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Teacher Perspectives on the Implementation of Information and Communications Technology (ICT) in Irish Junior Certificate Modern Foreign Languages (MFL) Classrooms: Potential Benefits and Drawbacks

Teacher Perspectives on the Implementation of Information and Communications Technology (ICT) in Irish Junior Certificate Modern Foreign Languages (MFL) Classrooms: Potential Benefits and Drawbacks

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List of Acronyms and Abbreviations

- Acceptable Usage Policy (AUP)
- Assessment for Learning (AfL)
- British Educational Research Association (BERA)
- Computer Assisted Language Learning (CALL)
- Digital Assessment for Learning informed by Data to motivate and Incentivise Students (DALDIS)
- Dublin City University (DCU)
- Information and Communications Technology (ICT)
- Modern Foreign Languages (MFL)
- The Research Council UK (RCUK)
- Zone of Proximal Development (ZPD)

Abstract

In light of recent Irish educational policies promoting the implementation of information and communications technology (ICT) in Junior Certificate Modern Foreign Languages (MFL) classrooms, this research aims to establish the nature of its usage through a positivist lens. Data is gathered using a quantitative methodology in conjunction with convenience and purposive sampling, with forty online participants chosen in the East of Ireland. The findings suggest that the majority of teachers highly rate the importance of ICT in MFL pedagogy while also feeling relatively confident in implementing it. However, it is recommended that further educational reforms be considered to provide equal access to technology for all students across the country.

Chapter One: Introduction

This dissertation aims to analyse teachers' perspectives on the implementation of ICT in Irish Junior Certificate MFL classrooms. Digital technology is ever-evolving, and traditional teaching methodologies are now being used in conjunction with digital teaching strategies in contemporary education (Timotheou et al., 2023). In their journal article, Haleem et al. (2022) explain that, when used appropriately, digital technology can enhance the learning experience for students and enable them to engage more with the curriculum. Furthermore, Gomathi and Radhakrishnan's (2021) experimental study found that ICT is assisting to improve academic performance while also opening new and previously unexplored avenues for educators to develop innovative, interactive, and engaging activities. In this sense, the current paradigm shift is transcending the way teachers teach and the way students learn (Timotheou et al., 2023). Concerning educational policy, many Irish schools and teachers now have the *Framework for Junior Cycle* (2015) at the forefront of their minds, and teachers are expected to develop Junior Cycle key skills, including: using digital technology to communicate; using digital technology to manage myself and my learning; being responsible, safe, and ethical in using digital technology; using digital technology to access, manage, and share content; using digital technology to develop numeracy skills and understanding; using digital technology to stimulate creativity; and using digital technology to work with others (NCCA, 2023). The above evidence signifies the importance of digital technology in the Irish education system.

The introductory chapter begins by outlining the origin of the dissertation. Following this, the background to the project, the rationale behind it, and the dissertation layout are examined. The study is then summarised before a comprehensive literature review is conducted in the ensuing chapter.

1.1 Origin of the Dissertation

Before embarking on my journey as a student teacher, the emergence of digital technology as a tool for teaching and learning had always intrigued me. This resulted in me choosing Digital Technology in Teaching and Learning as my second teaching methodology, and since the outset of this master's degree, I have acquainted myself with a host of digital teaching, learning, and assessment methodologies that could potentially be beneficial for student teachers and accomplished teachers alike.

During my first school placement, I was fortunate enough to be working in a technologically advanced school—for example, all classrooms were equipped with interactive whiteboards, and all students had access to a smart device. This presented me with the opportunity to recall recently acquired information related to digital teaching strategies and put it into practice. The implementation of a variety of technologies significantly enriched the teaching and learning experience, aided in attaining learning intentions, and will greatly influence my future practice. Conducting further research in this field, coupled with the synthesis of relevant theories, will, it is hoped, accelerate my evolution into an effective classroom practitioner.

1.2 Background to the Project

On May 3rd, 2023, Minister for Education Norma Foley TD introduced the report 'Towards a New Literacy, Numeracy and Digital Literacy Strategy: A Review of Literature' (Kennedy et al., 2023). Several authors from Dublin City University (DCU) contributed to the literature review research, which was commissioned by the Department of Education. The report underpins the importance of digital literacy in the classroom and proposes an array of pedagogical strategies and approaches that foster digital literacy development. Furthermore, Kennedy et al. (2023) posit that when digital teaching methodologies are appropriately employed, they can add value to the teaching and learning experience.

The core tenets of the Digital Strategy for Schools to 2027 (Department of Education, 2022) build on those of the Digital Strategy for Schools 2015-2020 while also acknowledging the achievements of its predecessor—for example, one hundred percent of post-primary schools now have high-speed internet connections, and all schools have access to the Digital Learning Framework. In addition, one of the more salient points of the strategy is that many schools now expect teachers to have the requisite skills to embed digital technology in their practice.

1.3 Rationale

The aforementioned report, commissioned by the Department of Education, and the Digital Strategy for Schools to 2027 signify the importance of digital technology within the Irish education system as well as suggest that it is likely to grow exponentially. This research project aims to gather empirical evidence by asking MFL teachers about their experiences using digital technology in Junior Certificate classrooms, which in turn will reveal how they perceive its value.

1.4 Dissertation Layout

This dissertation begins with an introductory chapter, which provides a succinct overview of the project. In Chapter Two, relevant literature in relation to the implementation of ICT in the classroom is reviewed, and key concepts are explored. Following this, Chapter Three details the research paradigms, methodologies, and methods considered and chosen for this research project. Chapter Four presents the respective findings. Chapter Five interprets and critically analyses the findings and creates a nexus between the garnered data and the key issues addressed in the literature review. Finally, Chapter Six draws on the main conclusions of the project, and recommendations are offered.

1.5 Conclusion

In conclusion, the purpose of this dissertation is to analyse teachers' perspectives on the implementation of ICT in Irish Junior Certificate MFL classrooms. This project stems from personal experience; therefore, conducting research will greatly influence future pedagogical practice. As previously discussed, this is a current topic that is significant in light of educational policies and research literature. This is evidenced by the emphasis placed on digital technology in the Framework for Junior Cycle (2015) and the wealth of publications available in this field.

Chapter Two: Literature Review

2.1 Introduction

This dissertation aims to analyse teachers' perspectives on the implementation of ICT in Irish Junior Certificate MFL classrooms. First, the evolution of ICT over recent years as a means of teaching, learning, and assessment in contemporary education is discussed. Reviewing relevant literature in conjunction with synthesising educational theories from seminal works aids in providing a conceptual framework. Following this, significant findings in relation to the research questions are examined in order to gauge the existing perceptions that foreign language teachers from various countries have. Selected educational policies and reports that underpin the importance of digital literacy in Irish schools are then explored. Subsequently, the potential benefits and drawbacks of implementing ICT in contemporary education are discussed. Finally, conclusions are drawn, and the main research question emerges.

2.2 The Evolution of ICT in Contemporary Education

The unprecedented impact of the COVID-19 pandemic forced many schools and educators on a global scale to implement digital teaching, learning, and assessment strategies in the hope that their students would be able to keep pace with the curriculum and diligently prepare for exams (Judge, 2021). *Digital Assessment for Learning informed by Data to motivate and Incentivise Students* (DALDIS)—a very significant three-year EU-funded Erasmus+ project—was inaugurated in 2019, and it set out to pilot test digital learning and assessment in five European countries (Ireland, Poland, Turkey, Greece, and Denmark). Ireland was the lead for the project, which resulted in the inception of JCQuest—an online learning and assessment platform—to aid Junior Cycle MFL students while engaging with the curriculum and preparing for examinations (Judge, 2021). JCQuest fully aligned with the curriculum using well-thought-out question sets and facilitated student feedback. Judge's (2021) quantitative research conducted at DCU found that students interfaced well with the software, as their levels of engagement, understanding, and progress were high. Although JCQuest was only fully utilised as a consequence of COVID-19, it does raise the question of the potential for a blended learning system for Junior Cycle MFL students.

The Specification for Junior Cycle Modern Foreign Languages (NCCA, 2015) encourages all students to be active agents of their own learning while also possessing the ability to manage and assess their own learning. The key principles of Piaget's (1968) and Vygotsky's (1978) constructivist theories are congruous with *The Specification for Junior Cycle Modern Foreign Languages* (NCCA, 2015) in the sense that they all promote agentic learning as well as encourage students and teachers to become co-constructors of knowledge (Piaget, 1968; Vygotsky, 1978). One could also draw parallels between the DALDIS project, JCQuest, and Piaget's (1968) constructivist theory, as they state that a well-thought-out curriculum can significantly accelerate the rate of cognitive development.

Acknowledging the seminal works of the forefathers of educational theory and linking them with *The Specification for Junior Cycle Modern Foreign Languages,* the DALDIS project, and JCQuest resulted in the emergence of a question: does digital technology have the capability of producing improved learning outcomes for Junior Cycle MFL students? Evidence from Haleem et al.'s (2022) research shows that, when used appropriately, digital technology can enhance the learning experience for students and enable them to engage more with the curriculum, which in turn should help them evolve into effective language learners. Gomathi and Radhakrishnan's (2021) experimental study champions this, and it found that ICT assists in improving academic performance as well as opens new and previously unexplored avenues for educators to develop innovative, interactive, and engaging activities. The symbiotic relationship between humans and digital technology has strengthened over the past two decades in particular, and the aforementioned studies suggest that this is likely to be the case for the foreseeable future as technology continues to evolve exponentially (Timotheou et al., 2023).

Given the relative success of JCQuest, one may think that similar online learning and assessment platforms would be used more extensively around Europe. However, Maier (2014) claims that Assessment for Learning (AfL) using digital technologies is still in its embryonic stage, and many countries are reluctant to implement it, with a preponderance of countries and schools still opting for conventional means of assessment. This seems somewhat surprising, as Haleem et al. (2022) posit that digital technology aids in creating and simplifying formative assessments. Moreover, eminent educationalist Wiliam (2011) explains that without assessment, it would be extremely difficult for teachers to measure levels of success for a specific lesson or a sequence of lessons. He further states that implementing formative assessment strategies—sharing learning intentions and success criteria;

effective questioning; feedback; peer-assessment; and self-assessment—can significantly increase the speed at which students acquire and retain knowledge. In this regard, assessment is widely viewed as a fundamental aspect of teaching and learning. Considering Irish students responded well while working in an online learning environment during COVID-19 and Haleem et al.'s (2022) study, which found that digital technology lends itself well to formative assessment, is it a case that educators lack the requisite knowledge to implement ICT in their classrooms? To help shed light on this question, it is worth examining the findings of recent research papers in order to gauge teachers' knowledge of ICT in the classroom.

