Digital, Distance and Remote Learning

Lessons learned from (COVID-19) school closures

Discussion paper
November 2020

into
Irish National Teachers' Organisation
Cumann Múinteoirí Éireann

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A nation's greatness depends upon the education of its people

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Foreword

The year 2020 has been a year like no other. Coronavirus COVID-19 created a global pandemic leaving governments, health services, schools and societies responding to the crisis in many varied ways. Schools in Ireland closed mid-March and didn't re-open until the Autumn term. Teachers rose to the challenge of continuing to support their pupils' learning remotely. It was a time when the use of digital technology to support education came into its own. However, it was also a time when existing inequalities in our system became more apparent.

Not all schools were in a position to use technology to support pupil learning during school closures. Nevertheless, the role of digital technology to support remote and distance learning and to communicate within school communities garnered a lot of attention at both policy and practice levels. Many teachers remain apprehensive about the use of technology for supporting distance learning, though the use of technology to support learning in schools has increased since schools re-opened, according to the INTO *Back to School* survey (October 2020). There is no doubt that digital technology has a role in supporting learning both in schools and at home, but its place in education needs further discussion. This discussion paper, initially prepared for the annual Consultative Conference on Education, which was cancelled, considers some of the issues relating to distance or remote learning and digital technology, in addition to outlining some findings from research studies that were carried out during school closures. The INTO also carried out a survey on teachers' experiences during school closures, also presented in the paper.

The INTO would like to thank the INTO Education Committee for their work in preparing the discussion paper, in drafting the survey and in planning the panel discussion on distance learning that replaced the Education Conference. The INTO is grateful to all those members North and South who took the time the complete the surveys, the results of which are included in this paper. In addition, the INTO would to acknowledge the contribution of the education team in Head Office, Ann McConnell, Jane Dowdall, Nuala O'Donnell, and in particular Aoife Ní Mhaoláin, Education Official, who drafted this paper, under the direction of Dr Deirbhile Nic Craith, Director of Education and Research. It is hoped that this discussion paper will contribute to education policy and practice in the area of digital technology and distance education.

John Boyle
INTO General Secretary
November 2020

Introduction

The future of our society is in our classrooms today. Our primary pupils are members of a generation of 'digital natives', growing up in a virtual, media-saturated age. Information and communication technology (ICT) has had a profound impact on almost every facet of our lives in recent years. The purpose of primary education is to prepare our children for the world that they will inhabit as adults, and foster skills and dispositions that will help them to develop as well-rounded individuals. Therefore, for the children in our primary school classrooms, access to ICT is essential as the future of work becomes increasingly digitised. In this context, as education responds to the needs of a technologically advanced and ever-evolving world, digital literacy is becoming as fundamental as 'the three Rs' of reading, writing and arithmetic, mindful that technological skills will likely be prerequisites for employment opportunities and occupations that the majority of our pupils will meet in their working life. Against this backdrop, the OECD *Future of Work* initiative looks at how such advancements are affecting the nature of jobs in the future - and what this means for skills and social policy. The *Skills Outlook* publication suggests that "to thrive in a digital workplace, workers need a broad mix of skills – strong, cognitive and socio-emotional skills as well as digital skills" (OECD, 2019, p.3). The future of work presents unparalleled opportunities, but there are also considerable challenges.

Technology in education is a perpetually changing landscape and the rate of this change has accelerated to such an extent that we can sometimes feel overwhelmed. Often it seems that we have just mastered a new device or application, when a more up-to-date generic version with enhanced functionality emerges. This rapid pace of development in our society makes planning for future eventualities almost impossible, yet as educators we have a responsibility to remain flexible and open to new methodologies as we strive to equip our younger generation with required ICT skills and, as illustrated during the COVID-19 closure, we must nurture resilience that will enable them to navigate challenges that they will encounter. The INTO has long recognised the potential of ICT to enhance teaching and learning significantly when utilised in a pedagogically appropriate way, that facilitates pupils' co-constructing, applying and creating knowledge for themselves, both individually and collaboratively (INTO, 2014). ICT enables teachers to bring lessons to life in new, dynamic ways, to motivate learners and to enhance the learning experience for children with special educational needs.

The interruption of in-school teaching during the COVID-19 crisis has demonstrated the innovation, creativity, and adaptability of educators in ensuring the continuity of education when school buildings became inaccessible. Faced with the challenge of supporting pupil learning during a prolonged school closure, it was technology that, in many cases, provided the link between teacher and pupil. Analysis from UNICEF reveals that 188 countries imposed school closures on a national level, affecting more than 1.6 billion young people across the globe. In response, more than two-thirds of countries introduced a national distance learning platform, drawing on the technological skills of teachers, pupils, and parents. The swift implementation of new strategies meant that teachers relied heavily on children's prior knowledge and digital competence to achieve learning outcomes. This experience highlighted the fundamental need to teach ICT skills from an early age. In many cases, the opportunities presented by effective distance learning were apparent as teachers embraced technology that allowed them to maintain contact with their pupils, continue to provide learning activities, monitor pupils' work, and respond with feedback. Educational platforms became a lifeline that some teachers engaged with through necessity rather than choice, but it opened a new way of sharing information with pupils in a time when options were limited. For teachers who were confident in utilising technology and who had

previously incorporated online platforms in their classroom-based teaching, this was a useful tool. However, despite the prevalence of digital technology in our world, the reality (as emphasised through the pandemic) is that there is an inequity that exists within our society and where online learning is used, there are cohorts of children who will lose out. Among the United Nations' Sustainable Development Goals (SDGs) is a target relating to quality education, which seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". A progress report published in 2019 revealed that, while progress has been made in relation to access to education and participation, over 262 million children remain out of school. Moreover, minimum proficiency standards in literacy and numeracy were still deficient for almost half of those in school environments (SDG 4.1.1; Egan, 2020). Even before the crisis, evidence shows that almost one third of the world's young people were already digitally excluded. School closures served to exacerbate this digital divide, and those who were already disadvantaged were further behind as is borne out by the findings of research carried out by Maynooth University on the impact of COVID-19 and school closures at primary level.

As school doors reopened in late August or early September 2020, following a six-month period of closure, health challenges remained a huge issue. With the virus persisting, some restrictions remained in place, impacting on the organisation of school education, for the opening term at least. In the knowledge that further closures and localised restrictions remained a possibility, schools reacted by devising plans and strategies to ensure that they would be prepared for all outcomes. For learners at primary level, blended learning is one approach that is under discussion - combining in-school and distance learning, but it is important that schools who are considering this method engage in thorough planning and preparation to ensure that implementation is not hurried and that it reflects the coherent, flexible approach that blended learning is designed to be.

How digital technology will evolve and continue to impact on schools, teachers, pupils and parents remains a question, and recent school closures which led to an increased use (where available) of ICT has served to focus our attention on this issue. It is timely then that this discussion paper encourages us to contemplate and take stock of where we are at present in terms of digital learning. As we prepare for a revised primary curriculum in Ireland, it is useful to explore means by which ICT can be effectively embedded in Irish schools. Within this document, we seek to investigate some of the ways in which technology can enrich teaching and learning in an Irish primary school context.

This document is in the four parts. Part one provides some explanations of the term 'distance learning' and its many forms, whilst examining the opportunities and challenges it presents. Part two focusses on experiences of school communities during COVID-19 closures, both on a national level and more broadly on a global scale. Parts three and four present key findings from recent INTO surveys on the experiences of principals and teachers in both the Republic of Ireland and Northern Ireland in supporting pupil learning during the period of school closure. The results of these surveys highlight the successes of teachers in their efforts to embrace ICT in teaching and learning, but also underline the obstacles that remain. The concluding section summarises key points and makes suggestions for future development.

Part one:
Distance, remote, and digital learning

Introduction

In *A Review of Technology in Teaching and Learning*, produced by Education International, factors that influence technology integration are presented, with a reference to the work of Kagan (1992) and Mumtaz (2000) who note that the pedagogical beliefs of educators have a significant role to play in their decisions to use technology in the classroom. They contend that if successful implementation of ICT in the classroom is to be realised, three essential elements to be addressed are "the teacher, the school and policy makers" (p. 319). In a small study administered by Doering, Hughes and Huffman (2003), teachers' initial responses "to technology integration and use in schools were full of scepticism" (p. 348; Egan, A. 2020) and many examples of how technology was used in their educational setting were of a traditionalist and transmissionist nature. Prestridge explored teachers' beliefs that shape the ways ICT are used in their educational environment and the findings reinforced previous research on teachers' beliefs and attitudes about using technology. Beliefs can be overly optimistic and ambitious, and the reality of the classroom may not be conducive to some of the approaches promoted in theory, thus "further research is needed to examine actualised practices that stem from stated beliefs, and at what point in practice do beliefs transform" (p. 458). The influence of traditional, transmissionist beliefs about technology and their impact on teachers' enthusiasm and desire to utilise technology in their classroom remains an area of investigation and will be explored in depth as education systems and teachers plan for a future where technology will play a central role in teaching and learning.

Part one of this document explores various understandings of distance learning, including blended learning. The benefits, challenges and some ethical issues associated with distance learning are then outlined. Finally, consideration is given to current policy and practice in primary schools in Ireland.

What is meant by distance learning?

The term 'distance learning' is difficult to define. Distance education is described as ''institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors'', (Schlosser and Simonson, 2009, p. 1). This definition captures the core concept of distance learning, though the dynamic and transformative nature of technology means that the definition of what distance learning is continues to evolve. In Encyclopaedia Britannica 2009 *Book of the Year*, distance education/learning is explained using the four distinguishing characteristics below:

i. Institution
ii. Geographic separation
iii. Interactive communications
iv. Learning community

Firstly, distance education was carried out through institutions; it was not self-study or a non-academic learning environment. Traditional classroom-based instruction may have been offered parallel to online or distance components, but courses of study were eligible for accreditation by the same agencies as those employing conventional methods. Secondly, geographic separation was inherent in distance learning. Location was no longer a barrier to learning, as, despite physical distance between teachers and learners, education could be facilitated through well-designed programmes. This mode of education could also bridge intellectual, cultural, and social differences between students. Third, interactive telecommunications connected the learning group with each other and with the teacher. Most often, electronic communications, such as e-mail, were used, but traditional forms of communication, such as the postal system, might also play a role. Whatever the medium, interaction was essential to distance education, as it was to any education. Finally, distance education, like any education, established a learning group, sometimes called a learning community, which was composed of students, a teacher, and instructional resources – i.e., the books, sound, video, and graphic displays that allowed the student to access the content of instruction (Simonson, 2009a, p. 231).

Distance learning has become embedded in a tertiary education context in recent years. Garrison and Vaughan (2007) refer to its natural place in higher education contexts focusing on the textual nature of the online context as opposed to the oral communication typical of the physical classroom space. Their view is echoed by others including Mason and Rennie (2006, p. xvii) who observe that:

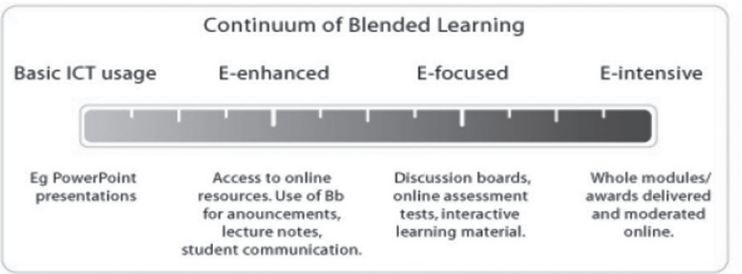
> blended learning is a term that has gained ongoing currency and aroused great interest in the higher education sector and appears to be surviving its "buzz word" status and taking its rightful place as signifying a particular idea or practice.

That the term 'blended learning' encompasses a broad spectrum of technologies, pedagogies, and skills, makes it complex to define and leads to different interpretations. A suggested composite definition (Friesen, 2012, p. 1) is:

> 'Blended learning' designates that range of possibilities presented by combining internet and digital media with the established classroom forms that require the physical co-presence of teachers and students.

In straightforward terms, the expression 'blended learning' suggests merging two or more types of training and instruction. This is not a novel concept, as the effectiveness of combining a practical element with theory-based learning has long been identified. Educators at all levels employ various methodologies in their teaching and the use of practical tasks helps to consolidate learning. The concept of blended learning spanning a continuum, as proposed by Jones (2006) (Fig 1), illustrates its wide-ranging nature, serving to accommodate a variety of approaches. For blended learning to be a success, a level of flexibility and fluidity is required to allow for optimum use of available resources, such is the pace of change within our society as well as the variable accessibility of materials. The agility of teachers as professionals comes into play as they must be ready to adapt and react to societal changes, thus continuous professional development for teachers in the realm of ICT is, and will continue to be, imperative to ensure that they can access training when required to provide them with confidence in their ability to utilise technology in their classrooms.

Figure 1: Continuum of Blended Learning (Jones, 2006)



A simplistic definition of blended learning does not accurately reflect the "thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (Garrison and Kanuka, 2004, p. 96). Even in a virtual global village with an ever-increasing reliance on technology, there is a recognition that there are merits to conserving some 'traditional', teacher-led modes of education whilst effectively embracing cutting-edge innovation. In an education context, benefits of modern devices and online tools in facilitating learning are acknowledged but likewise, it is accepted that there are limitations to cyber interactions and computer-generated activity and therefore it is important that teaching and learning seeks to strike a balance between virtual and face-to-face communication.

Interestingly, Bonk and Graham (2012) predict that the term 'blended learning' may become redundant as increasingly all forms of education provision incorporate some online elements. This prediction reinforces the above depiction of a continuum of teaching and learning approaches traversing from exclusively face-to-face to entirely online. This also illustrates the depth and intricacies of blended learning rather than a simple method of marrying some classroom and e-learning. The process must be considered as an organic and learner-centric approach, sensitive to the needs of the learners and the context in which learning occurs.

Research on blended learning has explored instructional design, teacher and pupil interaction, learning outcomes, attitudes, and the use of technology. Most of the literature is based on tertiary education and adult learning, focusing mainly on online learning as opposed to a distance learning in a broader sense. Evidence specifically from school education is limited, but emerging, and is likely to expand as systems enter the new academic year. An exploration of distance learning in the primary and post-primary school context will be invaluable to the field.

There may be no definitive and conclusive evidence on 'how much' of any distinct learning environment or style of instruction is beneficial, and the intricacies of the learning process and contexts means that there can be no 'one size fits all'. However, generally, education that strikes a balance between online content and classroom-based tutoring reaps rewards and has more benefit for learners than either sole online or classroom education.

When designing a blended learning approach for courses of study, the approach selected by a whole school, subject department, or individual class teacher may have several different characteristics. It will depend on a wide range of factors such as: the age and the learning competences of students, the curriculum content and objectives, time spent in distance learning and in on-site schooling, the availability of appropriate infrastructure as well as competences of teachers; and the schools' pedagogical culture. As ICT becomes an increasingly important element of teaching and learning, schools' culture must reflect the digitised world. Whilst approaches over the last decade may have differed with schools adopting technology to varying degrees, the pandemic may well have forced some schools for whom a pace of change and implementation of digital technology was quite measured to accelerate their level of engagement and introduce new platforms and online programmes.

