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1+2 Languages: An investigation into the potential impact of technology on pupil confidence in spoken language, with primary five children, in an area of high deprivation.

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Abstract

There are many benefits of learning an additional language. In Scotland, the '1+2 Languages' policy entitles children to learn an additional language from primary one through to third year of secondary school. This policy also provides an opportunity to learn a second additional language from primary five onwards. Previous to the current 'Curriculum for Excellence', introduced in 2010, the '5-14 Curriculum' incorporated modern languages. Consideration of past and present Scottish curricula are given in this study as are perspectives from other countries. Across different contexts, when learning to speak in an additional language, it is found that many learners lack confidence which is a key focus of this study.

The overall aim of this research was to improve pupil confidence, with the support of technology, when speaking Spanish. The research was conducted with primary five children between March and June 2020. Unfortunately, schools had to close due to the global pandemic of COVID-19 and teaching and learning was delivered online. Therefore, this study was undertaken partly in the classroom and partly through online teaching. Fortunately, the study could continue with minor changes to the original plan of intervention due to additional languages being part of ongoing teaching and learning.

A case study methodology was implemented in order to address the research question and subsequent questions. Furthermore, to contribute holistic and conclusive answers to these questions, a variety of methods of both qualitative and quantitative nature were chosen. The methods included: structured questionnaires; semi-structured interviews; online tools; and a reflective learning journal.

The key finding of this study was that pupil engagement, enjoyment and subsequently confidence increased when games-based technology was used as the main method of teaching and learning. However, barriers were identified and overcome before pupils could be successful in their learning. The main barrier, which became more evident during school closures, was a lack of access to online learning. It was also found that the majority of pupils who did not engage in the online learning were from an area of the highest deprivation.

The findings of this study contribute towards the literature surrounding: additional language learning; pupil confidence; and the use of technology in the primary school. The findings are significant in contributing towards both the Scottish context and in providing an insight into learning at home during the global pandemic. Implications for practice can be considered for future additional language teaching as well as the accessibility for children in relation to future learning at home activities.

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Permission to Consult

I give permission for this dissertation to be made by the University of Glasgow to anyone who wishes to consult it or knows of its existence.

Abstract

Abbreviations

LA   Local Authority

CfE   Curriculum for Excellence

UoG   University of Glasgow

AR   Action Research

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Chapter One: Introduction

1.1 Background

How to teach additional languages is a question that has exercised professionals for many years, particularly how to engage pupils in primary school (Snow *et al.,* 1989:201; Pinter, 2017:12). For the past 31 years, additional languages were taught in primary school through a didactic, formulaic approach with a lack of understanding about how second language literacy skills were best acquired (Kasper, 1997:307; Shaffer, 1989:401; Johnstone, 2000:128; Kramsch, 2000:315; Masters *et al.*, 2009:28). Additional languages were taught to enhance the broad education of senior pupils but lacked purpose (Howard and Brown, 1997:11).

It is believed that "changing values in the wider world of education shape what happens in schools and influence the way we see learning and teaching in the classroom" (Cockburn and Handscomb, 2006:89). Changes in classrooms, related to the implementation of learning a second or third language, have further been influenced by the rapid developments and access to technologies and continue to impact teaching and learning in the present day (McCormick and Scrimshaw, 2001:37; Watson, 2001:263; Berry, 2011:29; Dunn, 2017:18; Beetham & Sharpe, 2020:17).

Subsequent to such changes, the requirements of additional language teaching and learning have evolved. In Scotland, pupils have coherent learning opportunities to learn languages, other than their native language, from primary one through to third year of secondary school and have the option to continue their studies thereafter (Jones and Mackay, 2019:138; Education Scotland (1), 2020:online). Additional languages are not only taught discretely but are embedded throughout the curriculum using creative approaches based on how children learn best (SCILT, 2012:12; Education Scotland (2), 2017:2; Hood, 2019:145).

However, although there have been improvements over time, lack of pupil confidence in speaking a language, other than the mother tongue, has always prevailed (Tsui, 1996:159; Lightbrown *et al.,* 2013:38; Kralova and Mulvey 2013:23; Soradova, 2015:96; Yalcin and Incecay, 2014:2620).

1.2 Rationale

The rationale for this study is based on my professional experiences and curiosity combined with informed knowledge from both literature and policy (Menter *et al.,* 2011:3; Taber, 2013:127; Bryman, 2016:649).

I teach in a co-educational primary school situated in the West of Scotland, in an area of high deprivation (appendix 1). There is a greater imperative to support children from an area of deprivation due to their disadvantages in both education and life (Barton, 1997:232; Davies *et al.*, 2013:88; OECD, 2018:70; OFCOM, 2019:5; Picton, 2019:29). The disadvantages faced by pupils in my school are mirrored across the local authority (LA). Therefore, consistency and coherence across the LA is key in ensuring such barriers to learning are addressed, overcome and improvement in learning is sustained (Bezzina, 2006:162; Buchanan & Redford, 2008:30; Broadhead & Aalsvoort, 2009:5; Durrant & Holden, 2016:17).

My professional development experiences, of attending conferences in Greece, sparked my interest in improving teaching and learning of additional languages as I was the only teacher in attendance from Scotland (Jackson and Street, 2005:10; Albers, 2008:79; Cremin & Barnes, 2014:467). The conferences were collaborative workshops on eTwinning which is an online platform that allows schools to communicate and share projects across Europe (eTwinning, online:n.d.). These experiences led me to reflect and evaluate my practice in teaching languages (appendix 2) (Moyles and Robinson, 2004:56; Burton and Bartlett, 2005:71; Glazzard, 2011:58). I found my practice to be least creative during additional languages lessons and that pupils lacked confidence which prompted my decision to research this area and potentially make improvements (Jordan *et al.,* 2009:541; Timperley *et al.,* 2009:240; Education Scotland (3), 2014:77).

This academic year, as the 1+2 Languages coordinator of my school, I attended meetings to address the priorities of the LA when teaching additional languages (appendix 3). From the meetings and professional dialogue, it was understood that pupils were not arriving at high school with the appropriate level of Spanish – the additional language taught in our LA (appendix 4). Education Scotland ((2) 2017:6) state the importance of high school teachers building "on the seven years of primary language learning and do not start language learning afresh, as this would inhibit learner motivation and progression". Therefore, the LA

requirement to make improvements in additional language teaching and learning has further contributed towards the chosen area of study for this dissertation.

1.3 Research Aims

Punch and Oancea (2014:6) explain the importance of the research aims and of their consistency with the research questions. The specific research aims and objectives of this study are:

- To investigate and overcome barriers to learning an additional language.
- To deliver Spanish, the additional language of our local authority, through alternative teaching methodologies with a focus on technology.
- To research and implement methods proven to improve pupil confidence in speaking an additional language.

1.4 Research Questions

Research questions and titles are crucial in guiding and structuring studies successfully (Burton and Bartlett, 2005:62; Taber, 2007:121; Punch and Oancea, 2014:78). Therefore, the main research title that this study will strive to investigate is:

1+2 Languages: An investigation into the potential impact of technology on pupil confidence in spoken language, with primary five children, in an area of high deprivation.

To ensure that this research title is meticulously investigated, the following sub-questions will be analysed and addressed throughout the study:

1. *What are the barriers to learning an additional language?*
2. *In what ways might technology impact on pupil learning?*
3. *What methods, if any, have proven to be successful in improving pupil confidence?*

To best investigate these sub-questions, a case study methodology will be implemented using several data collection methods, of both qualitative and quantitative nature, to ensure a holistic and intricate approach.

1.5 Impact of School Closures

Unfortunately, at the end of March 2020, all schools in Scotland were closed due to the global pandemic of the highly infectious Coronavirus disease (COVID-19) (WHO, 2020:online). Education globally was disrupted with little time to prepare for lockdown measures (See *et al.,* 2020:7). However, education was encouraged through 'learning at home' in which teachers provided set tasks and support for pupils through an online platform (Education Scotland (4), 2020:online; Hodges *et al.,* 2020:1).
Successfully incorporating technology in education has proved challenging in the past (McCormick and Scrimshaw, 2001:55). However, these challenges are still apparent and have been highlighted during school closures (NCEE, 2020:online). Primary teachers had the least experience, confidence and "54% of teachers found online teaching stressful and only 44% felt adequately provided for online teaching" (See *et al.,* 2020:5). All teachers had to find new ways of being flexible and adapting their practice in order to be responsive to the unprecedented situation (Campbell *et al.,* 2004:88; Kyriacou, 2007:19-20; Buchanan and Redford, 2009:34; Kerr *et al.,* 2010:40; GTCS(1), 2012:4; Cremin and Barnes, 2014:3).
In addition, children also experienced upheaval and ambiguity during this time (Moore, 2020:online). Not only were children mentally unprepared but many disadvantaged children were digitally excluded from online learning due to lack of access to internet and devices (Cullinane and Montacute, 2020:1; Kirkham, 2020:online; See *et al.,* 2020:31). On return to school, specific support will have to be provided to children who have experienced hardship during this time (Moore, 2020:online; Scottish Government(1), 2020:7).

Fortunately, my research is integral to the LA current priorities and the teaching of additional languages is a core part of the curriculum, therefore, I could proceed with this study. In addition, I had planned to use technology and as teaching and learning was being delivered online, the research and children's learning in this area was able to continue during this period. However, from school closures onwards I collected only naturally occurring data and

did not implement the previously planned post-assessments, following advice from the University of Glasgow (UoG).

1.6 Dissertation Outline

This dissertation will be divided into five chapters. In Chapter One the reasoning for this study is explained and the context in which the research was conducted is described. Relevant literature, in relation to each of the sub-questions, is explored and objectively evaluated in Chapter Two. In the third chapter, the methodology and methods are explained and justified before discussion of how the data will be analysed. Ethical considerations and limitations have also been considered in Chapter Three. The fourth chapter moves on to discuss the findings of the research by drawing comparisons between the pre-assessment data and the naturally occurring anecdotal data collected throughout the study. Further discussions of limitations to the study will be considered in Chapter Four. Finally, Chapter Five will conclude the dissertation by summarising the key findings and explaining how the results of the study will be disseminated. Recommendations and implications for both practice and theory will be provided for the purpose of future research in Chapter Five.

Chapter Two: Literature Review

2.1 Introduction

This literature review is an essential starting point for considering how technology may be used in supporting the development of a second or third language. In addition, the review considers how pupil confidence could potentially be improved when speaking an additional language. A literature review is "a summary of a subject field that supports the identification of specific research questions" (Rowley and Slack, 2004:31). This allows for "a more integrated relationship between theory and practice" (Donaldson, 2010:4). It is a crucial component of research as this relationship is complex and cannot be ignored (Hart, 2001:2; Burton and Bartlett, 2005:42). Conducting a literature review allows the researcher to "ground the project in validity and reliability" (Cohen *et al.,* 2011:121). Developing an understanding of the origin and development of the topic being researched supports teachers, and subsequently, pupil experiences (GTCS(2), online:n.d.). This evidenced-based understanding enhances professionalism (Pounder, 2006:534; Dickson, 2011:259). Durrant and Holden (2006:27) argue that "schools who make use of current research findings about teaching and learning in their day-to-day work will develop more successful school improvement initiatives". Contrary, Elliott (1991:45-46) argues "teachers feel 'theory' is threatening because it is produced by a group of outsiders who claim to be experts at generating valid knowledge about educational practices". This is opposed by Mertler (2009:184) who insists on the importance of reading literature as a strategy for professional development. However, we cannot simply accept everything we read and must critically question both literature and our education system, past and present (Reeder, 2005:247; Carey, 2018:3079). Buchanan and Redford (2008:30) support this, claiming that knowledge and skills are created through "being a critical reader, and questioning the validity of policy and research through experimentation, observation and analysis". Furthermore, in a practitioner enquiry "we draw not only from relevant literature, but from our own experiences" (Cohen *et al.,* 2018:153). This allows teachers to widen their thinking and challenge preconceived assumptions (Buchanan and Redford, 2008:31; Baumfield *et al.*, 2012:161).

This review will explore literature surrounding the key research question and subsequent questions, as discussed in the previous chapter. These questions will be analysed and discussed under their own headings with terminologies defined, where appropriate, to ensure

clarity (Taber, 2007:126). In doing so, I am undertaking a 'teacher-as-learner' position which allows for development of my knowledge in relation to the sub-questions (Carroll, 2009:40; Baumfield *et al.*, 2012:60). Jackson and Street (2005:42) state "that in order for any school to go forward effectively it has to have a clear understanding of 'where it is now'". Therefore, I have considered how this literature relates to my current context and the benefits or challenges involved. However, before an analysis of the sub-questions, the search strategies used in this review will be discussed.

2.2 Search Strategies

When searching online for literature it was important to use a variety of databases to conduct a systematic search "because no database includes the complete set of published materials" (Xiao and Watson, 2019:103). Norris *et al.* (2008:714) found that Google and Google Scholar performed more effectively than other well-known search engines on a global basis. Gusenbauer (2018:199) supports this claiming "it is certainly the most comprehensive academia search engine". Therefore, the database of Google Scholar was used as a starting point to find academic literature. However, in order to conduct a rigorous and complete search, other databases were also used and a search of the following was conducted: EBSCOhost; Wiley Online Library; Taylor & Francis Group; and a search of thesis through Enlighten on the UoG website.

The amount of literature available can be overwhelming, however, it can become more focused by refining your research question (Hart, 2005:324). In doing so I searched for key terminology from my research title: 1+2 languages; technology; pupil confidence; spoken language; area of deprivation. This search produced some very relevant pieces of literature, however, due to the amount of words searched at once the quantity of literature was lower and mainly focussed on languages. Therefore, I widened my search, across the databases, in order to find literature on two key terminologies in conjunction. I searched for 'technology and pupil confidence' which returned interesting literature but was not all educational. I then searched for 'education and areas of deprivation' which produced a wealth of research but on a global level. Lastly, I joined the terms 'learning' and 'additional language' in which most of the literature was based around learning English and was not specific to children of primary school age. However, from all searches, I accumulated a purposeful and relevant bank of

literature. Scott (2000:2) argues the importance of practitioners considering how transferable literature is to their context. Therefore, I added the terms 'primary education' and 'Scotland' to searches to slightly refine the context.

There were pros and cons to the search strategies used. It was beneficial to have both refined and less refined searches as this allowed for a holistic understanding of concepts from a contextualized and wider stance. The Booleans Operator approach was helpful in ensuring the searches returned specific results. This involves using AND, OR and NOT where appropriate to combine or eliminate key terminologies. Using synonyms when conducting searches was also worthwhile as slightly different terminology was used by different researchers that shared very similar definitions of terms used.

A challenge, when searching for literature was that it could become a never-ending process of searching and reading. In the wealth of literature available decisions had to be made about the most relevant material that would enhance the review. This meant disregarding material in order to ensure appropriate literature and not divert in a different direction (Taber, 2013:162). In relation, another challenge found was that searching for this literature was a time-consuming process due to the substantial amount of reading (Hart, 2005:324). Time was also spent reflecting on the material read in order to consider the best approach to the review (Carroll, 2011:83). The material selected for review itself was published between 1989, when additional languages in primary education was first introduced – to the present day (Murray, 2017:39). The initial literature review was conducted from November 2019 to February 2020 in order to ensure, where required, recent literature was acknowledged. However, this was an iterative project throughout the study. Although a time-consuming process, the time spent was beneficial and allowed for developed knowledge, confidence and clarity in being able to continue with my research.

2.3 What are the Barriers to Learning an Additional Language?

Learning additional languages - languages other than the mother tongue - has many benefits. It is a life enhancing skill and allows for opportunities that are not available to all (Scottish Government(2), 2012:6). Scotland's National Centre for Languages (SCILT, 2019:7)

highlights the possibilities offered from learning another language as they consider that doing so can "enhance employability and give learners a passport to the world". Furthermore, "children who engage in sustained language learning develop better understanding of their mother tongue, which in turn has a positive effect on literacy" (NPFS, 2018: online).

However, there can be barriers to overcome when learning another language before enjoying the benefits discussed. It is reported that when learning an additional language, many learners experience anxiety and lack of confidence when speaking aloud in this new language. Yalcin and Incecay (2014:2620) state "foreign language learners identify speaking in the target language as the most frightening skill". This is a barrier for learners of all ages as older learners fear that their intelligence will be questioned if they make any mistakes (Mulvey, 2013:23). Furthermore, studies on learning additional languages "reveal that anxious students are desperately trying to avoid humiliation, embarrassment, and criticism, and to preserve their self-esteem (Tsui, 1996:159). Patsy *et al.* (2013:38) explains that speaking is a crucial part of language learning, however, that many learners feel forced to do so. The Scottish Parliament (2013:64) appreciate that language learning must be provided in a nurturing environment to allow children to be confident in their abilities and when speaking aloud. This is crucial for success as it is argued that "most research has proven that there is a negative correlation between FLA [Foreign Language Anxiety] and FL [Foreign Language] achievement" (Kralova and Soradova, 2015:96). The National Parent Forum of Scotland provides a document for parents, with information about learning additional languages, stating that it is "a fun and motivating experience, learning languages boosts brain power" (NPFS, 2018: online). However, in the whole document there is no indication that learning a language and speaking it aloud can be a worrying experience or that children may lack confidence. Therefore, this help sheet may not be so helpful in informing parents of how to support a child who is anxious or lacking confidence. This could potentially result in parents putting more pressure on their child or parents disengaging with additional language learning. McCoy (1979:187) states "cognitive restructuring can take the form of involving students in discussions about their feelings and rationalizations concerning language learning". It may therefore be beneficial to normalise lack of confidence in language learning, for both children and parents, and provide support and strategies to ensure success. Ensuring a nurturing environment in which children felt comfortable to express their feelings and opinions, both in class and online, was a priority when conducting my research.