2.3 Significant Findings and Teacher Knowledge of ICT in MFL Pedagogy

Karsenti, Kozarenko, and Skakunova's (2020) qualitative research conducted in Russia focused on the correlation between foreign language teachers' digital competence and improved learning outcomes. One hundred foreign language teachers were interviewed, with only twenty-five percent of them believing that they are capable of implementing digital teaching, learning, and assessment methodologies effectively. One of the reasons cited for this was a lack of knowledge. Sailer, Murböck, and Fischer's (2021) representative survey in Bavaria, Germany, was consonant with Karsenti, Kozarenko, and Skakunova's (2020) findings in that teachers stated that their basic digital skills were significantly more advanced than their digital teaching skills. These studies highlight how teachers in developed countries on the continent still consider there to be a gap in their knowledge while implementing digital teaching strategies.

Benini's (2014) mixed-methods study conducted in Munster, Ireland, found that teachers view digital technology in education favourably; however, they also have reservations about how to effectively implement it. Similarly, Hanna et al.'s (2020) small-scale qualitative research conducted in Northern Ireland found that the majority of teachers are proponents of implementing ICT in MFL pedagogy. Thirty-three MFL teachers were asked how they valued the importance of Computer Assisted Language Learning (CALL) in the process of acquiring a second language, and the findings exhibited that thirty-seven percent of teachers rate ICT as being extremely important, thirty-three percent rate it as being very important, twenty-four percent rate it as being moderately important, three percent rate it as being slightly important, and circa one percent rate it as not being important at all. Furthermore, circa thirty-three percent of teachers use it during every lesson, circa thirty percent use it every other lesson, circa twenty-four percent use it once per month, circa six percent use it once per term, and circa six percent never use it.

This research paper aims to confirm and build on these statistics by garnering information from Irish Junior Certificate MFL teachers. The statistics also suggest that the views of Torsani (2016) were correct when he predicted that digital technology would be as important as pen and paper in MFL pedagogy. There appears to be a paradigm shift occurring at present, whereby digital teaching, learning, and assessment methodologies are being used in conjunction with established teaching strategies (Ng et al., 2023). Thus far, this literature review has encapsulated some theoretical concepts related to digital technology in education, formative assessment, and cognitive development, as well as examined significant findings from recent research papers. These studies have aided in providing substantive evidence related to the main research question; however, to further add depth and nuance to this dissertation, Irish educational policies of relevance are discussed in the ensuing section.

2.4 Irish Educational Policies Underpinning the Importance of ICT in Education

Many Irish schools and teachers now have the *Framework for Junior Cycle* (2015) at the forefront of their minds, and teachers are expected to develop Junior Cycle key skills, including: using digital technology to communicate; using digital technology to manage myself and my learning; being responsible, safe, and ethical in using digital technology; using digital technology to access, manage, and share content; using digital technology to develop numeracy skills and understanding; using digital technology to stimulate creativity; and using digital technology to work with others (NCCA, 2023).

On May 3rd, 2023, Minister for Education Norma Foley TD introduced the report 'Towards a New Literacy, Numeracy and Digital Literacy Strategy: A Review of Literature' (Kennedy et al., 2023). Several authors from DCU contributed to the literature review research, which was commissioned by the Department of Education. The report underpins the importance of digital literacy in the classroom and proposes an array of pedagogical strategies and approaches that foster digital literacy development. Furthermore, Kennedy et al. (2023) posit that when digital teaching methodologies are appropriately employed, they can add value to the teaching and learning experience.

The core tenets of the *Digital Strategy for Schools to 2027* (Department of Education, 2022) build on those of the Digital Strategy for Schools 2015-2020. It acknowledges the achievements of its predecessor—for example, one hundred percent of post-primary schools now have high-speed internet connections, and all schools have access to the *Digital Learning Framework*. One of the more salient points of the strategy is that many schools now expect teachers to have the requisite skills to embed digital technology in their practice. This sentiment is echoed in *Looking at our School 2022: A Quality Framework for Post-Primary Schools* (Department of Education, 2022), which stresses the significance of digital competence within Irish schools and the necessity for teachers to integrate ICT in their pedagogical practice. In addition, the quality framework explains how students are now expected to take accountability for their own learning by using digital resources (Department of Education, 2022). The above evidence signifies how greatly the Department of Education values the importance of digital technology in modern-day education, as well as how they require teachers to become proficient at implementing appropriate digital teaching strategies in their classrooms. This links directly to the main research question, as Junior Cycle MFL teachers will be questioned about how they perceive the value of ICT in their classrooms and how competent they feel while implementing it.

2.5 Benefits and Drawbacks of Implementing ICT in Contemporary Education

It is evident that the Department of Education greatly values the importance of digital technology in contemporary education and is endeavouring to improve digital literacy in Irish schools. Haleem et al. (2022) posit that digital technology proved its worth during the COVID-19 pandemic by showcasing its ability to enable students to process and retain information, to think critically, to communicate and work with others, and to access and share content. Similarly, Dudar et al.'s (2021) study found that digital technology improves knowledge acquisition and assimilation, as well as boosts motivation, due to its inherently autonomous nature. Biletska et al.'s (2021) analytical study conducted in the Ukraine was consonant with the aforementioned studies, as it found that implementing digital technology in foreign language classrooms can help students' memory consolidation, in turn enabling them to convert words from their short- to long-term memory. These are all hugely beneficial aspects of implementing ICT in modern-day classrooms, but its potential extends beyond the classroom. Erbil's (2020) research found that students worked well when using the flipped classroom and cooperative learning methods within the context of Vygotsky's (1978) learning theories. Students were able to transmit culture, socially interact, and work collaboratively while also being active agents of their own learning. Lastly, Vygotsky's (1978) Zone of Proximal Development (ZPD) can also be applied in an online environment, as low-ability students are capable of working with and learning from high-ability students and more knowledgeable others.

Having extolled the virtues of digital technology in education, one must consider potential drawbacks. A gap in knowledge for teachers using digital technology in education has already been discussed in this chapter; however, students themselves may not excel while working in an online environment (Bennett et al., 2012). This can be due to a lack of knowledge and support or simply because many students are raised in low-income households with no access to smart devices. Building on this, Başal and Eryılmaz's (2021) qualitative research in Turkey found that funding is a major issue for many schools. Not only is it a matter of sourcing the money itself, but also finding a specialist who is capable of knowing whether low-tech or high-tech solutions are appropriate for a given school. Moreover, Njoku (2015) explains the challenges that students who take practical subjects face, as he argues that digital technology is more suited to theoretical subjects. He also posits that many schools still maintain that conventional teaching methods maximise learning outcomes. Lastly, other drawbacks discussed in the aforementioned studies include excessive screen time and the addictive nature of smart devices. Having considered both the benefits and drawbacks of implementing ICT in MFL classrooms, conclusions are drawn, and the main research question emerges.

2.6 Conclusion

In conclusion, digital technology is being utilised by MFL teachers around the world, yet there still appears to be a gap in their knowledge, especially when it comes to assessment. Theoretical perspectives and relevant studies suggest that ICT can simplify teaching, learning, and assessment while also offering students more autonomy, which in turn should lead to improved learning outcomes. Irish educational policies underpin the importance of digital technology, as it is now embedded within the framework for Junior- and Senior Cycle, with teachers expected to have the requisite knowledge to implement it in their classrooms. Digital technology in education has many benefits and drawbacks. Benefits include improved knowledge acquisition and assimilation; increased motivation levels; and memory consolidation. Drawbacks include a lack of teacher knowledge; a lack of funding for or access to digital technology; a resistance to change from successful, conventional teaching methods; and excessive screen time for students. The main research question to emerge from the comprehensive literature review conducted is: what is the nature of Irish Junior Certificate MFL teachers implementing ICT in their classrooms in terms of benefits, drawbacks, strategies (including assessment), and competencies?

Chapter Three: Methodology

3.1 Introduction

This dissertation aims to analyse teachers' perspectives on the implementation of ICT in Irish Junior Certificate MFL classrooms. First, this chapter details the research approach—key paradigms and methodologies—for the project. The following section explains the research methods and the data collection instrument used. Then, the sampling methods and participants considered for this study are discussed. Next, an explanation of how the data was analysed is given. The rigour of the research—in terms of validity and reliability—and the limitations of the research are then outlined. Lastly, the code of ethics for this dissertation is examined. Throughout this chapter, comparing and contrasting relevant academic literature helps to create a conceptual framework. The first step in the research process is to consider various approaches, which are discussed in the ensuing section.

3.2 Research Paradigm

In order to address the questions that emerged from the literature review, it is imperative to analyse different research approaches and choose one that is appropriate for this project. A breadth of relevant literature exists, which aids in creating a conceptual framework while also greatly influencing the decision-making process. Careful consideration should be given when selecting a suitable research paradigm, as this determines how the research is conducted (Cohen, Manion, and Morisson, 2017). The three paradigms examined as potential frameworks for this research are positivism, interpretivism, and pragmatism.

In their research paper on the positivism paradigm, Park, Konge, and Artino Jr (2020) explain that, when using this lens, information is garnered objectively. Moreover, while conducting research within this paradigm, researchers generally implement a quantitative methodology to ensure that all data is observable and measurable. In contrast, the interpretivist paradigm assumes that information is subjective, and the researcher often builds relationships with participants using a qualitative methodology (Alharahsheh and Pius, 2020). In this sense, the researcher is part of the process. Lastly, evidence from Feilzer's (2010) research on the pragmatist paradigm implies that using a mixed-methods approach—both quantitative and qualitative—can add depth and nuance to a research design and help to obtain rich data.

3.3 Methodologies

As discussed in the literature review, this dissertation aims to confirm and build on the findings of similar studies—which used quantitative methodologies—by questioning Irish Junior Certificate MFL teachers about how they perceive the value of ICT in MFL pedagogy. While all three of the aforementioned research paradigms could potentially have been utilised for this project, with time, it became apparent that a positivist paradigm was a logical choice given the nature of the research and the norms of the research area. According to Mellinger (2015), when carefully designed and correctly distributed, online surveys have the capability of generating quantifiable data. Furthermore, if required, online surveys can reach a diverse range of participants with relative ease. Perhaps the most alluring aspect of this methodology is that it allows the researcher to have the largest sample size of forty for this given project. In terms of potential drawbacks, Mellinger and Hanson (2020) emphasise that reliability can be an issue when employing this methodology, as the researcher does not have full control and is not capable of answering questions. This is discussed further in the rigour and limitations sections of this chapter.

