 116).

At present, the global economy is highly competitive. As a result, knowledge sharing maximises the use of expertise and resources and add to the success of the education sector (Ramayash *et al.,* 2013). The literature highlights how the knowledge and skillset of the teachers must be at the centre of professional development (Dadds, 2014). Knowledge-sharing can also assist with career development via a combination of tacit knowledge combined with research knowledge (Gutierez and Kim, 2018). This builds on teachers' experience through tacit knowledge. Polanyi (1966) argued that tacit knowledge unlike explicit knowledge, was

the product of learning from experience, which allows teachers to identify their own individual needs. Similarly, Fullwood *et al.* (2013) highlight how effective knowledge sharing maximises the intellectual capital held by the education sector and enables institutions to become more competitive in a global market. This further supports the importance of relationships for successful knowledge-sharing.

There are several environmental factors that can affect knowledge-sharing behaviour such as *"trust, national culture, leadership, organization structure, and organizational learning"* (Al-Kurdi *et al.,* 2018, p. 229). Knowledge-sharing intentions are also affected by the organisational climate. Studies by Lee and Green (1991), Bock *et al.* (2005) and Chen (2011) argue that if the climate *"reflects fairness, innovation and connection"* (Chen, 2011, p. 1004) there is a positive correlation in teachers' knowledge-sharing intentions.

An effective approach to knowledge management supports the knowledge-based economy, improves performance and enhances knowledge-sharing (Al-Kurdi *et al.,* 2018). Cronin (2000) categorises the education sector with strongly independent features such as autonomy and academic freedom. However, Knight (2006) argues that the traditional approach of lecturing for professional development seems outdated in the current dynamic context of available methodologies. Hargreaves (2000) suggested three professional development programs in order to generate knowledge creation in line with the 21st century educational needs as illustrated in Figure 5 (cited in Gutierez and Kim, 2018, p. 215):

| *Action research and constant communication between and among teachers and school heads* | → | *Formation of Professional Learning Communities (PLCs) which are focused on finding solutions to school-based problems* | → | *Networking among professional learning communities"* |
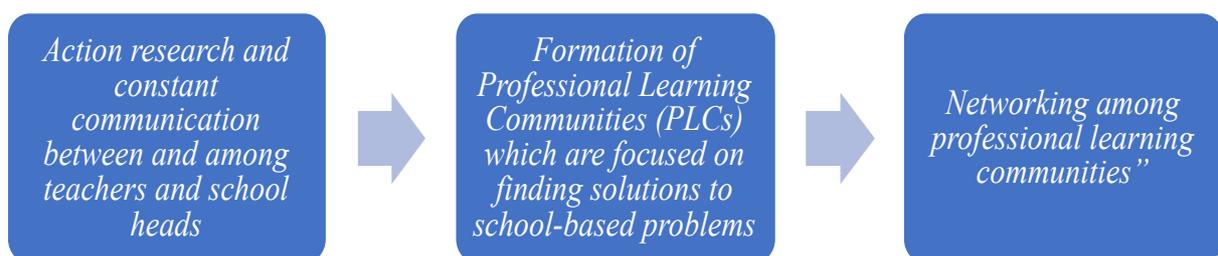
Figure 5: Professional Development Programs

The next section will discuss the elements and use of PLCs. This is the next evolution of professional development supporting as it supports teachers needing to prepare their students for the 21st century workplace.

2.5 <u>Professional Learning Communities</u>

Professional Learning Communities (PLCs) are pro-active groups that are able to quickly react to emerging trends and context. They are *"a cooperative process of problem solving where social scientists-researchers and the research subjects are peer-partners"* (Boog, Preece, Slagter and Zeelen, 2008, p.3 cited in Gutierez and Kim, 2018, p. 218). PLCs are made up of teachers, researchers and policy makers support teachers' PD (Gutierez and Kim, 2018) and are also known as a "*community of practice*" (Wenger, 2003).

Collaborative networks of professionals are viewed as being more effective for professional development than traditional methods (Braga *et al.,* 2017). For instance, they enable open learning environments, which encourage critical thinking and enables learners to look at multiple perspectives (Bügener and Barth, 2018). However, some studies have shown that despite the advantages of PLCs, their success does not always translate into practice (Oyewole, 2016: Underwood and Joshevska, 2019). Nonetheless, PLCs do support the new emerging trends and needs in educational practice in the 21st century, especially for lifelong adult learners and specific school contexts (Gutierez and Kim, 2018).

Collaboration can also be seen as a key element of sustainable PD and can help teachers adapt to change (Svendsen, 2017). Sobkin and Adamchuk (2015) noted the subtle change in modern education, which is that teachers are required to make their content more relatable to the student and the world around them, whereas PLCs allow for collaborations locally and globally. Dimmock (2016) summarised PLCs as a community of learning and inquiry, which supports the principles of adult social learning and encourages an active learning attitude. This is especially the case given that PLCs link prior teacher knowledge with emerging pedagogical trends (Gutierez and Kim, 2018), thereby supporting adult lifelong learning in an uncertain environment (Siivonen, 2016). Other studies have highlighted how collaboration with PLCs can lead to greater creativity (Edmonds, 2007), which assists the PD of teachers and enables them to best prepare students with the needs of the 21st century (Ciampa, 2015).

De Rijdt *et al.,* (2016) noticed that the constructivist approach, which focuses on collaborative learning by building on prior knowledge and getting continuous feedback, yielded positive attitudes and effectiveness during training. This reflects the relationship between sharing knowledge in a collaborative and motivation and measurement. Vekeman *et al*., (2018) further support this opinion by suggesting that principals who collaborate with teachers within the school can successfully promote PLCs. Likewise, McCaughtry *et al*., (2006) noted that, without clear support by management, initiatives such as PLCs can be seen as low value and as a result teachers' can be resistant towards it. Networking is essential in scaling up and sustaining PLCs but whilst networking is commonplace in business, is not utilised fully in the education sector (Goos*, et al.,* 2018). In order to make networking effective, a school's management has an important part to play by acting as facilitators to help scale-up PLCs (Svendsen, 2017). Yet, without the ability to successfully network, PLCs could potentially remain ineffective, and under-utilised.

Another key aspect in effective teacher PD is the input by teachers into decision-making, their voluntary participation, and their collaboration with other teachers (Bates, 2016; Goos, Bennison and Proffitt-White, 2017; Svendsen, 2017; Bürgener and Barth, 2018). At the present, the majority of approaches to development are top-down, which do not require teacher involvement and serve as demotivators, thus rendering PD ineffective and unsustainable (Svendsen, 2017; Goos *et al*., 2018).

In light of the above, this research seeks to address the gaps in the literature of how PLCs are utilised in the Irish education sector and how the different sectors (primary, post-primary and tertiary) understand, use, and view PLCs.

2.6 Measurement and Accountability

Current practices and the existing literature demonstrate that the Education Sector measures student achievement in a single field, such as exams as seen in Figure 6 below, as opposed to measuring teacher development in terms of values, principles, and standards. There is therefore a gap in literature on personal measurement systems for educators. Few studies have looked at teachers' attitudes to assessment and its relationship with their own PD. There is resistance from educators as they view measurement systems as being part of the new 'management

culture', which is coming into the Public Sector (Gleeson and Ó Donnabháin, 2009). These approaches include the public sector in Ireland borrowing from the corporate sector in terms of the New Public Management (NPM) Model which: *"guided by assumptions about how best to optimise public service provision system through a focus on target setting, outcomes, performance management systems and the overall design and implementation of consequential accountability systems"* (Barber 2005).
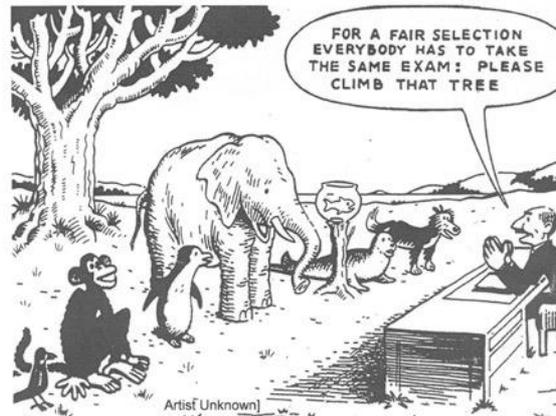
Figure 6: The current method of assessment

Government funding and policy changes within education institutions has led to an increase in demand for accountability (Forrester, 2011; Bradley, 2016). Given the increased competition within the educational environment, Bradley (2016) argues for a move from transactional HR to SHRM, incorporating processes such as talent management and performance management systems with links to organisational strategy. Performance management systems can ensure accountability and inform professional development for educators (Middlewood, 2002; Mchunu and Steyn, 2017). Metrics and benchmarking are commonly used at higher education institutions (Van Raan, 2005; Bradley, 2016). In a study by Sobkin and Adamchuk (2015), their research shows how teachers find it difficult to evaluate the outcomes of learners against specified educational standards.

Despite Bradley (2016) stressing the importance of alignment between an organisation's strategy, performance metrics, and staff management, the NPM does not fully take into account the environment of the Education Sector. The focus for NPM reporting emphasises value for money and accountability rather than promoting a supportive culture for development (Gleeson and Ó Donnabháin, 2009). Walsh (1994) argues that a contractual model of accountability involves performance indicators, which can erode trust and leave no room for ambiguity. In

contrast, Glatter (2003) suggests that responsive systems or professional accountability could be more adaptive and focus more on processes than outcomes and are about involvement and meeting a range of needs. This study aims to expand upon the existing literature by exploring teachers' attitudes towards measurement in order to determine whether there is a positive link between the use of measurement and teachers' professional development.