A second barrier when learning a language other than the mother tongue is the lack of modern and engaging resources used by the teacher. In their 2018 report, McFarlane *et al.* (2018:3) stated "clearly there is an issue with how we are teaching languages in our schools which needs to be investigated". When classroom resources, for language learning, are not current or modern then they do not provide realistic opportunities for children who will lose motivation and be unprepared for authentic experiences outside of the school (Patsy *et al.,* 2013:209). Teachers are undoubtedly extremely hard-working professionals, however, "some teachers need help in finding ways of using up-to-date, relevant materials in ways which are challenging and accessible… in branching away from the textbook" (SCILT, 2012:22). The ineffective use of resources for language learning is not particular to a handful of schools, teachers or regions but is something that should be revised throughout Scotland. The Scottish Parliament (2013:8) suggests that the utilisation of resources available is something that should be considered nationally, and that technology should be considered as an effective approach. The Scottish Government ((3), online) supports the use of technology "to enhance teaching and learning, and to provide real-life contexts that motivate children and young people and help them to see a purpose to their language learning". The Association of Directors of Education in Scotland undertook a review of the current language policy and also suggested that technology has an important role to play in delivering language learning (Christie *et al.*, 2016:7). Within the local area that I teach, an area of high deprivation, many of the children do not have the opportunity to travel to the native language speaking country of our additional language, Spanish. Therefore, I used technology to engage children in their learning of additional languages but to also allow for an authentic experience by communicating with native Spanish speakers.

It can be argued that the Scottish education system itself has presented barriers to learning additional languages. McFarlane *et al.* (2018:11) explains that there has been a dramatic decline, in the number of students studying additional languages, post-implementation of the current 'Curriculum for Excellence' (CfE), however, acknowledge that this decline has always existed. Prior to the CfE, in 1989 it was announced that "Scotland would have at least one teacher trained to teach ML [modern languages] in the upper primary stages" (Crichton and Templeton, 2010:141). The '5-14 Curriculum' then stated that languages, including additional languages, should be taught for a minimum of 20% of learning time (Scottish Parliament, 2008:5). However, the implementation of learning a second language was beneficial for pupils but challenging on teachers (Goulder *et al.*, 1994:80). Before the

introduction of CfE, HMIe (2007:12) concluded that nationally "there continues to be a need to provide in-service training for a large number of teachers, to ensure provision for modern language education in primary schools". Therefore, previously 'on paper' the teaching and learning of languages worked well, however, in reality it was a challenge for teachers and school leaders only having one trained professional in some schools.

Fast forward to the present day and CfE in which "primary teachers do not have to be fluent in the modern language(s) they teach" (Education Scotland, (2) 2017:2). The current '1+2 Languages' policy "aims to enable children and young people to study in two languages in addition to their mother tongue in all primary and secondary schools in Scotland up to the end of S3 - and beyond" (NPFS, 2018: online). So not only has the implementation of additional languages become more complex and demanding but teachers can be less qualified to deliver the ambitious policy. When CfE was first introduced, training in a second language was "to be the key to guaranteeing success for teachers in terms of increased confidence and expertise, and for pupils in terms of enjoyment and success" (Chrichton and Templeton, 2010:146). However, there are "variable degrees of language competence and confidence in primary teaching staff" (Scottish Parliament, 2013:73). These levels of confidence and competence are a cause for concern in the delivery of additional languages (Murphy, 2005:4; Scottish Government(2), 2012:19). McFarlane *et al.* (2018:11) believe that due to their ambitious policy, "the Scottish Government should have a better idea of the capability of primary sector staff to teach two additional languages". Teachers, as professionals, can appreciate the importance of additional languages, however, many are anxious about their personal lack of additional language acquisition and consequently teaching which collectively could have a detrimental impact on policy (Harris, 2003:320; Gil and Crichton, 2018:12). Patsy *et al.* (2013:39) argues that when a teacher switches to the mother tongue language during second language lessons, for any instruction, that this deprives learners and limits their opportunities. Therefore, it could be suggested that children in Scotland are disadvantaged because so many teachers lack in skills and confidence to deliver a lesson, never mind completely in the second or third language being taught. Furthermore, in an already busy curriculum, "planning should ensure that adequate curriculum time is allocated for introducing, practising and embedding the modern language" (Education Scotland (2), 2017:2). However, no recommended time is actually given, therefore the perception of 'adequate' may vary from teacher to teacher and school to school which results in incoherent provision. This further contrasts with the past recommendations of the 5-14 curriculum.

Priestley and Humes (2010:345) argued that "by ignoring the lessons of the past, CfE runs the risk of undermining the potential for real change". Not only does CfE ignore many of the lessons and recommendations from the past in the teaching and learning of additional languages, it completely disregards them.

McFarlane *et al.* (2018:5) does not believe that there is a crisis in learning languages, or that Scots are failing to recognise the benefit of speaking languages, but there are serious questions about how to translate those positives into our education system. If we are not quite at 'crisis point', what stage comes before this? In addition, what constitutes a crisis? Specific data and research for Scotland was challenging to locate. However, reports and research for the UK and Europe encompassed data relevant to Scotland (Leslie *et al.,* 2004; European Commission, 2012; British Academy, 2019). In 2004, Leslie *et al.* (2004:258) concluded "the knowledge of foreign languages is poor in the UK compared to other countries in Europe". In 2012, the European Commission (2012:16) placed the UK in the bottom three 'countries' for "least likely to be able to speak any foreign language" with 61% not possessing any other language . In 2016, only 34.6% of 25-64-year olds in the UK stated that they could speak another language which was the lowest amount of all 'countries' (Eurostat, 2019:online). In 2019, the British Academy (2019:4) argued "the UK is currently nowhere near to fulfilling its linguistic potential… the global nature of English does not make up for that underperformance, which is worsening each year". This data raises concern about the disadvantages of children in Scotland, in comparison to other children in Europe and their future opportunities. With consideration of this data and my local context, an area of high deprivation, the data becomes potentially concerning. The OECD (2018:70), unfortunately, concludes "that children from poorer communities and low-socio-economic-status homes are more likely than others to underachieve… addressing this persistent gap has become an increasing priority for the Scottish Government".

Regardless of the challenges and barriers to learning another language, we must continue to try and "ensure that Scots are well equipped citizens of a multi-lingual, multi-cultural, globalised world" (Gil and Crichton, 2018:2). Speaking another language is essential for being a part of a society outwith Scotland (Eurostat, 2019:online). Ensuring that children are prepared not only to live but to compete and thrive in this global world is even more crucial in light of Brexit (McFarlane *et al.*, 2018:3). Therefore, consideration of how other countries deliver languages other than the mother tongue is valuable. In Taiwan, "skills of successfully

using language and technology for interaction are important and may influence the acquisition of other skills, for example, communicating" (Lan, 2019:1). Online games, tasks and engagement with educational multimedia alongside essential face-to-face classes is found to be a successful strategy in language learning in the USA (Chun *et al.,* 2016:74). Yanguas (2018:234) argues that in Spain, using technology is beneficial "because it makes the learning process flexible, it enhances opportunities for real-life, meaningful communication, and students are able to work independently". In parts of Turkey, Interactive online games are important methods of language learning as they improve motivation and participation (Yukselturk *et al.,* 2018:160).

As stated by HMIe (2007:8) "monolingualism is curable". However, we have to address the barriers discussed: lack of confidence in spoken language; resources used by teachers; and the education system itself. Where possible, we can strive to overcome these challenges individually but in order for Scotland as a nation to improve in language learning, these barriers must be addressed at policy level.

2.4 In What Ways Might Technology Impact on Pupil Learning?

'Technology' itself "can be considered from physical hardware, such as computers and other digital devices, to that of online tools and media (Chun *et al.,* 2016:64). Online tools are websites, multimedia, games and apps (Scottish Government(4), 2016:9). Throughout the years as our world has become more technologically advanced, as have our classrooms (Hodson, 2003:46; Cockburn and Handscomb, 2006:89, Berry, 2011:29; Crook and Gu, 2019:1173). Developments in technology have been substantial and educators continue to find themselves working in uncertainty and require ongoing professional learning (McCormick and Scrimshaw, 2001:55; Beauchamp *et al.,* 2015:162; NCEE, 2020:online; See *et al.,* 2020:5). However, "teachers tend not to make radical changes to their existing teaching practices" (O'Donoghue and Chalmers, 2000:902). This could be due to the fear that "change means to chance the possibility that students might learn less well than they do under current practices" (Guskey, 2002:387). Regardless of previous beliefs, it is a requirement of teachers to effectively use technology to support teaching and learning experiences (GTCS(1), 2012:9; Education Scotland (5), 2014:36). Teachers must commit intellectually to these developments

to ensure schools are striving to meet the global technological developments (Cain, 2004:219). During school closures, engaging with technology was essential to provide learning opportunities from home (Education Scotland (4), 2020:online; Hodges *et al.,* 2020:1).

Technology benefits pupil learning as it supports their abilities and opportunities to thrive in a global digital future. Education Scotland ((6), online:n.d.) state that it is an "entitlement for all children and young people to experience opportunities to develop skills for learning, skills for life and skills for work". Digital technology supports the success of such skills which are vital for individuals but also for Scotland and its economy (Swinney, 2016:1). However, such digital technology being deployed within schools must be used effectively to ensure success (Scottish Government(4), 2016:4). Technology allows children to connect with others beyond the classroom which can encourage future job prospects (Education Scotland (5), 2014:37). Such opportunities and development of skills must be considered in relation to the local context in which I teach - an area of high deprivation. Dyson (2001:27) explains the importance of "equipping potentially marginalised groups to become active citizens and crucially, with the skills they will need to survive in an increasingly competitive and skills-hungry job market".

Technology improves pupil learning through differentiation. Children learn at different paces which requires teachers to plan accordingly to ensure that every child is meeting their full potential (Cremin and Arthur, 2014:157). It is argued that "technology offers teachers and school administrators the opportunity to successfully cater to different students' needs" (Yanguas, 2018:224). This is supported by the idea that technology offers teachers numerous approaches to choose from to best suit the individuals in their classroom and ensures that the curriculum is fully accessible to all (Scottish Government(4), 2016:9; Picton, 2019:2). The Scottish Parliament (2013:73) recognise how this can benefit the teaching and learning of additional languages as not only can the differentiation apply to the children but can support teachers in their different levels of language.

A further benefit of technology is that it engages pupils in their learning. Buckingham (2013:4) states that "technology is engaging - enriching - empowering". These are crucial components of learning to ensure a higher quality of work produced by learners and

subsequently a higher quality education (Byrne *et al.,* 2003:286). Understanding what engages and stimulates learning, allowing pupils to learn most effectively, is important knowledge to utilise when considering educational improvements (MacBeath and Mortimore, 2001:2). Undemanding activities, such as note-taking, are not as engaging for learners and do not require higher-order thinking (Wood, 2004:4-5). Therefore, didactic methods of teaching alone are unlikely to meet the needs of the pupils (Condie and Munro, 2007:37; Education Scotland (7), 2008:32). In response to these findings I restructured my current practice, when teaching additional languages, to ensure that lessons were engaging, enriching and empowering. Technology was used to support this restructure both pre-school closures and during online learning.

It is thought that technology can have a negative impact on pupil learning. The National Health Service (NHS, online:n.d.) claim that, on average, children spend a total of 6.3 hours a day in front of a screen. In addition, that "children with 2 or more hours of daily screen time are more likely to have increased psychological difficulties, including hyperactivity, emotional and conduct problems, as well as difficulties with peers" (NHS, online:n.d.). Furthermore, Intel Security (2014:10) argues that "cybercrime is out of control".

As practitioners, technology has many benefits as discussed, yet we must be mindful of the dangers that children can be exposed to through cybercrime and the overuse of technology on physical health. In doing so we are "ensuring that young people and schools capitalise on the benefits of using digital technology safely" (Swinney, 2016:1). It is crucial that practitioners teach cyber resilience and security to children at a level appropriate for their needs (Scottish Government(5), 2015:5). In relation to health, "language learning and practice could slow down cognitive deterioration… use of different languages can be seen as part of a healthy lifestyle" (Bak and Mehmedbegovic, 2017:7) Although the delivery of language learning is beneficial through the use of technology, teachers must ensure that they balance teaching and learning methodologies and do not solely rely on limited methods of delivery in order to obtain both learning and health benefits.

Lack of human interaction and socialisation can be considered as another disadvantage of technology impacting on pupil learning. It is argued that face-to-face communication is being substituted by technology which results in poorer social skills (Pierce, 2009:1370). When

learning a new language, engaging in collaboration is key to knowledge construction (Patsy *et al.,* 2013:169). If considering the viewpoint of Pierce, then technology may appear to be detrimental to collaboration and thereupon learning additional language. However, technology actually provides pupils with "the opportunity to collaborate online with others from across the world in addition to their peers within their school" (Scottish Government(4), 2016:9).

Technology and internet access are not readily available to all children at home, which has become more evident during recent school closures (Cullinane and Montacute, 2020:1; Kirkham, 2020:online; Masers *et al.* 2020:13; See *et al.,* 2020:31). This could have a detrimental impact on pupil learning in comparison to peers who have access at home and use technology for educational purposes (Picton, 2019:29; Andrew *et al.,* 2020:2; Scottish Government(1), 2020:3; Scottish Government(6), 2020:4). OFCOM (2019:5) conclude from their research that one quarter (24%) of households in Scotland did not have a fixed internet connection in 2019. This is a large number of households without access at home, many of which could include children. However, it must be noted that just because there is internet access does not necessarily mean that technological devices are being used for learning purposes.

The Scottish Government ((4), 2016:3) discusses the importance of "ensuring that every child has the same opportunity to succeed, with a particular focus on closing the poverty-related attainment gap". Providing children with an opportunity to develop their technological skills within school becomes crucial when considering that not all pupils have access at home. According to the Scottish Government's document 'The Scottish Index of Multiple Deprivation' ((7), 2020:10) the LA that I teach within - and neighbouring authority - are in the top four authorities with most deprived zones. The neighbouring authority has provided primary 6 and 7 pupils with their own iPad, which remains property of the council, but children were allowed to take this home, pre-school closures, to enhance learning opportunities whilst primary 1 to 5 pupils have access in school (GCC, 2019: online). These iPads have educational apps that do not require internet access. In the LA that I work within children from primary 1 to 7 have access to Google Chromebooks for teaching and learning purposes - but were not permitted to take them home pre-school closures. When permission was granted for pupils to take these devices home, due to the recent global pandemic, some children may still have been at a disadvantage as Chromebooks require internet access to

operate. It becomes difficult to 'ensure that every child has the same opportunity to succeed' when there are differences in opportunities across local authorities.

Technology impacts pupil learning by providing beneficial opportunities: developing skills to thrive in a globalised world; allowing a variety of learning needs to be met through differentiation; and engaging pupils in learning. However, technology can also provide challenges to pupil learning: too much screen time and potential online dangers; decreased human interaction; and lack of access for some learners at home. Many of these challenges can be overcome by practitioners when considering how best to meet the needs of their pupils.

2.5 What Methods, if any, have Proven to be Successful in Improving Pupil Confidence?

Pupil confidence - how confident a pupil feels to participate fully in their learning - is directly linked to one of the four capacities of the CfE which promotes learners being 'Confident Individuals' (Education Scotland (8): online:n.d.). Pupil confidence is crucial for successful learning and can be 'infectious', enabling other learners to have "stronger scaffolds and spaces for emotional and intellectual growth" (Cremin and Arthur, 2014:471). The same can be said on a whole school basis, if there is confidence amongst practitioners in teaching and learning, this can facilitate self-belief for parents and pupils (Durrant and Holden, 2006:30; Crowther, 2009:53).

When considering methods to improve pupil confidence, it is helpful to consider what may have negatively impacted on pupil confidence and how to address this. When pupils do not experience success, they lack confidence which can impact on their perception of self and create a barrier to learning (Reeves, 2013:61; Setiawan and Koimah, 2019:3). Children who experience success are more confident to speak aloud and are "laying down a neuronal scaffold that, later in life, will offer crucial support for leadership" (Goleman *et al.,* 2002:104). Therefore, providing learners with opportunities to experience success is imperative to developing life skills both now and in the future.

A method of improving pupil confidence, to ensure children experience success in learning, is through online tools and games. Online tools to support learning, such as a games-based approach enhances motivation, engagement and confidence (Alghamdi and Holland, 2017:55). Through using online tools, children of all abilities can experience success or opportunities to challenge themselves, but more importantly, without destroying their confidence (Tomlinson, 2003:136; Cross *et al.,* 2009:35). In an online games-based environment children are engaged and can answer questions with a simple tap rather than providing an answer in front of a class. This opportunity allows children to have the confidence to take risks, make mistakes and learn from them (Tomlinson 2003:136; Cross *et al.,* 2009:35; Collinson, 2012:264; Alghamdi and Holland, 2017:55; Setiawan and Koimah, 2019:3).