The *Digital Strategy for Schools (2015-2020)* published by the Department of Education in Ireland provided a rationale and a Government action plan for integrating ICT into teaching, learning and assessment practices in schools over five years. This strategy builds on previous strategies in ICT

integration and is the result of research and extensive consultation with education partners and stakeholders. It supports the overall strategy of the Department in a number of key areas including curriculum implementation, skills development, teacher education and learner outcomes.

Benefits of distance learning

As mentioned previously, findings in relation to the effectiveness of distance learning are not definitive. Despite the diversity of methodolgies under the umbrella of 'distance learning' there are some common aspects which can have immense benefit in the learning context. Online elements to teaching and learning offer unique opportunities to improve quality and access in education, acting as a motivational technique to address individual learning needs across a wide range of ability. It may be assserted that many approaches to distance learning afford students the benefits of both online learning and in-person instruction. Students can work independently and at their own pace online, with reassurance in the knowledge that they can also access the personal attention of a teacher if and when required. Similarly, teachers can continue to differentiate material and structure lessons to meet the level of students. The array of interactive tools and platforms available allows for flexible, interesting and creative approaches to instruction. Advanced communication methods also allow individualised content to be shared with learners in an relatively straightforward, timely manner.

It follows that well-organised distance learning can translate to efficient use of time. Where appropriate, teachers can tailor their instruction and rather than spending considerable time giving whole-class lessons, more time can be devoted to interacting with students on a one-to-one level or in smaller groups to help them with specific concepts, skills, questions or problem-solving exercises. Some students who may be reluctant to ask questions in front of peers in a classroom setting may be more inclined to seek help in a more private context.

The flexibilty that a blended learning model allows is advantageous in supporting the progression of a project or course of study without the requirement for teachers and learners to be in attendance at the same physical space at all times. On a practical level, this facilitates continuity of learning for times when attending a school site is not possible or when other locations may be more appropriate. Careful and comprehensive planning is one of the cornerstones of effective teaching, and blended learning demands a thorough and balanced consideration of pedagogical approaches to ensure that benefits of using the range of learning environments available are maximised. Certain contexts will lend themselves to independent study, whilst other environments will be more conducive to collaborative enquiry and social/peer interaction. Teachers will need to ensure that in-school periods are used to enhance social skills and sense of community – those elements that are difficult to support on an online fora.

Used correctly, an online or blended approach allows for increased learning opportunities as a result of a greater variety in teaching modalities, approaches and resources. Easily accessible, interactive activities can augment pupil engagement with certain topics and enrich children's learning experience.

Another benefit to distance learning is supporting digital competence of learners. As technology becomes an increasingly significant facet of our lives, children's proficiency in use of digital devices is important. Notably, this is one of seven key competencies set out in the *Draft Primary Curriculum Framework*, published by National Council of Curriculum and Assessment in 2020, which is currently available for consultation. It could also be argued that a distance learning environment reflects modern workplaces, in which employees may work largely on their own to meet specific objectives, only periodically checking in with their supervisors to give them updates or seek assistance. In this case, students would also be learning skills such as self-discipline, self-motivation, and organisational habits they will need in adult life.

Challenges of distance/blended learning

Despite displaying confidence and enthusiasm for new technologies, teachers still harbour a reluctance to use technology in their classrooms. Reasons for lack of use of technology by teachers has been a topic of conversation and debate with education circles for some time. Common reasons cited for lack of technology in education include deficiency of hardware and equipment, insufficient support and school policy which Schunk and Ertmer (1999) identified as "first order" (extrinsic) factors as well as "second order" (intrinsic) factors including teachers' pedagogical beliefs and their own technological self-efficacy.

Notwithstanding the positive aspects of blended learning, there is widespread apprehension about the use of digital and online learning, partly due to a lack of evidence-based research on the value of technology-enabled educational methodologies. As educational practice endeavours to distance itself from more traditional rote learning, there is a fear that online learning lends itself to formulaic tasks which may stunt the development of higher-order thinking skills that lead to deeper and more meaningful learning, although such outcomes will depend largely on the quality of the specific programmes or models in question.

Whilst distance learning can support differentiation and educators can tailor and adapt learning tasks, a criticism of this approach may be the lack of a personal, face-to-face component. Where video lessons are not used and students cannot see their lecturer or teachers, the absence of facial expression and tone can sometimes hamper the effectiveness of communication. The lack of face-to-face contact is a particular concern among teachers teaching young children, for whom interactions are an important aspect of teaching and pedadogy.

Again, the merits of blended learning in nurturing independence, organisational skills and self-directed learning have been cited but in the case of learners for whom this is challenging, their progression may be adversely impacted without regular supervision and scaffolding from teachers and adults.

For children in need of additional support, distance learning methods are acutely difficult. Teachers prepare individual education plans (IEP) to meet the needs of pupils in their class who require special education support. ICT is a powerful teaching and learning tool which has great capacity to reduce or eliminate some of the learning difficulties associated with disability. Educational platforms allow pupils to interact with learning material from a distance, but despite these potentials, for many children with special educational needs, structure and routine are paramount. The sudden closure of the school buildings during the initial stages of the pandemic in spring 2020 presented a major setback for some of these pupils.

Another key factor is the availability of appropriate resources and the competency of all parties in the use of such technologies. Access to digital devices and good quality internet connection is a prerequisite for successful distance learning. Hand-in-hand with internet access is the skillset of teachers and learners to utilise their online platforms in a safe manner. For those who may not have elected to study a dedicated module on digital tecnology, initial teacher education may not devote enough time to this area. In order for distance or blended learning to achieve positive results and for learning outcomes to be realised, teachers will require formal preparation in how to teach students effectively in a blended-learning context, given that the practice requires teachers to use new technologies and, possibly, more sophisticated instructional practices.

Whilst various online resources are designed for ease and swiftness of access and to enable more convenience, the opposite could be true. Teachers will be required to sift through a large volume of content, with significant screen time and apply more effort to find the right balance between online and face-to-face instruction. The limitless possibilities and content available at the click of a button could overwhelm teachers. In addition, teachers may not have sufficient time to assess online materials and software packages, which is essential to ensure that technology supports rather than replaces the professional role of the teacher.

Ethical issues associated with distance learning

> Ethics is concerned with 'what people should do' (Schultz, 2005, p. 1)

Online education has become more widespread in recent years. Though the educators may accept the moral basis of their profession, when it comes to teaching online, there may be other issues of concern different from those encountered in teaching face-to-face (Zembylas and Vrasidas, 2005, p. 61). As the Internet erases boundaries to education, there are new challenges for distance educators.

Ethics relates to morality, value and justice. In an education context, ethics relates to provision of equal educational opportunities for all learners, irrespective of nationality, gender, disabilities, or ideological differences. It means being fair to all concerned by establishing and adhering to fair principles accepted and shared by the community of learners. Teachers and schools need to determine their own ethical responsibilities in the design and provision of their digital education programme with due consideration for the contexts that learners find themselves in and the students' workload.

As much of teaching and learning has pivoted online, students do not have much choice in the platforms they sign up to and the digital footprint that they are leaving behind. To continue their education, they have no choice but to sign up. Face-to-face interaction is a real, authentic experience which allows results to be seen immediately. However, in open, online communication, the physical distance between individuals and groups is altered and personal touch is lost. There are some elements of basic communication etiquette that hold whether online or face-to-face. For example, it is assumed that students are respectful to their instructors and their peers, whether online or face-to-face.

Ensuring the safe and ethical use of the internet for students during distance learning is imperative. In the context of the COVID-19 pandemic where distance education was a new practice for many, there was a need to react in a timely fashion and emphasise the importance of internet safety and keeping personal data safe when working remotely. At school level, schools were reminded to ensure that relevant policies informed and guided distance learning in all forms used by the school community. The prevalence of distance learning in third-level education is based to an extent on the independence of the students who have the necessary skills, experience and support networks to contact if and when they require assistance. However, for young children at primary level, teachers needed to provide support to parents/guardians in accessing digital learning for their children and installing child-friendly web-browsers and appropriate filters to safeguard pupils and minimise the risk of unsuitable content being accessed during online activity. Working with young children, establishing clear ground rules and expectations with parents/guardians and pupils when using online platforms is essential.

Digital learning and technology in the Irish primary school

The *Primary School Curriculum* (1999) aspired to 'integrate information and communication technologies into the teaching and learning process and provide children with opportunities to enhance their teaching and learning in all subjects' (NCCA, 1999, p. 29). The requirement for ICT to be rooted in a broad curriculum and considered as a tool and a means for accessing the curriculum and supporting, enriching, and extending teaching and learning was recognised, as was the need for continuous professional support for teachers.

In 2008, the INTO reported that 'while the vast majority of primary teachers along with most of the rest of the Irish workforce have embraced technology and use it in their work, full integration into the teaching and learning process and in all subject areas remains elusive' (*Approaches to Teaching and Learning*, p.34). The INTO conducted a comprehensive research project in 2017

to elicit views from teachers on the use of ICT in schools. This survey explored the extent of integration of ICT across the curriculum and identified the perceived challenges inherent in the system. The findings were largely positive, indicating that improvements and progress had taken place in the intervening years.

Three years later, faced with the challenge of remote teaching and learning due to COVID-19 closure, the importance of ICT competence came to the fore. The progress of recent years was fundamental in allowing many teachers to effectively engage with pupils, yet the space for improvement at system level was emphasised.

In 2020, the INTO carried out a piece of research, both North and South, to garner information from teachers on their experiences of remote learning and the role of online methods in ensuring continuity of education during the period of 12 March 2020 to June 2020 (these findings are outlined in parts three and four of this document).

Concluding comment

The *Digital Strategy for Schools* (DES, 2015) was published with an ambitious aim to embed technology and digital learning tools in primary and post-primary schools. Within this strategy was a vision for the role of ICT in teaching, learning and assessment for all schools across the country, supporting its integration in a methodical and focussed way. As part of this plan was a digital learning framework for schools which sought to provide structure for schools and teachers that would enable them to identify their position on the journey towards embedding digital technologies in teaching and learning. Unfortunately, there remains a range of obstacles that impede the widespread, consistent adoption of digital approaches. Such barriers became apparent during COVID-19 school closures as schools adapted to remote methods of providing continuity of learning for pupils.

As referenced in this section, much research has been conducted into the affordances and challenges of distance learning in higher education settings. In Ireland, tertiary education is generally well equipped to harness the potential of distance education, though there is still a need for increased support for students to enable them to learn effectively online. However, there is a dearth of evidence from the primary school context regarding distance education, and recent events have underlined the need for further investigation in this area. Learning online requires a new set of skills for both teaches and learners to master, irrespective of age or experience.

Part two: Experiences of schools during COVID-19 pandemic

"It is obvious there is a role that schools play that any amount of technology cannot replace" (*COVID-19 in Schools* report, Maynooth University, 2020)

Introduction

Since March 2020, system leaders, educators, students, and families across the globe have demonstrated incredible energy, commitment, and flexibility as they quickly responded to the need to move to remote learning. During this shift, technology has played a critical role in enabling students to stay connected, engaged, and motivated. Teachers around the world are continuing the learning journey for their classes by integrating video, game-based learning, and powerful collaboration tools into their virtual lessons, and students are experiencing a new type of learning, which will have an important, lasting impact. Even with all the incredible fast work, administrators and leaders acknowledge they are navigating unchartered territory, and there is more to be done to ensure all students can participate.

Continuity of education during a period of crisis, via whatever means possible is essential (Baytiyeh, 2017). Furthermore, maintaining an element of routine is important to support children and young people through times of anxiety and stress. Events of recent months have had a profound impact on communities across the globe and during the initial period of strict lockdown, society was shrouded in fear and unease. Several studies have been carried out in Ireland and internationally to examine the impact and experience of school closure, and this section will draw upon finding in research reports from Maynooth University, Trinity College Dublin and ESRI.

Everyone had (and continues to have) a different experience during the pandemic. There are students who will have adjusted to their new situation and thrive while learning at home – for example those for whom social situations are uncomfortable, those who enjoy individual inquiry and autonomy, students who experienced bullying at school but find safety and comfort at home. Even among students who prefer school to remote learning, there is a vast amount of spontaneous learning happening. Students and their families are learning about new technology tools and practices; many students are rising to the challenges of independent learning posed by the crisis and learning how to make choices and meet deadlines. However, such experiential learning gains are undoubtedly occurring alongside much less progress in the core academic curriculum that students typically experience.

There is also the reality that those who are most vulnerable are more acutely impacted. We have seen that the most negative educational effects of the pandemic are borne by the most marginalised communities in society – students living in poverty, ethnic and racial minorities, and students lacking technology access. School buildings, the buildings themselves, are some of our most powerful tools for addressing social inequalities. There was a fear among educators, medical experts and those in government positions that if we failed to reopen school buildings for the 2020-2021 academic year, the extensive gaps in opportunity and outcomes would continue to expand, with a lasting negative impact on students and families.

Emergency remote education

In such a critical time, there has been a drastic change in how teaching and learning happen while learners are physically out of schools and separated from their teachers and classmates. On an international level, countries use different terminology to denote the educational practices employed during the COVID-19 pandemic (e.g. distance education, e-learning, online education, home-schooling). However, these terms do not quite capture what is taking place during the interruption of education in this context, which may be more effectively encapsulated in the phrase 'emergency remote education'. Considering that the expressions used in different countries are derivations of the generic term distance education, the predominant difference between emergency remote education and distance education is that the latter is an option while the former is an obligation. Therein lies the contrast and an awareness of this is important as misconceptions in definitions could lead to misconceptions in practices. Distance education is an organised, scheduled activity and its implementation is anchored in theoretical and practical knowledge which is specific to the field. Conversely, emergency remote education involves spontaneous, unplanned activities and practices and is concerned with reacting and surviving in a time of crisis using whatever resources (offline and/or online) that are available at a given time.

Digital divide

During the periods of school closure due to COVID-19, much of the emergency remote education approaches that have been adopted have depended on access to the internet in addition to the data and devices to provide continuation of teaching and learning. This shift to online has highlighted the stark digital divide between those who have access to electricity, internet infrastructure, data and devices and those that do not. Where there is access, there are further inequalities in bandwidth distribution, data price and internet speed, which are further shaped by socio-economic factors of gender, age, employment, educational background, neighbourhood, and household income (Rohs and Ganz, 2015). There is a misconception that if internet access and devices are equally available to all, then online and remote teaching solutions will be effective (Adam, 2020).