Similar to business world, incentives are being used to this has led to attract, retain and reward performance (McCormack *et al.,* 2014). However, as Kerr (1975) noted, reward systems may reward undesired behaviour. However, metrics can also be used for judgement rather than individual development, which can limit creativity and blue-sky thinking and reflect external rather internal motivation (Ter Bogt and Scapens, 2012).

Core competencies can be used as a way of measuring performance (Rutledge *et al.,* 2016). When competency-based systems are created based on the involvement of employees in creating them there will be more engagement, data will be more accurate and that goals will be achieved more quickly (Kessler, 2004). One study has identified that when teachers engage in their own professional learning through effective PLCs, a greater professional accountability can result (Braga *et al*., 2017). Core competencies, when linked with the organisation's strategic plan and expectations, provide a key focus for reflection and performance evaluation (Rutledge *et al*., 2016). However, without effective and consistent mechanisms, it is difficult to reinforce positive behaviour associated with success and achievement of competencies and could lead to a lack of accountability (Rutledge, *et al*., 2016). Integrating core competencies as part of job descriptions therefore allows for effective feedback opportunities and support for training, growth, and new opportunities (Rutledge *et al*., 2016). Bates (2016) recognises that there are concerns regarding how to measure education as it has many inputs and unique variables, which are reflected in Figure 7 below. Also, part of the purpose of education is long-term success, which adds to complexities in measurement.
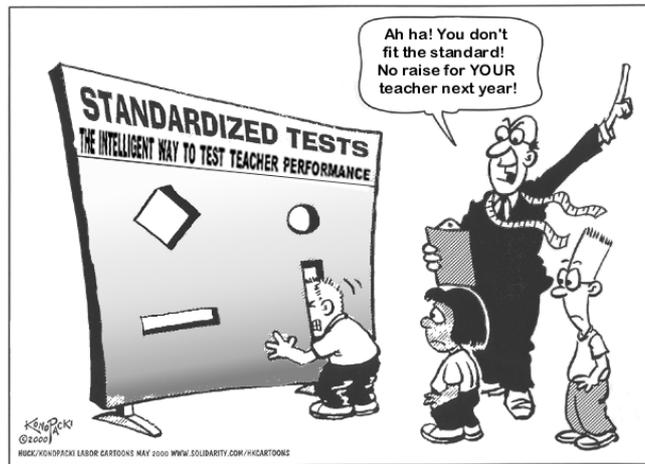
Figure 7: The issue of narrow measurements

Currently, the main measure of teaching are student results (Goos, *et al.,* 2018) and this can be seen through the publication of School League Tables. As Figure 7 shows, this is a narrow focus on what is a multiple output sector. In order for performance evaluations to be effective and meaningful, they need to be transparent, timely and relevant in order to be effective (Rasheed *et al*., 2016), rather than formulaic and a 'tick-box exercise' (Ramierz *et al*., 2014). Bradley (2016) suggests that metrics can be used to reward high performing teachers to positively impact teaching quality, as well as to identify those who could play a pivotal role within an organisation to help it meet its future needs. However, once again these studies only focus on a single sector, which is the tertiary sector. Given the current lack of SHRM processes in the education sector, the potential of using metrics will find difficulty in being realised. Despite their awareness of the importance of 21st century skills, teachers are generally unable to accurately reflect and evaluate their own knowledge. This is primarily because there is a shortage of instruments available (Jia *et al.,* 2016).

Existing studies on measurement and accountability lack a connection with constructive teacher PD. There is therefore a gap in the literature on agreed methods of assessing teacher performance, including and which elements to assess and when, as well as what teachers find effective. This study seeks to expand on the literature by providing an understanding of the focus of teachers when assessing their own, and their students, successes. Interestingly, robust measurement systems have been largely neglected in the literature. These could be important as they provide teachers with the right environment to discuss their results and the ways that

they could improve or be recognised, as opposed to focusing on the academic results of students only. In turn, they could help to improve school culture and enhance the learning community.

2.7 <u>Literature Review Conclusion</u>

What is made clear throughout the literature is that the education sector is complicated with numerous inputs, outputs, stakeholders, shareholders and an ever-evolving measurement system which is in reaction to global trends and the current political environment. Another key component of the sector is motivation which is a key building block that can increase job satisfaction, retention, improve performance and aid empowerment. In turn, this could improve the learning outcomes of the students.

As a result, their teachers need to have a good mastery over these skills in order to have the confidence to disseminate them to their students. Knowledge creation and knowledge-sharing is essential to success in the 21st century knowledge-economy (Hord and Sommers, 2008: Oancea, 2014). The importance of the relationships between the various actors including teachers, researchers, and management is vital for success and effective performance development.

Paradoxically, school assessments have not caught up with current practice. As a result, the metrics used, such as academic achievements, do not reflect the ways in which teachers put 21st century competencies into practice. Instead, they focus solely on formal grades based on exams (Brown, McNamara and O'Hara, 2016). There is also a lack of clarity around the concept of 'measurement' more generally, such as what is to be measured and how, and what is the purpose of it being measured. What is clear from the literature is that metrics for the measurement of academic results do not support or promote a collaborative culture. In fact, they seem to have the opposite effect as they can erode trust and motivation (Gleeson and Ó Donnabháin, 2009). Furthermore, there is a silo nature to the existing studies in the literature. As mentioned above, this is because they tend to focus on one educational sector only, such as primary, post-primary, or tertiary education. The majority of studies do not examine all three. What is more, there is a lack of information about the types of measurement that could be used to inform teachers of their progress or to provide recognition of their performance (Rasheed *et al*., 2016).

Overall then, most of the research found in the existing literature focuses on individual sectors when analysing professional development, as opposed to apply their discussion and findings to the three key sectors: primary; post-primary; and tertiary education. This research therefore aims to contribute to the existing literature by providing a better understanding of the challenges of the professional development of teachers across the three key educational sectors.

Chapter 3: Research Question and Objectives

The main research question which this dissertation hopes to answer is 'What types of challenges are teachers facing with 21st century professional development?' It studies a small selection of teachers at primary, post-primary and tertiary level. It aims to be able to identify any commonalities or differences in the challenges faced by the different educational levels, and to see if these can inform improving teacher professional development in the future.

The following six objectives were developed from the research question:

1. To understand the motivational factors behind teachers upskilling
2. To explore teachers' knowledge and use of 21st century competences in teaching and planning
3. To understand if peer coaching can be used to enhance teachers learning
4. To explore the culture for knowledge sharing amongst teachers
5. To understand if Irish educational sectors are ready to facilitate professional learning communities
6. To explore teachers' attitudes to assessment and measurement and its potential relationship with professional development

The objectives were developed from the literature and are seen as key and integrated components of professional development in the education sector.

Chapter 4: Methodology

In order to address the main research question of *What types of challenges are teachers facing with 21st century professional development* the data collected was required to convey experiences, be subjective, and be detailed. Data was collected from three different sample groups to form a comparison between the different sectors: primary, post-primary and tertiary. The sample set was compromised of 12 interviews and based on the limited sampling size, the data collected was qualitative in nature. To provide an overview:

"*Qualitative researchers usually work with small samples of people, nested in their context and studied in-depth unlike quantitative researchers, who aim for larger numbers of context-stripped cases and seek statistical significance.*" (Miles and Huberman, 1994, p. 27 cited in Braga *et al.,* 2017).

Qualitative data highlights and recognises the value-added educational outcomes that are present in teaching (Middlewood, 2002). The data was gathered through purposeful sampling (Babbie, 2008) which was followed by 12 face to face semi-structured interviews. This allowed for a greater flexibility in understanding of the more in-depth experiences of the interviewees, as well as offering more insights into particular situations.

Given that the sampling pool was small, the use of semi-structured interviews provided a flexible and useful research method (Drever, 1995). The researcher conducted a thematic analysis within predetermined areas as identified in the literature review: motivation, 21st century competencies, peer coaching, knowledge-sharing professional learning communities and measurement/ accountability. The interviewees' verbal answers allowed for identification of key thematic issues. To provide some background, interviews and observations are the most common form of competency analysis, despite them being time-consuming and costly issues (Gayeski *et al.,* 2007). This approach is qualitative in nature to ensure that more detailed data could be gathered.

4.1 Research Sample

The population of interest for this study involved teachers at primary, post-primary and tertiary educators in Ireland in the 2018/19 academic year. The study aimed to include teachers across

these three levels in order to allow for a comprehensive exploration of professional development across the sector, and to identify similarities and differences in the recurring themes across the different sectors. Assessing the priority of the different themes within the global and individual sample sets helped identify critical areas of interest, in addition to potential crossovers or interdependencies within the themes.

The teachers were selected based on both purposive and convenience sampling. The sampling utilised the researcher's personal network, which led to an element of snowball sampling (Babbie, 2008). This occurred because the researcher asked the interviewees to identify potential further participants. The researcher purposefully targeted a mixture of experienced and non-experienced teachers and lecturers.