However, it is argued that games alone are not adequate for learning (O'Neil *et al.*, 2005:256; Calvo-Ferrer, 2017:265). Expressive experiences, such as engaging with native Spanish speakers through videos, can support the development of pupil confidence (Cross *et al.,* 2009:52; Humphry and Hampden-Thompson, 2019:107). A similar opportunity of video calling was provided by Doyle (2013:34) who stated it "was an excellent way to develop pupil confidence in speaking Spanish for a real audience".

Another area that impacts pupil confidence is pupil-teacher relationship. Fink (2005:45) states that "the starting point for any relationship is trust". Children can be overly trusting with their teacher in order to try and please them, however, may lack confidence which can be an uncomfortable experience for pupils (Campbell and Groundwater-Smith, 2007:164). The pupil-teacher relationship is "pivotal in helping to shape their self-perceptions and providing them with a sense of competence in their academic life" (VanTassel-Baska, 1989:30)

In consideration of the pupil-teacher relationship, it could be argued that a method of improving pupil confidence is through the supportive teacher as a role model. If a teacher demonstrates lack of confidence, this directly influences the pupils who "may lose confidence in their ability and may perform more poorly than they otherwise might" (Setawan and Koimah, 2019:3). Pupils may feel worried when speaking in the new language being taught as they do not wish to make a mistake in front of their teacher (Yalcin and Incecay, 2014:2621). Kralova and Soradova (2015:78) state "a teacher plays one of the most important roles in increasing or alleviating anxiety by students". If the atmosphere in a classroom is

supportive and encouraging this can contribute towards raised self-esteem and pupil motivation to participate (Bianco, 2009:28; Patsy *et al.,* 2013:88). In order to create this environment, in which pupils feel confident to express themselves, they require their teacher to be a role model (Davies *et al.,* 2013:88). Steers (2009:128) supports that pupils are more willing to take risks and make errors if this is demonstrated by their teacher. Furthermore, an "important component of classroom climate is the enthusiasm shown by the teacher" (Muijs and Reynolds, 2011:131). These qualities and skills discussed are often innate within teachers who strive to ensure their pupils succeed (Baumfield *et al.,* 2012:99). Kemmis and Smith (2008:4) support teachers meeting "the long-term interests of each individual student, and the long-term interest of society and the world". In order to do this, teachers would need to ensure that they were equipping children to communicate effectively in a world where English is not always the given language. It was crucial I continued to portray this level of enthusiasm and confidence whilst nurturing children to foster positive relationships as "young children's relationships with teachers predict social and academic success" (Rudasill and Rimm-Kaufman, 2009:107). This is more prevalent to my context as schools "situated in an area of multiple deprivation benefitted from resilient and ambitious leadership" (Livingston *et al.,* 2018:39).

There are different methods to improve pupil confidence which is key to pupils' academic success both now and in the future. Two methods that appear to be successful are using digital technology, through a games-based approach and online tools, and a positive pupil-teacher relationship. These methods were implemented throughout my research in order to improve pupil confidence.

2.6 Summary

This chapter has considered the benefits and importance of conducting a literature review and discussed the strategies undertaken to gather the literature included. The subsequent questions, derived from the research title, were then addressed individually. However, throughout all questions key themes emerged: as a nation we must improve our skills in speaking additional languages; technology and teachers themselves are a beneficial resource

for improving confidence and supporting learning; many children - and teachers - are anxious at the teaching and learning process of additional languages; and children living in an area of high deprivation face additional challenges to achieving success.

The process of conducting this literature review has been extremely beneficial in conducting a "thorough critical evaluation of existing research… leading to new insights by synthesising previously unconnected ideas" (Hart, 2001:2). Through appreciation and analysis of past and present literature I have considered implications for my research and future practice. I aim to support fellow practitioners by contributing towards the literature surrounding my research title. Having an ambitious attitude is not only paramount when implementing my research but when considering its future impact as "we will never create what we cannot imagine" (Berry, 2011:30).

Chapter Three: Methodology

3.1 Introduction

The literature review, in the previous chapter, allowed for consideration of "what kind of society we should have and what kind of education should be created to realise that society" (Hargreaves, 1982:226). This study investigates pupil confidence when speaking additional languages, with the support of technology. The investigation is influenced and underpinned by the literature review.

In order to implement the research successfully, strategic planning is essential (Spencer, 2003:25; Durrant and Holden, 2006:36). This methodology chapter will discuss how this research was systematically planned. Case and Light (2011:186) explain that methodology "refers to the theoretical arguments that researchers use in order to justify their research methods and design". For the purpose of this study, I will be using a case study methodology. Crotty (2003:3) states that methods are "the techniques or procedures used to gather and collect data related to a research question". The methods I will use for this study are: structured questionnaires; semi-structured interviews; online tools; and a learning journal. This chapter will further explore how the data will be analysed during and after the intervention phase before discussing ethical considerations and acknowledging limitations.

Research Timeline

At this stage of my research, creating a realistic timeline of intervention was appropriate (Burton and Bartlett, 2005:66). A sufficient amount of time was provided in order to allow the children an opportunity to fully explore the changes to teaching and learning (Jackson and Street, 2005:45). For the purpose of this research, the study commenced at the beginning of March 2020 and lasted until mid-May 2020, approximately 10 weeks, excluding school holidays.

The original timeline was slightly altered due to the school closures, however, as the intervention was underway when the schools closed, changes to the timeline were minimal.

Participants

The participants of the research are the children in my primary five class. This decision was made as I teach this class full-time and could therefore plan appropriately for the intervention with little change to the class routine. My intention was to have 28 children from my class participating throughout the study.

Furthermore, my teaching colleagues were invited to be participants in order to gather their professional opinions. Collaborating with colleagues is crucial to achieving successful, sustainable changes and a shared vision amongst staff (Murphy, 2005:77; Woods, 2005:139; Cochran-Smith and Lytle, 2007:26; Baumfield *et al.,* 2012:105).

3.2 Action Research

For the purpose of this study, I used the Action Research (AR) cycle to make improvements to teaching and learning whilst developing a professional understanding of undertaking enquiry (Skerritt, 1996:83; Olesen and Myers, 1999:32). AR is a transformative cycle which transforms both practice and the practitioner (Kemmis, 2010:423). It is "a practical way of looking at your practice in order to check whether it is as you feel it should be" (McNiff, 2002:15).

Figure 1: Action Research Cycle

Diana (2011:172) states that "successful action research projects become the springboard for other questions and issues that can be studied in the future". This supports the 'Action Research Cycle' (Ferrance, 2000:9), shown in *Figure 1,* which illustrates that the cycle is

continuous. This could allow for further development of the research being undertaken or a 'springboard' for another area of enquiry. Using this cycle, practitioners consider their own context and seek to acquire relevant, evidence-based solutions (Albers, 2008:85). Thus, AR has the potential to address the attainment gap if successfully implemented by practitioners, specific to their context (Education Scotland (8), 2018:online). For the purpose of my research, I followed the AR cycle with consideration of my context. As this is a small-scale study, the cycle was fully implemented once, however, due to the iterative loop, the cycle was revisited where required. Subsequently, there is potential for further AR projects following this study.

Practitioner Research

It is argued that "a practitioner conducting research will not be the same as a traditional academic researcher" (O'Toole and Beckett, 2009:40). This is supported by Menter *et al.* (2011:3) who explains that practitioner research outcomes are not as widely shared. Practitioner research is not a new concept (Cochran-Smith and Lytle, 2007:27; Coleman, 2007:480). However, many practitioners do not consider themselves to be researchers and changing this mindset can be challenging (Donnenberg and DeLoo, 2004:173; Bezzina 2006:163). Regardless, the objectives and benefits of the AR cycle highlight the importance of breaking down these barriers, of practitioner and researcher, to create shared practice and improvements nationally, locally and personally.

As teachers, we regularly adapt national guidelines to meet the needs of our context (Sutherland, 2011:195). In doing so, we develop areas of learning - such as language learning - which "in turn radiate out to our schools, into sustained positive destinations beyond school, and ultimately impacting and benefitting society at large" (SCILT, 2012:4). Undertaking practitioner research through the AR cycle has the potential to improve teaching and learning, thus, allowing my pupils to develop personally and contribute towards society.

Practitioner research can contribute to local development by sharing practice with colleagues and supporting their projects (Durrant and Holden, 2006:21; MacDonald and Weller, 2016:140). I will ensure that I share the outcomes of my research with my colleagues and the local learning community. Furthermore, my practitioner research has the potential to improve the skills and opportunities of local children. Prior to school closures, the original plan was to link up with a Spanish school and engage in live video calls. Although this was not possible,

children were still provided with an opportunity to engage with native Spanish speakers through pre-recorded videos. This provided pupils an authentic experience that they may otherwise not have access to.

On a personal level, practitioner research through the AR cycle, "supports professional growth by challenging or 'disturbing thinking'" (GTCS(2), online:n.d.). A teacher will develop personally and professionally through practitioner research (Carroll, 2011:79). The main priority of this study was to improve outcomes for my pupils, however, I have considered my own development throughout.

3.3 Methodology: Case Study

A case study is a comprehensive study of a large group, small group or an individual engaging in an experience of interest to the researcher (Case and Light, 2011:191). Case studies can support the development of our understanding of events and allow for new discoveries (Sanders, 1981:44). A case study is a beneficial methodology for educational contexts as a holistic and natural approach can be taken when implementing the research (Laws and McLeod, 2004:4).

This methodology was chosen as the naturalistic approach was appropriate for data collection and timetabling of the intervention, as the participants were pupils in my class. Using a case study deepened my understanding of learning in my own classroom, both physically and online, which in turn influenced my teaching and practice (Dickson, 2011:259). Furthermore, aspects of my research can be transferred to other classes in the school due to a very similar context.

However, it is argued that case studies themselves require a significant amount of time and documentation to implement (Yin, 1994:7). Another limitation is that "methodologists do not have a full consensus on the design and implementation of case study, which hampers its full evolution" (Yazan, 2015:134). Furthermore, case studies are unable to be generalised and transferred to other contexts, especially studies of a small sample size (Yin, 1994:9). Contrary to this argument is the belief that "there is much to learn through considering how case studies from contexts different to one's own can be adapted" (Jenkins *et al.,* 2008:7). As this study implemented was small-scale and much of the data collected occurred naturally, I do

not consider that the limitations discussed hindered my research. However, I was mindful of these when executing my intervention.

3.4 Data Collection Methods

When choosing data collection methods, it is essential to consider the research question and the evidence that may be required to answer this (Baumfield *et al.,* 2008:14). In addition, choosing a variety of data collection methods is beneficial to develop a rich, holistic data set (Campbell *et al.,* 2004:105; O'Toole and Beckett, 2009:52). However, there are debates around what concludes as acceptable evidence (Hulme *et al.,* 2009:410).

The data for this study was collected in a relaxed and ordinary classroom setting in order to keep change to class routines to a minimum (Wingrave, 2014:38). When the study was continued through online learning, the assigned tasks were part of the weekly schedule of learning from home activities. The data collected was a form of assessment which "is an integral part of learning and teaching… helps to provide a picture of a child's or young person's progress and achievements" (Scottish Government(8), 2011:18).

After consideration of the research question and analysis of each type of method, I considered the following methods to be appropriate for my study.

Structured Questionnaires

Questionnaires are a fast, free and straightforward method of collecting data from a number of participants at one time (Campbell *et al.,* 2004:102; Cohen *et al.,* 2018:471). Another benefit to using structured questionnaires is that "patterns can be easily observed, and comparisons made" (Bailey, 1994:118). The questionnaires created were in an online format which made them very accessible to the participants.

Questionnaires are not without limitations including that of sample size and questionnaire length. If a questionnaire is too long, this can result in participants experiencing "respondent fatigue" (Denscombe, 2014:9). With this in mind, I ensured that the questionnaires created were short but that valuable questions were asked. Furthermore, Cohen *et al.* (2011:209) argues that small sample sizes can distort data. However, the questionnaires that I created were designed to compare themes and not purely numeric statistics.

The pupil questionnaires (appendix 5) were written in child-friendly language with supporting images. The online link was posted in our primary five Google Classroom. The children had prior experience of completing such questionnaires in relation to past school initiatives, therefore, this was an activity that they were familiar with. Cremin and Arthur (2014:438) argue the importance of providing "opportunities for pupils to voice their opinions about matters that concern them and that affect their learning and other school experiences". Furthermore, the teacher questionnaire (appendix 6) was distributed by email so that teachers could access this at an appropriate time. Issuing teacher questionnaires was beneficial in gathering the professional opinions of colleagues (Bell, 2010:30; Carroll, 2011:80). The written responses, alongside professional dialogue, allowed for a wealth of collaboration which supported this research (GTCS(1), 2012:7; DeLuca *et al.*, 2015:641; Drew *et al.*, 2016:92).

Semi-structured Interviews

Only a small sample of four children were selected to participate in group interviews. The children were selected using my professional judgement and knowledge of the individuals in order to have a diverse group and discussion. The criteria used to select these children was based on level of ability, pupil enthusiasm and the SMID decile in which the children live. Cockburn and Handscomb (2006:22) argue the importance of "listening to what children have to say, and attempting to gain an appreciation of their perspective". Therefore, the interview was audio recorded to ensure that I could listen to and analyse their answers outwith the classroom (Hannan, 2007:23). Children are keen to be involved in the planning and collaborating of their learning and when involved, are more engaged (Reeves, 2013:61). The interviews were appropriate for this study, adding depth and further value to the collective questionnaire answers provided. Logistically, the interviews were implemented as naturally as possible to ensure that the children felt comfortable (Moser and Kalton, 1997:297; Morrison, 2013:323). They were conducted within the classroom when the other children were at gym with the non-class contact teacher. This allowed for minimal disruptions and for the interviews to be implemented within the natural environment of the children.

There are limitations to interviews as a data collection method. Closed questions should be limited as they can give the impression that there is a right or wrong answer and to allow for

detail to be given (Campbell *et al.,* 2004:99). The questions that I asked were predetermined and allowed for children to give detailed answers (appendix 7). Another limitation of a group interview is that children can model their answers on their peers (Houssart and Evens, 2011:65). It is also argued that participants will alter their answers during interviews to what they perceive to be a favourable answer of the interviewer (Campbell *et al.,* 2004:99). Therefore, before the interview I explained that there is no correct answer and welcomed their honest opinions.

Online Tools

The benefits and limitations of online tools have been discussed in the literature review. The online tools used in this study were Google Classroom and Google Hangouts as the main platforms for delivery and communication. The other online tools: YouTube, Memrise and Quizizz are used for teaching and learning of Spanish. The main learning tool, Memrise, responds to the learning development of each individual pupil which is crucial in learners becoming secure in learning at their own pace (Roussou, 2004:5; Glazzard, 2011:62). Further details about the online tools used can be found in the appendices (appendix 8).

The tools were selected carefully, primarily to support children in their language development as well as being the most appropriate form of data collection. In turn these were also used to provide feedback to children as part of the learning and teaching. This was provided through written or verbal feedback on the communication platforms discussed. Furthermore, instant feedback to the children is provided through the design of the language learning tools, highlighting their progress through the use of points. This data is automatically generated and as the 'teacher' of each tool, I had unrestricted access to statistics and progress reports.

Learning Journal

A journal of learning was used as the key data collection method due to school closures. This included a variety of data types including: observations; pupil and professional dialogue; online comments; and personal thoughts and reflections. A learning journal is beneficial to ensuring evaluation throughout a research study (Chitpin, 2006:73). The journal also included

other data that could not be forecasted due to the spontaneous nature of children (Jeffrey and Craft, 2004:14). The learning journal was further beneficial as it contained genuine data about children naturally engaging in tasks (Wingrave, 2014:36).

However, as with all methods, there are limitations. The validity of learning journals is questioned due to the recording of information from the perspective of the researcher that could be seen as bias (Cohen *et al.,* 2011:209). To overcome this challenge, I supported my comments with images. Furthermore, I noted down points for reflection, during teaching and learning experiences, and wrote these up at the first available opportunity (Conner, 2013:78).

3.5 Data Analysis

This section will consider the types of data collected and how this was analysed in detail to identify findings and explanations (Sharp, 2012:103; Cohen *et al.,* 2018:714). Collecting data and assessing the progress of learners is regularly undertaken by teachers (Kyriacou, 2007:105; GTCS(1), 2012:9). Therefore, although the data was fully analysed at the end of the intervention, it was also considered and reflected upon throughout the study to ensure student wellbeing and potential progress (Timperley *et al.,* 2009:240).

Furthermore, the pre-assessment questionnaires and interviews were used for comparison purposes (Buchanan and Redford, 2008:30). These comparisons help "identify the strengths and shortcomings of our actions, so that we can make changes or capitalise on success" (Cockburn and Handscomb, 2006:140). Due to ethical changes, the post-assessments were not implemented and the comparisons were drawn from naturally occurring data through ongoing teaching and learning (Donaldson, 2010:4; Conner, 2013:74).

Quantitative Data

Quantitative and subsequently numeric data is factual and specific (Onwuegbuzie and Leech, 2006:480). This is beneficial when making comparisons, concluding themes and factually describing findings (Cohen *et al.,* 2011:374).

The numeric data that I gathered was from the questionnaires and statistics of the online tools used by the children to develop language learning. In addition, a 'frequency of volunteers' table was used as a form of formative assessment when a child volunteered to speak aloud in

Spanish. However, due to school closures, I had to consider an alternative, for example, the frequency of children replying to comments in the online classroom in Spanish and speaking Spanish during video calls.