During the decision-making process, a qualitative methodology was also an appealing option. Denzin (2001) explains that qualitative research allows the researcher to explore participants' feelings, attitudes, and experiences in depth, which in turn can help to gain a better understanding of their views. Maxwell (2012) echoes this sentiment and also highlights the flexibility of using qualitative research, meaning the design can be reconstructed if required. However, Barnett-Page and Thomas (2009) suggest that it can be difficult to rigorously analyse qualitative data due to the large volumes of text in the researcher's transcripts. For inexperienced researchers, this process can be rather cumbersome and time-consuming.

Lastly, the pragmatist paradigm was considered, which combines both qualitative and quantitative methodologies. On the one hand, implementing a mixed-methods approach can add depth and nuance to an argument, as it allows the researcher to build on a theory while also testing it empirically (Feilzer, 2010; Almalki, 2016). On the other hand, the skill set required to effectively implement mixed-method research may be more suited to experienced researchers (Creswell and Clarke, 2017). Therefore, from a practical standpoint, the positivist paradigm was most appropriate for this research project. It is now timely to discuss the research methods considered for this project.

3.4 Approach

Having decided that a positivist paradigm implementing quantitative research was a logical choice for this project, the next step was to determine whether a paper questionnaire—requiring circa twenty participants—or an online survey—requiring circa forty participants—was the most suitable research instrument for data collection. Due to the nature of this research project and the allure of the largest sample size, it was decided that online surveys—consisting of twenty questions—with forty participants would be used to gather data.

3.5 Research Methods

The design of the online survey was greatly influenced by the questions that emerged from the literature review and guided the entire process. Upon completion of the first draft, the survey was piloted with a teacher who has experience using ICT in MFL pedagogy and the research supervisor for this project. This helped identify questions that needed to be altered. For example, the original survey only contained two open-ended questions, meaning the findings of the study would be extremely limited. This was changed to five, and further drafts were sent to the research supervisor until it was agreed that the questions would generate rich data, prompting critical discussion. During this stage of the research process, critical reflection was demonstrated by making regular research diary entries. Analysing these entries greatly informed future practice and helped the researcher evolve into a critically reflective practitioner.

Google Forms was used to create the survey, as users can choose from an array of designs and question types. Furthermore, the surveys can be distributed with ease, and most importantly, survey owners can view charts with response data updates in real time. Lastly, raw data can be viewed via Google Sheets for deeper analysis and automation. In the following section, various sampling methods and the participants required for this research are discussed.

3.6 Sample and Participants

The next step of the research process was to identify and select a suitable sampling method. The four methods considered were as follows: *random*, *convenience, snowballing,* and *purposive.* In their research paper, Etikan and Bala (2017) explain that random sampling is a method whereby the probability of being selected to be a participant is equal. This method may be appealing to researchers who require a sample from a large number of people and also to researchers who want to remain unbiased. However, the authors stress that this method can be time-consuming, and researchers may struggle to find participants.

Emerson's (2021) paper on convenience sampling details how researchers often use this method when there is a correlation between the aims of the study and the participants. For example, a study could aim to analyse teachers' perceptions of various methodologies used for assessing students with special educational needs (SEN). In this case, it would be logical to look for participants in a school where there are a large number of SEN students and teachers. The main disadvantage of this method is that it lacks generalisability and transferability.

In their paper on snowball sampling, Parker, Scott, and Geddes (2019) state that it is a method commonly employed while conducting qualitative research. Interviewees are asked, when possible, to refer candidates who may be willing to participate in the study. This approach is often adopted when participants are not easily accessible. One of the main drawbacks of snowball sampling is that it could prove difficult to find willing participants.

Lastly, purposive sampling is implemented when the researcher seeks participants that they feel will add value to the research. This can help the researcher obtain trustworthy data, which in turn will improve the rigour and integrity of the study (Campbell et al., 2020). Challenges associated with purposive sampling include research bias and data manipulation, as the participants know that they have been selected for the research.

After weighing the pros and cons of each sampling method, a combination of convenience sampling and purposive sampling was used for this research project. These methods are preferred over random sampling and snowball sampling, as the study specifically requires Irish Junior Certificate MFL teachers. Teachers from two schools in the East of Ireland—one a private school with circa 700 students and 75 teachers, the other a public school with circa 1,200 students and 120 teachers—were selected to take part in an online survey. The sample size was forty, and teachers had to have a minimum of five years of teaching experience. In addition, all data collected preserved the anonymity of participants. It is also worth noting that all students in both schools are in possession of tablet devices; therefore, the teachers surveyed for this project have the option of implementing a host of digital teaching, learning, and assessment methodologies. The following section explains how the data was analysed for this study.

3.7 Data Analysis

As briefly outlined in the research methods section of this chapter, Google Forms is used to administer the online surveys for this research project. The software also facilitates statistical analysis, which is used for fifteen of the twenty questions. More specifically, data is optimally represented on pie charts for fourteen of the questions, and a five-point Likert scale is used to measure data for one question. Moreover, bivariate analysis using Google Sheets provides greater context by examining correlations and causal links between two variables. The remaining five questions are open-ended, as hearing teachers' voices prompts further discussion. While analysing the data garnered from these five qualitative questions, Braun and Clarke's (2006) widely regarded framework for thematic analysis was used. The authors' framework follows a six-stage process.

- (1) Collecting—forty written responses to each of the five open-ended questions for this study.
- (2) Engaging with the data—reading the responses critically and analytically. During this step, connections between concepts were made.
- (3) Coding—systematically identifying and labelling all aspects of the data that relate to the research question. For example, the words 'benefits' and 'drawbacks' were used as codes, and when MFL teachers were asked what they predominantly use ICT for in their classrooms, words such as 'teaching', 'learning', 'assessing', 'planning', and 'organising' were identified.
- (4) Generating the code categories—establishing commonalities. Furthermore, themes were created by linking words, phrases, and sentences that overlap in certain questions.
- (5) Conceptualising the themes—five themes were identified for the open-ended questions in this research project: ICT usage in MFL pedagogy, ICT hardware, ICT software, digital teaching strategies versus conventional teaching methods, and the benefits and drawbacks of using ICT in MFL pedagogy.
- (6) Contextualising and representing the findings.

In addition, Merriam (2009) describes how researchers can move between the stages as necessary, meaning it is a flexible system. For this study, the researcher regularly moved between stages two and six until rich data was garnered. It is now important to discuss the rigour of the research.

3.7.1 Rigour

In order to enhance the quality of this study, giving consideration to the rigour of the research is of utmost importance. According to Claydon (2015), in quantitative research, one must review the validity and reliability of the study. In their research paper, Heale and Twycross (2015) explain that validity is how the concept is accurately measured. For this project, the online survey is designed to analyse teachers' perspectives on the implementation of ICT in Irish Junior Certificate MFL classrooms. It does not deviate from the concept, as all questions connect with the identified generalisation. Concerning reliability, the research instrument used for this project—Google Forms—is capable of producing similar results for all participants. Lastly, data is collected objectively for this research project.

3.7.2 Limitations

Although the research approach chosen for this project allowed for the largest possible sample size of forty, it is still a small-scale investigation; therefore, one must acknowledge a lack of generalisability and transferability. The data collected could vary drastically if the teachers chosen to participate were working in schools where there is a lack of funding for or access to digital technology. In terms of data triangulation, while a comprehensive literature review was conducted, one must also note that only one methodology was used.

3.7.3 Ethical Issues

This research adheres to the Research Council UK's (RCUK) Code of Conduct in Britain (2013), the British Educational Research Association's (BERA) (2018) code of ethics, GDPR requirements, and Hibernia College's Code of Conduct for Research. Hibernia College requires that data be kept for three years after the project is complete; at this point, the data will be deleted. The online survey for this research project is completely anonymous, and any data collected is strictly confidential. This practice ensures that participants only have access to the data once the study is complete. Individuals can access their own data—online survey responses—upon request and may not access data from other participants. Participants may withdraw from the survey at any time by closing the survey page. Furthermore, all data is encrypted and kept on a secure external device with password protection. In relation to consent, the principals at both schools for this research project were given letters containing the above information prior to any data collection. Following this, teachers selected to partake in the study were given a research information sheet and required to sign a letter of consent.

3.8 Conclusion

In this chapter, it was articulated that the research paradigms of positivism, interpretivism, and pragmatism were all given profound consideration as the chosen methodology. In relation to the type of data needed to answer the research questions, the positivist paradigm was deemed the most appropriate selection for this dissertation. Given the parameters, time frame, and limitations of this minor research project, a combination of purposive and convenience sampling was used. Concerning data analysis, both univariate and bivariate analyses were used to report the quantitative findings, while Braun and Clark's (2006) framework for thematic analysis was considered to be the most effective methodology for the open-ended questions. In order to enhance the rigour of this study, a robust and versatile data collection tool was chosen, and all survey questions connected with the identified generalisation. Moreover, the limitations of the project were acknowledged, and strict ethical guidelines were adhered to during all stages of the research process.

Chapter Four: Findings

4.1 Introduction

This dissertation aims to analyse teachers' perspectives on the implementation of ICT in Irish Junior Certificate MFL classrooms. This chapter presents a detailed and in-depth critical analysis of the research findings. First, the participant demographics are discussed. Following this, univariate analysis is employed in conjunction with thematic analysis to gauge how teachers rate the importance of ICT in MFL pedagogy as well as how they perceive their own competency levels. Subsequently, to provide greater context, bivariate analysis is used to identify how often specific age groups implement ICT during MFL pedagogy and also to discover how confident specific age groups feel while using ICT in their pedagogical practice. A combination of univariate and thematic analyses is then employed again to report other significant findings and the potential benefits and drawbacks of using ICT in MFL pedagogy. The ensuing section discusses the demographics of the participants.

4.2 Demographics

Before conducting any research for this project, careful consideration was given to the participant demographics. Initially, it was hoped that there would be an equal ratio of male and female participants. However, it became increasingly difficult to source male participants in the schools chosen for this research project, which resulted in seventy percent of respondents being female and thirty percent being male.

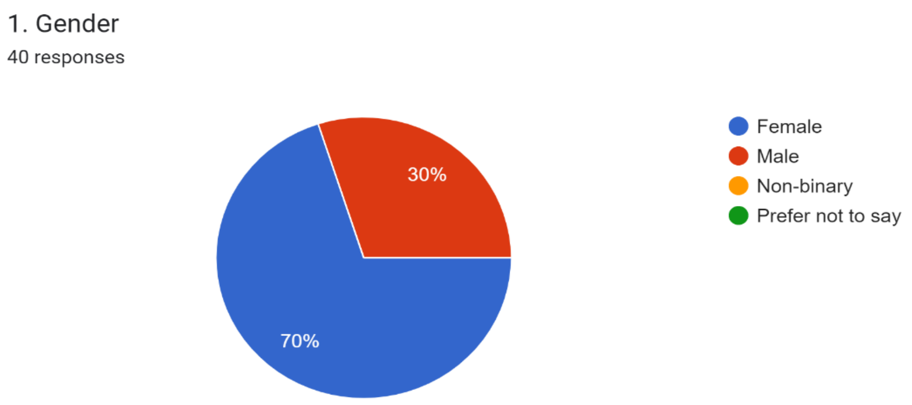

Figure 1: A pie chart representing the gender of participants.