12 teachers took part in the study. There were four teachers sampled in each sector. The gender split of the sample was seven females and five males. The average years of teaching experience across the three sectors was 11.5 years. The years of experience taught by sector can be seen in Figure 8 below.
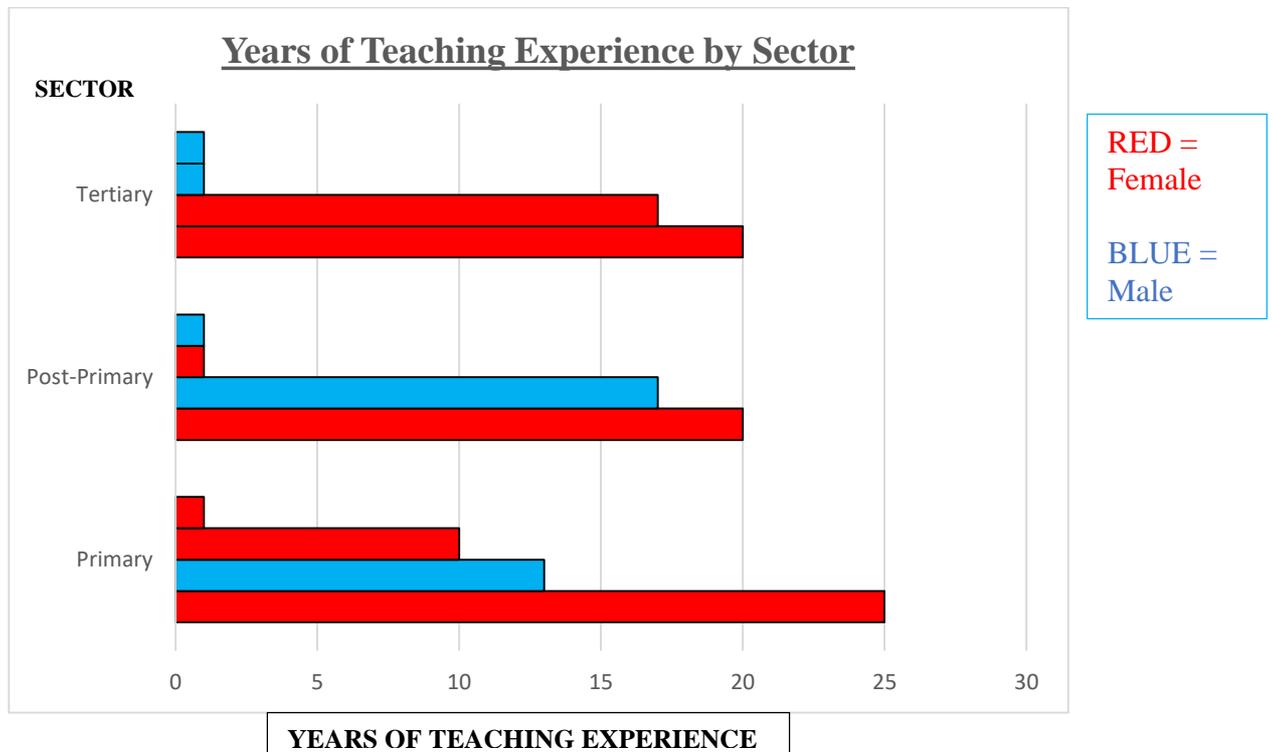

Figure 8: Years of Teaching Experience by Participants

4.2 <u>Research Instruments</u>

Data was gathered through purposeful sampling, which was followed by face to face semi-structured interviews using an interview guide. The interview guide was developed by identifying key themes from the literature review. A short number of questions were developed in relation to each theme as shown in *Appendix 1*. The interview guide allowed for flexibility to vary the order of the questions, add additional questions or probe further into topics that arose during the interview and were relevant to the research question. This allowed for a greater understanding of the experiences of the interviewee and potentially offered more insight into situations. The verbal answers from interviewees allow for identification of thematic issues.

A pilot interview was conducted using drafted questions with the first participant. Following this, the researcher added a generalised open question about the experience of participants upskilling. This was because the first question helped to focus participants' answers in the area of professional development. The researcher also changed the order of the questions so that the interview began with 'motivational' questions. This was because the researcher judged the first participant wanted to speak more freely in this area. The researcher's questions are contained in *Appendix 1*. The researcher found that participants spoke more freely after speaking about their motivation for upskilling.

4.3 <u>Interview Procedure</u>

The interviews were largely conducted with participants through face-to-face meetings, although three of the twelve interviews over the telephone due to distance and time constraints. The researcher met the participants in a location convenient to them. The study was explained to the participants and they were taken through the participant information leaflet as seen in *Appendix 2*. The researcher then obtained informed consent from participants by asking them to read and sign the consent form as seen in *Appendix 3*. The interviews were conducted between March and May 2019 and each interview was transcribed verbatim from the audio recordings for analysis.

The interviews were recorded using an audio device and the average time of the twelve interviews was 35 minutes with a range of 21 minutes – 72 minutes for all interviews.

4.4 <u>Analysing the data</u>

To analyse the data the researcher followed Braun and Clarke's (2006) 6-step guide to thematic analysis. The researcher conducted a thematic analysis within predetermined areas as identified in the literature review: motivation, 21st century competencies, peer coaching, knowledge-sharing professional learning communities and measurement/ accountability. Each were then identified using codes under each heading. The researcher then listed the codes against each area and further identified similar themes (Kim, 2011). The researcher reviewed these themes and further refined the initial identified themes into main themes and sub-themes. The themes were captured in a thematic map as see in Figure 9 below. The researcher then wrote a detailed analysis of the themes in the pre-determined areas, which will be discussed in the next section.
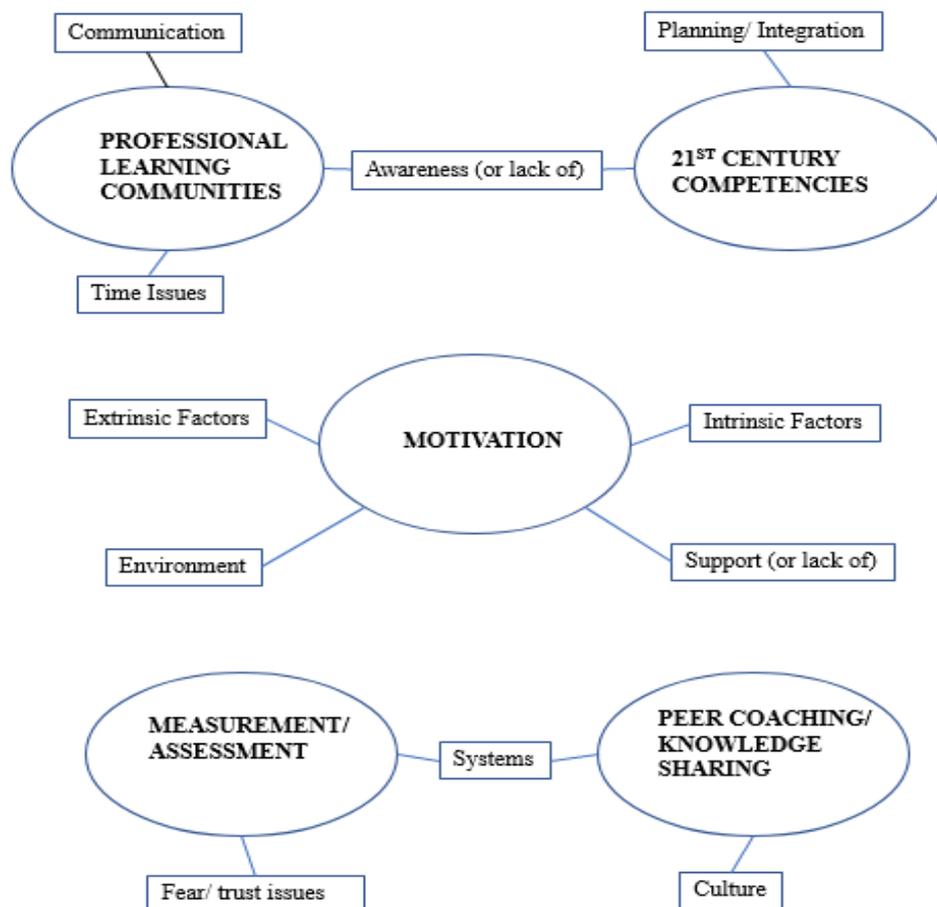
Figure 9: Thematic Map

4.5 <u>Limitations of Methodology</u>

Using a qualitative approach often limits the number of participants, which could mean that the beliefs and experiences of the participants may not be representative of the larger population (Dos Santos, 2019). The researcher is a post-primary teacher and was concerned with the potential bias when analysing and selecting the data. As a result, the researcher continually compared the data to the themes identified in the literature review to avoid personal opinion from guiding the themes.

The potential limitations of this study include the availability of different type of teachers: those new to the sector influenced by formal knowledge, such as being recently educated at a university, and those who have more experience in the sector and are influenced by classroom teaching experience. As the data sample was gathered through snowball sampling, the researcher noted that participants tended to recommend other like-minded participants. As the data size was small, the potential for interviewing different types of people was also limited.

Another limitation is the current professional development and funding available to the different sectors. This could show potential differences in performance development strategies for each sector. Given that different sectors were being examined, the questionnaire needed to be broad and not sector specific. Therefore, the different needs for each group are not recognised.

Each of the different sectors have different metrics that they are assessed against. The difference of metrics for each sector is not adequately addressed by the scope of the interview as there were numerous themes to discuss but could by an area for further study.

4.6 <u>Ethical Considerations</u>

The researcher briefed participants about what the interview involved. Each participant was given a participant information leaflet as seen in *Appendix 2* which outlined the scope of the dissertation. The interviews were based on informed consent, participants were given a consent sheet to sign as seen in *Appendix 3*. The researcher informed the participants that if they became

upset at any time, they could stop the interview and that they could refuse to respond to questions if they felt uncomfortable.

Chapter 5: Findings

In this chapter the research findings have been coded into themes and aligned with each research objective as seen in Figure 10Figure 10. They follow the key areas identified in the literature review.