Quantitative data, without effective analysis, does not always provide the full picture of the context of the situation and can therefore be limiting. (Miles and Huberman, 1994:10; Cohen *et al.,* 2011:197). I support this limitation if numeric data was to be used in isolation, especially for the methodology chosen. Therefore, I also gathered qualitative data to support my research.

Qualitative Data

This study predominantly gathered qualitative data for the "richness and holism, with strong potential for revealing complexity… in a real context" (Miles and Huberman, 1994:10). These deeper insights enhance understanding, providing detailed findings and conclusions (Corbin and Strauss, 2015:12). It is believed that "a qualitative approach to research may lead to a more extended form of professionalism" (Burton and Bartlett, 2005:51). This research provides an opportunity for extended professionalism through the planning, collecting and analysis of qualitative data in the form of interviews and the learning journal.

The limitations of qualitative data are related to the complex nature of the data and the inability to measure and analyse this (BERA, 2011:3; Miles *et al.,* 2013:10). This limitation contradicts that of the quantitative data, hence the decision to use both data types. Another limitation is that "the subjectivity of respondents, their opinions, attitudes and perspectives together contribute to a degree of bias" (Cohen *et al.,* 2011:179). As discussed, I ensured that pupils and teachers were comfortable and encouraged honest opinions. There may have been a similar consensus within the classroom as the children experience the same lessons in language learning. Therefore, I anticipated common themes occurring.

Mixed Method Approach

A mixed method approach requires integrating both quantitative and qualitative data, in the same study, to develop a holistic and in-depth analysis of findings (Onwuegbuzie and Leech, 2006:474). This approach allows for a comprehensive understanding of both 'what'

(quantitative) and 'why' (qualitative) changes occurred (Baumfield *et al.,* 2008:30). Regardless of the method, the limitations endure. Validity is a common limitation and in the mixed method approach this also must be addressed (Cohen *et al.,* 2011:197). I validated my data through triangulation, this being defined for the purpose of this study as: gathering three or more sources of data to draw conclusions (Hopkins, 2002:134; Hartas, 2010:38; Bryman, 2016:392).

Onwuegbuzie and Leech (2006:473) argue that "mixed methods researchers make use of the pragmatic method and system of philosophy". A pragmatic paradigm is associated with "human beings' natural efforts to improve their situation" (Goldkhul, 2012:8). From the data collected, I collated realistic and practical answers to the research question.

3.6 Ethical Considerations

Undertaking any research involves consideration of ethics to ensure that work being undertaken is purposeful and without harm (Punch and Oancea, 2014:58). Buchanan and Redford (2008:3) state that "all teachers are bound by a code of professional ethics and need to ensure that an enquiry is credible and will work within the context of the school". In ensuring that my study would contribute to the greater good of the school, I collaborated with my head teacher who approved my ideas (Johnson, 2003:339). I further sought permission from my LA and the UoG ethics committee. Throughout this research, I adhered to the guidelines from the Sottish Educational Research Association (SERA) and the British Educational Research Association (BERA).

Pupils and teachers were given forms to explain my research and to seek consent as "researchers have a responsibility to participants of all ages" (Flewitt, 2005:564). As children are minors, consent must further be given from a primary carer and only if both the carer and child give consent can they participate in the study (Cohen *et al.,* 2011:79). The children were provided a participant information sheet, in which we read aloud together in class and the opportunity to ask questions was provided. The permission form was then explained to children and they were given time to fill this out, with support where required (BERA, 2011:6). As in the participant information sheet, the children were reminded that they did not have to participate and that this decision would not impact pupil-teacher relationships. They were also informed that if they decided during the study that they no longer wished to participate then they would be "removed from the project cohort, analysis and final results"

(Baumfield *et al.,* 2008:33). However, as the study is integral to learning and teaching, the children were still expected to engage with the day-to-day lessons.

When collecting and reporting data, it must be authentic and respectfully represented (Bournot-Trites and Belanger, 2005:199; O'Toole and Beckett, 2009:54). However, although a true representation, pseudonyms were used to ensure participant anonymity. Whilst implementing my research, I constantly reflected and evaluated as the study developed ensuring that the wellbeing of each participant was paramount (Kemmis, 2010:425).

3.7 Limitations

Throughout this chapter I have discussed limitations to each aspect of the methodology and how best to overcome these potential challenges (Reeves and Drew, 2013:36). However, I had an open and reflective mind throughout as predicting all issues that an enquiring teacher may experience is extremely challenging (Carroll, 2009:40; Baumfield *et al.,* 2012:60). The school closures placed limitations on the study. However, as this situation is one that could not be changed the best was made of the current climate. In the future, the study could be reproduced in a similar context to observe and compare the outcomes.

3.8 Summary

This chapter has explored the concepts and strategies that were used in order to successfully execute the intervention. The definitions, benefits and limitations of each aspect have been discussed to provide a comparative and informative review of the methodologies and methods undertaken. In turn, this supports the decision to implement such strategies and allowed for consideration of possible limitations or challenges. I believe that the time that was invested in planning and researching the methodologies enhanced the way in which I implemented this intervention (Dow, 2004:3; Petty, 2009:323).

A key objective of this chapter was to carefully analyse and derive approaches of how to address the research question (Burton and Bartlett, 2005:104). I believe that I achieved this objective and was confident in proceeding with the intervention. "All research is constrained by time and resources" (Bryman, 2016:82). Therefore, regardless of school closures, I considered how to make sense of practice and continued to provide learning opportunities to

the best of my ability- as always (Dickson, 2011:274). The following chapter will discuss the findings of my research, post-intervention.

Chapter Four: Discussion and Findings

4.1 Introduction

In the previous chapter, the methodologies were discussed with consideration of how best to address the research question (Punch and Oancea, 2014:7). Following this, the "most powerful element, however, is the process of checking whether any changes in practice are having the desired impact on valued student outcomes" (Timperley *et al.,* 2009:240). This chapter will allow for reflection and analysis of the findings of this study, and seek to answer the research question (Albers, 2008:83-84). To do so, the original sub-questions must be addressed and examined in isolation (Burton and Bartlett, 2005:140). Therefore, this chapter will be structured with an analysis of each sub-question before consideration of possible limitations to the study.

It is argued that it is crucial that "post-assessments are undertaken, in their new format, to elucidate the post-opinions of children, from their perspective" (O'Toole and Beckett, 2009:52). I had originally planned to compare both pre and post-assessments, however, due to the current situation, post-assessments were not permitted. All pre-assessment data and some data from the implementation stage were collected pre-school closure. Therefore, to contribute an answer towards the sub-questions, I will make comparisons between the data collected at the start of the study and any changes to this data throughout the implementation (Baumfield *et al.,* 2008:34; Buchanan and Redford, 2008:30). The data being compared will be in the format of images, pupil work and comments, on the online classroom, that occurred naturally as part of my ongoing teaching and learning at home (Donaldson, 2010:4; Conner, 2013:74). The original timeline for data collection was decreased, using my professional judgement (Buchanan and Redford, 2009:35). However, "it is not the duration of time but rather the quality of the interactions that is significant in terms of the impact upon teaching and learning" (Carroll, 2011:87).

4.2 What were the Barriers to Learning an Additional Language?

The first barrier experienced in this study was that the majority of pupils did not enjoy learning an additional languages, in our school, this being Spanish.

1. What are your 3 favourite subjects?

More Details

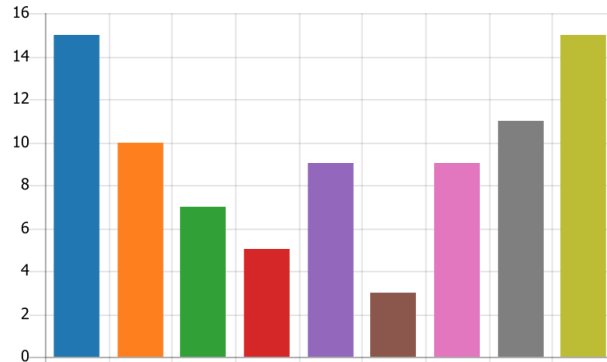|		
🔵 Learning Through Play		15
🟠 Health and Wellbeing		10
🟢 Literacy		7
🔴 Spanish		5
🟣 Maths		9
🟤 Religious Education		3
🟣 Science		9
⚫ Topic		11
🟡 Technologies		15

Figure 2: Question 1 of Pupil Questionnaire Results

I predicted that certain subjects were preferred by the majority of pupils, however, did not anticipate Spanish being the second least favourite subject (Medwell, 2014:155). However, this further supports my decision to improve teaching and learning within this subject area (Mujis and Harris, 2006:967). Learning Through Play being a favourite subject for the majority of the class did not surprise me as "undoubtedly, play is a child's favourite activity" (Roussou, 2004:6). Furthermore, "play is a natural way for children to interact" (Riley and Jones, 2010:148). Therefore, the interactive and role play skills demonstrated during play were used to support language learning during video calls (Scottish Government(9), 2013:1). Technologies was a joint favourite which further supports my study, in which technology is a key factor, as children work better when they enjoy and are engaged in their learning (Reeves, 2013:61). Technologies being joint favourite was not surprising as children "today have grown up in an era of digital technology and been familiar with computers… from an early age" (OECD, 2018:online).

The interview with pupils (appendix 9) confirmed their lack of enjoyment in learning Spanish and their reflections provided an insight as to why (Cremin and Arthur, 2014:318). All four children initially stated that they enjoyed learning Spanish, however, three of the children followed their answer with an alternative, with reasons including that it was boring, repetitive and that they easily forget the learning. Ensuring that learners have enjoyable and enhancing learning experiences, for now and their future, is essential (GTCS(1), 2012:6). The previous method of teaching and learning was therefore inefficient and improvement was essential. The research discussed in the literature review supports this as children require engaging and

motivating learning experiences in order to reach their full potential when learning an additional language (SCILT, 2012:22; Lightbrown *et al.,* 2013:209; McFarlane *et al.,* 2018:3; Scottish Government(3), online:n.d.).

During school closures, there were weekly tasks set online for all curricular areas. There was no pressure or expectation that children would complete all of these. A few weeks into the implementation stage, children began to choose to focus on Spanish themselves (appendix 10). Pollard (2008:253) suggests that children "enjoy and value learning more when they understand it… they feel more in control". It was surprising that children chose to focus on Spanish more than 'times tables', a concept in which they are successful in and very familiar with. Therefore, this and the online quiz results, indicate that the increase in participation and enjoyment could be due to a developed understanding of Spanish. Boden (2001:102) argues that "creativity and knowledge are two sides of the same psychological coin, not opposing forces". Some children went over and above the given tasks and found ways in which to highlight their enjoyment and increased knowledge in Spanish (Lightbrown *et al.,* 2013:88). These creative expressions by pupils, for example, creating a playscript in Spanish allowed for a developed understanding of how children were improving (Faultner *et al.,* 2006:193).

A second barrier was that not all children interviewed (appendix 11) valued or appreciated the benefits of learning another language. All four children interviewed associated requiring additional language skills with going abroad. One child even expressed that learning another language was not important as other people speak English. This lack of appreciation for other languages does not inspire hope or contribute favourably to the UK being one of the poorest in obtaining additional languages, as discussed in the literature review (Leslie *et al.,* 2004:258; European Commission, 2012:16; British Academy, 2019:4). Furthermore, the opinions expressed by the pupils highlight the requirement for improved teaching and learning, as also addressed in the literature review (Gil and Crichton 2018:2; McFarlane *et al.,* 2018:3; Eurostat 2019:online).

Throughout the implementation, children demonstrated their growing appreciation for languages and the value that they hold (appendix 12). Through set tasks, children expressed their understanding that languages could be beneficial to their future careers and improve their understanding of English (Carroll, 2014:54). Furthermore, some children decided to engage with other languages of interest to them. This engagement was encouraged and promoted in order to follow the interests of the children and allow for self-directed learning in additional languages (Hunzicker, 2012:269; Cremin and Barnes, 2014:478). Regardless

whether these children continued to develop other additional languages, initially engaging develops "techniques that stimulate curiosity and raise self-esteem and confidence" (NACCCE, 1999:110).

The last barrier is extremely important in relation to this study- lack of pupil confidence. From the 9 teaching colleagues who responded to the questionnaire (appendix 13), 6 believed pupils to be only 'a little confident' in speaking Spanish. In addition, 6 colleagues consider themselves only to be 'a little confident' in delivering Spanish throughout the school. The lack of confidence, of both pupils and teachers, highlighted in the questionnaires aligned with my own perceptions (Hopkins, 2002:38; Pollard *et al.,* 2008:5).
The concerning lack of pupil confidence was further evident in the pupil pre-assessments (appendix 14).

5. How confident do you feel speaking Spanish?

More Details

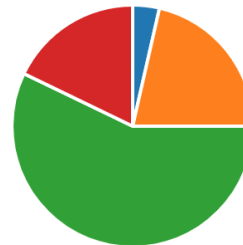|		
Very confident	1	
Confident	6	
A little confident	16	
Not confident	5	

Figure 3: Question 5 of Pupil Questionnaire Results

From the 28 children participating, the majority considered themselves to be 'not confident' or 'a little confident' as opposed to 'confident' and 'very confident'. Pupil responses, during the interview, supports much of what has been discussed in the literature review about anxiety and fear of humiliation or making mistakes when speaking a language other than their native language (Tsui, 1996:159; Lightbrown *et al.,* 2013:38; Mulvey 2013:23; Yalcin and Incecay, 2014:2620; Kralova and Soradova, 2015:96).
This barrier and the methods used to improve pupil confidence, will be further discussed under the sub-question 4.4 in order to provide an answer for each question.

4.3 In What Ways Did Technology Impact on Pupil Learning?

Teaching colleagues were also consulted on the aspect of technology (appendix 15). Similar findings to that of my own previous teaching and learning of additional languages were concluded. Colleagues value technology across the curriculum, however, limited technology is used in the teaching of second or third languages with minimal games-based learning opportunities for pupils. Consulting and gathering opinions of colleagues is crucial when implementing change and developing an understanding of practice in the school community (Woods, 2005:139; Cochran-Smith and Lytle, 2007:26).

2. How much do you enjoy online tasks?

More Details

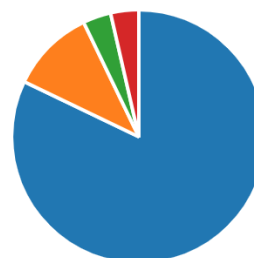|		
●	A lot	23
●	A little	3
●	In the middle	1
●	Not a lot	1
●	I do not enjoy them	0

Figure 4: Question 2 of Pupil Questionnaire Results

The pre-assessments from the children further highlight the ways in which they embrace technologies with almost all children reporting that they enjoy online tasks 'a lot'. Colliver and Fleer (2016:1) express the importance of hearing from children themselves as they can express themselves well and understand what impacts on their learning. During the interview (appendix 16) the pupils explained how technology has helped them learn from a young age and explained different purposes for using this to support learning. The views of the pupils support the benefits and opportunities to develop skills as previously discussed in the literature review (MacBeath and Mortimore, 2001:2; Byrne *et al.,* 2003:286; Wood, 2004:4-5; Buckingham, 2013:4).

3. Do you play online educational games anywhere outside of school?

More Details

🔵	Most days	3
🟠	Sometimes	6
🟢	Rarely	11
🔴	Never	8

Figure 5: Question 3 of Pupil Questionnaire Results

It was surprising that although children are enthusiastic about technology and appreciate the benefits it has on learning, so few 'rarely' or 'never' engaged in educational games outside of school. Homework was previously always in paper format, therefore, there was never a requirement to use technology for school purposes, pre-school closure. As discussed in the literature review, ensuring that children are digitally prepared for the future both within and outside of school is crucial for the future of children and our economy (Condie and Munro, 2007:37; Swinney, 2016:1; Education Scotland (5), online:n.d.).

Technology supported pupil learning both before and during the school closures with the introduction of online games to support learning Spanish (appendix 17). The pupil comments and images highlight their enthusiasm and engagement with this new method of learning Spanish.

Some children also created their own online quiz and shared this with friends, albeit the content of some quizzes was not academic, but the process involved shows a developed understanding of online tools and children taking responsibility for their learning (Watkins, 2004:8; Durrant and Holden, 2006:33). The online tools used are also used by the languages department in the associated high school and, as a result, the principal high school teacher can access the progress reports and was very impressed with the statistics. This study will therefore support future transition to high school for pupils. In collaborating with the high school when implementing this research, I have considered ways in which to support pupils both now and in the future (Jackson and Street, 2005:42; Coleman, 2007:495; Kemmis and Smith, 2008:4).

All children participated well with technology at the beginning of the study, during school, using online games to support their development of additional languages. However, during school closures not all children engaged.

Actively Engaged	Briefly Engaged	Never Engaged
16/28	7/28	5/28
57%	25%	18%

Table 1: Statistics of Engagement During School Closure

I have categorised 'actively engaged' as children who commented or shared work through the platform of Google Classroom or email at least once per week and had participated in class video calls. 'Briefly engaged' were children who had responded to an email at least once but rarely, if ever, commented on the Google Classroom or sent work. The impact of technology on pupil learning was crucial during school closures as all resources, communication and learning experiences for our class were online (appendix 18). There were some paper worksheets provided by the LA, for collection at set hubs. However, from professional dialogue with my head teacher, the uptake on these was not good and most children collecting the resource were already engaging online.