Of the forty respondents, ten percent are between the ages of twenty-one and thirty, thirty-five percent are between the ages of thirty-one and forty, thirty-two and one-half percent are between the ages of forty-one and fifty, seventeen and one-half percent are between the ages of fifty-one and sixty, and five percent are over the age of sixty. This shows that there is a balanced mixture of ages, which improves the rigour and integrity of the research.

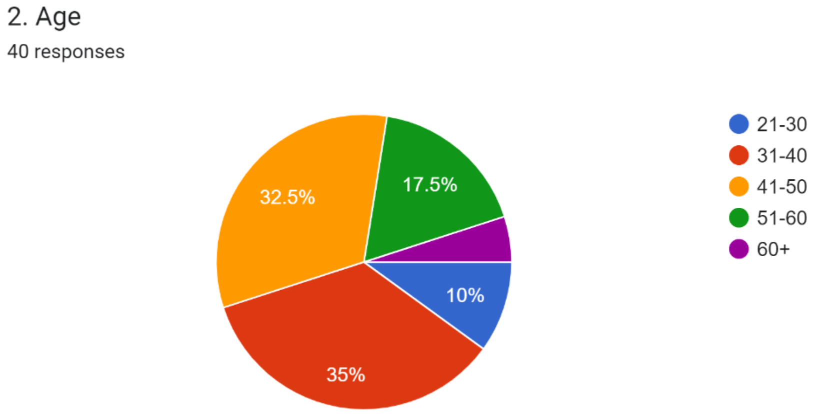

Figure 2: A pie chart representing the age of participants.

In terms of teaching experience, forty-seven and one-half percent have five to ten years' experience, fifteen percent have ten to fifteen years' experience, twelve and one-half percent have fifteen to twenty years' experience, and twenty-five percent have more than twenty years' experience. The prerequisite for this study was that teachers must have a minimum of five years' teaching experience. This demonstrates that all of the teachers surveyed have had a considerable amount of time to implement ICT in their teaching practice. Having highlighted the statistical data in relation to the demographics of the sample, it is now imperative to address the research questions that emerged from the literature review.

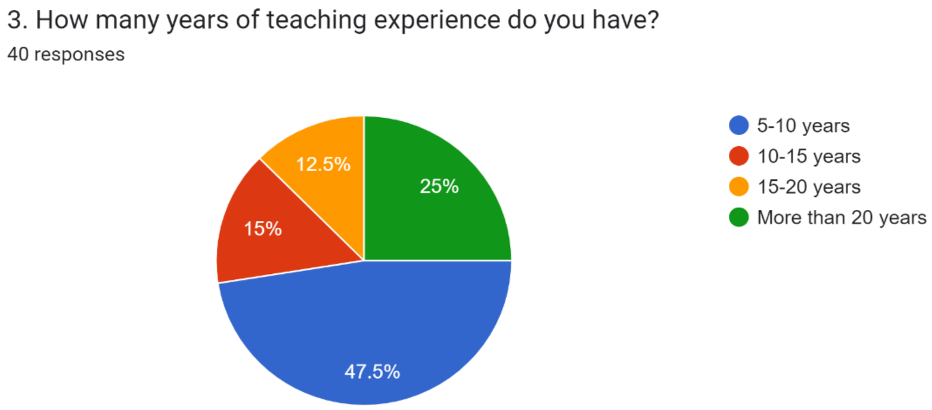

Figure 3: A pie chart representing how many years' teaching experience participants have.

4.3 Significant Findings and Teacher Knowledge of ICT in MFL Pedagogy

This section uses univariate analysis of the quantitative questions to gauge how teachers perceive the value of ICT in MFL pedagogy, how often they implement it during their lessons, how confident they feel while using it, if they think additional training would address a gap in their knowledge of ICT, and if they have ever used ICT as a means of formative assessment. Furthermore, thematic analysis—a six-stage process for unpacking qualitative research questions as outlined in the methodology chapter—is employed to add depth to the findings.

In relation to how teachers rate the importance of ICT in MFL pedagogy, forty-two and one-half percent of respondents rated it as extremely important, thirty-seven and one-half percent rated it as very important, and only twenty percent rated it moderately important. Interestingly, none of the respondents rated it as slightly important or not important at all. These findings suggest that an overwhelming majority of MFL teachers in the schools surveyed either value or strongly value the importance of ICT in MFL pedagogy. Regarding qualitative findings, when teachers were questioned about what they predominantly use ICT for in MFL pedagogy, the most common responses were 'teaching', 'learning', 'planning', 'organising', 'assessing', and 'student engagement'. Other responses included 'collaborative platforms', 'sharing resources', 'a digital repository of notes', 'videos for teaching vocabulary and pronunciation', 'PowerPoint presentations', 'a tool for incorporating UDL in the classroom', and 'to aid me while teaching'.

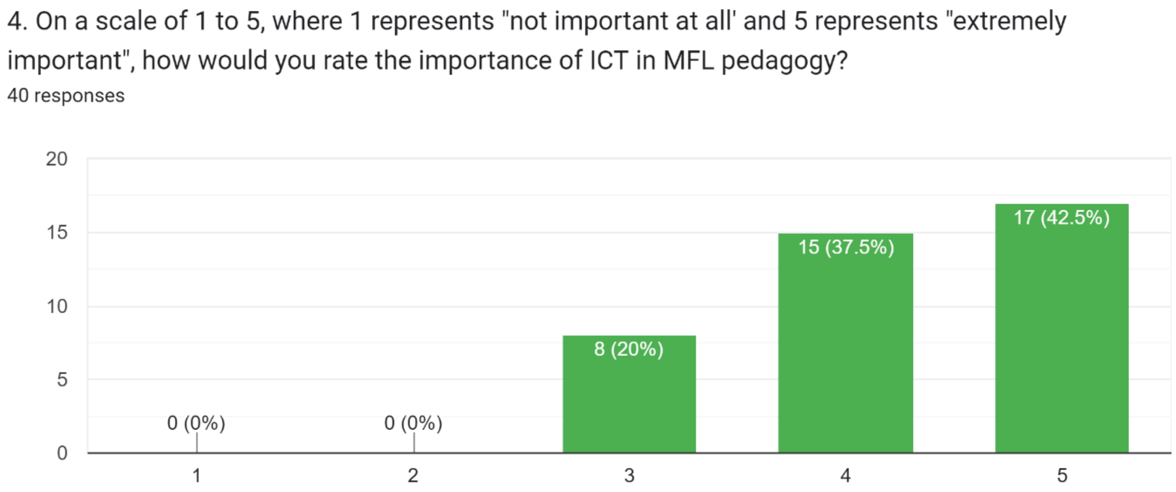

Figure 4: A Likert scale representing how teachers rate the importance of ICT in MFL pedagogy.

When participants were questioned about how often they implement digital teaching, learning, and assessment methodologies in their classroom, forty-two and one-half percent stated that they use it during every lesson, forty-two and one-half percent use it every other lesson, and fifteen percent use it once per week. Perhaps unsurprisingly, as both schools surveyed for this research project are equipped with the facilities and have a sufficient level of resources to implement ICT in their classrooms, no teachers stated that they rarely or never use ICT during their lessons. The qualitative findings revealed that teachers are mainly using 'computers', 'laptops', 'iPads', 'iMacs', 'tablets', 'overhead projectors', and 'interactive whiteboards' while teaching Junior Certificate MFL students. In relation to software, a large number of teachers use 'Microsoft Teams', 'OneNote', 'Schoology', 'Kahoot!', 'Quizlet', 'Nearpod', 'Wordwall', and 'The Language Gym' for teaching, learning, and assessing. Furthermore, one teacher stated that they use Wordwall as it is 'brilliant for creating interactive games and worksheets', while another wrote that they like OneNote as 'it is clear which material was covered daily' and 'in case of absence, the learning can still continue.'

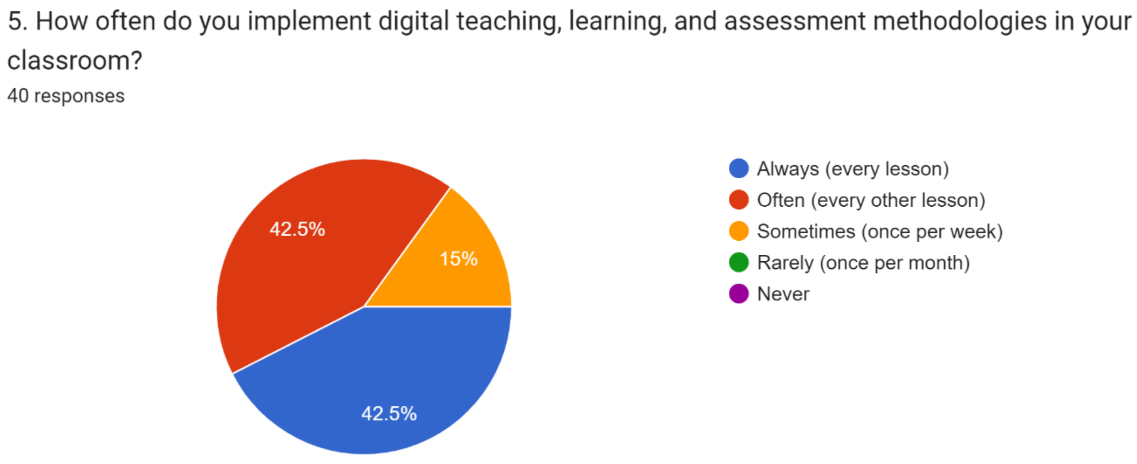

Figure 5: A pie chart representing how often teachers implement digital teaching, learning, and assessment methodologies in their classrooms.

Next, MFL teachers were questioned about how confident they feel while using ICT during MFL pedagogy. Of the forty respondents, thirty percent stated that they are highly confident while using ICT in their classrooms, sixty-two and one-half percent said that they are somewhat confident, five percent said that they are neither confident nor unconfident, two and one-half percent said they are somewhat unconfident, and none said that they are unconfident. This suggests that a large number of teachers in the surveyed schools deem themselves to be relatively competent while using ICT during their lessons.