Research Objective	Area identified in literature	Themes
1. To understand the motivational factors behind teachers upskilling	Motivation	- Intrinsic factors - Extrinsic factors - Environment - Support (or lack of)
2. To explore teachers' knowledge and use of 21st Century Competences in teaching and planning	21st Century Competencies	- Awareness - Planning/ Integration
3. To understand if peer coaching can be used to enhance teachers learning 4. To explore the culture for knowledge sharing amongst teachers	Peer coaching & Knowledge Sharing	- Systems (formal/informal) - Culture
5. To understand if Irish educational sectors are ready to facilitate Professional Learning Communities	Professional Learning Communities	- Awareness (or lack of) - Communication - Time constraints
6. To explore teachers' attitudes to assessment and measurement and its potential relationship with professional development	Measurement and Assessment	- Systems (formal/informal/lack of) - Fear/ trust issues

Figure 10: Research Objectives and Themes

5.1 <u>Research Objective 1: Motivation</u>

R1: "To understand the motivational factors behind teachers upskilling"

The two major areas that were highlighted in the interviews by the participants were personal motivational factors and environmental factors. Across the sectors teachers needed similar environments that contain: personal motivation and purpose, value by management and support by management to positively affect their motivation, with the exception of tertiary level, where promotion was a dominant extrinsic factor.

The sub-themes: intrinsic, extrinsic, environmental and support, as identified are expanded on below.

<u>Theme: Intrinsic motivational factors</u>

The majority of participants across the three sectors were intrinsically motivated to upskill because of curiosity, interest, to boost competency, learner outcomes and personal satisfaction:

"Just for my own confidence, for my students to be learning better and to be happy with the classroom environment" (post-primary teacher, female, newly qualified)

"If I felt I needed help with something, if I'd heard about a new methodology…or a certain way to teach certain subjects that I would be struggling with. I would seek out something to help me with that" (primary teacher, female, experienced)

"Just having a good outcome for the children, because you know, better outcome for them, good satisfaction from my point of view" (primary, female, experienced)

The intrinsic factors were also prompted and supported by personal reflection across primary, secondary and tertiary:

"As soon as I come out of a class, I think about the class… I think about how it went and how can I build on it again for the next one" (post-primary level, male, newly qualified).

Also, the use of student feedback informing or reinforcing personal reflection at tertiary level:

"There's nothing worse than sitting in a room and you know when you've lost the class, they've switched off, their heads are down…I get as much out of doing a good lecture as the students do" (tertiary level, male, semi-experienced)

It should be noted, that there was also a clear observation by participants across all three sectors about colleagues who were experienced teachers and who did not want to use personal reflection or feedback to learn new ways*: "A lot of lecturers just ignore feedback" (tertiary level, male, experienced).*

Theme: Extrinsic motivational factors

Extrinsic factors such as promotion and progression, especially at tertiary level, were reasons for upskilling. At primary level one of the reasons for upskilling was to receive three extra personal vacation (EPV) days. At both primary and tertiary level upskilling was seen as a 'box ticking' exercise, but this was not mentioned at secondary level:

"The economic promotion structure at third level requires you to check certain boxes" (tertiary level, female, experienced).

Theme: Environment

The environment influenced participants due to the perception of value placed on upskilling from management. At tertiary level *"historically teaching was undervalued" (tertiary, male, experienced).* However, within the data participants indicated that all new lecturers now had to undertake a Postgraduate Certificate in Higher Learning and Teaching. Increasing mastery of content or teaching methodologies to keep current was a common motivation across all three sectors:

"With the Junior Cycle English and much more of that being based around technology to a minor degree has opened up my eyes needing to upskill" (post-primary, female, experienced).

A number of participants were also influenced by colleagues who were new to the profession:

"As I became one of the more senior teachers...I have felt I need to keep up with my own professional development, particularly with all the fantastic young fresh ideas that are coming in with the newly qualified teachers that are coming on staff" (primary, female, experienced).

Theme: Support

Teachers were more motivated to upskill when there was value placed on upskilling: *"Encouragement from senior staff, having value placed on that upskilling within the institution, being given supports, emotional, financial"* (tertiary, female, experienced). In the primary sector unlike post-primary and tertiary, teachers relied more heavily on being made aware of courses by the principal. The post-primary and tertiary sectors were more independent when exploring training opportunities.

5.2 Research Objective 2: 21st Century Competencies

R2: "To explore teachers' knowledge and use of 21st century competences in teaching and planning"

A clear knowledge of 21st century competencies was shown across all sectors. There was no trend in the importance of different competencies as they were regarded as being 'subject' and 'context' specific.

The majority of teachers subconsciously planned and integrated the competencies into their work, as outlined below. Yet, they were influenced by external factors, such as the Department of education, the Junior Cycle and external bodies (as in the case of tertiary level education). The sub-themes explored the level of awareness and planning and integration by each of the participants.

Theme: Awareness

There was a greater level of consciousness of 21st century competencies, in primary sector due to newly implemented methodologies, as well as at post-primary level owning to the new Junior Cycle:

"I think that problem-solving is very much at the forefront now…If you're to look at senior cycle in school the way maths has changed, I definitely thing that's a 21st century thing" (primary, female, experienced).

At tertiary level two out of four tertiary level participants argued that 21st century competencies were nothing new: *"21st century competencies are things we were doing in the 20th century…I think what's really helpful though is it does help frame the conversation"* (tertiary, female, experienced).

In the section of the interview regarding competencies, participants were initially asked to rank pre-defined 21st century competencies to frame the conversation regarding competencies. This was also to see if there were any common perceptions of priorities. When asked to rank in order of importance, there was no pattern in any of the sectors apart from 'creativity' which was put last by eight of the twelve participants. The most common competency that was added when participants were asked to add any other competencies to the list was 'technology'.

Theme: Planning/ integration

At primary and post-primary level, newly qualified teachers had a clearer and more purposeful view of the competencies when teaching and planning: *"We had to have all of those competencies in our lesson plans all the time…because I'm still in the teacher training frame of mind"* (post-primary, female, newly qualified). On the other hand, more experienced teachers did not integrate competencies consciously and argued that they integrated them subconsciously: *"Not always hugely conscious, I think you do it automatically"* (primary, female, experienced). Experienced participants stated that they would be able to retro-fit or identify competencies if asked.

"I never think about the 21st century competencies when I design my classroom…If somebody sat me down and said 'You need to demonstrate where these are in your programs' I would do it. But nobody yet has asked me to do this" (tertiary level, female, experienced).

"The competencies come in (when planning) naturally I suppose" (primary, female, experienced).

"Probably not consciously…but I think by what I do, a lot of the competencies are involved anyway" (post-primary, female, experienced).

Across all three sectors summative assessments were competency based: *"It would be conscious (the use of competencies) in terms of the assessment design" (tertiary, female, experienced.* The competencies for assessment are defined by outside institutions, such as the Department of Education in the primary and post primary sector or external Qualification bodies and university departments in the tertiary sector.

A number of participants observed that they did not use every competency all the time. This could be because the competencies used were subject specific:

"I think about them not as 21st century competencies but as a range of skills my students should have because of the degree I'm teaching. But, if I was teaching a different degree, I don't know that I would necessarily prioritise that list of skills" (tertiary, female, experienced).

5.3 Research Objective 3 and 4: Peer Coaching and Knowledge Sharing

R3: "To understand if peer coaching can be used to enhance teachers learning"

R4: "To explore the culture for knowledge sharing amongst teachers"

Knowledge sharing, and peer coaching were seen to be key parts to professional development in the education sector (Knight and Cornett, 2009*)*. There were different forms of communications, such as formal systems (school and government) and informal conversations, and the frequency and quality depended on the culture of the organisation. The sub-themes overlapped, and the information was grouped together which will be discussed in more detail below.

Theme: Systems (Formal and Informal)

Formal Systems:

Peer coaching was seen through formal systems for new teachers, through the Droichead process (for inducting newly qualified teachers) in primary and post primary level and through the Postgraduate Diploma in Higher Teaching and Learning at tertiary level. Both formal

processes involved structured reflection by students and organised observations. All participants (newly qualified teachers) viewed the process as being beneficial and supportive: *"This person was great actually and gave me really good advice" (post primary, male, newly qualified).*

The majority of participants saw the benefit in observations, but there was apprehension and fear at all levels regarding formalised reflection and peer observation processes for experienced teachers/ lecturers: *"If you're a senior professor or lecturer there's a lot of ego in it, a lot of them wouldn't like to be told that they're not doing something right" (tertiary, male, experienced).*

"I suppose the fear is that they find fault with what you're doing" (primary, female, experienced). Formal observations were also seen as manufactured: *"I just feel that you put on a performance, that it's not reality" (primary, female, experienced).*

Once the environment for the formal observations had passed in all three sectors e.g. official induction processes, the majority of participants did not want to continue with regular observations.

Informal Systems:
Knowledge sharing was seen to happen organically through informal conversations and the frequency reflected the various needs of the teacher. Knowledge sharing also happened continuously, but it was more frequent for newly qualified. For example, newly qualified teachers at primary and post-primary levels noted that they would speak to more experienced teachers on a daily basis:

"I would go to my colleagues daily for advice as I believe it makes me a better teacher, weighing the options and taking others advice on board. Teaching is a very broad term and there is so much to it" (primary, female, newly qualified).

"I'm over in my mentor's room every minute" (post primary, female, newly qualified).