However, these assumptions do not consider that students require not only digital and internet literacy but also the self-directed learning skills needed to best benefit from online/remote learning. Furthermore, as Rohs and Ganz (2015) outline through drawing on Knowledge Gap Theory (Tichenor et al., 1970), the ability to use digital resources in a meaningful way that optimises benefits to learning is directly proportional to an individual's or family's socio-economic status. It is important that we also bear in mind that such differences do not apply only to students, but to teachers also. Even within one school, the experience of teaching staff will vary based on the availability of resources. On a broader scale, across schools and countries there will be diversity in terms of digital access, digital literacies, access to software and content, and availability of supportive online communities.

The Maynooth University study (2020) reinforced the concerns relating to the digital divide as this is an issue that came to the fore within their survey. Teachers outlined their difficulties in emulating certain aspects of school life. Four out of ten principals agreed that a digital divide exists in their school whilst a majority (44%) indicated that they did not know. The researchers stressed the unequal distribution of hardware, software, and also technological skills, further underlining the social inequalities in society and the unfair playing field created. Teachers' responses suggest that teachers and pupils struggled with the support and upskilling necessary to bridge this gap. Participants in the survey raised questions in relation to the appropriateness of terms such as "distance learning" or "delivering the curriculum" which may be overly ambitious and place unrealistic pressure on teachers. In the context of a pandemic, "curriculum delivery" is not the

objective, but rather efforts are channelled into supporting children's learning in the home setting with a focus on what is reasonable and achievable under trying circumstances. The findings of this report were provided to the Department of Education ahead of the publication of their guidance on remote learning, however, though it made reference to a range of suggestions for schools to support contact with families and pupil learning, the document did not specifically address the digital divide.

The experience of school leaders

School leaders experienced a considerable degree of concern and the burden of managing continuity of learning was immense. The changing demands and swift shift to a new way of working posed many challenges including providing opportunities for learning remotely, communicating with staff via online platforms, ensuring the school environment was prepared for a safe reopening, managing initiatives such as school meals' programmes and DEIS summer camps as well as co-ordinating deliveries of resources and packages to homes of pupils. According to research carried out by a team of researchers in Trinity College Dublin (Fahy, A., Murphy, C., Fu, N., and Nguyen, T., 2020), school principals referred to the intensity of their work which extended over the summer school closure, essentially meaning that they were unable to avail of their summer break. The research identified the obstacles that school leaders encountered as a result of the sudden school closure, providing details relating to the ways that principals navigated the initial stage of the pandemic and how leading during the pandemic had affected their personal wellbeing. Among the key findings within the report was "anxiety over the incredibly high workload, impossible balancing act, demands in supporting school children, managing own children and family, uncertainty about returning to work, and uncertainty about their future role and availability were commented on by principals in relation to their wellbeing and concerns" (Fahy, A., Murphy, C., Fu, N., and Nguyen, T., 2020, p. 2).

The experience of children

Children were not excluded from this state of apprehension, exposed to daily news briefings, frightening stories of illness and death and experiencing strict measures that were alien to them. Not only were they isolated from friends and in many cases extended family, but they were also deprived of their formal schooling and the face-to-face action this brings. The closure of schools means much more than the loss of formal instruction and gaps in some curricular areas, there is a deeper effect in that children in their formative years have missed a significant period of time with their peers – crucial in their emotional, social and behavioural development. Students found that they were suddenly forced to direct and regulate their own learning and become digitally savvy. Students vary regarding their comfort level, familiarity, and access to digital technology. In some instances, an overload of information, especially for those who are not familiar or experienced in online learning and teaching, could have negative impacts on learners as they may feel demotivated and discouraged (Williams and Adams, 2013). For pupils at primary level the absence of the teacher meant that instruction was less readily available. Children are resilient and exhibit an ability to adapt and bounce back. However, the importance of promoting wellbeing was highlighted throughout the period of school closures and as schools reopened for the 2020-2021 academic year, guidance from the Department of Education advised teachers and school leaders to prioritise social, personal and health education and physical education in their planning to support children who have experienced a great upheaval during their formative years. Young people would have reacted in different ways to the changes that happened around them and their experiences will have varied significantly based on family situations, location, and access to

devices. Parental dispositions also play a part in determining children's ability to deal with crisis. If parents can see the world in a positive way, children pick up un this. If parents cannot do this, and this can be for so many reasons, it is harder for children to be positive.

A preliminary report from DCU's National Anti-Bullying Centre published in November 2020, stated that Irish children experienced one of the highest rates of cyberbullying in Europe during the COVID-19 pandemic. Bullying is not a new phenomenon, but the increase in online learning and the use of various online educational platforms, unfortunately, creates a cyber space where young people can be the victims of intimidation and harassment. In a classroom context, social, personal and health education (SPHE) is an important way to educate children on bullying and perhaps raises the question relating to time allocation for this subject and whether the current allocation of 30 minutes per week is adequate.

Children with SEN

Children with additional needs have faced increased challenges to their education, health, and home life due to the pandemic. Their day to day lives will have changed, and are most likely still different, because of the evolving COVID-19 situation. The OECD (2020) has highlighted how school closures in particular, have aggravated stress among many children with disabilities and additional needs whose wellbeing is heavily impacted by the structure and routine of the school day. These children also experienced a disruption to therapeutic support intended to develop their communication and social-emotional skills, thus intensifying pressure on not just themselves, but their family circle.

Research carried out by Dublin City University (*Impact of Coronavirus Restrictions on Children and Young People*) found that behaviour of children with special needs regressed during the period of social isolation negatively impacting their mental health. The regression ranges from mild (with children separated from peers and regression of social skills) to very significant (fearful of adults from outside their home). Within this study children, teenagers and parents all agreed and acknowledged that the overriding and most difficult impact of school closure was not being able to have face-to-face contact with their friends. The importance of regular, ongoing schooling for pupils with special educational needs cannot be underestimated. While all pupils need to be supported to maintain their engagement in learning, those with SEN are among those who need the most support at such an unpredictable time. Many schools introduced a range of strategies and measures to meet the needs of pupils with SEN insofar as possible. For some, videos and audio-visual methods were used as these allowed children to see and hear a familiar face and reassuring voice. In other school contexts where such digital methods were not used, regular phone calls proved useful. (INTO survey, October 2020).

The Department of Education guidance (*Guidance on Continuity of Schooling: Supporting Pupils with Special Educational Needs For primary and special schools*, April 2020) acknowledged that pupils with SEN can be particularly vulnerable as they deal with not being at school, with changes in their daily routine, and with not seeing their friends or teachers. Keeping pupils connected to learning and to their school was highlighted as critical for pupils with SEN at this time. The guidance document (April 2020) suggested that the mainstream class teacher and special education teacher must work collaboratively to ensure that an appropriate programme of work is devised for pupils with SEN and this content (as far as possible) should be personalised to the pupils' needs and interests. Reviewing the pupils' support plans to identify aspects of the programme that could be continued in the home environment is important and regular opportunities for the pupils to engage with the special education teacher (SET) using various appropriate and available platforms were important. Many online educational programmes are highly motivational for children with special educational needs providing them with extra practice they require to master basic skills in a non-threatening, non-judgemental way (DES,

1997). The vast array of specifically tailored educational websites allow pupils to work at their own pace and can facilitate a high standard of presentation. Sophisticated graphics and interactive elements contribute to learner motivation which often corresponds to an increase in self-esteem, thus enhancing pupil learning. The National Council for Special Education (NCSE) offered advice for parents and teachers on ways to provide learning opportunities for children with special educational needs, including links to suggested online resources. Whilst such material may have been beneficial for many, the issue of accessibility was also an issue for some.

All parents/guardians harboured a great sense of concern about how the COVID-19 situation was affecting their child(ren) and the consequences of the extended school closure on the pupils in the future. This is particularly true of parents/guardians of children with special educational needs and disabilities. Every pupil with SEN is different and had unique support needs in the COVID-19 situation. Teachers and school leaders worked to find ways of reaching out to children with SEN, sensitive to the challenges that these families face in creating structure for their children in an uncertain phase, and in helping their engagement with learning.

Children at risk of educational disadvantage

It has been well documented that children who are particularly vulnerable within our society have been especially impacted by school closures, including those living in poverty, children who have additional needs and those who require specialised support and care. Very quickly the digital divide has emerged, with profound implications for students who do not have access to the technology, Wi-Fi or digital literacy required to engage with online schooling. Teachers employed a variety of approaches and methodologies to reach out to children who did not have the capacity to partake in online activities. Some schools prepared hardcopies of resources for their pupils which were either delivered (by post) to pupils or collected by parents. In some cases, where home visits were possible and practicable, home school community liaison (HSCL) teachers maintained contact with children and families. That they continued to interact on a face-to-face level with these pupils is hugely important as children in difficult circumstances benefit greatly from direct contact and this human level of connection. The hallmark of a good HSCL-family relationship is trust, which is built up over time (sometimes hard-fought), and a break to this bond and this important element of the support network could have a detrimental effect.

There are also many students who are grappling with additional care responsibilities during the pandemic, thus limiting their ability to engage in learning. These children, also, need the guidance of a constant, trustworthy adult figure in their lives and in some cases their teacher may be the person best placed to offer support.

With the school closure came a cessation of other initiatives, school-based and community-based programmes, including the school meals scheme. There was grave concern among principals and teachers who expressed their dismay at the fact that those most in need would be deprived of nutritional food and significant efforts were made to ensure the continuity of provision.

Schools working under the DEIS (Delivering Equality of Opportunity in Schools) scheme have supported children and their families, not only in terms of their engagement with learning, but also in terms of providing food, pastoral care and emotional support as communities struggle to cope in this profoundly changed environment. The widening gap in attainment that will emerge from school closures will deeply impact young people, not only in terms of learning and socioemotional outcomes, but also in terms of future life experiences and opportunities. Notwithstanding the resilience of children, such a major disruption to their education in their formative years could affect their development socially, emotionally and behaviourally. Increased and sustained investment in DEIS will be required to further support schools as they negotiate the pandemic with their pupils and their wider communities.

Younger children (infant classes)

Throughout the period of school closures, teachers sought to support the continuity of their pupils' learning to enable progression in learning. This was challenging for all teachers, but particularly difficult for teachers of pupils in infant classes. Whilst specific teaching input was important to guide parents/guardians and teachers, for younger children the nature of their activities in the early years of primary school are practical, hands-on, and exploratory. The early years framework, *Aistear*, is underpinned by principles that focus on providing enjoyable and appropriately challenging experiences so that all children can grow as competent and confident learners. The aims of the early years' curriculum outline dispositions, attitudes and values, skills, knowledge and understanding that adults should nurture to help children learn and develop.

Remote learning is not conducive to providing education for young children in the infant classes. A wealth of educational apps, videos and games are available and can consolidate learning, but these require not only access to devices, but also supervision of parents. For teachers, the process of carefully considering large volumes of materials online was time-consuming, and likewise for parents of younger children installing apps, setting up platforms and monitoring activities all demanded a great deal of time as these pupils are less capable of working independently. Maintaining an interest and sustaining engagement with learning tasks is also difficult for younger children whose attention span is less than pupils in older classes. We know from the growing body of research into the use of digital technology by preschool children that such tools "appear to have become pervasive and teachers are responding pedagogically to these new opportunities for play and learning" (Fleer, 2020; p. 214). Digital technologies have become embedded in the lives of children, but it is important to note that the digital device is merely one tool among many for pedagogically supporting the play and learning of children. Teachers in the classroom setting draw upon digital tools in meaningful ways to enrich and consolidate children's learning.

Parents/guardians

For parents/guardians, school closures meant that they had to assume the dual role of parent-educator. Taking on the role of parent-educator came with significant pressure as households struggled with access to devices, availability of broadband and sufficient space for all family members to continue with their work or education. For the caregiver, the worry about COVID-19 was ever present and they were doing their utmost to protect their family, perhaps tend to more vulnerable relatives whilst also supervising children's assigned homework. The shift to online learning requires a specific set of technical and pedagogical knowledge and skills and for parents/guardians who do not have the skillset there was a heightened sense of tension.

A report from Trinity College Dublin (Devitt, A., Ross, C., Bray, A. and Banks, J., 2020). examined the experience of home learning during the enforced school closures from the perspective of parents of primary school children, providing a unique insight into parents' concerns about home learning because of COVID-19. Among the key findings were that just over half of parents reported that their child's learning continued to an appropriate level with over a quarter of respondents indicating that their child was not continuing to learn at a sufficient degree at home. Of concern was the finding that 14% of parents who engaged with the survey expressed a lack of confidence in their ability to support children's learning, citing a lack of knowledge of the curriculum, its content and what elements should be prioritised. One parent who contributed to the Trinity College study remarked, "If we had a better understanding of exactly what the curriculum contains we could move forward faster" whilst another said, "I know they're doing work, but I don't know if they're learning anything as I don't have teaching skills." It is evident that, for some, home learning was a daunting and stressful experience.

Lack of parent time to support learning was one of the factors cited by parents as impacting on their child's learning in a survey of primary-school parents carried out by Trinity College Dublin (Devitt et al, 2019). This COVID-19 parent survey provided a unique insight into parents' experiences and concerns about home learning with just over half of the parents indicating that they were confident that their children continued to learn enough during school closures. Worryingly, more than a quarter reported that they felt their child was not continuing to learn enough. The finding is consistent across all parents regardless of socio-economic status or school characteristics. However, parents of children with a disability and those with children in the senior primary classes were more likely to feel their child was not learning enough.

Parents benefit from peer-related support, as evidenced in a study conducted by an interdisciplinary group of researchers affiliated with the Italian Society of Primary Care Pediatricians Lombardia and the Riccardo Massa Department of Education at the University of Milano Bicocca (UNIMIB). Findings from this research, presented at a convocation of the European Early Childhood Education Research Association (EECERA) (October 2020), explored how parents and family life have been affected by the COVID-19 pandemic with a focus on the hard-hit Italian region of Lombardy. Parents were required to juggle family and work life, home schooling, health challenges and many struggled, and in some cases continue to struggle, with feelings of confidence and self-efficacy in coping with the emergency. The researchers described a new territory that has emerged between families, educational services and health services and parents' capacity to manage this new territory is very varied, with an uneven level of support and resources. Dealing with such immense changes and adapting to new roles and responsibilities is daunting for parents and families and the experiences presented in the Lombardy report are no doubt mirrored on a global level. Parent-to-parent solidarity and community-based peer support were considered essential.

The INTO issued guidance to teachers at the start of the school closure in March with learning suggestions that could be shared with parents/guardians to illustrate the array of opportunities for learning within the home environment, seeking to reassure parents and alleviate their anxiety.

Communication

In the most challenging of circumstances, effective communication is crucial to ensure clarity about changing roles, consistency in expectations and help to manage expectations. The Department of Education's *Guidance on Continuity for Schooling* (April 2020) offered general advice for schools about the importance of communicating with all parents and guardians.