Technology has potentially had a detrimental impact on pupils who 'never engaged' due to lack of access to online learning (Scottish Government(10), 2020:3). There had been no communication with these children from myself or other pupils and they have never commented on the Google Classroom, replied to an email or engaged in the online games. Almost all of the children who 'never engaged' live in an area of the highest deprivation. Masers *et al.* (2020:13) explains that "vulnerable children are more likely to have fewer resources available to them… they and their families will need more support". Furthermore, the current school closures will not just have a short-term impact but pose a high risk of increasing the poverty-related attainment gap (Andrew *et al.,* 2020:2; Scottish Government(6), 2020:4). The educational disadvantages faced by children from areas of high

deprivation were already greater than those from more affluent areas, as discussed in the literature review (OECD, 2018:70; OFCOM, 2019:5; Picton, 2019:29).

In this current global pandemic, the First Minister of Scotland announced that Scotland is "going to invest a further £30 million to provide laptops for disadvantaged children and young people to enable them to study online" (Sturgeon, 2020:online). In theory, this is a tremendous idea which many children across Scotland will benefit from. However, within my school, approximately 30 children and families opted to take a Chromebook home when offered, with the announcement of school closure (appendix 19). There is no lack of devices, they currently lie in an empty building. The devices themselves are not always the key barrier to accessing online learning. As discussed in the literature review, in 2019 one quarter (24%) of households in Scotland did not have a fixed internet connection (OFCOM, 2019:5). The reality of this situation was expressed by 'Jim', a very keen child who loves to learn, being interviewed in the following excerpt:

Class Teacher: Do you think a device, like a Chromebook, helps you to learn?
Jim: Yeah, but if you don't have internet for it then you cannot use it. But, if you go to a place where it gives you free internet then, yeah.... You learn and your-brain-gets-bigger!
(McShea, 2020:89)

Unfortunately, Jim falls into the 'never engaged' category. As a researcher this supports my previous points, however, as Jim's teacher this fills me with despair. As discussed in the literature review, the Chromebooks used in my LA cannot be accessed without internet access. In May 2020 the Scottish Government ((11), 2020:online) also released the 'Connecting Scotland' initiative which "aims to connect up to 9,000 more people on low incomes who are considered clinically at high risk so they can access services and support and connect with friends and family during the pandemic". This initiative, alongside the investment in devices, will be extremely crucial and beneficial in ensuring the poverty related attainment gap remains so and does not evolve into an attainment sinkhole. However, the process involves referrals from the LA and no timescale as to when the initiative will start or be fully implemented has been acknowledged - more than four months after school closures.

4.4 What Methods Proved to be Successful in Improving Pupil Confidence?

The pre-assessments, as discussed is sub-section 4.2, demonstrated the severe lack of pupil confidence in speaking Spanish. However, the following methods were successful in improving pupil confidence.

Online Games

From the beginning of the implementation, I recorded the frequency of children who volunteered to speak Spanish in class (appendix 20). This was recorded alongside the introduction and use of online games to support language learning. Originally, only 3 children (11%) volunteered to speak aloud in Spanish, however, by the end of the fourth session this had increased to 11 children (39%). Although less than half the class volunteered, "improvement is still improvement, no matter how small" (McNiff, 2002:17). The frequency table could not be continued due to school closures, however, this is a concept that I would be interested to implement with a future class. Children commented on the Google Classroom in Spanish and on their own language development, and subsequent increase in confidence, due to online games. This finding supports the literature which argues that online games promote risk-taking and allow pupils to experience success in a fun and engaging way, therefore, increasing confidence (Tomlinson 2003:136; Cross *et al.,* 2009:35; Collinson, 2012:264; Alghamdi and Holland, 2017:55; Setiawan and Koimah, 2019:3). Furthermore, the points awarded to children were for effort and not skill. Therefore, the online game meets the needs of all learners by automatically differentiating according to the answers pupils give meaning no child was at a disadvantage if they engaged with the game (Cremin and Arthur, 2014:157).

Video Calls

The video calls provided a good opportunity to see and speak to pupils during this unprecedented time. Basilaia and Kvavadze (2020:3) explains how beneficial video calls have been during the global pandemic and values them in promoting collaborative learning at a distance. However, Masters *et al.,* (2020:13) argues that in this method of teaching you cannot monitor engagement and that it does not provide opportunities for collaboration

between pupils. The video calls were not the platform for delivery of lessons but a fun method of communication and learning games. During the class video calls, I integrated Spanish games during which all of the children appeared confident and excitable (appendix 21) These games allowed for some collaboration between students and practise of talking and listening skills. Furthermore, the benefits of video calls support the literature review as one method of communication and opportunity for pupils to confidently express themselves (O'Neil *et al.,* 2005:256; Cross *et al.,* 2009:52; Doyle, 2013:34).

Spanish Videos

As discussed in the methodologies chapter, the original plan of pupils engaging in video calls with Spanish pupils could not happen. Therefore, I contacted Spanish friends and colleagues who provided 'all about me' videos for me to post in the private Google Classroom (appendix 22). I posted 2 videos per week over a period of 4 weeks for the children to listen to and 'reply' if they desired. The replies were not sent due to data protection, however, this provided an opportunity for pupils to practise speaking aloud and provided the experience of communicating with native speakers. Offering this experience to pupils, promotes confidence and develops social skills which are beneficial for now and future interactions with others (Riley and Jones, 2010:148; Spratt and Florian, 2015:90).

From the 16 children 'actively engaging', 6 children (38%) decided to send a response in Spanish. It was interesting to note that the majority of children actively engaging and posting Spanish video responses were boys. I did not make responses a mandatory task in order to promote pupil choice and as not to deteriorate pupil confidence by 'forcing' pupils to participate (Scott, 2000:16; Education Scotland (9), 2008:5; Lightbrown *et al.,* 2013:38). It was interesting to note that the children who posted a video of themselves had previously engaged well in the online games. Byrne *et al.* (2003:288) supports this as "a vital component of the learning process, feedback on success provides motivation for continued effort, given the likelihood of further success". Children further experienced this sense of success through positive feedback and comments from peers.

Teacher as a Role Model

In relation to the Spanish videos, I posted my own Spanish 'all about me' video (appendix 23). If I am to expect the children to engage fully, I need them to have trust, feel comfortable and model this (NACCCE, 1999:106). In addition, for learning experiences to be successful, teachers must be fully engaged (Timperley *et al.,* 2009:242). To do so, I took on the role of 'teacher as learner' and explained to the children that I was learning alongside them (Cockburn and Handscomb, 2006:47; Carroll, 2009:40). MacBeath (2009:83) argues that teachers understand they are learners, however, often find this challenging to admit to their pupils. As I am not fluent in Spanish, I had no problem in expressing this to children as for a teacher to improve professionally, "they must feel safe to make mistakes and have supported opportunities to learn from them" (Timperley *et al.,* 2009:241). The children discovered that they could 'follow' one another on the online game Memrise, a feature they taught me. In doing so, I participated in the online games and the children could see how many points that I had earned. This certainly encouraged children and gave them confidence as they strived to climb the leader board, above their teacher.

Children further demonstrated their increased confidence in supporting one another on the Google Classroom and video calls. Also, in correcting myself in a Spanish spelling error. This increase in pupil confidence and the shared, supportive environment allowed for pupils to feel comfortable and be more willing to take risks in verbalising their new learned knowledge (Pollard, 2008:253; Honeyford and Boyd, 2015:63). These findings support the literature previously discussed in highlighting how the teacher can reduce anxiety in children and promote confidence (Steers, 2009:128; Muijs and Reynolds, 2011:131; Lightbrown *et al.,* 2013:88; Davies *et al.,* 2013:88; Yalcin and Incecay, 2014:2620; Kralova and Soradova, 2019:78; Setwan and Koimah, 2019:3).

4.5 Limitations

The reliability and validity of the study could be questioned due to the decreased number of participants engaging throughout (Cohen *et al.,* 2011:179; Baumfield *et al.,* 2012:25; Martinez-Mesa *et al.*, 2014:615; Bryman, 2016:197). This further led to consideration of what constitutes a case study, therefore, advice was sought from the GTCS ((3), online:n.d.)

which promotes case studies for practitioner enquiry and provides a brief example on their website. However, I was surprised and disappointed that only one brief example is available. Furthermore, a 'key principle' of the GTCS ((4), online:n.d.) is to "extend and enhance its knowledge base and understandings of relevant educational issues". Despite 'relevant' issues in education, which are explored through research and that of the promoted case studies, the one available example has not been updated since 2011 when it was printed in the Times Educational Supplement (Buie, 2011:online).

However, after additional reading of literature and professional judgement of data gathered, I believe that my research contains an appropriate quality of data to draw comparisons and conclude findings (Malterud *et al.*, 2016:1754).

A further limitation is the potential lack of authenticity of pupil videos uploaded as these could have been recorded several times before posting (Baumfield *et al.,* 2012:105). In addition, the videos from the native Spanish speakers were pre-recorded which reduces the authenticity of the conversation.

However, this could also be considered as a beneficial experience for children in building pupil confidence. Pupils had the opportunity to practise several times, self-reflect and post the work that they are proud of (Petty, 2009:322; Santagata and Guarino, 2010:136). In addition, pupils could pause and replay the native Spanish videos in order to dissect the spoken sentence and develop a fuller understanding (Meier, 2002:153). This task could be considered as a cooperative activity which "positively affects student achievement and self-esteem… particularly children from different ethnic and economic backgrounds" (Archambault and Hallmark, 1995:403).

As discussed in the previous chapter, pupils wish to please their teacher which can lead to a degree of bias (Campbell *et al.,* 2004:99; Cohen and Manion, 2011:179; Houssart and Evens, 2011:65). Furthermore, some parents may have been involved in pupil work and encouraged them to record their Spanish video, therefore, it not being the choice of the pupil.

However, I do not believe this to have impacted on the study as children were reassured prior to pre-assessments which were carried out naturally as part of the school day (Cockburn & Handscomb, 2006:22; Wingrave, 2014:36). In relation to potential parental involvement, this has proven to motivate children more in their learning and does not discourage them (VanTassel-Baska, 1989:22).

Too much screen time can be detrimental, as discussed in the literature review (NHS, online; Intel Security 2014:10). Having a balance in teaching methodologies has always been crucial to child development and learning (NACCCE, 1999:106). However, this proved challenging during school-closures with all learning being assigned online. Where possible, learning in other curricular areas was assigned online but with the task of actively engaging pupils away from a screen. Perkins and Taylor (1976:22) state that "all meaningful experiences undergone by children can be described as education". Furthermore, the Scottish Government ((12), online) promoted 'screen time' in many of the activities suggested to clear your mind and improve mental health during the pandemic, for example, staying active indoors and staying connected to friends and family.

4.6 Summary

This chapter has presented and discussed the findings from data collected throughout the intervention. The variety of data gathered provides a holistic account of events and developed understanding of the research question. Overall, regardless of school closures and alterations to implementation and data collection, pupil confidence appeared to increase. I was fortunate enough to conclude these findings as the data collected occurred naturally as part of the ongoing teaching and learning - at home (Cochran-Smith and Lytle, 2007:27).

Chapter Five: Conclusions and Recommendations

5.1 Introduction

This study aimed to explore and improve outcomes for teaching and learning additional languages and subsequently pupil confidence (Onwuegbuzie & Leech, 2006:482). Effective implementation of technology was used to support the aims of this study. This chapter will highlight the key findings of the research in relation to each sub-question before considering dissemination strategies and implications for practice. In addition, implications for theory will be addressed. Furthermore, recommendations will be made before acknowledging limitations. Finally, the research will be concluded.

5.2 Summary of Key Findings

The previous chapter provided answers to the sub-questions by drawing comparisons between the pre-assessment data and the anecdotal data collected through ongoing teaching and learning. Through reflection and evaluation of the detailed conclusions in Chapter Four, key findings can be identified (Carroll, 2011:83; Diana, 2011:172; Bryman, 2016:690). The key findings from this study are summarised below.

What were the Barriers to Learning an Additional Language?

- The enjoyment of pupils, when learning additional languages, was impacted by the teaching and learning methodologies used.
- Children expressed a lack of appreciation and understanding in the value of learning another language other than for going on holiday.
- Lack of pupil confidence in speaking in additional languages.

In What Ways Did Technology Impact on Pupil Learning?

- Pre-assessments demonstrated that teachers valued technology to support teaching and learning across the curriculum, however, used limited technology to support additional language learning.
- The majority of children enjoyed online tasks, however, very few engaged with educational online tasks outside of school, pre-school closures.
- Almost half of children did not actively engage in online learning during school closures.

What Methods Proved to be Successful in Improving Pupil Confidence?

- Online games that automatically differentiated and allowed children to earn points and compete on a leader board.
- Class video calls during school closures which allowed for opportunities to speak in Spanish.
- Spanish videos uploaded by native speakers for pupils to watch and reply to if desired.
- The teacher as a role model and a learner, learning alongside the pupils and participating in the games and Spanish videos.

5.3 Dissemination Strategies and Implications for Practice

It is crucial to share the outcomes of research otherwise it becomes limited in its significance (Menter *et al.,* 2011:3; WHO, 2014:150; GTCS(3), online:n.d). However, "often the findings of educational research never make it into the actual classroom" (Diana, 2011:171). This reiterates the importance of teacher researchers as discussed in Chapter Three. Yet, it is believed that practitioners are concerned with improving practice more than publicising findings (Menter and Hulme, 2009:113). Nevertheless, sharing knowledge and understanding, gained from undertaking research, is vital for education (BERA, 2011:3).

When undertaking this research, I collaborated with the high school principal teacher to ensure that the online games were progressive and suitable for transitioning from primary to secondary. Therefore, I will share my findings with other 1+2 Language coordinators and primary teachers in my LA and introduce them to the progressive games-based programme during a local learning community meeting. This shared learning across the local learning community will promote consistency, a smoother transition for primary 7 pupils and will support sustainability of the project (Durrant and Holden, 2006:21; Muijs & Harris, 2006:971; DeLuca et al., 2015:649).

I will further share my findings and support the implementation of 1+2 Languages in my own school as "successful school improvement is dependent on the ability of individual schools to manage change and development" (Muijs and Harris, 2006:961). To ensure success, I will provide support to my teaching colleagues (Smeets and Ponte, 2009:176; Kemmis, 2010:421). As discussed in the previous chapter, many of the teachers stated that they lacked confidence in teaching additional languages. As found in this study, the implications of this on practice are that pupils may subsequently lack confidence (Davies et al., 2013:88; Setawan and Koimah, 2019:3). Therefore, I will consider other methods of improving teacher confidence alongside the introduction of games-based learning, for example, peer support.

Furthermore, parental engagement is crucial in improving pupil outcomes (VanTassel-Baska, 1989:35-36; Colliver, 2016:10; Scottish Government(13), 2018:3; Goodall, 2020:1). Therefore, I will share my findings with pupils and parents during informal workshops to encourage learning at home for families (Scottish Executive, 2005:16; Crowther, 2009:67; Mascheroni, 2016:274). Sharing my findings may allow for an increase in adults engaging with additional languages. This could contribute towards improving the poor statistics of additional languages spoken in the UK, as discussed in the literature review (Leslie et al., 2004:258; European Commission, 2012:16; British Academy, 2019:4). Future opportunities for pupils to share their success and become leaders of learning will be planned (Drew et al., 2016:103; Scottish Government(13), 2018:20). However, due to the current school closures, the success of pupils and opportunities for further engagement in the online games will be shared online with pupils and parents (Krutka and Carpenter, 2016:10).

The confidence in the dissemination of findings and implications for practice is based on the positive results and feedback from this study. Ultimately, sharing outcomes and supporting

others could potentially have positive implications on teaching and learning for others (Hattie, 2000:1; Durrant and Holden, 2006:29; Albers, 2008:83).

5.4 Implications for Theory

The key findings described above, in section 5.2, support much of the theory discussed in the literature review. In addition, this research contributes a Scottish perspective to the literature on learning additional languages and the development of pupil confidence (Raffe, 2004:63). This is beneficial as all statistics previously found and discussed were from a UK perspective and not specific to Scotland (Leslie *et al.,* 2004:258; European Commision, 2012:16; British Academy, 2019:4). In addition, this dissertation was written during the global pandemic of 2020 and could contribute towards future studies that reflect upon the impact of online learning and school closures.

Gender was not a focus of this study, however, it was noted in the previous chapter that more boys engaged with the online games and chose to upload a Spanish video. This could be a focus for future studies as boys are found to be more determined to succeed in second language learning whether girls show higher levels of anxiety (Abu-Rabia, 2004:719; Robbins, 2004:77).

5.5 Recommendations

Recommendations for practice in the current climate must be considered as the school closures will impact teaching and learning (Cockburn and Handscomb, 2006:89). How best to meet the needs of all learners must be contemplated for their return in August (Scottish Government(13), 2018:online). As discussed in the previous chapter, not all children actively engaged with online learning during school closures. Therefore, consideration of why pupils may not have engaged in learning must be reviewed. If online access at home is a barrier then perhaps these children should be prioritised to have more support in school on their return. Furthermore, as Chromebooks cannot be accessed without internet, consideration of future technological purchases from the LA would be beneficial to ensure children from areas of deprivation are not being further disadvantaged. These recommendations are based on the

findings of this study and of what the current situation demands for both language learning and pupils' wider education (Woods, 2005:114).