There was a symbiotic relationship seen at primary and post-primary levels as new teachers shared new practices with more experienced teachers. However, this was not the case at tertiary level:

"With the new Junior Cycle, I'm very comfortable with it, but my mentor isn't. So, she comes to me a lot…we work together well, but we would both go to each other" (post primary, female, newly qualified)

"There's an exchange of ideas and advice there on a daily basis" (primary, female, experienced).

At tertiary level there was the least amount of knowledge sharing by experienced lecturers: *"Even if I got a new module to teach, I might go to the colleague that previously taught the module…But it's rare that that kind of thing comes up. It's more that I've built up my own bank of experience and I don't feel like I need to get other people's advice at this stage" (tertiary, female, experienced).* Time was also noted to be a factor for the lack of knowledge-sharing at tertiary level: *"I've taken on more responsibility in the last year...it depends how busy we are but maybe once or twice over a semester" (tertiary, male, semi-experienced).*

Nonetheless, time was viewed as being a major issue affecting knowledge-sharing across all sectors: *"people are so busy doing their own stuff, you don't really have time to help other people, or kind of engage with other people" (tertiary, female, experienced).*

Theme: Culture

The culture of the institution and attitudes of individuals determined the amount of knowledge-sharing. Participants also noted that, while they were happy to share, this was not always the case: *"Often that depends on the personalities involved and everything and a willingness to share ideas" (primary, female, experienced).* This feeling was also experienced at tertiary level: *"I find that staff weren't receptive to it, just on an individual basis. Colleagues weren't receptive, they just weren't used to that way of thinking" (tertiary, female, experienced).*

Across all sectors it was noted that the education sector was quite an "*individual work cult*ure" *(tertiary, female, experienced).*

There was a lack of risk-taking behaviour in primary and post-primary. Fear and time were cited as the key reasons for this. At tertiary level there was more risk-taking behaviour, but on those occasions, there was a lack of support from leadership. Culture was also deemed to be an important motivating part of whether risk-taking occurred or not: *"The academic culture in the university I'm in is very much against errors, against mistakes, whereas the last university I was in was absolutely about being creative with what you had."* (tertiary, female, experienced).

One of the reasons for a lack of risk taking at tertiary level was fear: *"you can't really admit you need help in a workplace when you can't make mistakes"* (tertiary, female, experienced).

The perceived value of knowledge was a consistent factor across the three sectors, which determined whether peer coaching and knowledge-sharing had been successful:

"A lot of academics would probably be resistant to that because teaching isn't a huge part of ourselves in the university sector. It's probably only about 25% of our job…It's not a massively valued part of many academics, or of how they would view their job" (tertiary, female, experienced).

"There's so much to learn from the new methods and new teachers coming in…there's an awful lot of wealth of knowledge to be gained from older teachers experience, and sometimes I think that maybe overlooked and not valued as much as it should be" (primary, female, experienced).

It was also noted at both primary and tertiary level that older colleagues were the least likely to want to share knowledge. In contrast, that culture had shifted with new teachers/ lecturers, who were keener: *"not every older teacher is willing, but I think there's an awful lot to be gained with younger teachers and watching them in the classroom"* (primary, female, experienced).

"We tend to be dinosaurs, we have learned a way of doing it sometime 20 years ago. We're still going to do it the same way more or less" (tertiary, male, experienced).

5.4 Research Objective 5: Professional Learning Communities

R5: "To understand if Irish educational sectors are ready to facilitate Professional Learning Communities"

None of the participants engaged with professional learning communities as they are defined by the literature.

The learning communities, as defined by the participants, across all sectors, included a one-way exchange of ideas or information by professional bodies or associations.

Theme: Awareness (or lack of)

Across all sectors participants had some awareness of their associations. There was mixed engagement with only 2 out of the 12 participants engaging with teaching and learning groups in-house. In the tertiary sectors there were dedicated teaching and learning departments, but only one of the participants mentioned using them:

"If I had something I wanted to try out, some new approach…the first thing I'd do is contact the CAP program (teaching and learning department) in University and they would talk me through it" (tertiary, male, semi-experienced).

There were no dedicated teaching and learning groups mentioned by the participants at primary and post-primary level.

Theme: Type of Communication

The types of communication used by different associations included: conferences, talks, magazines, circulars, and online. The most effective form of communication and engagement across all sectors was via the internet, through emails, mailing lists and social media being found the most effective at engagement: *"There are quite a few groups on Facebook…I find them quite useful because it's coming from different teachers" (secondary, female, newly qualified).* The frequency of communication ranged from weekly, monthly, bi-yearly and yearly depending on the association. No particular frequency was signalled as being especially beneficial. An individual's engagement with information was unique to each participant and

depended on need: *"I only look at it for a moment before I delete. But I look at it long enough to decide if there's something in it that might be relevan*t" *(tertiary, female, experienced).*

Theme: Time

Time was another factor associated with engaging with professional learning: *"It's never been brought to me and I've never really had the time or inclination to really go looking for it"* *(secondary, female, experienced).* A number of participants noted the benefits of online communication in regard to helping with time issues:

"The online resources are probably the strongest bit for academics because everything's there and you don't have to wait for a training (session)" *(tertiary, female, experienced).*

5.5 Research Objective 6: Assessment/ Measurement Findings

R6: "To explore teachers' attitudes to assessment and measurement and its potential relationship with professional development"

All of the participants recognised the importance of accountability, but there was no agreement on what accountability should look like. Each participant valued different areas for example; environment, student positivity, student interest, engagement and results which are dependent on the students' individual ability: *"This is not all about them getting A grades or H1's but it's about your individual student"* *(post primary, female, experienced).* Another participant recognised one of the other difficulties with accountability:

"The thing is with children, some children are just not going to get it, they're just not going to understand what it is you're trying to teach. You cannot be held accountable for those" *(primary, female, experienced).*

These sentiments are also echoed in the next discussion around student responsibility.

Formal Systems

Student grades at the end of modules or year were used as a formal system of measurement across the three sectors. The validity of these was questioned across the sector as well by a number of participants: *"it's very subjective. If you simply assess marks…year on year that could vary massively with nothing to do with your teaching methods or your teaching success. It could be something to do with the student body itself"* (tertiary, female, experienced). Student feedback was formally collected at tertiary level and informally and on an-hoc basis at post-primary, with none at primary level. The quality of the feedback was questioned at tertiary level:

> *"The problem is your student who just doesn't like the module and they just don't want to engage, and they do the bare minimum and they give you shitty feedback at the end"* *(tertiary, female, experienced).*

Despite this criticism, student feedback was viewed as being an effective way for lecturers to reflect on their effectiveness of their teaching.

Informal Systems

A number of participants stated that they used anecdotal measures, such as questioning and observation, to inform personal reflection: *"I give more weight to what is going on every day and the happiness (of the students). Am I getting good positive feedback from the students, do they seem to be engaging?" (post primary, female, experienced).*

A Lack of Systems

None of the participants mentioned the use of results when identifying gaps in their professional development until they were prompted by the researcher. A formal feedback loop was only mentioned once at primary level, which comprised of a *"monthly review which you hand to your principal" (primary, female, experienced).* However, this covered content (where the teacher was in the syllabus), rather than success. No other formal measurement systems informing a teacher's professional development were mentioned.

Theme: Fear/trust

The use of metrics prompted a number of the participants to raise issues of fear and trust surrounding the use of measurements. In particular, some of the comments focused on the idea that teaching is individual, and no two teachers teach the same way:

"There is a real fear factor of you being evaluated by your colleagues…teaching can by quiet alienating. Because you're in your room, you're doing your own thing, it's quite individual" (post primary, female, experienced)

There was also a fear about how the metrics and information would be used:

"It depends on how the information is used and there's a scare part there. Is this open to everybody to assess?...I would be fearful of how that could be used and if it could be used as a tool against a teacher" (post primary, male, experienced).

5.6 <u>Conclusion</u>

Following the identified themes and the sub-themes above the researcher observed the multi-faceted nature of the education sector. The autonomy and individual nature of the role of the teacher/ lecturer is set against individualistic work cultures, whilst belonging to an overall environment has many challenges in understanding effective professional development. There were also common issues of time, fear/ trust, systems and their quality, a complex working environment made up of different needs and abilities of students, and different attitudes, values and beliefs of the participants which are different even when working in the same educational sector, as challenges in teachers 21st century professional development needs.

Chapter 6: Discussion

This chapter will discuss the findings of the data in relation to the literature. It will seek to identify any commonalities or differences that Irish educators have across the three sectors in relation to the current global literature through the primary and secondary research questions.

R1: To understand the motivational factors behind teachers upskilling

An important aspect of a teachers' responsibilities is to ensure they remain well-informed and up-to-date with best practises (Ross and Bruce, 2007). The participants interviewed for this study supported this view, and the data highlighted an intrinsic motivation to keep informed. However, further analysis of the data revealed that there was no clear ownership of the responsibility to upskill. Instead teachers interviewed relied on external bodies, or school leaders to keep them informed. The main reason cited by the participants for this was time. For example, one of the time constraints, from the participants interviewed, was family commitments. This supports the findings of Bozkus and Bayrak (2019) who found that female teachers most commonly cited this reason. Another interesting finding, which has not been discussed in the literature, was how newly qualified teachers can potentially motivate experienced teachers to upskill. Especially, in the case of new syllabuses and methodologies.