As highlighted, online platforms present an ideal forum to communicate in a remote learning environment, but this option is not available to all pupils and their families and is reliant on access to the required resources. Programmes such as *Zoom* and *Microsoft Teams* allowed for interaction and conversation in real time, with the option of using a camera to enhance communication as parties could see each other, albeit in a virtual space. Facial expression can often help to convey key messages and this is something that was widely discussed by educators, especially by teachers of early years and primary level, in advance of schools reopening after a period of closure when the issue of face coverings was being addressed.

Just as facial expressions play an important part in communication, so too does tone of voice. In some cases, phone calls were the main means of contact between schools and families, and an effective way for teachers to check-in with parents and guardians. Tone of expression was most meaningful at a time when families needed support and reassurance.

The Trinity College report on parent perspectives on teaching and learning during school closures (*Parent Perspectives on Teaching and Learning During COVID-19 School Closures: Lessons Learned from Irish Primary Schools*. July 2020) summarised attitudes towards communication from schools in the unique circumstances. Seventy-nine per cent of parents surveyed stated that they considered the communication to be excellent or good. This is important, as some

parents/guardians shared their nervousness at the lack of knowledge of the curriculum. Affirming, encouraging comments were helpful in instilling a sense of confidence among parents. Teachers' key message for parents/guardians was that there was no expectation to cover the content of the curriculum that would be taught in the school setting. Teachers gave examples of how family learning practices both in and outside the home could provide meaningful contexts for children to develop and practice new skills. Within this report on parental perspectives, poor communication was associated with one-way communication from the school, teachers not providing feedback on pupils' work which had been submitted and limited opportunities for interaction with the school.

Wellbeing

In addition to the profound and global impact of the pandemic on people's social, economic, and political lives, COVID-19 has also affected individuals both emotionally and psychologically (Miller, 2020). Teachers, students, and parents/guardians, plunged into an unfamiliar situation with much uncertainty about the future, were faced with, and in some cases continue to experience, a great deal of stress and anxiety. Wellbeing dominated discourse in media circles during the pandemic, and the importance of looking after one's mental and emotional health as well as one's physical fitness was reiterated. For school leaders, teachers, pupils and parents, the importance of prioritising wellbeing is essential, and guidance issued to schools from the Department of Education served to underline the importance of focusing on social, personal and health education (SPHE) and physical education (PE). Prioritising SPHE offers greater scope for teachers to deal with sensitive issues in the classroom context and allow children to express their emotions and share their thoughts in a safe environment, with the support of peers and their teacher. As Jansen (2020), former vice-chancellor of the University of the Free State (South Africa) highlighted, our biggest mistake would be to regard children as cognitive machines or instruments which can be switched off on demand and restarted following the traumatic COVID-19 crisis.

Support communities are also important for teachers and principals to collaborate and support each other, and to share tools and knowledge. Social media, during these times, played an essential role by facilitating a space where educators could meet, share, and exchange their knowledge. Having a support community enables teachers who may feel psychologically overwhelmed, and in need of assistance to cope with the pressures created by the pandemic, to be supported by colleagues.

Various educational organisations, websites and stakeholders curated useful materials that teachers and pupils could benefit from during emergency remote education. Many commercial (for profit) educational companies temporarily made their services available free of charge. There were many efforts to support individuals and institutions varying from sharing tips, advice, and resources to providing strategies and guidelines, offering crucial support at a time of insecurity and anxiety during the COVID-19 closure. The sharing of resources and the sharing of skills and expertise broadens perspectives and enriches teaching and the learning experience of pupils. A myriad of groups have been established on social media platforms which provided an outlet for teachers to interact with one another and share classroom experiences, lesson ideas, display suggestions, and links to websites long before the COVID-19 pandemic. Whilst some of these developments have the potential to support teachers and offer practical advice and workable solutions, for certain teachers this may have had the opposite effect. Certain teachers may have felt overwhelmed or anxious that their work was of a lower standard to fellow teachers across the country. However, every effort was made by the INTO, by providing guidance to members, to reinforce the message that all schools are different, with a unique set of circumstances that determine how they can enable the continuity of education for pupils. Likewise, teachers' personal situations varied, and school leaders and parents had to be sensitive to this in their expectations of what could be achieved through remote learning.

Experiences of schools in Ireland during the COVID-19 closures

'Every day is a school day' and this adage was manifest on many levels throughout the period of school closure. For pupils, the home setting became their temporary learning environment whilst parents and guardians took on the role of 'teacher'. As a result of COVID-19, school closures shifted education from the classroom to the home, and for a three-month period, the burden of education fell largely on parents. While some children are regularly home schooled in Ireland, the numbers are few (1,495 in December 2019) and the protracted nature of the closures means that home schooling became a reality for the close to 1 million children who are currently enrolled in primary and secondary schools (CSO, 2020).

The Department of Education and Skills (DES) made resources available on their website for both teachers and parents, and individual schools provided varying levels of supports to families including the use of apps such as *Edmodo*/*Showbie*/*Aladdin* to communicate with students and post assignments, homework, and pre-recorded material, presentations, and voice memos. Some schools facilitated video lessons using platforms such as *Zoom*/*Google Hangout*, as well as regularly communicating with parents through text messaging and email and, as of 30 March, Raidió Teilifís Éireann brought school to the homes of hundreds of thousands of households through their RTÉ *School Hub* which was broadcast on weekdays, with live lessons from three qualified primary school teachers. A similar service was provided by TG4 as Gaeilge to ensure that children in Gaeltacht areas and in Irish-medium schools were afforded an equal opportunity. One of the first innovative ideas was the provision of daily PE lessons with renowned television celebrity Joe Wicks. There was an outpouring of gratitude from parents across the country to these morning sessions that promoted physical activity each morning and helped maintain structure and routine to the day. Various sportspeople based in Ireland followed suit and coordinated videos and virtual sessions for children of school-going age.

Such initiatives were useful resources to supplement work assigned by individual schools. Given the broad spectrum of school contexts, there was no "one size fits all" model that could be applied countrywide. Schools used teachers' professional judgement and knowledge of pupils and families to devise strategies that would enable effective continuity of learning. However, on a national level, there was a high level of variability in both schools' and parents'/guardians' capacity to support remote learning. Some households may lack the physical resources necessary to support children's learning (e.g. overcrowding, desk space, computers), while others may have time constraints, particularly where parents were engaged in essential frontline services. Parents/guardians with literacy issues may also struggle to engage with the curriculum, while the heightened stress and health problems arising from COVID-19 may make it difficult for both adults and children to engage in school-work.

The INTO, among others, sought to reassure parents that there was no expectation on them to recreate the work of the class teacher. Home surroundings and the natural world offer much scope for active learning, inquiry, discovery and exploration and it was practical activities such as these as well as other life skills that were promoted rather than a focus on completing workbooks and textbooks. In March and April, the INTO published a suite of support material and within its advice for teachers were suggested home based activities that they could share with parents of children in their classes. Allowing children to contribute to household chores, get involved in cooking and gardening or decorating facilitated oral language development, mathematical concepts and arts education all of which are important lifelong skills. Letter-writing was a practice that enjoyed a renaissance, with An Post distributing postcards to each household across the country to allow families and friends to keep in contact. This encouraged many children and young people who may not be accustomed to a pen and paper as a means of communicating to embrace this traditional method.

Concluding comment

The challenges and disruption to schooling posed by COVID-19 forced teachers to pivot and embrace alternative ways to continue to support pupil learning outside the traditional school setting. There are now innumerable resources and examples of good practice to offer guidance on how to support online education, including advice for parents on how they should manage children's learning in a virtual space and a home context. Whilst some of these suggestions may be useful, such a kaleidoscope of information can be overwhelming, particularly for those parents who, as evidenced in the Maynooth survey, felt inadequately equipped to support their child's learning as they did not have the expertise and curriculum knowledge of teachers. Other findings discussed in this section of the report highlight the difficulties associated with the continuity of learning for school-going children at primary level, including the practicalities of accessing resources and digital devices, the lack of routine and the absence of a peer group. It is clear from the results of the Maynooth University, Trinity College and ESRI surveys that there was a profound sense of anxiety among parents, principals, and teachers that pupil achievement gaps would widen if emergency remote learning was poorly executed. However, the positives to home-based learning should also be acknowledged, demonstrating that learning occurs in a myriad of contexts. Home life can create less structured and fewer academic opportunities for children to engage with the natural environment, strengthen bonds with family members, assume responsibilities and carry out domestic chores and develop other life skills. It is important that teachers and parents work collaboratively, and in reflecting on their experiences of the challenges posed by the COVID-19 pandemic, seek to implement practical, evidence-based solutions.

Part three:
INTO survey of teachers' and principals' experiences of school closures

Introduction

The INTO undertook research on the topic of remote learning during the enforced school closures due to COVID-19 in 2020, by issuing a survey to 4,267 members, randomly selected from the organisation's membership database. A total of 947 surveys were returned which equates to a response rate of 23.5% which can be considered a fair percentage given experiences with previous surveys involving the INTO. The questionnaires were all completed online, being a break from the INTO norm of part online/part hardcopy in the past. However, there were two separate surveys, one aimed at principals and one aimed at teachers to try to ascertain their separate experiences of remote learning during the school closures from March to June 2020. Of the 947 respondents, 140 were principals and 847 were teachers. The responses gave clear insight into the issues and concerns associated with remote learning, as identified by teachers and principals.

The surveys issued in October 2020, the results were subsequently collated, and the main findings are presented in this report. Initially, it was intended that this research would inform part of the INTO's background paper on remote learning for the INTO Annual Consultative Conference on Education. However, due to the COVID-19 situation, and in line with public health advice and government restrictions, a decision was made by the INTO Central Executive Committee to cancel the Education Conference (and other face-to-face events scheduled for 2020). An alternative event, hosted online, explored the topic of remote learning, featuring a panel of teachers, principals, and former teachers who are now involved in digital learning and support for primary school educators.

Profile of respondents

Figure 2 provides information relating to some of the key background characteristics of the sample respondents. Of the 23.5% who responded to the survey, 3.5% were principals and 20% were teachers. Respondents had a range of teaching experience from newly qualified teachers, up to teachers/principals with 40+ years teaching experience. The size of the respondent's schools ranged from <50 to >500 pupils with the majority (72%) of principals' schools being between 101-200 pupils while 57% of teachers taught in schools with more than 200 pupils. Regarding the survey for teachers, mainstream class teachers represented 61% of the sample surveyed, and 33% of the sample were special education teachers. Regarding the survey for principal teachers, 56%, were administrative principals and 43% of the sample were teaching principals. As outlined in figure 2, the respondents taught in a variety of schools ranging from full stream to Gaelscoil, Special Schools to DEIS schools.

Figure 2: Respondents' profile and demographics

	Principal %	Class Teacher %
Teaching Posts		
Administrative Principal	56	
Teaching Principal	43	
Administrative Deputy Principal	0.7	
Mainstream class teacher		62
Special Education Teacher		33
Other		5
Number of years teaching		
0-5	0	21
6-10	4	24
11-20	26	36
21-30	30	8
>30+	36	9
Size of School (No. of pupils)		
<50	15	8
51-100	17	8
101-200	72	9
201-400	34	27
400+	12	30
Location		
City	13	19
Suburban	14	23
Town	25	32
Rural	47	27
Type of school		
Full Stream (Inf-6th)	88	89
Special School	5	5
DEIS Primary Urban 1	3	12
DEIS Primary Urban 2	4	5
DEIS Primary Rural	9	4
Gaeltacht	2	2
Gaelscoil	2	7

Percentages are rounded to the nearest whole number.

Supporting pupil learning remotely

Following the sudden closure of schools in March 2020 due to the pandemic, most schools transferred to online methods of providing support to pupils, with only 2% of respondents reporting that they did not engage with remote learning.

Almost half of teachers surveyed (49%) indicated that technology was the primary means of the provision of continuity of learning with only 3.5% relying on hard copies of materials from the period of March to June 2020. In the case of 48% of respondents a combination of technology-based and hard-copy resources were utilised.

Online communication proved to be the preferred option for teachers in monitoring pupil engagement and learning progress. Over three quarters (78%) of teachers maintained contact with

pupils online with more traditional methods such as telephone calls (38%) and postal service (10%) also used by teachers.

The sense of community, interaction and the relational aspect of learning that occurs in the physical space of a school building cannot be recreated in a virtual space. Teachers' observations of the negative impact of school closure on the overall development of pupils (socially, emotionally and academically) emphasise the importance of the school building. It is not only the children who benefit from the social interaction and relational aspect of school, but teachers too felt the pressure and isolation of remote working and missed the value of collaborative, cooperative planning with colleagues and the support of the school community.

Pupil engagement

During the period of school closure, there was a concern not only for the educational progression of children, but also for their emotional and social wellbeing. The impact of such a significant period of detachment from the school, teachers and peers was particularly challenging for pupils with additional needs for whom routine is an important part of their lives. Teachers surveyed were asked how, in their opinion, the closure affected children with additional educational needs. Responses illustrate teachers' (52% of those surveyed) fear that children with special educational needs (SEN), pupils with English as an additional language (EAL) and those at risk of educational disadvantage have experienced regression in their learning.

Figure 3: Teachers' perspectives on how the school closures affected pupils with English as an additional language (*please note that respondents had the option to offer more than one response).