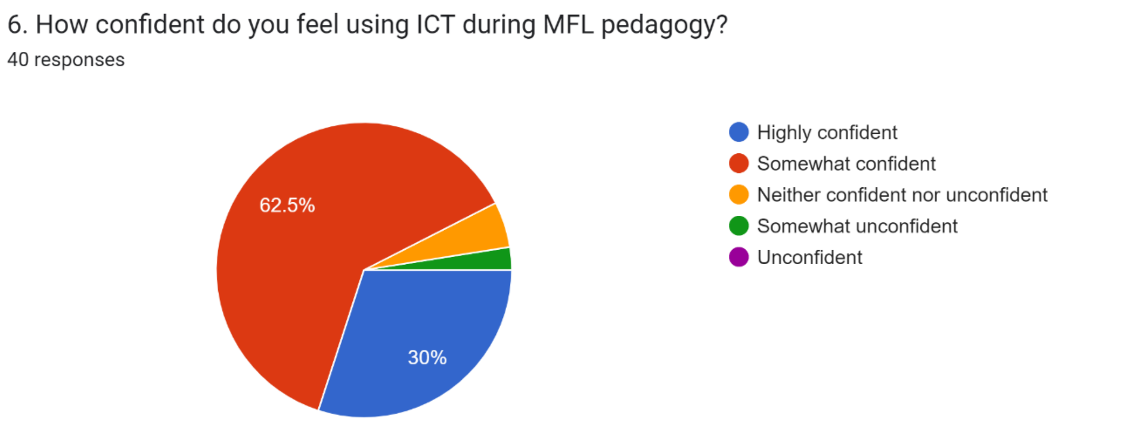

Figure 6: A pie chart representing how confident teachers feel using ICT during MFL pedagogy.

Following this, teachers were asked whether they think that additional training would address a gap in their ICT knowledge. Surprisingly, given that both schools promote the use of ICT, seventy-two and one-half percent of respondents stated that additional training would benefit them, twenty-two and one-half percent said that it did not apply to them—indicating they feel highly confident using ICT—and only five percent said that they would not benefit from additional training.

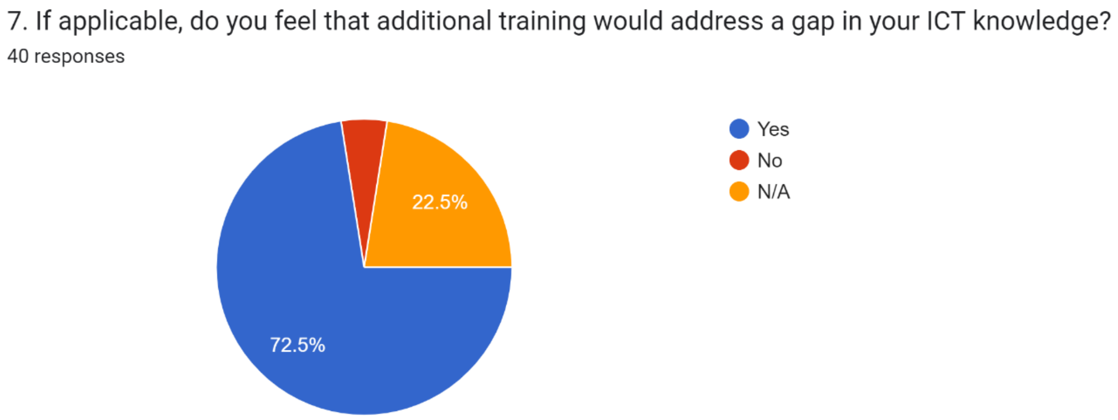

Figure 7: A pie chart representing whether teachers feel that additional training would address a gap in their ICT knowledge.

Lastly, respondents were asked whether they had ever used ICT as a means of formative assessment to evaluate and monitor student progress. Ninety percent of teachers responded 'yes' to this question, with the remaining ten percent saying they have never used it. This implies that the vast majority of MFL teachers in the surveyed schools are using ICT as a means of formative assessment. Concerning qualitative responses, one teacher stated that they use Kahoot! to 'quiz my students and assess their levels of understanding and progress', while another answered that they use Schoology for 'both summative and formative assessment.' Lastly, a teacher said that they use The Language Gym because they can 'set activities for them and monitor their progress.' To this point, univariate analysis used in conjunction with thematic analysis for the qualitative questions have enabled the exploration of key data sets for this research. However, bivariate analysis provides greater context by examining correlations and causal links between two variables. This is demonstrated in the ensuing section.

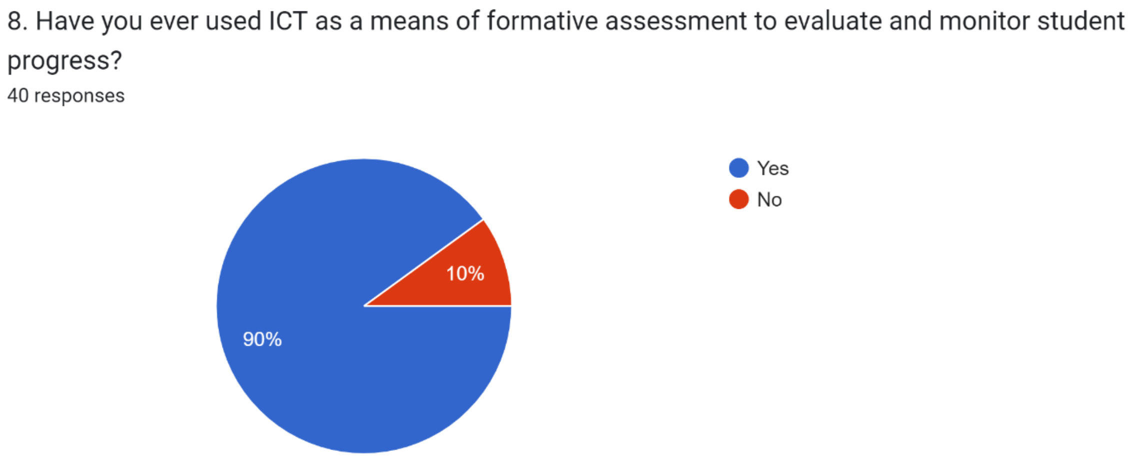

Figure 8: A pie chart representing whether teachers have ever used ICT as a means of formative assessment to evaluate and monitor student progress.

4.4 Bivariate Analysis

The column chart below illustrates how often specific age groups implement ICT during MFL pedagogy. In the twenty-one to thirty age bracket, fifty percent implement ICT every lesson, twenty-five percent every other lesson, and twenty-five percent once per week. In the thirty-one to forty age bracket, fifty-seven percent use ICT during every lesson, twenty-eight and one-half percent every other lesson, and fourteen and one-half percent once per week. In the forty-one to fifty age bracket, thirty-eight and one-half percent use ICT during every lesson, sixty-one and one-half percent use it during every other lesson, and none reported using it once per week. In the fifty-one to sixty age bracket, twenty-eight and one-half percent use ICT during every lesson, fifty-seven percent use it every other lesson, and fourteen percent use it once per week. Lastly, one hundred percent of teachers over the age of sixty stated that they only use ICT once per week.

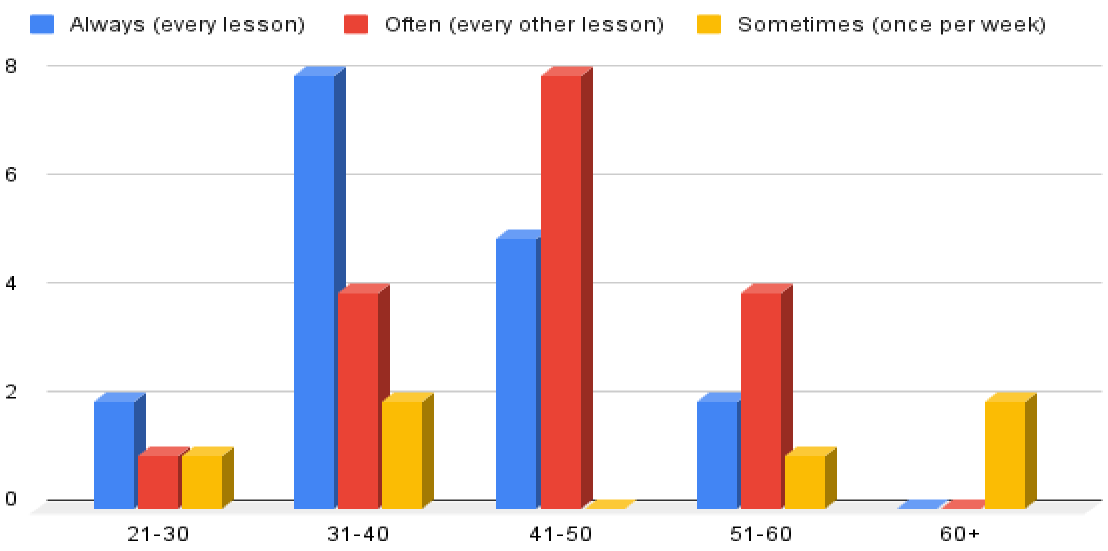

Figure 9: A column chart illustrating how often specific age groups implement ICT during MFL pedagogy.

The evidence above indicates that teachers forty years of age or younger are more likely to implement ICT during every lesson than their counterparts over the age of forty. Interestingly, there is also a steady decline in every lesson usage in the age brackets over the age of forty. However, this establishes a causality, as teachers in the forty-one to fifty and fifty-one to sixty age brackets are more likely to implement ICT in every other lesson than teachers under the age of forty.

In relation to confidence while using ICT in MFL pedagogy, there appears to be a correlation between younger teachers—under the age of forty—and high levels of confidence. In the twenty-one to thirty age bracket, fifty percent feel highly confident, and fifty percent feel somewhat confident. These statistics are exactly the same in the thirty-one to forty age bracket. There is a significant change in the forty-one to fifty age bracket, with only fourteen percent feeling highly confident. However, eighty-six percent do feel somewhat confident while using ICT in their classrooms. Similarly, in the fifty-one to sixty age bracket, only fourteen and one-quarter percent of teachers feel very confident, while seventy-one and one-half percent feel somewhat confident. Furthermore, fourteen and one-quarter percent stated that they feel neither confident nor unconfident. Lastly, fifty percent of teachers over sixty said that they feel neither confident nor unconfident, and fifty percent said that they feel somewhat unconfident. These results are illustrated in the column chart below.