Studies conducted by Bowles (2002) suggest that the main motivations behind teachers' upskilling were intrinsic in that they are associated with a sense of competency, commitment, improving learner outcomes and knowledge. This is in contrast to the work of Bautista *et al*. 2018 which suggests that motivation is based purely on skills and knowledge. The intrinsic motivational factors of the participants were not distinctly affected by the number of years' experience, and this can be seen in contrast to the literature of Sharma and Pandher (2018) and Krishnaveni and Anitha, (2007). Conversely however, the motivation was about the participants' individual experience and not on exchanging experiences with others and this is contrast to the study of Sobkin and Adamchuk (2015) where they found that teachers were motivated by exchanging collective experiences.

In Ireland, in this study, it has been found that the main external motivation for upskilling were socio-psychological factors such as career progression at tertiary level. However, these motivations also worked alongside a more lassiez-faire attitude as they were part of 'box-

ticking' exercises. This attitude was also found at primary level where all professional development conducted in the summer was to obtain EPV days, another box-ticking exercise. These findings contrast with the literature which suggests that the major factor for upskilling was intrinsic motivation (Bautista *et al*., 2016). The data of this study did not support this one way or the other.

R2: <u>To explore teachers' knowledge and use of 21st century competencies in teaching and planning</u>

The interview data shows that all of the teachers had a good awareness of the 21st century competencies as identified in Figure 4: 21st Century Skills. However, in contrast to what has been suggested within the literature (Norahmi, 2017) there was not a key focus on technology. Furthermore, the competencies were more in the forefront of newly qualified teachers in primary and post-primary institutions. This reflects their pre-service training and knowledge of new ore more recent subject specifications. There was a clear consciousness in all sectors about the need for the competencies.

Across all sectors experienced teachers noted that they automatically included the competencies in their teaching, they were also not seen as a new entity. This is in contrast to the literature which suggests that the 'buzz words' of 21st century competencies infer that teachers were not already emphasising the competencies (Ananiadou and Magdalean, 2009; Jia *et al.,* 2016; Norahmi, 2017).

Although a few teachers listed technology as a competency that they would add, the majority of teachers did not mention this factor when discussing their planning and teaching. Again, this contrasts with the literature which places technology at the forefront of 21st century education (Greenlaw, 2015; Norahmi, 2017). The lack of trend in the importance of competencies in the data supported Pellert (2007) findings that teachers focus on competencies in their own field. The most prevalent argument found within the literature is that educators need to be able to move out of their comfort zones and go beyond their disciplines in order to address the needs of their learners for 21st century living (Nandan and London, 2013). In light of this, further study could focus on investigating the advantages and disadvantages of this approach for teachers and their students.

RO 3: To understand if peer coaching can be used to enhance teachers learning

According to the interview data, there was a particularly positive attitude towards formal peer coaching during the induction process (first year of teaching) for new teachers, this was known as the 'Droichead' process in primary and post-primary education. During the Droichead process there was a positive mentor relationship between newly qualified teachers and experienced teachers. At tertiary level, the use of peer coaching was also seen as supportive and helpful for those working towards their teaching qualification. This concurs with Zhang, Liu and Wang's (2017) which views peer coaching as helpful for transferring teaching knowledge into practice. Upon completion of the first year of teaching, there was no more peer coaching in any of the sectors. The idea of peer coaching for experienced teachers was met with apprehension and fear, and there were no systems in place in any of the sectors. This disputes Ma, Xin and Du (2018) findings that in-service teachers found it easier to work with and accepts peers' critiques and guidance. The data from the interviews shows that peer coaching is beneficial, but that it needs an effective vehicle to orchestrate it. It is clear that the Droichead process successfully supports both the new and experienced teacher in enabling peer coaching, but there is yet to be a process identified that supports that relationship for experienced teachers in their development. The interview data identified a difficult culture of fear, trust and judgement to overcome for successful peer coaching for experienced teachers.

RO 4: To explore the culture for knowledge sharing amongst teachers

Three factors emerged as key to affecting knowledge sharing: attitude, time and environment. At tertiary level time was identified as a factor that prohibited knowledge-sharing. This supported by the work of Szulanski (1996) which states that a lack of time affected knowledge-sharing behaviour. Individuals personality was mentioned at both primary and tertiary level, but not at post-primary. There was a clear trend showing that participants were selective about who they would go to, rather than mentioning peers who would not share information. For example, at tertiary level there were clear descriptions of personalities who were unlikely to or would not, pay attention to feedback and who actively avoided engaging with knowledge-sharing. This supports Yang's (2008) studies which highlights the inevitable presence of employees who do not want to engage with, or hinder, knowledge-sharing. A team environment for knowledge-sharing was only mentioned at the post-primary level. However, the remarks regarding this appeared flippant and participants answers focused more on individual

knowledge-sharing. This contrasts with the findings of Agemang *et al.* (2016) which found that teachers work as teams in schools.

The teaching environment was mentioned as a barrier to knowledge sharing where the institution did not support risk taking or did nothing to encourage team-work. This is particularly notable because the importance of a learning culture in order for effective knowledge sharing, development of skills and resources is identified within the literature (Elmore, 2000; Fullan, 2006).

Furthermore, there was a downwards correlation in knowledge-sharing from newly qualified to experienced teachers and from primary to tertiary level. However, experienced teachers in both primary and post-primary sectors engaged with knowledge-sharing on a more regular basis. This supports the findings of Chen (2011) who found that high school teachers showed a *"very aggressive and ardent willingness"* (p. 1004) to engage with knowledge-sharing activities.

There was a positive relationship between teachers' PD and knowledge sharing when it did occur. This 'active learning' is supported by the literature in the work of Desimone, Porter, Garet, Yoon and Birman (2002). All participants found knowledge-sharing beneficial in increasing their PD. This is supported by the findings of Handal and Lauvas (1987). It was also found that the most beneficial knowledge-sharing happened in informal settings. In addition, discussions were found to be more prevalent at primary and post-primary. This highlights one of the challenges for the tertiary sector, as there is clear value in teachers' interactions as the discussions are not just about strategies and can range from pedagogy to practice and inspiration, supporting the findings of Underwood and Joshevska (2019). Furthermore, it also supporting the importance of the tacit knowledge transfer which is currently lacking at tertiary level. The major reasons given by tertiary lecturers for not engaging was lack of time and also a focus on getting their research done.

RO 5: To understand if Irish educational sectors are ready to facilitate Professional Learning Communities

Gutierez and Kim (2018) argued that PLCs were made up of teachers, researchers and policy makers within institutions. However, the interview data highlighted PLCs to be understood as

teacher engagement with professional associations and occasionally teaching and learning groups. This partly supports DuFour's (2004) understanding of PLC which was any type of group with an interest in education.

According to the interview data, engagement with professional associations was sporadic in terms of meetings, or continuous without physical engagement as seen by mailing lists. The effectiveness of engagement with these associations was difficult to assess as the participants spoke about small individual bits of information they might use within their teaching at a particular point in time. This is supported by the literature which suggests that in order for PLCs to be effective there needs to be accountability, measurements and regularity (Hoaglund, Birkenfled and Box, 2014). One of reasons stated by the interviewees for not engaging more actively with PLCs and seminars was time.

The environment in which PLCs operate such as continuous collaboration and multiple stakeholders (Svendsen, 2017), was not evident at primary and post-primary. At tertiary level there was more evidence of multiple stakeholders such as collaboration with companies, think-tanks and educational organisations. Collaboration amongst teachers only happened on a selective individual basis throughout the three sectors. The individualistic nature of teaching as identified by the participants and supported by the findings of Ning, Lee, Lee (2015) is at odds at the team environment needed to make PLCs effective (Brown, Horn, King, (2018). This supports the evidence which suggests that there is a lack of PLCs found by the researcher. In addition, it was found that collaboration happened on a small scale. Teachers engaged with professional associations on an ad hoc basis, but it was a one-sided communication e.g. teachers were given knowledge, rather than a two-way flow of information. At primary and post-primary level, engagement with education centres were mentioned positively several times which contrasts with the findings of Bautista *et al. (*2018). Engagement through education centres was facilitated by the leadership at primary level. This supports Vekeman *et al.* (2018) which highlighted that leadership teams tended to promote PLCs. According to the data for this study, leadership teams did not facilitate or encourage engagement with PLCs at post-primary or tertiary level. This may explain the lack of engagement with PLCs among teachers. This view is supported by the work of McCaughtry *et al.* (2006).

The use of online communities was more highly favoured than the literature suggests. When the participants spoke about online engagement, they stated that they found it more effective

and were contacted more frequently than meetings. This does not support the evidence of Sobkin and Adamchuk (2015) that suggests that online engagement is not an effective tool. The number of years' experience did not affect the engagement with PLCs. However, there was a higher level of engagement at a university level learning community with more experienced tertiary level lecturers, although this was also closely associated with their career progression.

The literature is clear in the benefits associated with PLCs (Wilson, 2016; Svendsen, 2017; Braga *et al*., 2017; Gutierez and Kim, 2018) which include improved teacher PD and student outcomes. However, the data suggests that particular importance is not placed on PLCs among the participants interviewed as a means for improving their professional development. Therefore, this suggests that their engagement has no clear structure or purpose. The reflections of the participants suggest that the leadership is not engaged with the promotion of PLCs as a benefit to teachers' PD either. Existing research highlights the key role school leaders play in successful and effective PLCs (Svendsen, 2017; Brown *et al*., 2018). Considering this, further study could look at the attitudes of Irish principals towards PLCs.