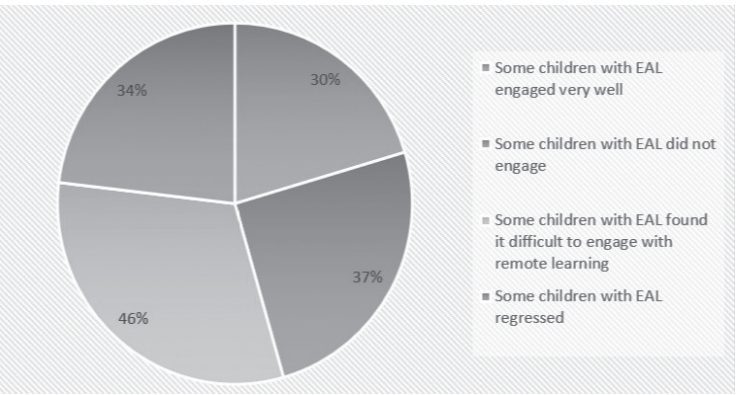


Figure 4: Teachers' perspectives on how the school closures affected pupils at risk of educational disadvantage

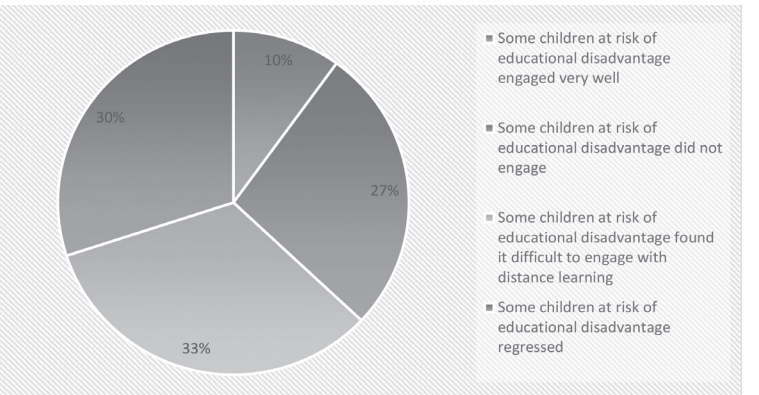
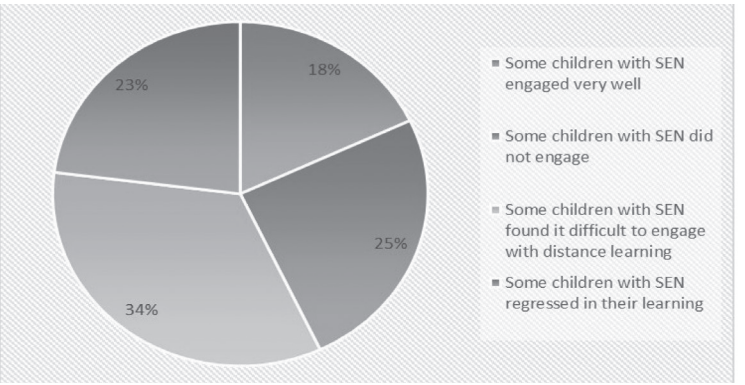


Figure 5: Teachers' perspectives on how the school closures affected pupils with special education needs (SEN)

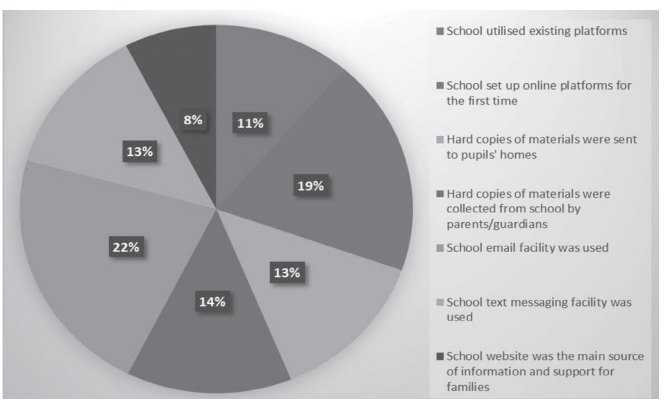


Teachers' concerns for the regression of pupils during the school closure (as illustrated in these graphs) was echoed by respondents in the principals' survey. Asked if there were children in their school that they felt were negatively impacted by school closures, 84% responded that there were. Principals' confidence regarding their teaching staff's capacity to support their pupils' learning remotely varied. For the most part, principals expressed some level of confidence in their teachers with 34% declaring that they were "very confident", 42% stating that they were "reasonably confident" and a further 16% saying that they were "hopeful". A minority of principals surveyed indicated that they were "apprehensive" (8%) or "extremely apprehensive" (less than 1%) and this trepidation was due to wide-ranging factors such as lack of infrastructure for schools, unavailability of resources for pupils, regional variation of broadband, individual family circumstances (of teachers and pupils) and inadequate training for teachers in the area of digital technology.

Remote learning through technology during the school closure

Technology played a key role in the provision of learning for primary school pupils during the period of closure. School email facilities were used widely in communicating with pupils and their parents/guardians and supplying learning materials with four out of five respondents indicating that they used this method. Four out of ten respondents to the teachers' survey noted that they used existing online educational platforms which would have been set up prior to the pandemic and the consequential school closure. However, the survey results also show that a considerable number of schools (70% of participants) connected with online platforms for the first time.

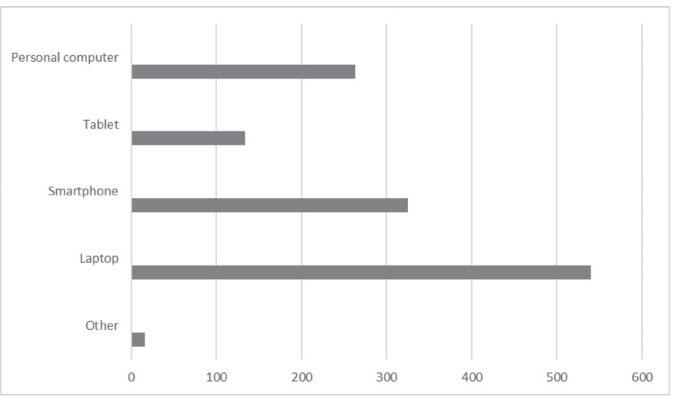
Figure 6: Methods used by teachers to connect with their pupils



Over one third of schools (36%) provided devices to pupils for use throughout the closure. There was an acknowledgment from both principals and teachers who participated in these surveys that access to devices and technology was a barrier to pupil engagement. Schools recognised the obstacles that families were encountering in providing access to resources in the home environment, for example where parents/guardians were also working from home and using these devices, or in cases where older siblings were also engaged in remote learning and may have had priority due to assessments or examination. Two thirds of teachers surveyed indicated that some pupils in their care did not have access to devices.

For teachers, the most used appliance was a laptop (75%) with smartphones being the next most widely used device (45%). Most teachers (93%) indicated that they did not purchase a device specifically for the purpose of remote learning during the pandemic, with 57% using their own personal equipment and 42% having access to a school-owned device.

Figure 7: Devices used by teachers to support pupils' learning remotely

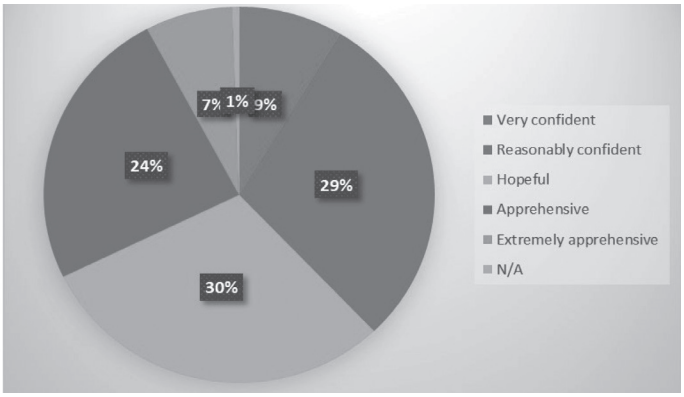


The availability of other apparatus in the home setting varied among teachers, with just over 40% of respondents having access to a printer at home. Such factors would determine how resources could be presented to pupils and some teachers would therefore be limited in their options. For the initial period of restrictions (March to mid-May), school buildings were inaccessible, and this meant that some teachers were working with minimal materials for this time. Three quarters of teachers believe that permission to use the school's facilities for planning and preparation of material in the event of future closures would be beneficial (42% agreeing to "a great extent" and 34% to "some extent"). Without pre-prepared plans, schemes, books, and resources readily available and easily accessible at school, some teachers noted the additional time spent on sourcing relevant, stimulating material online, researching alternative resources and providing instruction and support to pupils and parents. Teachers, in selecting the most appropriate and engaging learning activities, also needed to be mindful of the limited material available to children in many circumstances. Various costs are involved in remote working for teachers (for example postage, printers, ink, purchasing books/materials, subscriptions to websites etc.) and just over 60% of respondents stated that they paid for any expenses incurred themselves.

Teachers' experience of remote learning through technology during the school closure

Teachers were asked to share their personal experience of remote learning and how confident they felt in the adoption of online platforms. The data highlights mixed responses from the respondents as shown in figure 8.

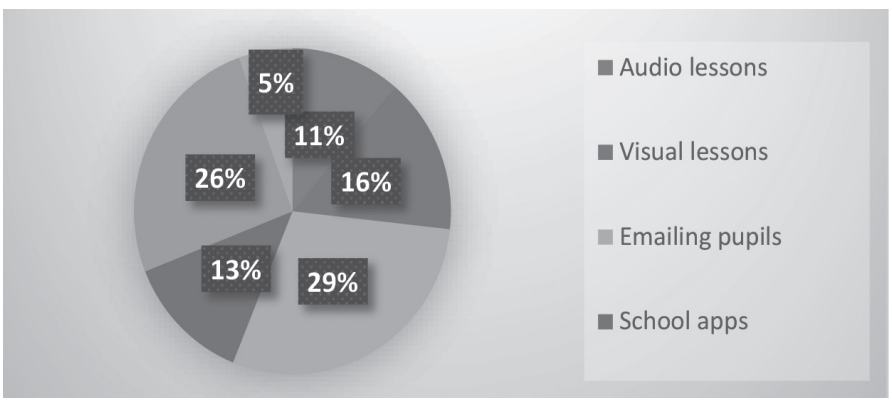
Figure 8: Teachers' confidence in supporting pupils' learning using digital technology



The sudden shift to supporting children's learning online was a challenge for many teachers, particularly those who felt that they did not have the skills required. Prior to the enforced closure only one third of respondents engaged with technology daily in the classroom setting. Whilst one quarter of teachers surveyed used technology "quite regularly", 27% stated that they incorporated technology into teaching only "occasionally", with 11% "rarely" availing of digital methods. A small percentage (3%) never used technology. This finding captures the variance among schools and teachers and the challenge for a certain cohort of school staff who were apprehensive due to a lack of competence in using information and communications technology.

Some schools engaged with new educational platforms online for the first time. Just under 30% of respondents to the survey described themselves as "apprehensive" or "extremely apprehensive" in using digital technology with only 9% considering themselves to be "very confident". Teachers' resourcefulness and ingenuity was manifest in the creative ways by which they interacted with pupils, supplied learning material and for pupils in sixth class and second class by hosting online graduation ceremonies and celebratory videos to mark their special milestones, postponed sacraments and other events. Some of the most widely used activities to support remote learning are captured in figure 9 (below).

Figure 9: Activities used in supporting remote learning using technology



Other examples provided by teachers in the survey included school YouTube channels and school blogs which were used to share videos and activities with pupils. 'Circle time' is a frequently used method for children to share stories and express views with others. In the absence of face-to-face interaction in the physical space, some teachers stated that they adapted with creativity to host circle time/'our news' sessions online, via *Zoom* and other online means. This platform was also used by some schools to hold assemblies or mark important occasions on the school calendar.

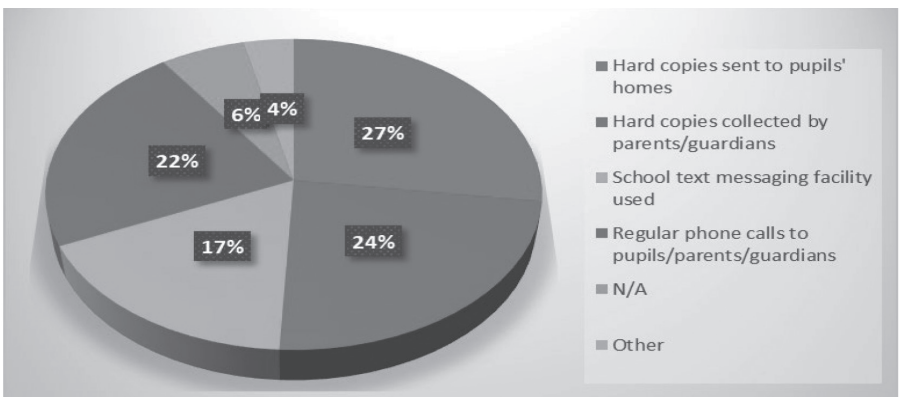
The survey examined the conditions under which teachers were working remotely to ascertain

their level of readiness for this method of working. Just under 40% of participants described their broadband as "of good quality", 36% of teachers stated that their broadband access was "adequate", 16% stated that they had "sporadic" broadband and 8% referred to their broadband as "poor". This finding highlights the inequities within the system and the unequal starting point for teachers. Broadband access is a key consideration as these impact on time, frequency, and quality of communication. Unreliable broadband will contribute to technical issues which some teachers may not have the skills to rectify. Technical difficulties were "sometimes" a disruption for two out of five teachers surveyed, with 19% of respondents indicating that they experienced such issues "quite often" and just under 5% of teachers stated that they "very often" faced problems in this regard. Only 10% stated that they "never" experienced interruption as a result of technical issues.

Remote learning without technology during the school closure

As mentioned, only a minority of teachers who engaged with this survey (3.5%) relied on hard-copy materials, with most schools utilising some element of technology. In cases where schools engaged in remote learning without technology, over 50% of teachers prepared hard copies of resources that were delivered to pupils' homes. Almost 47% of teachers organised hard copies that were collected by pupils' parents/guardians. A total of 43% of teachers reported communicating with pupils/parents/guardians regularly via phone calls and 34% utilised the school's text messaging facility. Other approaches mentioned by respondents were that their colleagues, in particular home school community liaison teachers (HSCL) or special education teachers assisted with the preparation of learning tasks and the dissemination of same. Where possible, home visits were facilitated by HSCL staff. Other teachers stated that textbooks and workbooks had been sent home with pupils on the day of school closure (12 March 2020) and this proved useful in assigning tasks.

Figure 10: Supporting remote learning without the use of technology



The RTÉ *School Hub* initiative which broadcasted lessons on television daily from Monday to Friday during school closures was used by over half of the respondents to supplement their provision of remote learning. A small percentage (15%) of respondents indicated that they availed of this resource "very often" with 38% drawing upon this programme "occasionally". A similar education resource was provided through the medium of Irish by TG4 (*Cúla 4 ar Scoil*), and 36% of respondents engaged with this programme as part of their supports for pupils and two thirds of those who used the resource deemed it to be either "excellent" or "very good".

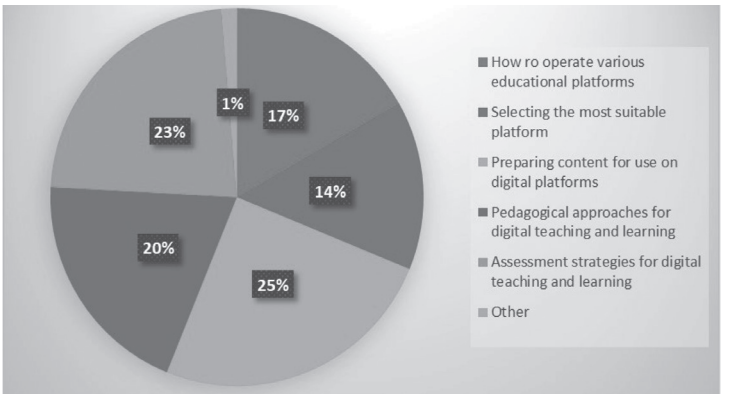
Upskilling and professional development

The sudden announcement of school closures on 12 March 2020 meant that teachers had little time to organise content and learning materials and, in some cases, felt "ill-prepared" for an extended period of school closure.