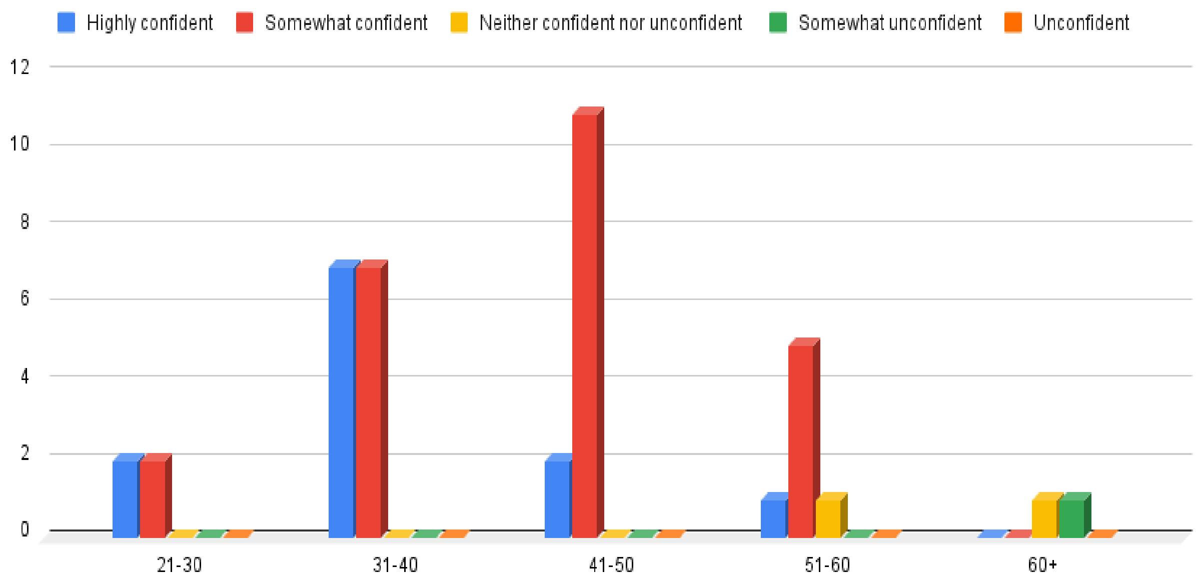

Figure 10: A column chart illustrating how confident specific age groups feel while implementing ICT during MFL pedagogy.

4.5 Additional Findings

This section analyses the remaining quantitative questions from the study while also reporting significant qualitative findings. When participants were questioned about whether ICT has the capability of assisting Junior Cycle MFL students in managing themselves and their learning, ninety-seven and one-half percent said 'yes', with only two and one-half percent saying 'no'. Teachers were also asked how effective ICT is in helping students prepare for their Junior Certificate examination, with fifty-five and one-half percent saying 'very effective', forty-seven and one-half percent saying 'somewhat effective', and none saying 'neither effective nor ineffective', 'somewhat ineffective', or 'ineffective'. In terms of potentially using a blended learning system whereby Junior Cycle MFL students are required to learn both in-class and online, seventy-two and one-half percent of respondents said 'yes' and twenty-seven and one-half percent said 'no'.

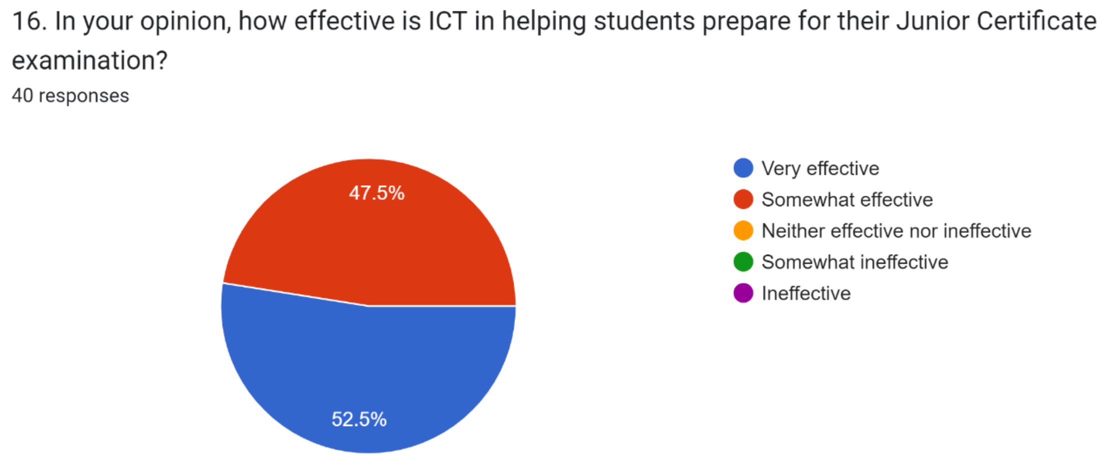

Figure 11: A pie chart representing how effective teachers believe ICT is in helping students prepare for their Junior Certificate examination.

When MFL teachers were asked if online learning environments and management systems promote collaboration and the sharing of relevant content for students and teachers alike, ninety-five percent said 'yes' and only five percent said 'no'. Respondents were also required to think about whether students' levels of engagement and understanding are higher using conventional teaching methods or digital teaching strategies, to which sixty-seven and one-half percent answered digital teaching strategies and thirty-two and one-half percent answered conventional teaching methods. Qualitative responses connected with this question included 'it depends on the student', 'they need to be used together', and 'I think a mix of both is good'. Furthermore, just under forty percent of teachers unequivocally wrote that they believe that digital teaching strategies are capable of producing improved learning outcomes for a diverse range of learners. However, rather worryingly, eighty percent of teachers think that digital teaching strategies are adding to excessive screen time for students. Lastly, ninety-seven and one-half percent of respondents acknowledged that their school has an ICT Acceptable Usage Policy (AUP) in place. It is now timely to examine the potential benefits and drawbacks of implementing ICT in contemporary education.

4.6 Benefits and Drawbacks of Implementing ICT in Contemporary Education

Lastly, Irish Junior Certificate MFL teachers were questioned about the main benefits and drawbacks of implementing ICT in their classrooms. There were a wide variety of responses to this question; however, many benefits and drawbacks repeated themselves. Regarding benefits, teachers stated that 'students are more engaged when working with ICT', 'it helps a variety of learners', 'it makes learning fun for the students', 'students can manage and access their learning at any time', 'teachers can use different formats to teach students', and 'students appear to retain information better when working with ICT'. In relation to drawbacks, a preponderance of teachers stated 'excessive screen time', while other responses included 'students get easily distracted', 'students can open unrelated tabs when using smart devices', 'creating resources can be time-consuming', 'it can slow the development of students' social skills', 'time constraints', 'lack of resources', and 'lack of ICT ability'.

4.7 Conclusion

In this chapter, a detailed and in-depth critical analysis of the research findings was presented. There is a reasonable balance among participants in terms of gender, age, and teaching experience, which improves the rigour of the research. Univariate analysis used in conjunction with thematic analysis for the qualitative questions exhibited how an overwhelming majority of teachers surveyed for the project either value or strongly value the importance of ICT in MFL pedagogy and generally use it for planning, organising, teaching, assessing, sharing resources, and increasing student engagement. Moreover, it was evidenced that the vast majority of teachers implement ICT in either every lesson or every other lesson. Regarding competency levels, the garnered data showed that over ninety percent of teachers feel either somewhat confident or highly confident using ICT in their classrooms. Surprisingly, a large proportion of teachers stated that they would benefit from additional training. In relation to formative assessment, a preponderance of participants answered that they use ICT to monitor and evaluate student progress.

Bivariate analysis—column charts created using Google Sheets—illustrated that teachers forty years of age or younger are more likely to implement ICT during every lesson than their counterparts over the age of forty. However, this established a causality, as teachers in the forty-one to fifty and fifty-one to sixty age brackets are more likely to implement ICT in every other lesson than teachers under the age of forty. Concerning competency levels, bivariate analysis indicated that teachers under the age of forty are more confident while using ICT in MFL pedagogy.

In terms of the benefits of using ICT in MFL pedagogy, respondents said that it increases engagement, improves memory retention, caters to the needs of a diverse range of learners, makes learning fun, and enables students to manage and access their learning at their own pace. In relation to the drawbacks, teachers stated that excessive screen time for students is disconcerting, students can get easily distracted, creating resources can be time-consuming, and it can hinder the development of students' social skills. Other drawbacks included time constraints, a lack of resources, and a lack of ICT ability.

Chapter Five: Discussion

5.1 Introduction

This dissertation aims to analyse teachers' perspectives on the implementation of ICT in Irish Junior Certificate MFL classrooms. In this chapter, the findings in relation to the research questions and secondary sources from the literature review are critically discussed. First, it is demonstrated how an apparent paradigm shift in contemporary education has seen many MFL teachers on a global scale utilise ICT to enhance their pedagogical practice. Following this, the findings of significant studies are compared and contrasted with those of this research. Moreover, educational theories as well as Irish educational policies add depth and nuance to the argument. Lastly, the main benefits and drawbacks of implementing ICT in contemporary education are examined. The following section examines the evolution of ICT in contemporary education.

5.2 The Evolution of ICT in Contemporary Education

As outlined in the literature review, students on a global scale were required to learn online during the COVID-19 pandemic in an attempt to keep pace with the curriculum and diligently prepare for examinations (Judge, 2021). Furthermore, JCQuest—an Irish online learning and assessment platform—was developed to aid Junior Cycle MFL students. Judge's (2021) quantitative research conducted at DCU found that students interfaced well with the software, as their levels of engagement, understanding, and progress were high. Interestingly, the findings from this research indicate that a staggering number of teachers not only think that ICT is effective in helping students prepare for their Junior Certificate examinations but also regularly implement it in their pedagogical practice. Moreover, an overwhelming majority of teachers stated that they could indeed envision a blended learning system whereby Junior Cycle MFL students are required to learn both in-class and online. In addition, sixty-seven and one-half percent of MFL teachers stated that they believe students' levels of engagement are higher using digital teaching strategies than conventional teaching methods. In this sense, the findings from this project are consonant with Judge's (2021) quantitative research. The research findings also demonstrate that the implementation of ICT is likely to continue to evolve in contemporary education and provide auxiliary support for Junior Cycle MFL students while engaging with the curriculum and preparing for examinations.