RO 6: To explore teachers' attitudes to assessment and measurement and its potential relationship with professional development

With the exception of exam results, the primary method of measurement and assessment was teachers' perception. This is supported by the literature (Kang *et al.* 2013). However, the effectiveness of it is difficult to measure as it is subjective and individual. Although all teachers believed in accountability, there was no agreement about exactly what would constitute accountability. They also saw the benefits in measurement to inform PD. However, again there was no consensus on what it would look like. This is because each teacher measured themselves subjectively, reflectively and looked for different areas to measure their success. This supports what Lynch (2007) highlighted about the complexities of education where he stated that *"in education not everything that counts can be counted and not everything that can be counted counts"* (Lynch, 2007, p.5, cited in Gleeson and Ó Donnabháin, 2009, p. 41). This also supports the idea that the education sector has a number of complex and complicated outcomes.

In terms of teacher PD this poses another issue. This is because as teachers mainly use reflection to assess their success and future needs and, because this is based on individual

perspective, it is not robust. This is supported by the work of Lortie (1975) and Spring (1991) that concludes that teacher knowledge is connected to personal experience and reflection rather than "*well-defined measures of learning outcome*" (Agyemang *et al*. 2016, p. 66).

After analysis of the post-primary level it was found that teachers spoke more about their role in students' lives rather than grades, whereas in primary and tertiary it was more about leading students through the academic side of school life. This difference supports the work of Makovec (2018) who noted that a teachers' individual perception influences their role in the classroom. This adds to further challenges in identifying measurements as teachers are individuals, they will view and experience their roles differently. Teachers needs are numerous and varied. In addition, added to the matrix are years of experience, subject area and sector and this supports the findings of Caddle *et al.* (2016). In line with Glatter (2003) findings, the research shows that teachers tend to favour 'responsive' methods of assessment and accountability. The findings also highlight the current tension between the 'bureaucratic' (grades) measurements of the current education system and the teachers who believe in more 'responsive' (process) measurement and accountability. This was also identified by Gleeson and Ó Donnabháin (2009).

Chapter 7: Conclusions

This study aimed to explore challenges teachers faced in 21st century professional development across the three sectors in the Irish education system: primary, post-primary and tertiary. The findings from this research have provided evidence to support much of the literature about the various complexities and difficulties associated with effective professional development in the education sector in Ireland. Overall, the findings highlighted the lack of strategic planning for aligning professional development with the needs of the teachers and against organisational goals. It also highlights that teachers, except first year teachers, are left to decide their own professional development needs and that this is done without measurement, accountability or feedback. The study also highlighted the significance of the different the needs of individual teachers and that the teachers' own perception plays a large part of their thoughts and beliefs towards PD and their needs. Therefore, it is argued that the current system of PD available in Ireland needs to adapt to a more personalised approach, although whether this is feasible or not is subject to further research.

Analysis of the three sectors has served to identified numerous similarities and differences between them. The skills teachers need within each sector and across the sectors vary with the socio-economic environment of the area, school culture, age of the students, subject area, number of years of experience and the individual teacher perception of their needs and ability. In this sense, the sectors are all similar as they each pose a unique set of challenges A lack of awareness of systems, organisational goals and structured purpose across all three sectors in informing PD also emerged from the results of the study. At the same time, the current economic environment is focused on increasing knowledge creation for the future workforce, but not on how to ensure that the educational environment aligns with outside needs. The expectations that teachers remain relevant and up-to-date, is not unreasonable. However, the professional development currently offered is reactionary, rather than pro-active in in assessing future needs.

It has been found that the buzz word of '21st century competencies', is not a teachers' focus, as it is the governments, most teachers argued that the competencies were well in use and being taught before the 21st century. This suggests that there is a disconnect between the government policy of ensuring 21st century competency and skills and what teachers are currently, and already, doing. The key findings suggest that teachers view 21st century needs differently than

the literature suggests and that their reflections are embedded and embedded with their experiences, individual environment and workplace culture. For example, none of the teachers' emphasised the use of ICT among the students. Instead, they emphasised rather that students need to able to handle large volumes of knowledge and importantly, that they were happy and resilient.

Furthermore, there was an interesting link between knowledge-sharing and measurement/ assessment. Whilst all the participants agreed they were useful, they were quick to place conditions on them and noted the challenges. These were based around trust, fear and relationships. This also had an impact of the attitudes towards knowledge-sharing amongst teachers. For example, teachers still appeared to be influenced, by what is a largely autonomous work environment and selective group work, based on the attitudes of peers who are willing or not to collaborate or share knowledge. This has also negatively affected attitudes towards peer coaching. This is made further challenging by how teachers view their needs differently, thus further reinforcing the individualised work culture rather than a team environment. This is further compounded by factors such as different subjects that stress different competencies. Apart from the formal newly qualified teacher induction process, knowledge-sharing happened as a result of an individual teacher being motivated to seek knowledge for personal improvement. Therefore, there were three main factors that prevented: individuals, environment and time.

With PLCs there was a notable lack of active learning. However, engagement was driven by the participants' motivation. The motivation for PD was evident throughout. Interestingly, 'time' was a constantly mentioned factor for a lack of active PD. This was not evident in the literature.

The most notable absence in the across the Irish education sector is the presence of systems for measurement for improving teachers' PD. Cosán, the national framework for teachers learning, (The Teaching Council, 2016) has sought to bridge this gap. However, the culture of fear and mistrust around assessment or observations of peers means that it has a number of obstacles to overcome. This study may be particularly useful in light of the inclusion of the assessment of three levels of the education sector. The use of results of grades from school-set exams or state exams can be subjective depending on the quality of the exam set, the person marking it and the student taking it and therefore cannot be said to a robust form of measurement. Despite

this, it is currently the main accepted level of measurement used across the three educational sectors.

The use of the interview method was useful for the purposes of this study because it reflected a profession where reflection forms a large basis of a teachers' improvement in PD. This is because experience forms a key part of their PD. As the researcher was looking at a number of areas, the questions were brief, and the data gathered was broad in nature. It must be noted that no single area of investigation has been examined in detail. Each area could have formed the purpose for a whole interview. Therefore, the broad information gathered cannot give a detailed picture. However, the evidence collected provides indicators into some of the challenges facing teachers with 21st century PD. Interestingly, a number of participants noted how much they enjoyed doing the interview as they never usually got specifically asked about their own PD, or their thoughts on it, and that some hadn't spent much time thinking about it. This suggests that there is room for more teacher engagement with their PD and there is a positive attitude towards it.

The challenges facing teachers in the education sector in Ireland reflect the challenge of defining the role profile of an educator. The literature suggests a need for teachers to remain up to date, relevant, creative, the list goes on. The research finds that the solution needs to contextually relevant in order to address the needs of 21st century. As a result, educators will need to step outside of their comfort zones and subject specific areas. The issues of increasing workloads and, more importantly, work environment and work culture aren't commonly viewed as important factors to address first, rather than putting sole responsibility on the individual teacher to ensure that their skills are up-to-date. Therefore, it can be argued that focus should be placed on leadership teams to create the right environment. In addition, they should seek to be creative and innovative when developing measurement tools, to allow for socio-economic factors as well as the socio-factors of the make-up of their staff, not only that, but that it is essential to include teachers in the conversation to ensure actual needs are being met.

Chapter 8: Recommendations

8.1 <u>Research Recommendations</u>

In light of the research results, and the limitations associated with this study, three main recommendations can be put forward for further research study. Firstly, this study does not include students' perspectives, ability, willingness to learn and motivational factors. As the purpose of teaching is to prepare students for the work world, and life as a responsible citizen the two areas need to be looked at in combination to truly inform teachers professional development.

Secondly, an independent study of each of the areas related to professional development as identified: motivation, 21st century competencies, peer coaching, knowledge sharing, PLCs and measurement/ assessment is worthy of its own independent study. And thirdly, a focus on the culture of organisations of educators to see potential links between organisational culture and professional development. This will provide a more detailed picture than the current study was able to give.

Primary and post-primary teachers were more aligned to their needs than at tertiary level. Tertiary education appeared to demonstrate its own priorities, as identified through its split of 40:40:20 (teaching, research, university needs). University priorities are split because their research practices, rather than their teaching practices, inform university rankings more. They also have a closer connection with international institutions and organisations as a result of collaboration with companies and professional associations. As a result, future research studies could be more relevant by examining the needs of primary and post-primary teachers' together, despite the fact that the students' developmental stages are different. For example, this could include the needs of a five-year-old in comparison to the needs of a teenager.

Finally, in light of the evidence collected by this research that highlighted time constraints as a barrier to effective PD across all three sectors, further investigation into the use of dedicated time slots within a school day or part of a time table for professional development would be beneficial. Currently, the new Junior Cycle allots 40-minutes of professional development time a week. Therefore, further research could attempt to assess whether this allocation has successfully solved or alleviated the 'time' issue.

8.2 <u>Practical Recommendations</u>

The practical recommendations of this study call for a more focused and structured approach to professional development, which also supports and encourages a team rather than an individual culture/ environment. And also calls for better use of human resources. At tertiary level, there are dedicated HR departments, whereas at primary and post-primary level HR is done by the principal. Other potential influencing factors are the Department of Education and unions. Unions, in particular, can affect the timings and implementations of new schemes. However, new schemes done at a local level, can potentially avoid a 'one size fits all' approach as dictated by the Department of Education or HR departments at universities and as a result, can be more impactful.

Recommendation 1: Teacher PD linked to personal needs in line with overall key school/ university objectives

Robust systems of measurement agreed with teacher/ lecturer and management that focus on supporting teachers' needs whilst aligned with the school/ university objectives can ensure an organised and more effective approach upskilling. By engaging with teachers and lecturers in the creation of the measurements will allow them to be pro-actively part of the conversation, rather than a top-down approach. There is no cost involved, but there is potentially a time-cost. This can be off-set against training days and at post-primary level during the use of 40 minute planning time for the new Junior Cycle. It would be prudent to test the measurement system with one department before rolling out school/ university-wide.