As referenced earlier, some 70% of respondents indicated that their school engaged with an online educational platform for the first time. Such a dramatic shift in approach and methodology demanded rapid training and upskilling, and this varied from one school to another. Many school leaders sought advice from the PDST (among others) to select the most appropriate platform for their individual school situation. Over half of respondents (51%) said that their school's management team provided links to PDST training with 27% noting that their school recommended other online training providers. In addition, 58% of teachers sourced their own independent professional development in online learning methodologies.

It is evident from the results of the survey that many teachers would welcome continuous professional development (CPD) in areas of online teaching and learning. For example, 66% of teachers would specifically like to receive support/CPD in preparing content for use on digital platforms whilst 60% feel that they would benefit from further professional development that focuses on assessment strategies for digital teaching and learning.

Figure 11: Areas of priority for continuous professional development (CPD)



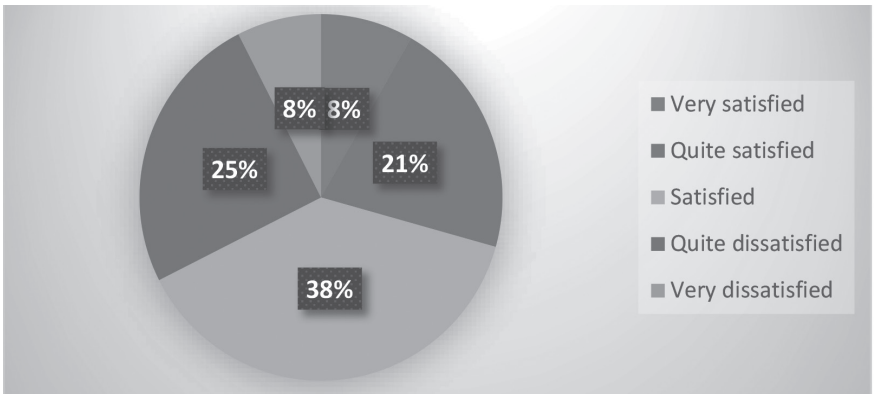
Communications with parents and pupils

Schools generally did communicate with pupils and parents/guardians. Half of teachers surveyed (50%) provided daily updates for pupils. Assessment is acknowledged as a crucial element for pupils' learning progression as children need constructive, timely feedback to direct future learning activities, and maintain engagement.

Class teachers typically engaged in communication with parents/guardians, though in some schools home school community liaison teachers were also involved in establishing and maintaining communication with pupils/parents/guardians remotely. Two thirds (66%) of teachers identified online platforms as the prominent means of providing feedback, 31% of teachers contacted pupils/parents/guardians by phone and 13% of respondents sent written feedback to pupils' homes.

When asked how satisfied they were with the level of engagement of parents/guardians, 68% of teachers were satisfied to varying degrees as illustrated in figure 12.

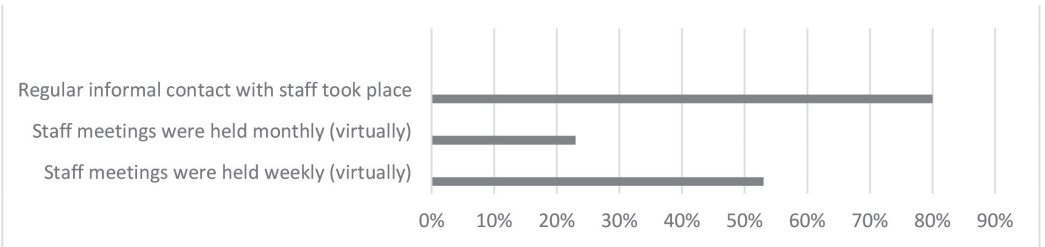
Figure 12: Teachers' satisfaction of the level of engagement of parents/guardians



Communication with fellow staff members

Collaboration and contact with colleagues are important elements to consider during periods of extended school closure. Peer support is hugely beneficial when navigating such an unprecedented situation, not only to work co-operatively on professional issues but also to maintain interaction and help promote positive wellbeing. Four out of five principals maintained "regular informal contact" with their staff members.

Figure 13: Frequency of contact between principals and staff members



More than half of the principals surveyed (53%) organised weekly staff meetings (online) during the school closure. Co-ordinating meetings in a virtual space is more challenging than face-to-face gatherings and sustaining interest and engagement can also be difficult. Principals' responses highlighted the challenge of maintaining regular contact with staff. Over two thirds (69%) of respondents to the principals' survey cited teachers' poor-quality broadband as an obstacle to regular communication with 74% identifying the varied ability and competency level of staff as problematic. The adverse impact of remote working on relationships was also acknowledged with 49% of principals surveyed stating that the absence of face-to-face interaction and the move to meetings on a virtual space negatively affected the connection between staff.

Planning and recording

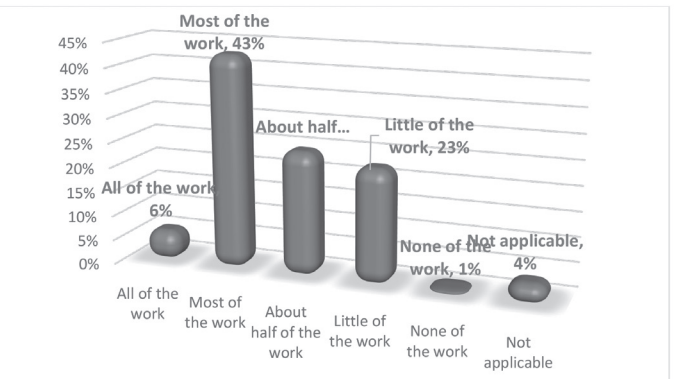
As teaching methodologies are adapted and altered, teachers' planning needed to be reflective of this change. Initially it was difficult for teachers to gauge how much content should be assigned to pupils on a daily, weekly, and fortnightly basis. Teachers needed to consider the different family situations of pupils which would affect their access to devices, level of engagement and support from adults in the home environment.

Just under half of respondents reported that "most of" (43%) or "all of" (6%) the work that they had planned for a week-long period was completed by their pupils.

Common challenges to planning were a lack of engagement from children, the negative impact of the loss of relationships/face-to-face interaction, difficulty in providing meaningful feedback remotely, limited access to devices for some pupils and/or teachers and unavailability of broadband. The extent to which these issues affected teachers' planning is summarised in the graph below.

Respondents to the principals' survey indicated that 50% of their teaching staff provided a monthly record of work covered with their class whilst 31% submitted weekly plans.

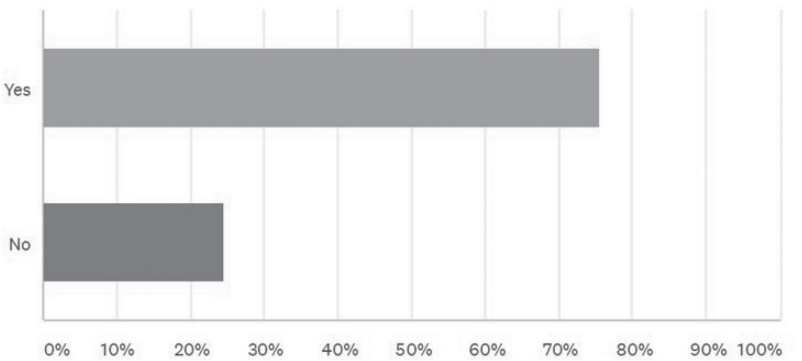
Figure 14: The amount of work which teachers planned for their pupils that was completed



School policy on remote learning

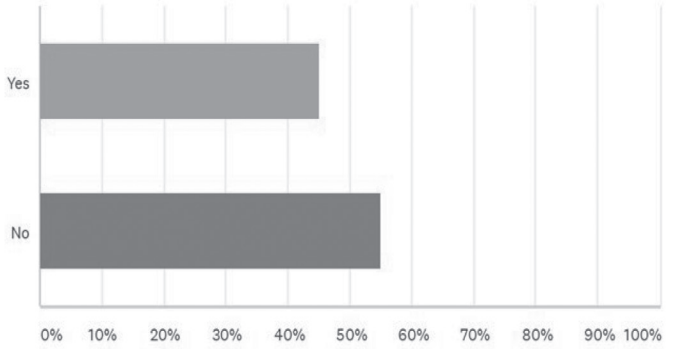
The *Digital Strategy for Schools 2015-2020, Enhancing Teaching, Learning and Assessment* (Digital Strategy) recognises that digital technologies can play a central role in transforming learning, teaching and assessment practices for teachers and students in a high-quality 21st century education system. Just over three quarters of respondents to the principals' survey reported that their school had "an effective digital learning plan" in place prior to the COVID-19 school closure.

Figure 15: Schools with effective digital learning plans established before March 2020



Following the sudden closure of schools as a result of the pandemic, many schools made amendments to their digital plan to respond to the changed context in which they were operating. Some strategies and methodologies would initially have been introduced as short-term measures, but schools were mindful that there was a need to review and explore digital practice on a deeper level and plan for future school closures.

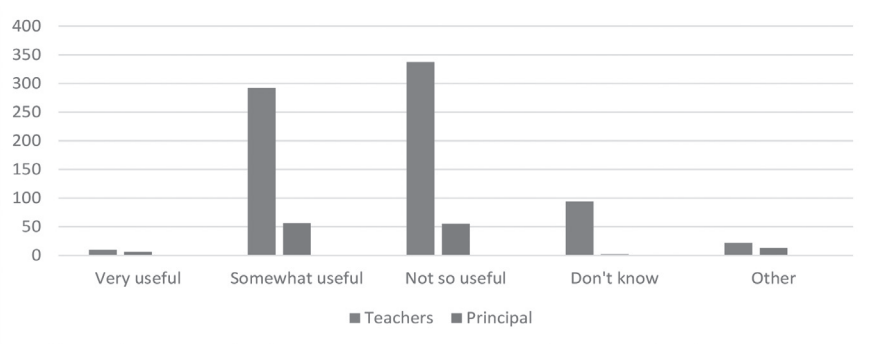
Figure 16: Schools who amended their digital learning plans considering their experience of remote learning



Guidance from the Department of Education

Principals and teachers were asked if they consulted guidance published by the Department of Education on continuity of learning during the period of school closure and, if so, to indicate how relevant and how beneficial this information was in planning for remote learning. Most principals (96%) and teachers (76%) stated that they referred to this guidance, and there were varied responses regarding their level of value. Just over 42% of principals found the guidelines "somewhat useful", with an equal number noting that they were "not so useful". The most common response among teachers was that the Department's supporting documentation was "not so useful" (45%) with a slightly smaller number of teachers (39%) indicating that they considered the guidance "somewhat useful". A recurring point in principals' comments was the timing of the Department's guidance, which, it was noted, was published late and at a stage when most schools had already made decisions in relation to methodologies that would be used in the continuity of education and routines had been established. Some principals remarked that the guidelines merely served to reaffirm what was happening in their school context. There was a sense of frustration that some of the content within the Department of Education's guidance was "out of touch with reality" in primary schools and "overly ambitious". This led to unrealistic expectations of what could be achieved through remote learning. Teachers' reaction to the guidance echoed the sentiments of principals, with a general perception the information provided arrived too late to be of benefit, did not consider the varied contexts of schools across the country and that recommendations were vague. Some responses stated that the guidelines were "unsupportive" and there was a lack of sensitivity to the exceptional circumstances that schools found themselves in during the period of closure.

Figure 17: Responses of teachers and principals to Department of Education guidance



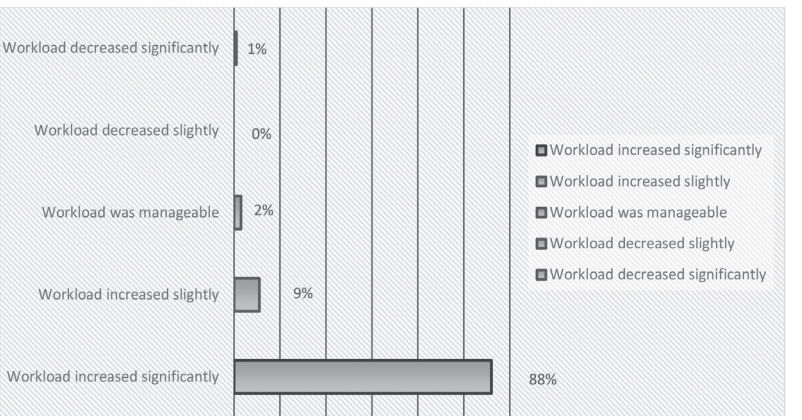
Wellbeing and work-life balance

Feedback from members surveyed emphasised the negative impact of the pandemic on the wellbeing of principals and teachers. School leaders and teachers were forced to react and adapt quickly to the impacts of the pandemic in their working life, as well as in their personal life. Balancing the personal and professional when the home setting becomes the place of work is an immense challenge. Over three quarters (77%) of principals stated that they found themselves "working excessive hours" and it was difficult to structure their day when working remotely.

Principals clearly identified an increase in their workload during the period of school closure. A broad range of additional duties and responsibilities for principals were noted impacting significantly on wellbeing. This was illustrated in a comment from a principal who referred to "the massive increase in time needed to coordinate, communicate and upskill from a distance and also trying to motivate staff regarding teaching and learning, in addition to managing regular administrative work".

Almost nine out of ten principals surveyed (88%) stated that their workload was greater than normal, and it was striking to note that only 2% of principals regarded their level of work as "manageable", with one response from a principal stating that the COVID-19 school closure "was the most stressful, demanding, draining period of (their) whole teaching career to date".

Figure 18: How workload changed during the period of school closure for principals



Among the main sources of stress and anxiety for principals was the overwhelming sense of responsibility with limited support. Some principals found it difficult to manage not only their own anxiety, but that of their teaching staff. In their role as principal, they felt a great deal of pressure to address the concerns and queries of teachers and parents, when they sometimes were unsure of the correct advice, "Trying to have all the answers to questions from teachers and parents when I didn't have all the answers myself". Some principals referred to a feeling of "isolation" and the demands of exhibiting to their colleagues a positive vibe and assured feel. One teacher remarked "it was very lonely, no-one there to listen to principals who felt that they had to always be upbeat and on top form for everyone else…afraid to let down defenses and putting others' wellbeing first".