Comparisons between the tenets of Piaget's (1968) and Vygotsky's (1978) constructivist theories and Irish educational policies such as *The Specification for Junior Cycle Modern Foreign Languages* (NCCA, 2015) were drawn in the literature review. It was posited that they are analogous to one another considering they all promote agentic learning as well as encourage teachers and students to become co-constructors of knowledge (Piaget, 1968; Vygotsky, 1978). For this research, teachers were questioned about whether ICT has the capability of assisting Junior Cycle MFL students in managing themselves and their learning, with ninety-seven and one-half percent saying 'yes', and only two and one-half percent saying 'no'. This demonstrates that the vast majority of teachers believe that ICT can enable students to become active agents of their learning, which is called for in *The Specification for Junior Cycle Modern Foreign Languages* (NCCA, 2015) and the *Framework for Junior Cycle* (2015). The research also revealed that ninety-five percent of teachers feel that online learning environments and management systems promote collaboration and the sharing of relevant content for students and teachers alike. Here, a correlation with Piaget's (1968) and Vygotsky's (1978) constructivist theories is established, as ICT facilitates the co-construction of knowledge.

A notable question that emerged from the literature review was: does digital technology have the capability of producing improved learning outcomes for Junior Cycle MFL students? Evidence from Haleem et al.'s (2022) and Gomathi and Radhakrishnan's (2021) research studies suggests that it does, as they argue ICT enhances the learning experience for students while also helping them to engage more with the curriculum. Generally speaking, the findings from this research were congruous, as teachers stated that they believe ICT is capable of producing improved learning outcomes for students. However, some teachers feel that ICT must be used in conjunction with conventional teaching methods in order to optimise their pedagogical practice, and a minority of teachers believe that conventional teaching methods are still most effective.

Maier (2014) claims that Assessment for Learning (AfL) using digital technologies is in its infancy, and many countries are reluctant to implement it, with a preponderance of countries and schools still opting for conventional means of assessment. On the contrary, this research found that ninety percent of teachers have indeed used ICT as a means of formative assessment to evaluate and monitor student progress. However, it is also worth noting that this is a small-scale investigation; therefore, the results could vary drastically in secondary schools around the world. It is now timely to discuss significant findings and teacher knowledge of ICT in MFL pedagogy.

5.3 Significant Findings and Teacher Knowledge of ICT in MFL Pedagogy

As reported in the literature review, Karsenti, Kozarenko, and Skakunova's (2020) qualitative research conducted in Russia questioned one hundred foreign language teachers, with only twenty-five percent of them believing that they are capable of implementing digital teaching, learning, and assessment methodologies effectively. One of the reasons cited for this was a lack of knowledge. Sailer, Murböck, and Fischer's (2021) representative survey in Bavaria, Germany, was consonant with these findings, in that teachers stated that their basic digital skills were significantly more advanced than their digital teaching skills. Surprisingly, the data from this dissertation varied drastically from the aforementioned studies, with the vast majority of teachers stating that they are either highly confident or somewhat confident while using ICT during MFL pedagogy. This indicates a positive step in the right direction, as the *Digital Strategy for Schools to 2027* (Department of Education, 2022) and *Looking at our School 2022: A Quality Framework for Post-Primary Schools* (Department of Education, 2022) stress the significance of digital competence within our schools as well as highlight the need for teachers to effectively embed digital technology in their pedagogical practice. Notwithstanding, seventy-two and one-half percent of respondents stated that additional training would address a gap in their knowledge. These observations suggest that Irish Junior Certificate MFL teachers deem themselves to be more confident using ICT in MFL pedagogy than their European counterparts; however, they feel that ICT training would also benefit them.

Benini's (2014) and Hanna et al.'s (2020) studies found that teachers view digital technology in education favourably. In relation to Hanna et al.'s (2020) research conducted in Northern Ireland, thirty-three MFL teachers were asked how they valued the importance of CALL in the process of acquiring a second language. The findings exhibited that thirty-seven percent of teachers ranked ICT as being extremely important, thirty-three percent ranked it as being very important, twenty-four percent ranked it as being moderately important, three percent ranked it as being slightly important, and circa one percent ranked it as not being important at all. For this research, when teachers were questioned about how they rate the importance of ICT in MFL pedagogy, forty-two and one-half percent of respondents rated it as extremely important, thirty-seven and one-half percent rated it as very important, and only twenty percent rated it moderately important. Interestingly, none of the respondents rated it as slightly important or not important at all. This exhibits a recurring theme in these studies and signifies the perceived importance of ICT in contemporary education. A pictorial representation of this data can be seen below.

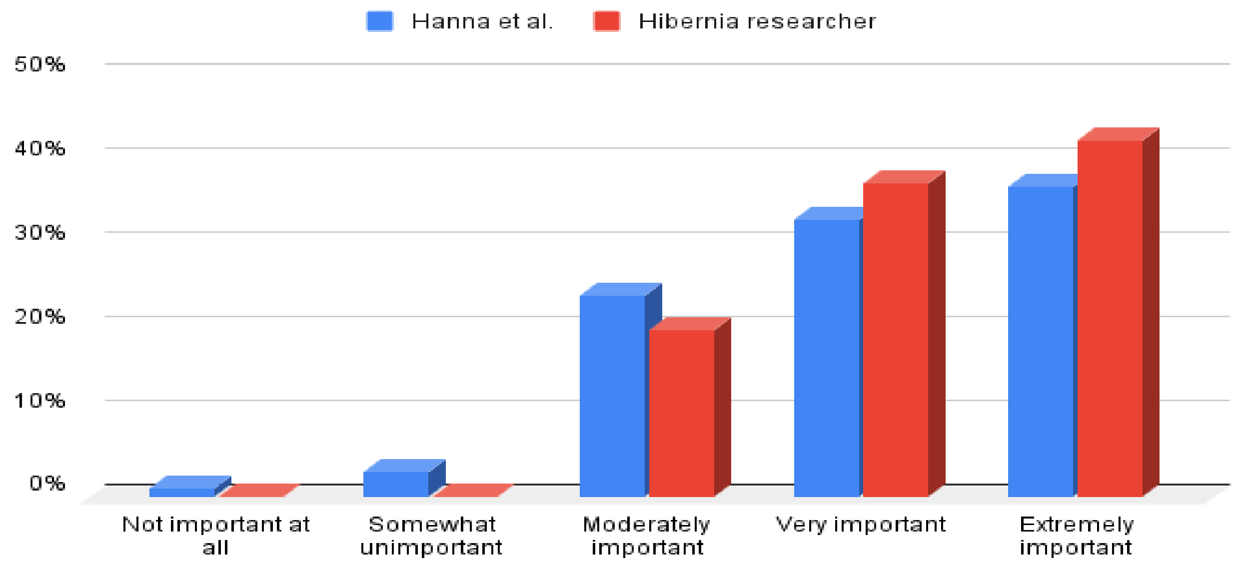

Figure 12: A column chart comparing the findings – in terms of how MFL teachers rate the importance of ICT in MFL pedagogy – of this study with Hanna et al.'s (2020) research.

5.4 Benefits and Drawbacks of Implementing ICT in Contemporary Education

From the comprehensive literature review, many benefits of implementing ICT in contemporary education emerged. Haleem et al.'s (2022), Dudar et al.'s (2021), and Biletska et al.'s (2021) research studies suggest that digital technology enables students to process and retain information, to think critically, to communicate and work with others, to access and share content, while also increasing motivation. A number of respondents for this dissertation had similar views, with one teacher stating 'students appear to retain information better when working with ICT', and another saying that they use digital technology to 'share homework and useful resources with students' and to 'communicate effectively with students.' Furthermore, many teachers are using online learning platforms and management systems that promote collaboration and the sharing of relevant content, and they also believe that their students are more motivated when working with digital technology. Importantly, the above evidence shows that Irish MFL students are developing key skills from the *Framework for Junior Cycle* (2015) while using ICT, including: using digital technology to communicate; using digital technology to manage myself and my learning; being responsible, safe, and ethical in using digital technology; using digital technology to access, manage, and share content; and using digital technology to work with others.

In terms of drawbacks, Bennett et al. (2012) found that students themselves may not excel using digital technology in education. Rather worryingly, some teachers from this research agree with this sentiment, with one stating that ICT can ‘help some students but it is very distracting for others’, while another teacher said ‘overuse leads to a lack of engagement, no eye contact, can inhibit oral communication, and lead to poorer concentration and focus.’ Moreover, a teacher said that ICT is ‘distracting and they (the students) do not memorise things as well as when they write things in their copies.’ Başal and Eryılmaz’s (2021) findings were largely congruous with the aforementioned study, and the authors also expressed concerns about funding for ICT hardware and software. As the two schools surveyed for this research are well-funded schools, this is not an issue; however, one must acknowledge that not all schools around the world are this fortunate. Finally, Njoku (2015) argues that excessive screen time and the addictive nature of ICT are major drawbacks, which multiple teachers from this research agreed with.

5.5 Conclusion

In this chapter, the findings in relation to the research questions and secondary sources from the literature review were critically discussed. Relevant educational theories and policies related to the implementation of digital technology in Irish post-primary education aided in creating a conceptual framework. For example, it was demonstrated that the majority of MFL teachers surveyed for this dissertation deem themselves capable of embedding digital technology in their pedagogical practice, as called for in recent significant Irish educational policies. Furthermore, an overwhelming majority of teachers can envision a blended learning system whereby Junior Cycle MFL students are required to learn both in-class and online, with many teachers already using collaborative online platforms to share resources and course content. It was also demonstrated that a preponderance of Irish MFL teachers and their European counterparts highly rate the importance of ICT in contemporary education; however, many of them still feel that additional training would also address a gap in their ICT knowledge.

Concerning the main benefits of implementing ICT in contemporary education, the findings from this research largely confirmed the findings from previous studies. For example, many Irish MFL teachers believe that digital technology in contemporary education enables students to process and retain information, to think critically, to communicate and work with others, to access and share content, while also increasing motivation. In terms of drawbacks, again, the findings of this research were consonant with previous findings, with teachers believing ICT can be distracting for certain students and can lead to poorer concentration and focus. Lastly, Irish MFL teachers also expressed concerns about excessive screen time and the addictive nature of ICT.

Chapter Six: Conclusion

This dissertation aims to analyse teachers' perspectives on the implementation of ICT in Irish Junior Certificate MFL classrooms. First, the main conclusions are drawn from the salient points of discussion in the previous chapters. Moreover, the conclusions succinctly encapsulate the essence of this project. Subsequently, the limitations of the research project are discussed. Lastly, recommendations based on this dissertation are offered. The following section draws on the main conclusions of this research project.