As discussed in 5.3, implementing the games-based online learning programme across the LA would be recommended. However, in ensuring success, it is recommended that there should be regular 1+2 Language coordinator meetings to increase sustainability (Goleman *et al,* 2002:111; Harris, 2003:971; Albers, 2008:85). Furthermore, the implementation of this project should be regularly monitored and assessed in each primary school to ensure the best possible outcomes for pupils (Hart *et al.,* 2007:502; Smeets & Ponte, 2009:190). However, it may take several academic years for the improvement in transition of primary 7 pupils to secondary school due to the uncertain times of schooling. On the return to school, the focus will not be academic attainment but creating a nurturing environment and readjusting pupils to a new form of schooling (Jiao *et al.,*2020:265; Moore, 2020:online).

In Scotland, "each child is entitled to learn a second modern language… from P5 onwards" (Education Scotland (10), 2020:online). The teaching and learning methodologies explored in this research could potentially support the implementation of the other additional languages.

5.6 Limitations

Limitations have been identified and discussed throughout this study. The limitations were primarily related to implementing the research during the COVID-19 global pandemic. In an ideal situation, I would have collected post-assessments which mirrored the pre-assessments undertaken. However, I was fortunate that I had gathered data before the ethical guidelines changed and that data occurred naturally through ongoing teaching and learning of the curriculum. Therefore, I consider the data collected and comparisons discussed to be sufficient in supporting my key findings and conclusions (Campbell *et al.,* 2004:81).

Due to the unprecedented nature of schooling, both now and in the near future, the study cannot be exactly replicated when introducing this within the LA. Adaptations will have to be considered and discussed both before and during the implementation process to constantly ensure success (Johnson, 2003:339; Durrant and Holden, 2006:30; Carroll, 2011:88)**.**

5.7 Conclusion

This chapter has concluded the study by exploring and discussing the key findings, implications and recommendations. Consideration of how the outcomes will be shared and used to benefit future teaching and learning was also addressed.

Whilst the global pandemic has had considerable adverse effects on pupils' learning, in relation to teaching online, it has enabled opportunities for children to engage in a more intense way than would have been possible during normal classroom teaching. Therefore, I consider the outcomes to be successful and technology to have supported the improvement of pupil confidence when speaking an additional language. Of course, this success only applies to the pupils who actively participated throughout. Technology proved to be paradoxical in its impact on student outcomes. Lack of access to online learning, of pupils living in areas of the highest deprivation, was potentially detrimental to their learning not only in additional languages- but in all curricular areas.

By undertaking this dissertation, I have developed my professional knowledge and understanding and subsequently my teaching practice and leadership skills (Goleman *et al.,* 2002:109; McNiff, 2002:15; Forde *et al.,* 2009:31). However, the ultimate personal and professional successes of implementing this research was the benefits to pupil learning both now and in the future (Diana, 2011:170; MacDonald and Weller, 2016:146).

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Appendix 1: Scottish Index of Multiple Deprivation (SIMD)
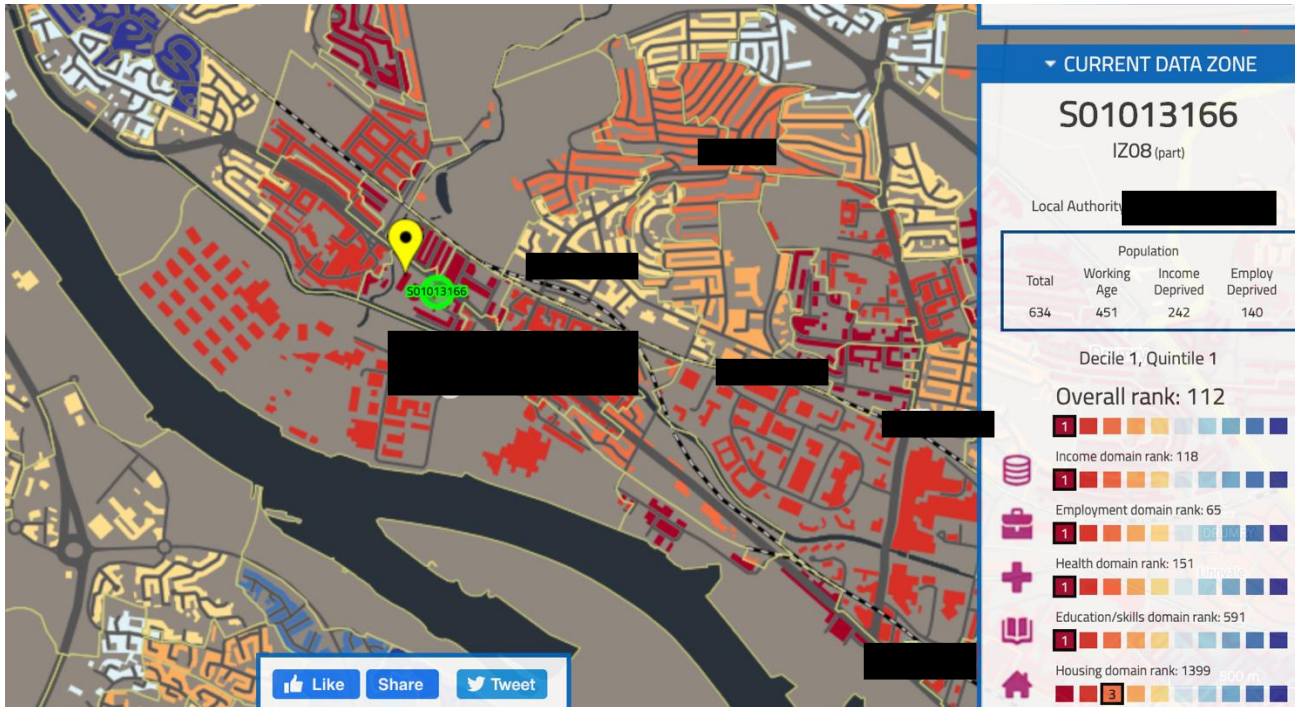
This extract of the SIMD map shows the location of the school in which I teach and the local surrounding area. It highlights the high level of deprivation of pupils living within the local community with the majority living in decile 1, the lowest on the scale.

Appendix 2: Previous Teaching of Spanish

An example from 3 jotters of the previous method of teaching and learning...
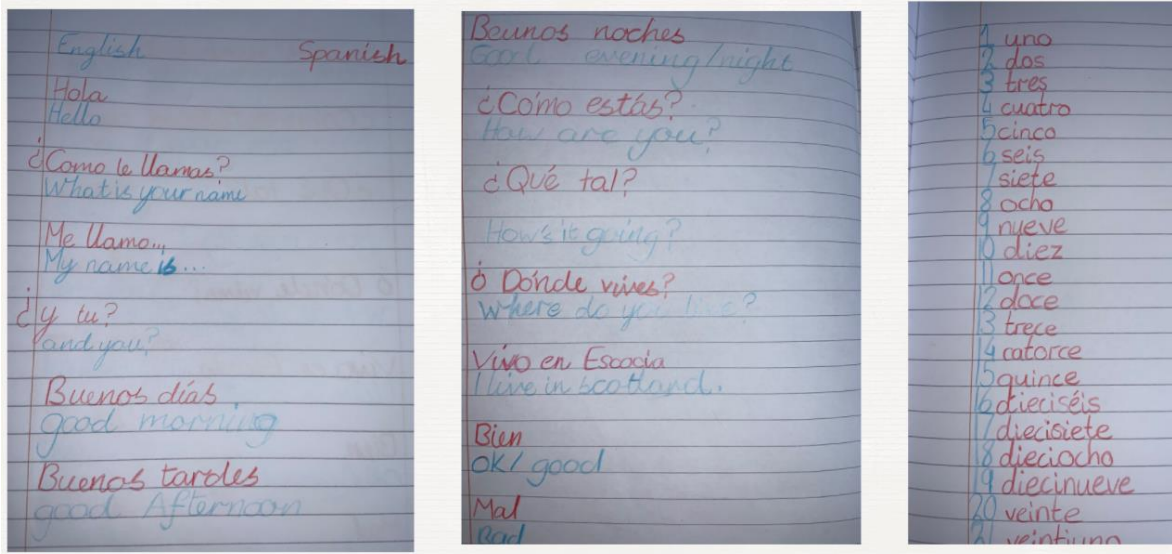
Another example from 3 jotters of the previous method of teaching and learning highlighting the challenges when children do not present their work carefully...
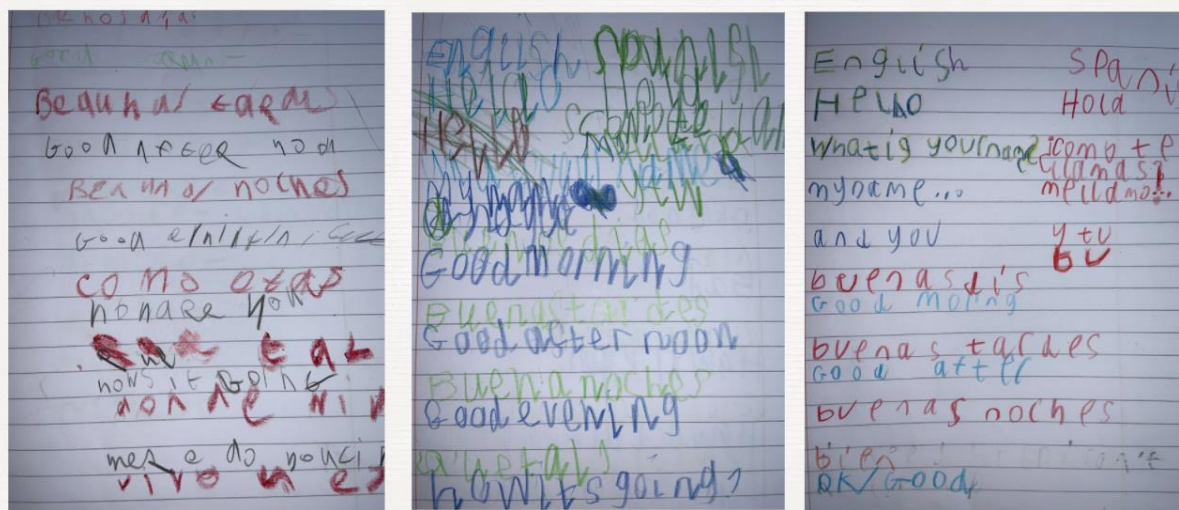
Previously, I delivered Spanish lessons in a didactic form of teaching. The children would 'repeat after me' and would copy the vocabulary in their jotters. Children could refer back to their jotters when practising orally, however, this became challenging when children did not present their work clearly. This was supported by clips from YouTube and occasionally an active vocabulary-based task that involved matching pictures to words.

Where possible, the vocabulary was embedded into the class routine - for example - the register and ordering lunches. Children appeared to lack knowledge of vocabulary that had not been revisited in a while. They also appeared to lack confidence when speaking aloud.

Appendix 3: Local Authority Meeting

Primary Survey Questions

Does your school provide more than one language as L2?

Yes - 1 (3.6%)   ███████   Primary offering Gaelic as well as French

No - 27 (96.4%)

How do you deliver L2 in your school?

100% of the schools which responded said that the L2 is delivered through the 'class teacher embedding learning'.

A small number mentioned team teaching and drop-in sessions from internal and external specialists. One school mentioned using a volunteer a certain times of the year. One school also mentioned using a whole-school focus, such as assembly, to deliver the language.

Primary Survey Questions

Not full provision - From what stage do you offer L3?

Of the schools who are not offering full provision from P5 - P7:

- 2 schools are delivering L3 from P6 onwards
- 1 school is delivering blocks of languages across P6 and P7

If you are not providing a full L3 provision from P5 - P7, please indicate reasons.

- The majority of schools who responded to this question stated that competing priorities are preventing them from fully implementing L3 provision
- Most schools felt that teachers have not been sufficiently trained in order to fully implement
- Teacher confidence and skills were highlighted as an area or concern by a small number of schools
- One school mentioned time constraints

These extracts are taken from the local authority 1+2 Languages coordinator meeting. The meeting discussed the results of a survey implemented several months previously at the end of the academic year 2018-2019. The meeting feedback had no mention of using technology to support the teaching and learning of additional languages across the authority. Therefore, this further supports my decision to focus on technology to support teaching and learning of Spanish for this study.

Appendix 4: Professional Dialogue

This professional dialogue is between myself, as the researcher, and the principal teacher of 1+2 Languages at the local high school. This quote was stated by the principal teacher during the first local authority meeting. This quote surprised me personally and further contributed to my intention to research and potentially improve additional language learning.

Appendix 5: Blank Pupil Questionnaire

Questionnaire 1

This questionnaire is to help me in my project that we talked about. Please read the questions and answer them for how you feel. There is no right or wrong answers. Thank you, ████████

* Required

1

What are your 3 favourite subjects? *

- [ ] Learning Through Play
- [ ] Health and Wellbeing
- [ ] Literacy
- [ ] Spanish
- [ ] Maths
- [ ] Religious Education
- [ ] Science
- [ ] Topic
- [ ] Technologies

2

How much do you enjoy online tasks? *

- ○ A lot
- ○ A little
- ○ In the middle
- ○ Not a lot
- ○ I do not enjoy them

3

Do you play online educational games anywhere outside of school? *

- ○ Most days
- ○ Sometimes
- ○ Rarely
- ○ Never

4

How do you feel when learning Spanish? *

Enter your answer

5

How confident do you feel speaking Spanish? *

○ Very confident

○ Confident

○ A little confident

○ Not confident

The images include all of the questions asked to the children. The questionnaire was completed as an online form in which the children have previous experience in using. The questions were written in child-friendly language with images to support each question. The questions were read aloud and children had as much time as required to answer.

Appendix 6: Blank Teacher Questionnaire

Questionnaire (Teachers)

The answers provided in this questionnaire will be used to support my research, as discussed. Thank you, in advance, for taking the time to complete this questionnaire and answering honestly.

* Required

1. If any, what technology do you use to support your teaching of additional languages? *

   Enter your answer

2. In your professional opinion, do you consider technology to enhance learning across the curriculum? *

   Enter your answer

3. In your professional opinion, how confident do you consider the children in your class to be when speaking aloud in the L2 (Spanish)? *

   ○ Not at all confident

   ○ Only a little confident

   ○ Neutral

   ○ Confident

   ○ Very confident

4. How confident are you in delivering L2 (Spanish) throughout the school? (P1-P7) *

   ○ Not at all confident

   ○ Only a little confident

   ○ Neutral

   ○ Confident

   ○ Very confident

5. If you have any additional comments, please feel free to add them below.

   Enter your answer

This questionnaire was for teaching staff. When I informed the staff about my research and provided them with consent forms, I explained that if they wished to participate then I would electronically send them the questionnaire. The questionnaire is short and did not require a great amount of time to complete as I was conscious of teacher workload.

Appendix 7: Pupil Interview Questions

Q1) Do you think that learning another language is important?

Q2) Do you enjoy learning Spanish?

Q3) How confident do you feel when you are speaking Spanish?

Q4) Do you think using a device, like a Chromebook, helps you to learn?

These interview questions were asked to the children selected. Question 1 was asked to each child in turn, followed by question 2 and so on. This occurred in the natural environment of the classroom and I encouraged children to answer honestly.