Figure 19: Challenges for principals during school closures

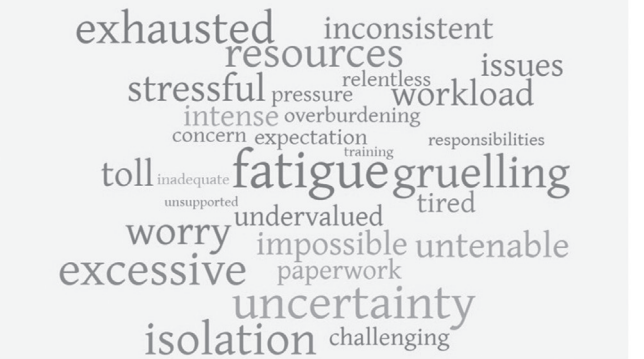
Children not engaging in remote learning	91%
Staff had varied abilities to engage with technology	74%
Promoting the wellbeing of staff members was challenging	71%
Some teachers did not have good quality broadband at home and virtual meetings were challenging	69%
Some children had no access to devices	67%
Promoting the wellbeing of pupils was challenging	62%
Managing anxiety of parents/guardians was challenging	57%
Some children had no access to broadband	57%
Teachers did not have access to school facilities to prepare work	53%
Connecting with teachers from a distance impacts negatively on relationships	49%
It was difficult to keep in touch with parents/guardians	41%
It was difficult to keep in touch with teachers	31%
Co-ordinating packages for posting was time-consuming	28%
Arranging the continuity of school meals was time-consuming	14%

In addition to the challenges listed above, principals also identified the following issues as stressors during the COVID-19 school closure:

- lack of guidance and clarity from the Department of Education and Health Service Executive
- additional administrative duties
- providing devices and resources for teachers and supporting those who did not have access to school facilities to prepare work
- dealing with technical issues
- varying degrees of digital literacy and competency among staff
- managing time
- coordinating staff meetings and in-school management team with teachers working outside of regular school hours due to their individual family/personal circumstances
- coordinating July provision
- preparing for the safe reopening of schools (with many underlining the fact that they were unable to avail of a break over the summer months).

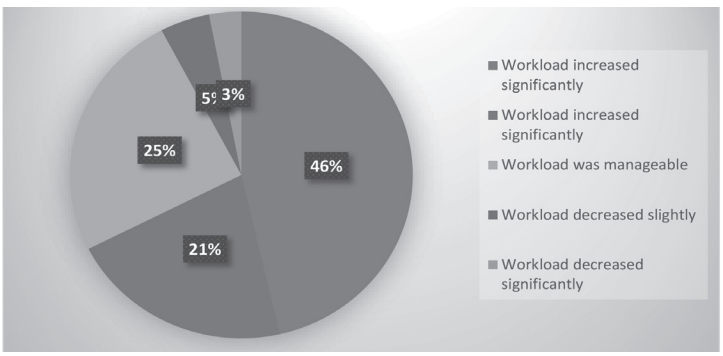
Whilst some principals indicated that they took specific actions to support their physical health (63%) and their mental health (36%), lack of time was an issue for those who have not taken positive action regarding their wellbeing, with some fulfilling multiple professional and personal roles. Figure 19 (below) summarises some of the key words used by principals to describe their experiences during the school closure.

Figure 20: Principals' experiences during the prolonged school closure



The increase in workload as demonstrated by examples provided by principals was echoed, but to a lesser extent, by teachers. Like the pattern among school leaders, the majority of teachers surveyed found that their workload "increased significantly", found themselves working "excessive hours" and felt "under greater pressure than being at school". Again, most teachers (77 %) found it difficult to structure their day during the period of working from home.

Figure 21: How workload changed for teachers during the period of school closure



Among the key obstacles encountered by teachers when providing learning opportunities for pupils remotely were the following:

Figure 22: Challenges for teachers during school closures

Some children were not engaging with remote learning	87%
Some children did not submit any work for feedback	81%
Some children had no, or limited, access to devices	66%
It was difficult to give meaningful feedback	48%
Some children had no access to broadband	45%
No access to school facilities and resources to prepare work	35%
Connecting with pupils from a distance impacts negatively on relationships	30%

Preparing for future school closures

The COVID-19 school closure occurred very suddenly, and school communities had no time to prepare. Teachers and school leaders promptly adjusted to change, but as evidenced by the responses in this survey some found this experience extremely challenging. There is an onus on the Department of Education to ensure that schools are adequately resourced, and teachers are appropriately educated to meet the needs of a technologically advanced society and to support pupils' digital literacy. As summarised in the table below, over four out of five teachers agree "to a great extent" that the State should ensure that all areas of Ireland have high quality broadband (88%) and that all teachers should be provided with a device to support pupil learning remotely (81%). The results also point to a reluctance among teachers to embrace digital technologies. For example, when asked if the use of digital platforms should become the norm in classrooms, 16% agreed "to a great extent", 20% agreed "to a small extent" and 50% responded with "to some extent". A minority (5%) disagreed, replying "not at all" and a further 10% were undecided (responding with "hard to say"). This reflects the mixed views of teachers regarding digital technology in the primary school curriculum. Whilst there is an acknowledgement of a need to embrace technology, helping our pupils develop their technological competence and become digital learners, teachers' responses in this survey highlights a sense of apprehension.

The role of digital learning in the future of primary education is a key element that will be

explored as part of the redeveloped curriculum. 'Being a digital learner' is one of seven key competencies set out within the *Draft Primary Curriculum Framework* published by the NCCA in February 2020.

Figure 23: Key considerations for future school closures

	To a great extent	To "some" or to a "small" extent	Hard to say	Not at all
The use of digital platforms should become the norm in classrooms	16%	70%	10%	5%
All teachers should be prepared for future school closures by having contingency plans to support the continuity of pupils' learning	58%	37%	4%	<1%
All teachers should upskill in digital competence	52%	42%	5%	1%
The State should provide digital devices for all pupils	34%	38%	20%	8%
The State should ensure all areas of Ireland have high quality broadband	88%	8.5%	2%	<1%
Teachers should be expected to provide direct teaching using technology	10%	53%	21%	15%
Teachers should always have access to school buildings and facilities in the event of any further school closures	42%	42%	13%	3%
The primary curriculum should include the development of digital competencies for all pupils	39%	51%	8%	2%
All teachers should be provided with a device to support pupil learning remotely	81%	14.5%	3%	1%

Concluding comment

School closures arising from COVID-19 created huge challenges for teachers across the globe. Findings from this INTO survey show the amount that has been achieved to date on adjusting to a new reality, but also puts into sharp focus weaknesses within the education system. The survey identified the key issues that must be addressed to ensure that schools are equipped with the technology that is required in an ever-evolving, digital world. The pandemic has highlighted the inequalities within society and the extent of the "digital divide", reinforcing the social inequalities of our world. The findings reveal the concerns of teachers and principals, including the lack of hardware and software in schools to facilitate distance learning, and the requirement for continuous professional development for teachers who feel that their initial teacher education level did not adequately prepare them for digital teaching and learning. Online learning and teaching demands skills that need to be developed and kept up to date on a regular basis. However, online learning and teaching requires further discussion in the context of what's desirable and appropriate for primary education.

From the comments of teachers and principals, the value of face-to-face teaching and learning is reiterated, and schools play a central role that no amount of technology can replace. The sense of community, interaction and the relational aspect of learning that occurs in the physical space of a school building cannot be recreated in a virtual space. Teachers' observations of the negative impact of school closures on the overall development of pupils (socially, emotionally as well as academically) emphasise the importance of the school building as a place for being together. It is not only the children who benefit from the social interaction and relational aspect of school, but teachers too felt the pressure and isolation of remote working and acknowledged the value of collaborative, cooperative planning with colleagues and the support of the school community.

Part four:
INTO survey of members in Northern Ireland based on their experiences of school closures

Introduction

In Northern Ireland, research on the theme of remote teaching and learning was conducted prior to the school closure. Online surveys were circulated to a total of 6,650 INTO members, and of the 2,913 questionnaires that were opened by recipients, 1,331 versions were returned. The majority of surveys received by the INTO were from teachers at primary school level, with almost one third of responses coming from teachers in post-primary schools. This response rate is broadly reflective of INTO membership in the North. Teachers who engaged with this survey teach across all the key stages, including the Foundation Stage, thus the results offer a valuable insight into the wide-ranging experience of educators at all levels.

Profile of respondents

Figure 24 below provides information relating to the sample respondents. Of the 1,331 INTO members in Northern Ireland who responded to the survey, 62% teach at primary level and 32% at post-primary level. Respondents had a range of teaching experience and the age profile is also captured in the table below, with more than three quarters of respondents under the age of 50.

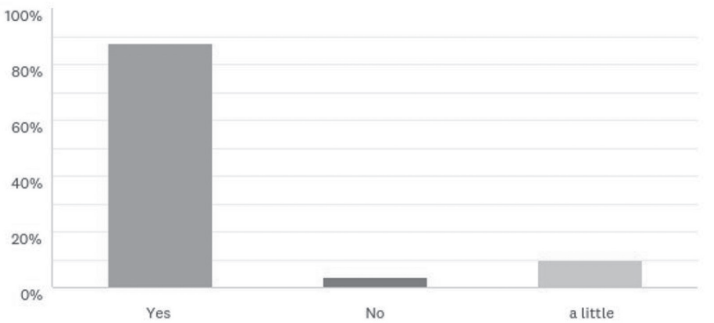
Figure 24: Details of respondents

Teaching Post		Key Stage	
Nursery school	2%	Nursery	7%
Primary school	62%	Key Stage 1	36%
Special school	2%	Key Stage 2	30%
Post-primary school	32%	Key Stage 3	31%
Education Other Than at School (EOTAS)	<1%	Key Stage 4	32%
In Education Authority (EA) as an advisory teacher	<1%	Post 16	25%
Other	2%		
Age of respondents			
Under 25	1%	46-50	20%
26-30	10%	51-56	16%
31-36	15%	57-65	6%
37-45	33%	65+	<1%

Supporting pupil learning remotely

The sudden COVID-19 enforced closure of schools in March 2020 forced schools to engage with new methodologies to support pupils' learning. Most respondents to this survey indicated that they conducted remote learning to some extent, but a small number (less than 4%) did not engage with remote methods.

Figure 25: Respondents who engaged in remote teaching/learning



Teachers were asked to provide some detail regarding the methods that they employed during the school closure. Results demonstrated that apps such as *Seesaw* and *Elluminate* were widely used. Whilst a few schools may have been using these platforms prior to the COVID-19 school closure, others introduced and embraced these apps for the first time.

The use of live video lessons was less popular among teachers, and respondents shared their concerns in adopting such methods. Survey results illustrate that 15% of teachers conducted video lessons, with only 9% of respondents delivering live lessons. Many members cited the lack of security around this material and their fear that content shared with children could be recorded, tampered with and shared outside of the class group. The lack of assurance that lessons would be used solely for the purpose for which they were designed and intended led to a reluctance and sense of apprehension among teachers, and others felt that they lacked the skills and expertise to create and deliver such content.

> I would feel very uncomfortable with this. It is very difficult to produce a high standard video with no mistakes and without something that someone would take issue with.

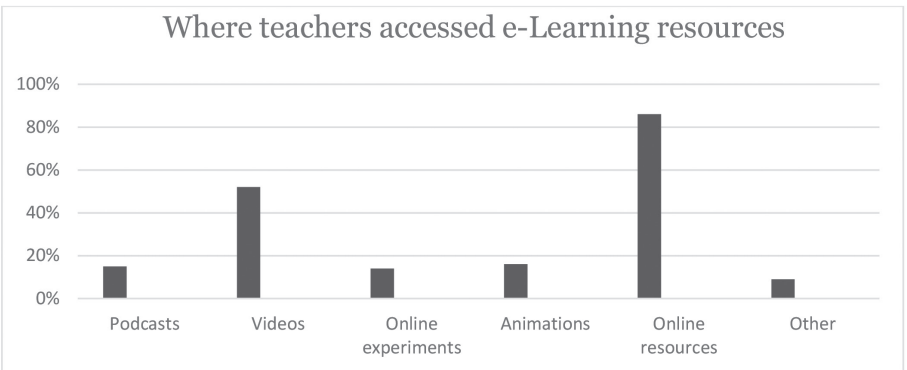
Audio lessons were used by 11% of teachers surveyed who felt somewhat more at ease with this less intrusive approach, as they were not on camera. The use of audio clips and recordings featuring the familiar voice of the teacher was encouraging for pupils and made it possible to maintain some sense of continuity and normality during the most testing period where children were detached from the routine of school, their classmates and their teacher. One respondent commented that they completed a recording

> with audio only (and) while (they) felt uncomfortable, it was the easiest way to explain and prepare a lesson. A few parents commented that children enjoyed hearing the teacher. It is very time consuming in trying to do a good job and not make any mistakes and then transferring and uploading videos onto platforms.

School email facilities were a common means of communication between teachers and pupils and their parents. This proved an efficient, straightforward means to share resources with pupils

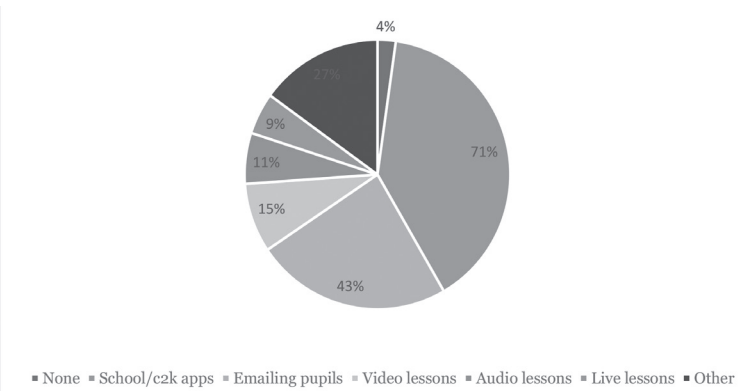
(presuming that they had adequate access to internet and devices). Online educational websites are plentiful, and teachers can obtain worksheets and lesson ideas based on any curricular area, and searches can be refined by class level and topic. During COVID-19 many online providers moved to make more resources available free of charge. The majority of teachers surveyed (86%) reported that they were satisfied in their ability to access online resources. However, some respondents remarked that the time taken to do so was considerable. Teachers also noted the dearth of material suitable for pupils with special education needs. Over half of teachers sourced videos to supplement learning materials and add an interactive element to engage children in the absence of face-to-face contact in the classroom setting. Other resources that teachers availed of, but to a lesser extent, included animations (16%), podcasts (15%) and online experiments (14%).

Figure 26: Sources of support materials for teachers during the period of school closure



For those who did not avail of online resources and methods of providing learning opportunities, they relied mostly on hard copies of materials which were sent to the homes of pupils.

Figure 27: Type of learning conducted by teachers working remotely

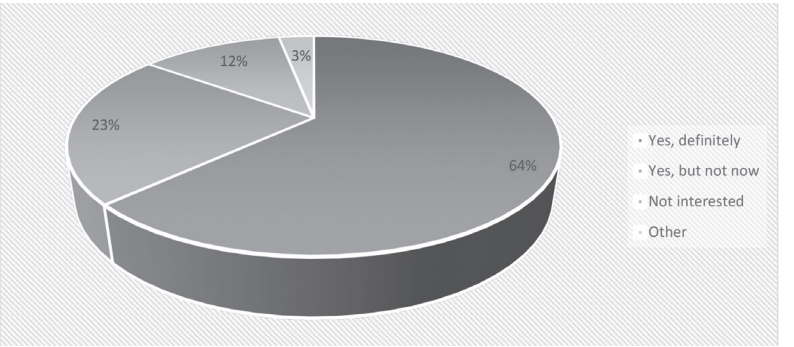


Teachers' experiences of remote learning

The unexpected switch to supporting children's learning remotely was a challenge to teachers and it is noteworthy that a mere 5% of respondents to the survey described themselves as "confident" in conducting remote learning. Over half (52%) of those surveyed emphasised the need for professional development and support in this area. Furthermore, 31% of teachers stated that they were "nervous, but willing to try". This willingness and commitment of teachers was evident in the manner they adapted to support their pupils, but the chasms of knowledge and expertise, and the diverse competencies of teachers led to anxiety and stress.