6.1 Main Conclusions

Over the past two decades in particular, digital technology in education has experienced a staggering rate of evolutionary change (Seenivasan, 2024). This significant paradigm shift has transcended the way teachers teach and the way students learn in many schools on a global scale (Timotheou et al., 2023). The main aim of this research project was to establish the nature of Irish Junior Certificate MFL teachers implementing ICT in their pedagogical practice. Perhaps unsurprisingly—given the interactive and engaging nature of digital technology—an overwhelming majority of teachers surveyed for this project view it favourably and also utilise it frequently. The reviewed literature, in conjunction with the research findings, highlight the seemingly inexorable march of digital technology in contemporary education. However, for all post-primary teachers to reap the benefits of the successful implementation of digital technology in their pedagogical practice, the provision of additional training and funding should be considered by the Department of Education. Moreover, teachers should be aware of the benefits as well as the drawbacks of implementing ICT during MFL pedagogy. This dissertation also demonstrated that the usage of online collaborative platforms is becoming more popular as Irish Junior Certificate MFL students traverse the curriculum. Could this one-day lead to curriculum reforms whereby there is more of an emphasis placed on asynchronous learning? There is building evidence suggesting that this could indeed be a more inclusive model for educating future generations (Northey et al., 2015). It is now timely to discuss the limitations of this dissertation.

6.2 Limitations

One must acknowledge that this was an unfunded, small-scale research project, and the participating schools were well equipped for teachers to implement digital teaching strategies on a daily basis. Furthermore, all students attending these schools possess smart devices. The findings from this study could vary drastically in schools that do not receive adequate funding for digital technology. Having said that, the research did obtain rich data, prompting critical discussion; therefore, the intended outcomes were achieved.

6.3 Recommendations

As the advent of sophisticated digital technology in contemporary education is still relatively new, regular, continuous research in this field is essential. The implementation of ICT in the classroom setting is likely to grow exponentially over the coming decades; therefore, researchers will be provided ample opportunity to carry out further studies (Facer and Selwyn, 2021). While it is undoubtedly refreshing to see an emphasis being placed on the development of digital literacy skills in Irish educational policies such as *The Specification for Junior Cycle Modern Foreign Languages* (NCCA, 2015) and the *Digital Strategy for Schools to 2027* (Department of Education, 2022), constant monitoring of these policies and further educational reforms are indeed required in order to grant equal access to technology for all second-level students around the country. In an age where inclusion is of vital importance in education and society as a whole, this seems like a reasonable request.

As Digital Technology in Teaching and Learning is the researcher's second teaching methodology, sourcing relevant educational policies, educational theories, and existing literature had a profound effect on the entire research process. Furthermore, carefully structuring the survey and interpreting the data enabled the researcher to evolve into a critically reflective practitioner, which will also greatly inform future practice.

In terms of the quantitative methodology chosen for this dissertation, while it did generate rich data, a mixed-methods methodology could potentially have further added depth and nuance to the argument. However, given the nature of the research, parameters, and time frame, a quantitative methodology was deemed to be an appropriate choice for this project.
(10,994 words)

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Appendices

Appendix 1a: Research Information Sheet

HIBERNIA COLLEGE

Research Information Sheet

Researcher: X
Organisation: Hibernia College Dublin
Supervisor: X
Title of study: Teacher Perspectives on the Implementation of Information and Communications Technology (ICT) in Irish Junior Certificate Modern Foreign Languages (MFL) Classrooms: Potential Benefits and Drawbacks

Outline of research study:

This dissertation aims to analyse teachers' perspectives on the implementation of information and communications technology (ICT) in Irish Junior Certificate Modern Foreign Languages (MFL) classrooms. On May 3rd, 2023, Minister for Education Norma Foley TD introduced the report 'Towards a New Literacy, Numeracy, and Digital Literacy Strategy: A Review of Literature' (Kennedy et al., 2023). Several authors from Dublin City University (DCU) contributed to the literature review research, which was commissioned by the Department of Education. The report underpins the importance of digital literacy in the classroom and proposes an array of pedagogical strategies and approaches that foster digital literacy development. Furthermore, Kennedy et al. (2023) posit that when digital teaching methodologies are appropriately employed, they can add value to the teaching and learning experience.

Objectives of the project:

The objective of this research is to investigate teachers' perspectives on implementing ICT in Irish Junior Certificate MFL classrooms. The main research question is:

- What is the nature of Irish Junior Certificate MFL teachers implementing ICT in their classrooms in terms of benefits, drawbacks, strategies (including assessment), and competencies?

What would I need you to do?

Your participation in this research project is greatly appreciated. This research project has received ethical approval from Hibernia College Dublin. If you agree to participate, you will participate in a short online survey with the researcher. Any information you provide about your own identity or that of the school will be anonymous and confidential. This research will be used in the publication of a dissertation for Hibernia College Dublin. You are free to withdraw from the study at any time up to one month after data collection.

What is the purpose of this research?

The purpose of the research is to complete a small-scale study that forms part of the final year of the Professional Master's of Education (Post-Primary) at Hibernia College Dublin.

Appendix 1b: Teacher Consent Form

HIBERNIA COLLEGE

Teacher Consent Form

Researcher's name: X
Organisation: Hibernia College Dublin
Title of study: Teacher Perspectives on the Implementation of Information and Communications Technology (ICT) in Irish Junior Certificate Modern Foreign Languages (MFL) Classrooms: Potential Benefits and Drawbacks

Have you been fully informed/read the information sheet about this study? Yes/No

Have you had an opportunity to ask questions and discuss this study? Yes/No

Have you received satisfactory answers to all your questions? Yes/No

Do you understand that you are free to withdraw from this study at any time without giving a reason for withdrawing and without your withdrawal having an adverse effect for you? Yes/No

Do you agree to take part in this study, the results of which are likely to be published or presented at a conference? Yes/No

Have you been informed that a copy of this consent form will be kept by the researcher? Yes/No

Are you satisfied that any information you give to the researcher will be kept confidential? Your name and the name of the school will not appear in the research report. Yes/No

Participant's name (printed and signature): ____

Date: __________________

Researcher's signature: _______________________________________

Date: 30/11/2023

Appendix 1c: Principal's Letter

HIBERNIA COLLEGE

Dear X,

18/12/2023

As part of my Professional Master of Education (Post Primary) with Hibernia College, I am investigating teachers' perspectives on the implementation of ICT in Irish Junior Certificate Modern Foreign Languages (MFL) classrooms**.** This letter aims to provide you with an introduction to the research project and to seek consent for the project to move forward.

With your permission, I would like to ask Junior Certificate MFL teachers in your school to participate in online surveys in order to gain greater insight into the research area. Any data gathered will be underpinned by Hibernia College's robust Ethical Code of Conduct. For example, obtained information will be held in the strictest confidence, and pseudonyms will be used to ensure anonymity. Furthermore, the school's name will not appear on any research findings.

I would appreciate your cooperation in providing access to the staff at the school over the coming months. If you have any questions or require further information on the research study, please do not hesitate to contact me.

Researcher: XXXXXXX Tel. No: XXXXXXXXXX Email: XXXXXXX

Lastly, this research study has received ethical approval from Hibernia College Dublin. If you have any concerns about this study, please do not hesitate to contact the college directly at XXXXXXXXX

Principal's Signature: _______________________________

Researcher's Signature: _____________________________

Date: 18/12/2023

Appendix 1d: Online Survey

Teacher Perspectives on the Implementation of Information and Communications Technology (ICT) in Irish Junior Certificate Modern Foreign Languages (MFL) Classrooms: Potential Benefits and Drawbacks

Dear Teacher,

I am currently studying the Professional Master of Education (PME) programme with Hibernia College. I am carrying out a small-scale research project to investigate teachers' perspectives on the implementation of ICT in Irish Junior Certificate MFL classrooms.

This research has received ethical approval from Hibernia College. Your experience as a practicing teacher is invaluable, and I would greatly appreciate your participation in this short online survey.

The survey is completely anonymous, and any data collected is strictly confidential. Ethical guidelines will be adhered to at all times. You may withdraw from the survey at any time by closing the survey page. Data access will be managed, and it is only accessible to the researcher and their supervisor. All data will be encrypted and kept on a secure external device with password protection.

Thank you for taking the time to assist me with this research project.

*Indicates required questions

1. Gender *

○ Female

○ Male

○ Prefer not to say

○ Other...

2. Age *

○ 21-30

○ 31-40

○ 41-50

○ 51-60

○ 60+

3. How many years of teaching experience do you have? *

- ○ 5-10 years
- ○ 10-15 years
- ○ 15-20 years
- ○ More than 20 years

4. On a scale of 1 to 5, where 1 represents "not important at all" and 5 represents "extremely important", how would you rate the importance of ICT in MFL pedagogy? *

1	2	3	4	5
○	○	○	○	○

5. How often do you implement digital teaching, learning, and assessment methodologies in your classroom? *

- ○ Always (every lesson)
- ○ Often (every other lesson)
- ○ Sometimes (once per week)
- ○ Rarely (once per month)
- ○ Never

6. How confident do you feel using ICT during MFL pedagogy? *

- Highly confident
- Somewhat confident
- Neither confident nor unconfident
- Somewhat unconfident
- Unconfident

7. If applicable, do you feel that additional training would address a gap in your ICT knowledge? *

- Yes
- No
- N/A

8. Have you ever used ICT as a means of formative assessment to evaluate and monitor student progress? *

- Yes
- No

9. What do you predominantly use ICT for in your classroom? (e.g., teaching, assessing, etc.) *

Long-answer text

10. What digital technology (e.g., computers, tablets, etc.) do you use in your classroom? *

Long-answer text

11. In your opinion, what is the most useful app or software for teaching, learning, and assessment? Please briefly explain how you use it. *

Long-answer text

12. Do you think that online learning environments and management systems promote collaboration and the sharing of relevant content for students and teachers alike? *

- Yes
- No

13. When used appropriately, do you feel that ICT has the capability of assisting Junior Cycle MFL students in managing themselves and their learning? *

- Yes
- No

14. Do you think that students' levels of engagement and understanding are higher using conventional teaching methods or digital teaching strategies? *

- Conventional teaching methods
- Digital teaching strategies

15. Do you believe that digital teaching, learning, and assessment methodologies are capable of producing improved learning outcomes for a diverse range of learners, or are conventional teaching methodologies still more effective? *

Long-answer text

16. In your opinion, how effective is ICT in helping students prepare for their Junior Certificate examination? *

- Very effective
- Somewhat effective
- Neither effective nor ineffective
- Somewhat ineffective
- Ineffective

17. Can you envision a blended learning system whereby Junior Cycle MFL students are required to learn both in-class and online? *

- Yes
- No

18. Do you feel that students already spend an excessive amount of time on their smart devices, and are digital teaching, learning, and assessment methodologies adding to this? *

- Yes
- No

19. Does your school have an ICT Acceptable Usage Policy (AUP) in place? *

- Yes
- No

20. In your opinion, what are the main benefits and drawbacks of implementing ICT in Junior Certificate MFL classrooms? *

Long-answer text