Appendix 8: Online Tools

Online Tool	Key Features/Benefits	How This Will Support my Study	Data I Will Collect
Google Classroom	- Online classroom with teacher privileges. - Secure and private, class code required to join. - A collaborative space in which teachers and pupils can 'post' and 'comment'. - Classwork can be assigned and electronically 'handed in'.	A platform of delivery to support the sharing of links to online games and learning. *A form of day-to-day communication with pupils. A platform for delivering resources, online teaching and learning, including links to online games.*	- Pupil comments. - Pupil work that they have submitted. - Direct messages from pupils.
YouTube	- A wide variety of educational videos are available. - Links can be accessed easily and no account is required to view the videos.	Whole class revision of direct teaching inputs. *Links can be sent through the Google Classroom to revise previous learning and support new teaching.*	- No data will be collected
Memrise	- A fun language learning app website that is available for download as an app. - Teachers can create 'groups' which are essentially classes. - Each class can be assigned a course, for example, numbers or colours etc. - Teachers can see when pupils have been engaging with the online games and how many points they have earned. These are earned by practising, 'mastering' and revising words.	Children will log in and become a member of the online group/class using their Google account. This will allow for individual practise of vocabulary. All children will start at the same level. They will be given an equal amount of time to practise in school, however, they will naturally progress at different levels. The program will only allow children to learn new vocabulary when they have mastered the current words. Children can download the app or engage outside school if they desire. *Tasks will be set through the platform of Google Classroom for all curricular areas, including languages. Memrise is a useful tool to use at home as it does not require additional planning or differentiation as the children progress at*	- Which children have been engaging with the process of learning and revising. - The leaderboard of learning - based on how many points children have earned. There is a leaderboard for each course and then an overall leaderboard. - Statistics of words learned and words found to be challenging that require more practise.
		their own pace. The tool will allow me, as their teacher, to observe their progress at home.	
Quizizz	- Fun and engaging online quizzes for all areas of learning including additional languages. - There is the option to register classes and sync this to Google Classroom. The accounts of children are linked to their Google account. - Joining a class quiz is a simple process involving entering a 6 digit code. - The teacher can access the statistics of each quiz to analyse how individuals and the collective class performed. Quiz results and levels of accuracy are given and individual questions that prove challenging can be analysed.	Quizizz will be used closer to the end of the project. The quizzes assigned will be used as a form of additional practise and assessment of learning. *Quizizz will be used in the same way as previously planned, however, more quizzes may be used as the amount of time spent online learning will be increased. Quizizz could potentially be used for other subject areas during school closures.*	- The leaderboard of learning for each quiz - based on how many points children have earned. - Statistics of which children have been engaging and how often. - Analysis of the answers given by pupils will indicate which, if any, areas of learning are proving more challenging and require more revision. - Data highlighting the success of individuals and the collective class and areas of strength.
eTwinning	- A secure platform for schools to collaborate across Europe. Schools must be registered through the British Council. - Teachers seek out a partner school to pair up with and implement an agreed project. - The project is given a private page that both teachers can access, share resources and communicate through. - Teachers can set up video calls between classes through the eTwinning platform.	An eTwinning Spanish partner will be found and a project set up. I plan to do an 'All About Me' project as this covers the vocabulary appropriate for my pupils. This will involve the children having a 'pen pal' in the Spanish class in which they will exchange letters with. The children will also engage in video calls with the Spanish class. During these video calls the children will be given the opportunity to meet their Spanish pen pal 'face-to-face', on the call. During communication there will be the opportunity to speak in both languages to	- Communication between myself and the partner teacher. - Communication between my pupils and the pupils of the partner school in Spain. This will include copies of letters sent and video calls.

		support language development of children from both schools. *The eTwinning platform cannot be used due to school closures in both countries. Therefore, the children will respond to pre-recorded videos, recorded for our class. This will allow for the best experience of communication with a native speaker in these given times.*	
Google Hangouts	- A platform for communication using a Google account. - Simple to use and can host video and audio calls for up to 28 users at once.	*It was decided that Google Hangouts would be used to communicate with pupils when learning at home, during school closures. This will allow for a higher level of communication between myself and pupils whether for the purpose of teaching and learning or wellbeing check-ins.*	- Video calls themselves and photographs of these. - Conversations and comments during calls.

This table states and explains the online tools used in my research. The key benefits and features of each tool are explained and consideration of how these supported my study in given. Furthermore, possible sources of data that could be collected was stated.

The table was amended post-school closures to consider how the online tools would be used during learning at home time. This is shown in red/italics.

Appendix 9: Pre-assessment Interview Answers (Question 2)

Q2) Do you enjoy learning Spanish?

Emma: "Em well yeah… I like learning Spanish but when it comes to writing down in your jotter some people also find it a bit boring… but it is good to know like the words 'cause if you go on holiday you could take your Spanish jotter and you could like talk to people and if people come to like the school and stuff or you could just talk to people"

Gill: "Yeah I like learning Spanish but like em sometimes I forget it so like when I'm writing it down like I need my Spanish jotter"

Harper: "Yeah but I prefer maths and art because if cause everytime we do art it's something different and everytime we do maths like it's not something different and everytime we do Spanish it's kinda the same"

Jim: "Yes. Because you can learn… you can just talk other languages and other stuff like that because it's important to actually learn other languages… very important actually"

The names used are pseudonyms which were chosen by the children in order to ensure anonymity. The answers provided have been transcribed exactly with the ellipses signifying a pause in the answers given. These responses were given to the question stated above. The answers given highlight that pupils are not very enthusiastic about learning Spanish and appear to prefer other subjects.

Appendix 10: Children Choosing to Engage with Spanish

Hi ████ how are you getting on? :)

████ 26 Mar

good i'm doing times tables and spanish

Handed in (See history)

Spanish.pdf
PDF

2 private comments

████ 0:22
I did my Spanish and I came first.and I did my Spanish work sheet and it was fun.

Quizizz Statistics

Type	Quiz name	Total players	Accuracy
ⓘ Assigned	**Spanish Food and Greetings** *Completed 5 days ago*	29	84%
ⓘ Assigned	**Times tables.** *Completed 5 days ago*	14	81%
ⓘ Assigned	**Spanish Colours** *Completed 12 days ago*	45	77%

*** The total players counts children as a new player if they 'play again'.

Spanish

Cast:
Sam/shopkeeper
Saharah/customer

Scene 1
Sam: Hola
Sharah: Hola

Sharah: que tal
Sam: Buen/e tr
Sharah: Buen /gracias

Scene 3
Sam: Que quieres
Sharah: Cuanto es por favor
Sam: Es un euro

Scene 4
Sam: Quiere
Sharah: Un batido de fresa
Sam: Vale

Scene 5
Sarah: cuanto es por favor
Sam: Son dos euros

Scene 6

Sharah: Gracias

Sam: De nada!

Sharah: Adios

Sam: Adios

The above images are extracts of pupil work and comments which highlight children choosing to engage with Spanish when learning at home. The quiz statistics show more engagement with Spanish than numeracy. The slideshow is a playscript in Spanish that a child created in addition to the set tasks for that week.

Appendix 11: Pre-assessment Interview Answers (Question 1)

Q1) Do you think that learning another language is important?

Emma: "Em... well... it's not really important, but it could be because if like you go to a restaurant in Spain or something and they don't speak English, it's good to know what they're saying"

Gill: "Em not that important but I mean like if you go to somewhere like somewhere and they don't speak English em you need to know what they are saying."
Me: "Why do you not think it's that important?"
Gill: "It's because other people speak English"

Harper: "Yeah because if you had to go to an airport for maybe a birthday, you couldn't translate, it would take a long time to translate you might need need to go on Google Translate to translate and show them it and it might take a long time and you might miss the birthday"

Jim: "Yes because… if you're in a different country, you need to know how to speak because what if you need to go somewhere but you don't know where it is… you can't ask someone because they will be like 'what?'... so yeah, that's why it's important and it's also important to learn stuff"

The names used are pseudonyms which were chosen by the children in order to ensure anonymity. The answers provided have been transcribed exactly with the ellipses signifying a pause in the answers given. These responses were given to the question stated above. The results highlight that children place value on an additional language if travelling abroad, if at all.

Appendix 12: Children Valuing Additional Language Learning

Do you agree or disagree with the statement above?

I agree that learning a new language is important.

Write three reasons to back up your opinion. Make sure these are detailed and will really persuade the reader to agree with you.

1. I think learning a new fabulous amazing language will be really helpful in your life because if you go to a different country you would no how to speak that language and have a better understanding about that country.

2. It would give you more opportunities in life such as being a Spanish teacher and also living and working in a different country.

3. Its an extra skill to have that would help make your literacy skills better its also an amazing skill to have because then you can speak two languages.

ms i started learning sweedish on memrise

21 Apr

That's amazing! Well done you!

22 Apr

counting to ten in ten different languages

counting to ten in 10 diff...
Google Docs

1 class comment

22 Apr

Wow!! I am very impressed Go you!! :D

Swedish ett tvâ tre Fyra Fem Sex sju âtta nio tio

Spanish uno dos tres cuatro cinco seis siete ocho nueve diez

French un deux trois quatre cinq six sept huit neuf dix

german eins zwei drei vier fünf sechs sieben acht neun zehn

Italian uno due tre quattro cinque sei sette otto nove dieci

polish jeden dwa trzy cztery pięć sześć siedem osiem dziewięć dziesięć

Indonesian satu dua tiga empat lima enam tujuh delapan sembilan sepuluh

Russian один два три четыре пять шесть семь восемь девять десять

Russian один два три четыре пять шесть семь восемь девять десять

Portuguese um dois três quatro cinco seis sete oito nove dez

Irish aon dó Trí Ceathair Cúig Sé Seacht Ocht Naoi Deich

The above images are extracts of pupil work and comments which show the value that children are placing on learning an additional language. Previously pupils only understood languages to be of value when travelling abroad. Their work shows the change in values and pupils choosing to study additional languages of their own choice.

Appendix 13: Teacher Pre-assessment Questionnaire (Question 3 and Question 4)

3. In your professional opinion, how confident do you consider the children in your class to be when speaking aloud in the L2 (Spanish)?

More Details

🔵 Not at all confident	0	
🟠 Only a little confident	6	
🟢 Neutral	1	
🔴 Confident	2	
🟣 Very confident	0	

4. How confident are you in delivering L2 (Spanish) throughout the school? (P1-P7)

More Details

🔵 Not at all confident	1	
🟠 Only a little confident	6	
🟢 Neutral	1	
🔴 Confident	1	
🟣 Very confident	0	

The two questions and results above demonstrate the professional judgement and opinions of teaching colleagues. The lack of confidence of both teachers and pupils, when teaching and speaking an additional language, is highlighted.

Appendix 14: Pupil Pre-assessment Questionnaire (Question 4) and Interview (Question3)

Q3) How confident do you feel when you are speaking Spanish?

Emma: "Well I'm actually quite confident but when it comes to like speaking a full conversation with someone that really knows Spanish, I get quite nervous"

Gill: "Em I'm nervous when saying them out loud but I know like em like what they mean"
Me: "Why are you a little bit nervous about speaking out loud do you think?"
Gill: "It's incase like I say the wrong word"

Harper: "Em I don't feel that confident 'cause if I was just asked to go up I wouldn't like I would be kind of like… bumpy because like fuzzy in my words 'cause I'm not prepared and stuff, I would rather be prepared than just go up"

Jim: "A lot actually because if you learn you go up in life but if you don't learn, you go down"
Me: "OK, so you feel quite confident then when you're speaking Spanish?"
Jim: "Yeah"

The above extracts are both answers to the pupil class questionnaire and a question from the interview. Both extracts highlight a lack of confidence amongst pupils when speaking Spanish.

Appendix 15: Teacher Pre-assessment Questionnaire (Question 1 and Question 2)

Teacher Questionnaire: Q1

If any, what technology do you use to support your teaching of additional languages?
Smart board
Smartboard
Smartboard
None. No smartboard in the class.
Rockalingua and YouTube.
Chrome books, Smartboard, internet
Smartboard - YouTube
I use Youtube videos.
I don't personally use much technology to support additional languages.

Teacher Questionnaire: Q2

In your professional opinion, do you consider technology to enhance learning across the curriculum?
Yes, however I do not have enough knowledge of suitable apps/ websites to enhance our L2.
Yes
Yes
Yes. Very much so in infant classes.
Absolutely. It makes learning meaningful to the children as it affords them the opportunity to explore key learning in different ways. However, technology can be unreliable when devices run out of charge or websites don't load, which can affect learning experiences negatively.
Yes
Yes, more so in upper school.
I consider technology to be very valuable across the curriculum.
Yes, chrome books are used often by the children.

The above extracts are the answers given from the teacher questionnaire in relation to technology. Not all teaching staff responded to the questionnaire, however, the majority of the teachers who have answered appreciate technology but do not appear to use a wide variety to support additional language learning.

Appendix 16: Pupil Pre-assessment Interview (Question 4)

Q4) Do you think using a device, like a Chromebook, helps you to learn?

Emma: "Em well I actually say yeah it does because when, ever since I was young I've played games online and it's really helped me learn because when I was younger I didn't know like some words and I found them out by em like playing games"

Gill: "Eh yeah because em I like beating my friend… being on top of the leaderboard and… yeah"

Harper: "Yes 'cause say I was going to do a project… I would em like go on something like to see information and stuff and maybe play a game and stuff and then I could just write it down and then I could just present it and it would be really good"

Jim: "Yeah but if you don't have internet for it then you cannot use it but if you go to a place where it gives you free internet then yeah"
Me: "Yeah good answer, what about in school, do you think that using a Chromebook and doing online tasks in school helps you to learn?"
Jim: "A lot actually because much more Chromebooks in school and other stuff actually help much more because they're in schools"
Me: "Yeah, what about doing online tasks like Teach Your Monster to Read or something, do you think that helps you?"
Jim: "Yeah, that also helps because you learn and you-brain-gets-bigger!"

The names used are pseudonyms which were chosen by the children in order to ensure anonymity. The answers provided have been transcribed exactly with the ellipses signifying a pause in the answers given. These responses were given to the question stated above. The responses highlight a variety of reasons in which children believe that technology supports their learning.

Appendix 17: Engagement with Online Games

Memrise Leaderboard

14:38

ms
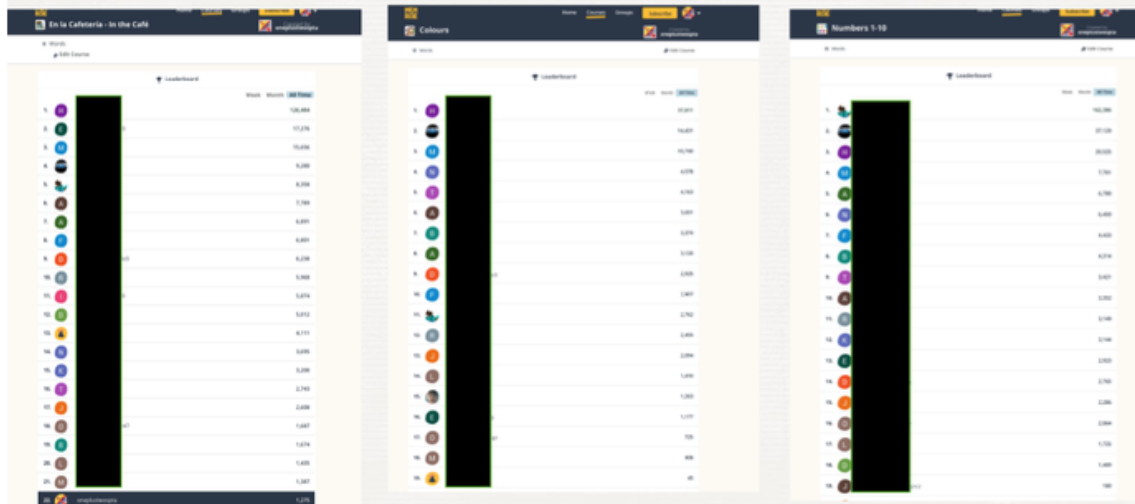
14:38

Im littery just going to keep playing and getting higher

4:44

am also gonna keep playing so i could get higher too

15:06

15:06

I might cancel roblox for a week or month

15:07

and play memorize

26 Mar

miss ▮ i masterd in the cafiteria months of the year numbers to ten coulers and numbers to thirty 0ne in spanish on memrise

3 class comments

26 Mar

Wow wow wow! I think I will have to make a quiz for you all!! You are doing amazing! 😊

26 Mar

i also did i have like about 65 thousand points

10:55 (Edited 11:07)

WOW! I am so impressed with the Quizizz quizzes that have been created. If you have created a quiz then post your link here and your friends can have a go! :)

13 class comments

10:55
https://quizizz.com/join/quiz/5eb27af0948e3b001d850f0a/start this is my quiz i will post the other one i did too

10:56
here is the other one https://quizizz.com/join/quiz/5eb28173c0971e001bffab20/start

10:57
my ten times table one https://quizizz.com/join/quiz/5df36aecfd1540001b61f815/start

10:58
Amazing work

10:59
thanks

11:03
This is my quiz it's about wwe champions

Quizizz - Game Link
https://quizizz.com/join/quiz...

2 class comments

11:08
Welcome this was fun

12:44
iizizz.com/join/quiz/5eb29fde55e4b0001b76887f/start?studentShare=true

1 class comment

Just had a go - brilliant   I love how you mixed up the questions. Well done! :)

Email from the high school principal teacher of 1+2
Languages post-intervention.

May, 2020

17:34 (8 minutes ago)   ☆

I hope you are doing well during this time.

My primary five children have been engaging well with the MEMRISE online learning and loving it! Hopefully we can roll this out across LLC next academic year.

Kind regards,

17:39

to me ▾

It's great to see so many pupils motivated to do well in Spanish by using Memrise as many are going above and beyond set tasks.

The above extracts show the engagement of pupils with online tools both pre-school closure and when learning at home. The tweets were written by children, as a form of self-assessment, after an opportunity to first engage with online tools to support additional language learning. They highlight the enjoyment and high level of engagement of pupils when using online tools to support learning Spanish. The images show children engrossed in using the online tools and their enjoyment in using the games-based learning platforms. The leader boards highlight the engagement of children at home and the high amount of points earned by pupils. The comments further support the engagement of children when using online tools to support additional language learning.

Appendix 18: Online Delivery of Learning

Preparation Plan of Action for School Closure

All preparation for learning at home was online-based. Parents had the opportunity to collect a Chromebook for their child.

Preparation for pupil absence/school closure	• Establish Google Classroom for each class • Ensure all pupil usernames and passwords are operational
Preparation for learning from home	• All google classroom access to be shared with pupils • All google classroom access to be shared with parents (help sheet) • Children requiring a Chromebook to take home identified • SLT to begin to upload classrooms with materials and resources
Extra-curricular clubs and trips	Cancelled with immediate effect

The Local Authority have provided additional home learning challenges for families. These have been posted online.