Recommendation 2: Recognition of Professional Development

At tertiary level, there is recognition of PD through increased job prospects. At primary and post-primary level recognition of PD can be done through communication to staff and parents through staff meetings and emails and newsletters respectively. This can support a culture of learning and recognition which adds perceived value to professional development, thereby increasing teachers' motivation to engage with upskilling. It can also create value for learning for the school through parent perspective. Leadership is key element in building a culture of motivation and engagement. There are no monetary costs or time constraints as this can be rolled out by management through emails or staff meetings.

Recommendation 3: Time allowance for Professional Development

Time was a key challenge across all three sectors for upskilling. Currently, primary and post-primary schools organise cover for teachers who attend PD. However, the lack of substitute teachers or other cover teachers hampers the ability for people to have time to engage with upskilling. As a result, money is needed to pay for cover for lessons.

Dedicated time for upskilling not just off-site but on-site through in-house teach-meets (where teachers use their knowledge to teach other teachers) can encourage knowledge-sharing. This will encourage a team rather than an individualistic culture. This can be organised by management or dedicated Learning and Development groups in schools negating the cost factor. However, cover for organising events relies on the goodwill of the teachers or the cover of the teachers, which comes with its own cost. A potential solution is to give each department a budget for professional development and see what the need is and to review on a yearly basis.

Chapter 9: Personal Learning Statement

My purpose of studying the MA in Human Resource Management was because I had such different experiences working corporately compared to working in the education sector. In the education sector I see people working as individuals, not as teams and not working towards a clear objective. Most interestingly, there is a lack of measurement and feedback for the people who are key to implementing educational courses, the teachers. This thesis was in equal parts enjoyable, difficult, complex and fascinating. I was led to my research topic by identifying the gaps in my own sector through studying HR for the last two years. The research focused purely on teachers as I felt that there is a lack of focus on them, and that they are constantly being asked to do more with less time and resources.

This thesis reinforced my belief in the importance of teamwork and a support network. Neither of which I could have done without. It highlighted to me the importance of identifying and engaging people with different skillsets and attributes in order to get a job done and efficiently. I really enjoyed the interview process and found what an invaluable mine of information people are, and most importantly, the importance of giving people a forum to share ideas and experiences. The more I researched the more I realised that I had focused on too many areas. Each area I identified in the literature was complex and could have formed its own thesis. Selecting information that stayed for the thesis and what was discarded was an interesting challenge. It showed me that what you leave out it can be as important as the information kept in, in regards to creating a picture. I learnt so many skills doing this research project. The most important one was to always break a monster of a project into small goals, and tick them off, one at a time.

Most studies focus on one area in education e.g. primary or post-primary and certainly not three as I have done. I believe that whilst it was interesting gathering the data and looking for trends across the three sectors, given the limited time, it may have been more beneficial just to focus on one sector. Also, had time permitted, to do a longitudinal study. The study would also have potentially been benefited by using focus groups. However, unfortunately, time did not allow.

My research supported my belief that teachers need more support for their professional development and that it is a much under-valued area in education, ironically. It also shows what an opportunity there is, despite the challenges, to put in support structures to aid teachers

in their professional development. This thesis and two-year study has inspired me further to look into potential solutions to support myself and my colleagues in furthering our professional development in my own place of work.

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Appendix 1: Semi-Structured Interview Guide

I am interested in learning about the challenges teachers face in preparing themselves for teaching in the 21st century environment.

Could you tell me about your experiences of upskilling or engaging in professional development?

Motivation

- Tell me about a time when you were most motivated to upskill
- What factors encourage you to upskill?

21st century competencies

- Do you agree the following are representative of 21st century competencies: critical thinking/ problem solving, creativity, communication, collaboration?
  - Are there any other 21st century competencies you would see as part of that set?
  - Can you rank this in order of priority?
- To what extent do you feel you engage with the competencies when designing your curriculum or classroom activities

Peer coaching & knowledge-sharing

- How often would you go to your colleagues for advice about teaching
- Could you give me a recent example of when you went to a colleague for teaching advice?
- And an example of when a colleague has come to you. Can you tell me when that was?
- Can you tell me about the ways in which your colleagues and you engage with informalized peer-review and feedback?
- How could that system be improved for you?
- Have you ever done something risky in teaching and who supported you?

Professional learning communities

- Have you heard of your professional associations?
- Are you part of formal or informal networks around teaching and learning?
  - tell me what that association does
  - why are you not a member?
- How do these networks encourage you keep up to date with the latest research on teaching and learning?

Measurement & Accountability

- How do you reflect on your teaching success?

- How could measurement and accountability improve your professional development?

- What is the best example of measurement or accountability that you have seen in practise/ the worst?

Participant Information Leaflet

WHAT TYPES OF CHALLENGES ARE TEACHERS FACING WITH 21ST CENTURY PROFESSIONAL DEVELOPMENT?

You have received this information because you are being invited to take part in a research study that investigates teachers' experiences of professional development. Before you decide whether to take part in this research, you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Once you have read this information, you can also contact me with any questions that you have or if you would like further information. Take time to decide whether or not to take part.

WHO I AM AND WHAT THIS STUDY IS ABOUT:

I am a Masters Human Resource Management student at National College of Ireland. This study seeks to identify challenges teachers are facing in equipping themselves with the relevant 21st century skills. It also looks at educational environments and seeks to see if they support 21st century learning. The research will be used to write a dissertation as part of a Masters in Human Resource Management.

WHAT WILL TAKING PART INVOLVE?

If you decide to take part in this research, you will be asked to engage in a one-to-one interview, which will last between 40 minutes to 1 hour. The interview will take place in a location that is convenient for you. The interview will be audio recorded to allow me to analyse the data. During the interview you will be asked questions related to your experiences of professional development, including motivation, practices and environment.

WHY HAVE YOU BEEN INVITED TO TAKE PART?

You have been invited to take part as you are a teacher in the educational sector at either primary, secondary or tertiary level.

DO YOU HAVE TO TAKE PART?

Participation is on a completely voluntary basis. You do not have to take part in the research. If you do take part, you are free to decline to answer any question and you can withdraw from the study at any time without any consequence.

WHAT ARE THE POSSIBLE RISKS AND BENEFITS OF TAKING PART?

We do not anticipate any risks associated with taking part in this research. There are no direct benefits to you for taking part in the study. However, it is hoped that this research will help to identify factors that support and/ or prevent good professional development in an educational environment. It will also look to see if there are any learnings and useful practices that the different educational levels could learn and adopt from each other. This information could be used to inform changes to improve 21st century professional development and therefore benefit both teacher and as a result student.

WILL TAKING PART BE CONFIDENTIAL?

Taking part in the research is entirely confidential. Any identifying information such as names will be redacted from interview transcripts. When writing up my findings, some quotes from interviews may be included, but these will not contain any identifying information. Non-anonymised data in the form of signed consent forms and audio recordings will be collected and retained as part of the research process. The information that we collect will be only be accessed by the research team (myself and my supervisor).

HOW WILL INFORMATION YOU PROVIDE BE RECORDED, STORED AND PROTECTED?

The interview will be recorded with an audio device. The audio file will be transferred to secure storage on a local drive on my computer. Audio files will be transcribed and stored in secure, password protected files. The data will be retained for two years after the exam board convenes in Winter 2019 and then deleted.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?

The results of the study will be submitted in the researcher's dissertation.

WHO SHOULD YOU CONTACT FOR FUTHER INFORMATION?

CONTACT INFORMATION

Researcher	Supervisor
Emma Beamish BA, PGCE Email: x17134277@student.ncirl.ie	Caoimhe Hannigan PhD, MSc, BA Email: Caoimhe.hannigan@ncirl.ie

Thank you for taking the time to read this.

Emma Beamish

Researcher

Appendix 3: Consent Form

WHAT TYPES OF CHALLENGES ARE TEACHERS FACING IN 21ST CENTURY PROFESSIONAL DEVELOPMENT?

CONSENT TO TAKE PART IN RESEARCH

- I …………………………………. voluntarily agree to participate in this research study.

1. I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequence of any kind.

2. I understand that I can withdraw permission to use data form my interview within two weeks after the interview, in which case the material will be deleted.

3. I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.

4. I understand that participation involves a 40 minute to 1-hour face to face interview, which will be audio recorded to assist with analysis.

5. I understand that I will not benefit directly from participating in this research.

- I agree to my interview being audio-recorded.

- I understand that all information I provide for this study will be treated confidentially.

- I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identify of people I speak about.

- I understand that anonymised extracts from my interview may be quoted in the researcher's dissertation and published papers.

- I understand that if I inform the researcher that myself or someone else is at risk of harm, they may have to report this to the relevant authorities – they will discuss this with me first but may be required to report with or without my permission.

- I understand that signed consent forms and original audio recordings will be retained by the researcher until the completion of their dissertation in October 2019 (after the exam boards)

- I understand that a transcript of my interview in which all identifying information has been removed will be retained for 2 years (from the date of the exam board) until 2021.
- I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

CONTACT INFORMATION

Researcher	Supervisor
Emma Beamish BA, PGCE Email: x17134277@student.ncirl.ie	Caoimhe Hannigan PhD, MSc, BA Email: Caoimhe.hannigan@ncirl.ie

Signature of research participant:

……………………………………….. ……………..

Signature of participant **Date**

………………………………….

Signature of research:

I believe the participant is giving informed consent to participate in this study.

……………………………………. ……………..

Signature of researcher **Date**