Home Learning Challenges

Alongside the learning resources provided for your child from their school and/or Early Learning and Childcare Centre, there will be more general weekly 'Home Learning Challenges'. These will be fun games and activities linked to learning that you can do at home with your children:

Wednesday Week 8
- 0-3 - Wednesday Week 8
- 3-5 (Nursery) - Wednesday Week 8
- 5-8 (P1 - P4) - Wednesday Week 8
- 9-11 (P5 - P7) - Wednesday Week 8
- 11-14 (S1 - S3) - Wednesday Week 8

Monday Week 8
- 0-3 - Monday Week 8
- 3-5 (Nursery) - Monday Week 8
- 5-8 (P1 - P4) - Monday Week 8
- 9-11 (P5 - P7) - Monday Week 8
- 11-14 (S1 - S3) - Monday Week 8

Wednesday Week 7
- 0-3 - Wednesday Week 7
- 3-5 (Nursery) - Wednesday Week 7
- 5-8 (P1 - P4) - Wednesday Week 7
- 9-11 (P5 - P7) - Wednesday Week 7
- 11-14 (S1 - S3) - Wednesday Week 7

The above extracts show the preparation of the school and local authority in ensuring that the online learning platforms were organised for school closures. The plans focussed on using technology and the platform of Google Classroom.

Appendix 19: Chromebooks and Learning from Home

Email to the principal teacher regarding Chromebooks borrowed.

Hi ███████

I hope you are well.

Do you know how many children opted to take a Google Chromebook for learning at home, pre-school closure? I am hoping to use this information to support my dissertation study as a main focus is technology.

Kind regards,

████████

Re: Chromebooks

To: ██████████

Hi ██████

I think around 30 but this is a changing figure as more are being given out from the hub.

Kind regards

████████████

Thank you very much for your detailed response. That information is great. Is there anything about Chromebooks remaining in schools and not to be taken home by pupils?

Kind regards,

████████████

RE: Chromebooks

11 February 2020 at 15:04

To: ████████

Chromebooks aren't taken home.

Chromebooks need Wi-Fi, and generally if pupils have Wi-Fi at home, they will also have a device that allows them to connect to the internet and access the OurCloud (GSuite) learning environment. So no need for a chromebook.

The above extracts of email communication, with the principal teacher of the school, show the lack of pupils who have opted to take a Chromebook device home with them during school closures. The second extract states that Chromebooks will not work without an internet connection and was received pre-school closures and before COVID-19 impacted education.

Appendix 20: Online Games Demonstrating Pupil Confidence

Volunteers to Speak Aloud in Spanish

Date	02.03.20	06.03.20	09.03.20	13.03.20	16.03.20	20.03.20	23.03.20	27.03
Child 1								
Child 2				X				
Child 3				X				
Child 4				X				
Child 5								
Child 6								
Child 7		X	X	X				
Child 8					Data was not collected this week, in relation to the frequency of volunteers, due to a significant absence rate.		School Closure	
Child 9								
Child 10			X	X				
Child 11								
Child 12								
Child 13								
Child 14	X	X		X				
Child 15								
Child 16								
Child 17								
Child 18								
Child 19	X		X					
Child 20				X				
Child 21								
Child 22			X					
Child 23								
Child 24				X				
Child 25				X				
Child 26								
Child 27	X			X				
Child 28			X	X				

Good morning ▮▮▮▮

▮▮▮▮ 09:24

vierness

▮▮▮▮ 09:24

is friday

▮▮▮▮ 09:25

Si! :)

▮▮▮▮ 09:25

que tal

▮▮▮▮ 09:27

¿fenomenal, y tu?

▮▮▮▮ 09:28

Perfecto

▮▮▮▮ 11:04

Theres no memirise in classwork

▮▮▮▮ 11:09

i just got 19050 points yay

▮▮▮▮ 11:10

It is under 'Spanish' in the Classwork section. Wow that's so good ▮▮▮ Do you feel like you have improved in Spanish? :)

▮▮▮▮ 11:21

I am feeling amazing brilliant Great Confident In my Spanish

I think i improved on spanish just cause of memirise

▮▮▮▮ 09:11

I can spell tricky words like cuanto es por favor

▮▮▮▮ 09:12

And like milk shakes un batido de fresa or chocolate

▮▮▮▮ 09:14

Thinking of memirse imma practise

▮▮▮▮ 09:16

You can ask me a question if you like

The above table was used during school learning time to measure the frequency of volunteers speaking Spanish during class lessons. However, this could not be continued during schools closures. The pupil comments are taken from the online classroom and highlight children volunteering to speak in Spanish and their growing confidence.

Appendix 21: Video Calls

I'm so excited to see you all I miss u all alot!

▇▇▇▇▇▇▇▇ 27 Apr

We are excitied to see you as well ▇▇▇▇▇▇▇

▇▇▇▇▇▇▇ 7 Apr

Oh I'm pumped like a balloon!🤗🤗🤗🤗🤗🤗🤗

▇▇▇▇▇▇ 7 Apr

I'm excited to see▇▇▇▇ as well miss not seen my friends in ages

▇▇▇▇▇▇▇ 27 Apr

I know, it is not the best of times but it is important that we are all safe. :)

comments

▇▇▇▇▇▇

Yea it was super fun

▇▇▇▇▇▇

Miss we have the same type of laptop Mine is also HP

▇▇▇▇▇▇ 7 Apr

Glad you enjoyed it▇▇▇▇ was lovely to see you. Aw wow!! That's a chromebook from school that I've borrowed. The video calls don't work as well on my own laptop. Well spotted though!

▇▇▇▇▇▇ Apr

Hi

▇▇▇▇▇▇ 7 Apr

Hi

▇▇▇▇▇▇ r

That was the funnest thing I've done so far during lockdown

▇▇▇▇▇▇ 7 Apr

Glad you enjoyed it▇▇▇▇
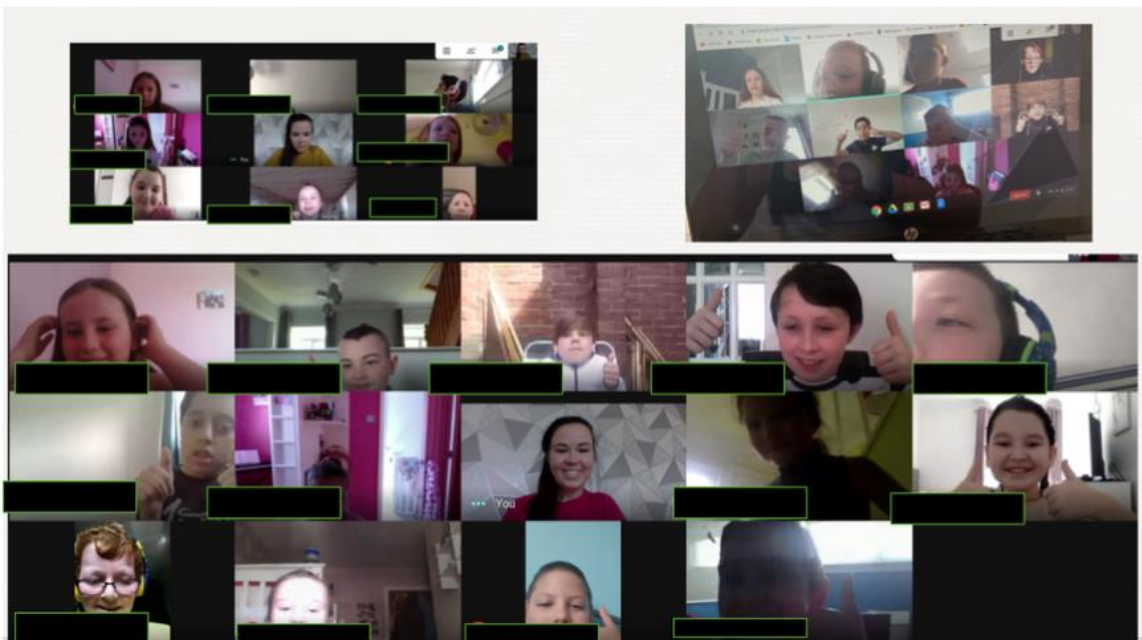
The above extracts are pupil comments and happy faces in relation to engaging with class video calls. During these video calls a range of conversations and games were played including Spanish games in which pupils excitedly and confidently engaged with.

Appendix 22: Spanish Video Calls – Pupil Confidence
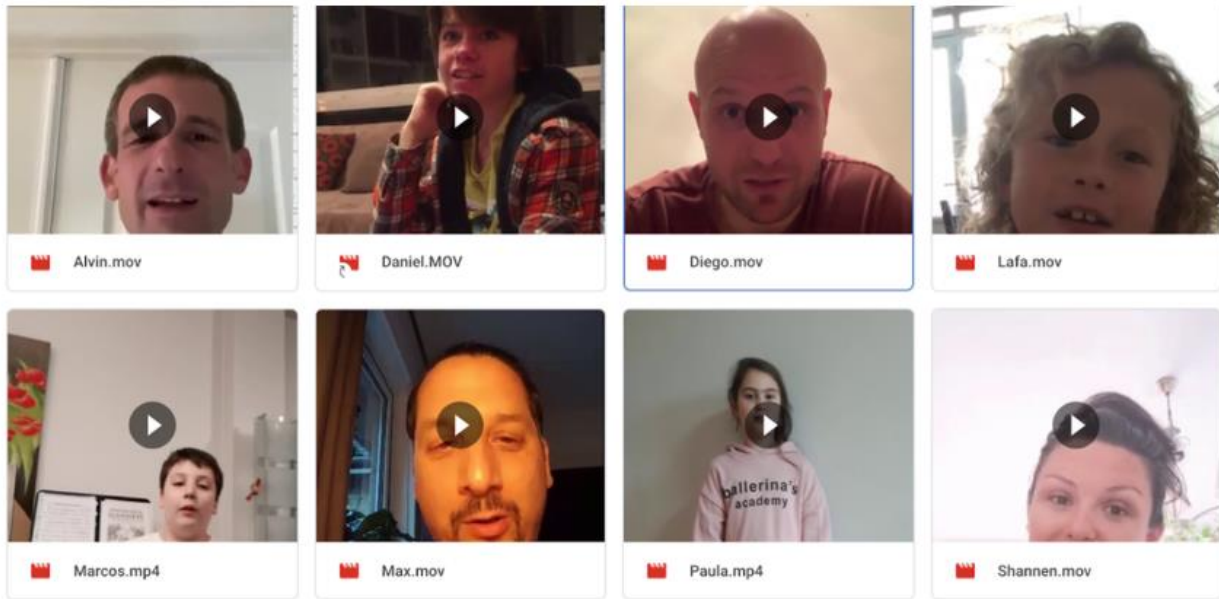
3 class comments

13:55
Amazing work   This is brilliant. I am very proud of you. :D

:56
i was a bit shy

14:01
You spoke clearly and used great pronunciation. You should be proud of yourself. P.S. I love your bear! :D

Alright Thank you and i think im not nervous for spanish

Comment from the same child the following week.

This child has since supported others in speaking aloud and pronouncing words on the video calls.

Spanish

29 Apr 2020 at 09:22.MOV
Video

3 class comments

▮▮▮▮ 09:24
Well done for giving this a go Fynlay! You have a lovely Spanish accent! :)

▮▮▮▮ 09:25
amazing

---
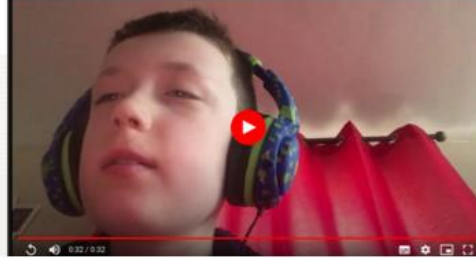
 30 Apr
My Spanish video hope u like it :)

VID_20200430_152829.m...
Video

3 class comments

▮▮▮▮ 30 Apr
Amazing work ▮▮▮. I love your use of the teddy bear - that's brilliant! Well done you. :)

▮▮▮▮ 1 May
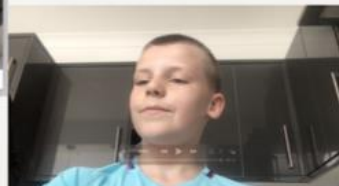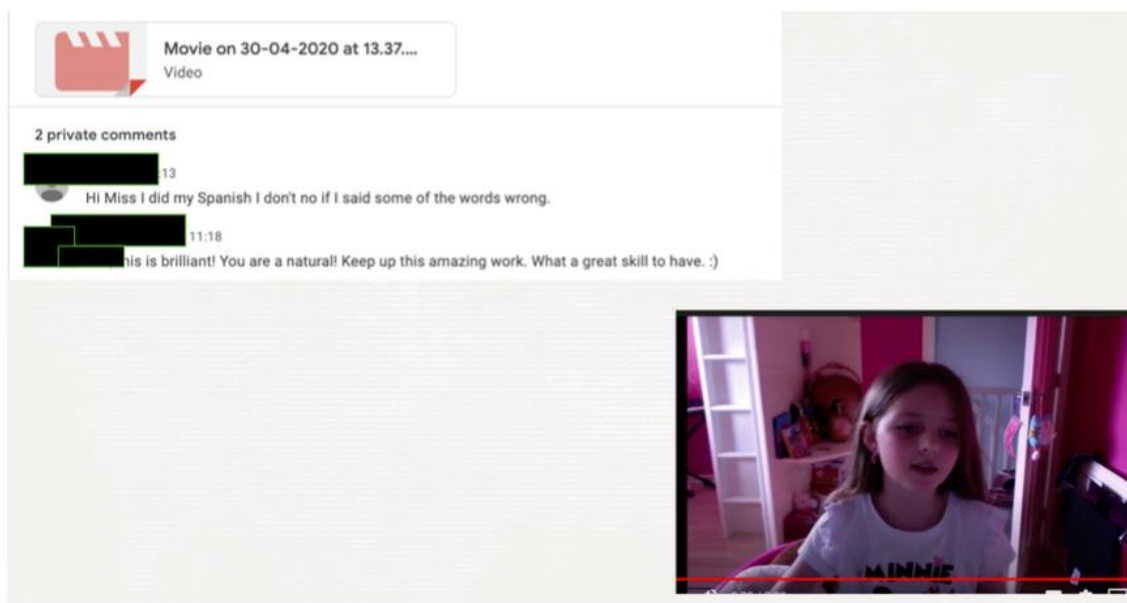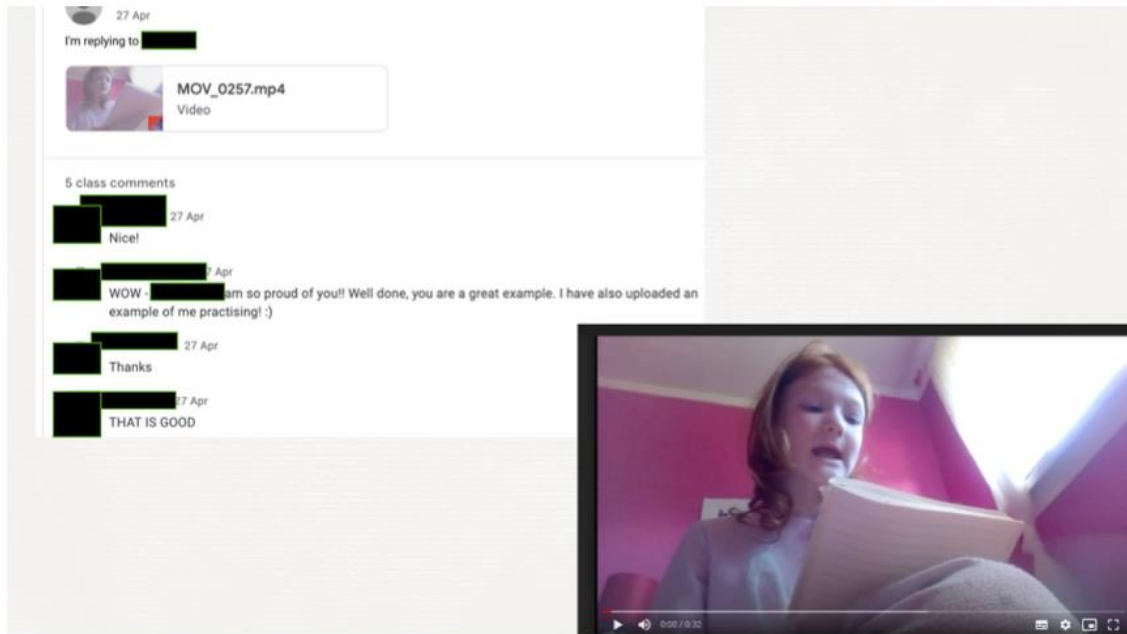Nice to see you back and its super amazing

▮▮▮▮ 1 May
It's good

Spanish
To: ▮▮▮▮

I tried my best Miss.

The above images show the Spanish videos that I shared with the children and the responses that they posted in the private Google Classroom. These children were not required to post a response but chose to do so. Other children provided motivational and positive peer feedback.

Appendix 23: Teacher as Role Model - Pupil Confidence

Pupil and Teacher Videos - Screenshot

I uploaded a Spanish video example to model to the children as literature suggests this improves pupil confidence (see literature review). I ensured that the video was relaxed and even included my pet for when I was discussing 'pets'. This worked well as a couple of the children included a pet or teddy bear that they wished to use.

The following slides are screenshots of the children posting their work or of during their Spanish video.

U followed me on memirise thx

5 Mar

Ohhh! Can you follow people on MEMRISE? Even I am learning at home!

Yes you can

when u view the profile u can see followers

Mar

Fab!

you just go on the leaderboard click on the persons name you want to follow and then follow

The above extract explains my reasoning for uploading the video. The comments of pupils show their high level of understanding and engagement in using the online tools in which they have shared with myself and others.