Asked if they would like to receive professional development and training on remote teaching and learning, three quarters of teachers were resounding in their response, stating that such support would "definitely" be welcomed. An additional one fifth of respondents answered "yes, but not right now." Events of recent months were demanding and pressurising for teachers and many referred to the difficulty of maintaining a healthy work-life balance. Given the increased emphasis on online working, a sense of digital fatigue may be impacting teachers and more long-term support may be beneficial rather than courses in online methodologies being rolled out in a hurried manner.

Figure 28: Teachers' willingness to engage in training in remote teaching/learning methods



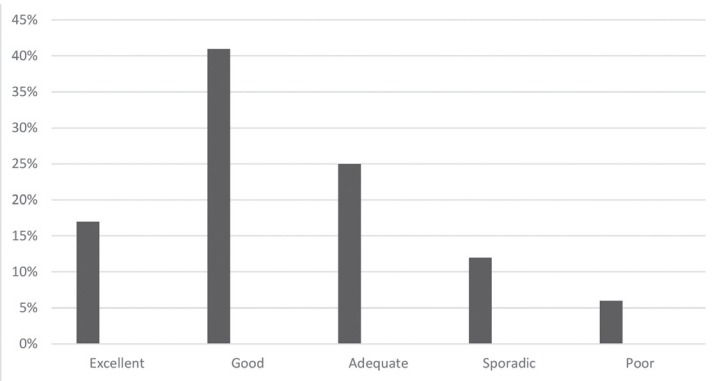
A significant majority of respondents indicated that they were aware where they could access some online resources. However, the time taken to do so was noted as being considerable, with one teacher stating that there is "so much available online, but it can become overwhelming." Teachers also highlighted the unsuitability of remote teaching and learning for children with special education needs, who "learn through practical work mostly."

Broadly speaking, the most used devices by respondents were laptops and iPads / tablets, with a high percentage of teachers using their personal smart phones also, almost 40%. Over 70% of devices used belonged to the teachers themselves, with only 54% of teachers having access to a school-owned device. There was disparity in the age of the primary device used with 65% of respondents stating that their devices were over four years old, and less than 10% of teachers indicating that the main device used was relatively recent. The variances of resources available to teachers as well as the standard and condition of equipment are manifest in these findings and highlight a need for investment in infrastructure to ensure equality of access to materials.

As mentioned previously, there was a greater tendency for teachers to avail of digital methods of delivering content and emailing was preferred over posting of resources. Whilst several factors influenced this decision such as time and financial cost, in many cases teachers did not have access to the requisite equipment to allow for preparation of materials. Three quarters of respondents revealed that they relied on a school-based printer and as their workplace was inaccessible during the school closure, the printing and copying of material was not always a viable option. Just under half of respondents have access to a printer at home while many citied that they got printing done by family members or their partners' work. The expense incurred was highlighted by respondents, including the cost of ink and paper, which they were paying for themselves.

Almost all respondents had access to broadband, but, again, the lack of consistency regarding internet reliability and efficiency was evident from the survey results. Almost one fifth of teachers defined their internet as "inadequate", with 43% stating that it was "less than good" and only 17% labelled their broadband as "excellent". Many respondents cited major issues with speed of uploading and downloading documents, videos etc. Others also outlined the struggles in a domestic setting where other family members were also working from home and children were using the internet for their own schoolwork. This dynamic resulted in the need to schedule specific period of the day for usage of a device and was a challenge when conducting virtual meetings.

Figure 29: Efficiency of respondents' Wi-Fi



Pupil engagement

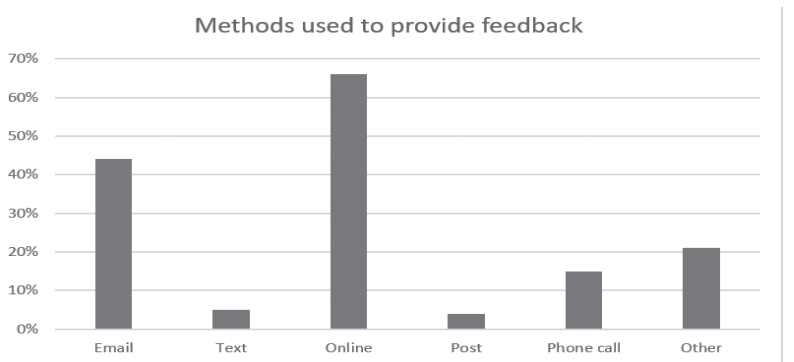
Whilst schools worked tirelessly to provide continuity of learning for pupils, and ensure sufficient opportunities for educational progression were provided, there was deep concern for children's emotional and social wellbeing. The impact of such a significant period of detachment from the school, teachers and peers was particularly challenging for pupils with additional needs for whom routine is an integral part of their daily life.

While all teachers assigned tasks for their pupils for the duration of the school term, the level of pupil engagement varied. Less than 4% of respondents stated that all their pupils had engaged in learning during the period of COVID-19 school closure, with only 0.5% of teachers indicating that none of their pupils had engaged. Over 50% of pupils engaged in over half of the respondents' classes.

Engagement of pupils was predominantly monitored online, with 80% of respondents tracking pupil involvement by email or via digital school platforms, whilst 19% contacted pupils via telephone and only 1% corresponded by post.

Over 90% of respondents provided feedback to their pupils, and again such communication was mainly online or by email. A minority of teachers connected with pupils/parents by phone call or text message, and 15% shared feedback by post.

Figure 30: Provision of feedback to pupils



Upskilling, professional development and training

Teachers' confidence and competence in information and communications technology differ greatly. In our ever-evolving digitised world, regular professional development and opportunities for upskilling are essential to develop teachers' technological self-efficacy and digital competences

and to ensure that they acquire the pedagogical skills required to enable them to integrate technology in meaningful ways into their classes.

As outlined in figure 31, a third of respondents to this survey cited having training in ICT in the last year, with just under half having had training in remote teaching and learning in the 2020 summer term (since the sudden school closure). A significant amount of this training was a brief "crash course" in the week before the schools closed in March from principals, ICT co-ordinators and colleagues. Some schools availed of Education Authority training in the week preceding the closure. Other teachers accessed training themselves since lockdown to bridge the gap and acquire skills that enabled them to engage with the basic level of digital technology that allowed for the provision of learning opportunities remotely. Some of this training took the form of webinars, virtual meetings with colleagues and YouTube videos. Many teachers stated that they sought advice from their younger, more technologically advanced colleagues. As evident in figure 32, almost 50% have had no time from school in recognition for doing this training themselves.

Figure 31: Most recent training in ICT completed by respondents

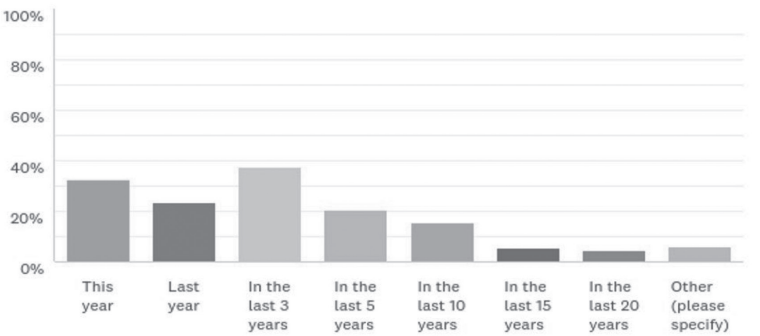
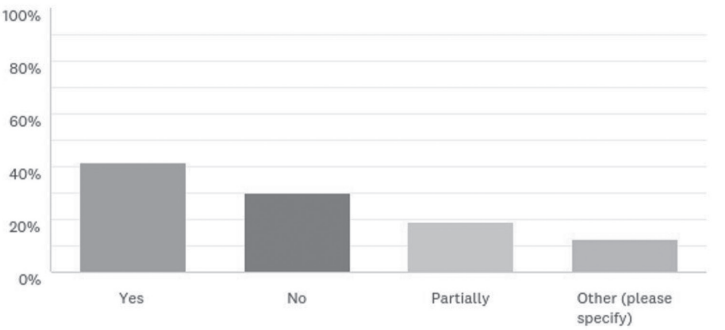


Figure 32: Allowance of time for ICT training from schools



Teachers' wellbeing and concerns about the future

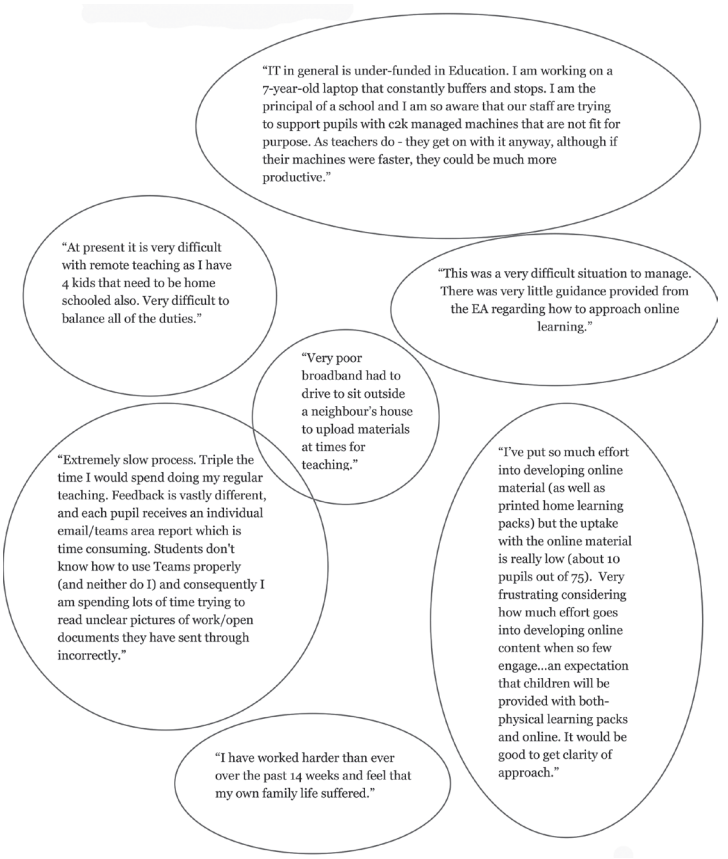
Many respondents expressed fears regarding the requirements and demands of blended learning from August/September onwards and had concerns in relation to childcare and home-schooling arrangements for their own children. The rumours of what would be expected in September led to concerns about live-streaming lessons being conducted with the pupils in class to the pupils at home and being expected to complete the full curriculum for all pupils. Concerns were also highlighted regarding the lack of any respite/holiday time for teachers and school leaders over the summer period (2020) after an intense and stressful couple of months with policies and plans to

be updated and rewritten within a short timeframe and in the absence of appropriate guidance. Teachers expressed anxiety and trepidation about how the new school year and day would look. At the time of the survey, schools were approaching the summer closure, and tentative plans for the return to school were being prepared. Some teachers were apprehensive about the lack of physical space within their classroom and feared that social distancing would not be feasible. Others sought clarification and reassurance that there would be adequate, timely tracing and protection for vulnerable members of the school community.

The survey identified some critical short-term actions to be taken to create a safe, secure school environment on re-opening. The most common areas which respondents prioritised are encapsulated in the image below.

Figure 33: Areas of concern for teachers

Figure 34: Sample comments from respondents



Concluding comment

The COVID-19 pandemic has highlighted how rapidly the educational environment is changing in a global context. As evidenced by response to this survey, technology was employed by teachers to allow for continuity of education and collaboration with pupils from a distance under the most challenging conditions. The immediate focus was to secure (if not already available) a device and broadband to ensure they could continue to work with pupils and reach the end of the school year. However, once the first-order barrier of access to technology was address, secondary issues became apparent. Teachers began to consider the pedagogies related to online learning. There was concern among teachers, as revealed through this research, that they do not have the skills required to use technology in an appropriate manner. Recreating practical skills in an online environment was difficult, but teachers were praised for their ingenuity and resourcefulness in responding to this challenge.

However, in considering the future of technology in education, there are stark findings within this research which serve to underline the lack of suitable and adequate support for educators to realise the goals of digital education. Technology offers much promise, but to make informed decisions about how best to use technology pedagogically, teachers must be well informed and have received adequate training and professional development.

Conclusion

Schools are at the heart of our communities, playing a fundamental role in our broader society, supporting children to thrive and flourish in a holistic way. Our experience of school, as learners, shapes our understanding of ourselves as individuals, our rights and responsibilities as part of a local and national community and more broadly in a globalised and increasing digitalised world.

The closure of schools due to the COVID-19 pandemic demonstrated the challenges of achieving pupil engagement in school work at a distance and highlighted a gulf regarding access to education. On a physical level, learners were separated from their teachers and their familiar school environment and the screen of digital devices became, for many, a wall between the learner and their wider learning community. This not only hampered the quality of learning and the teachers' instruction, but on a much deeper level, children were detached from the emotional and social aspect of learning and the impact of this on their personal development was a concern for teachers, principals, and parents.

As we look forward to the future of our society, and the increasing influence of technology in our everyday lives, digital learning will be a vital element in a redeveloped primary curriculum. However, as highlighted in the INTO survey on teachers' and principals' experiences of school closures, there are several foundational issues that must be in place to enable our education system to serve the digital learning needs of our pupils. Respondents to the survey agreed that the State should have a role in providing high-quality broadband to all schools within the country, that there must be a commitment to ensuring all teachers have access to a device for use in their teaching and to enable the continuity of education where remote working must take place, and that opportunities should be afforded to all teachers to engage in professional development and upskilling in digital competence. Recent months demonstrated some benefits of distance learning, but only where teachers and pupils have access to the resources needed. With the possibility that schools may be forced to temporarily close their doors in the future as the country continues to battle COVID-19, careful planning is imperative to prepare for possible future school closures.

The overall aim of digital technology in education should be to ensure that ICT becomes an integral part of the teaching and learning process in every classroom of every school, embedded across every area of the curriculum. Achieving this aim, would enable teachers and students to engage in distance learning methodologies if and when they are deemed necessary. As outlined in Education International report entitled 'A Review of Technology in Teaching and Learning' (2020), this is the approach adopted in various other European countries. In the Nordic countries, for example, technology has been woven into the tapestry of curriculum by its inclusion in all subject areas as a means of enhancing the teaching of that subject and opening up new methods of teaching. Technology, therefore, is not viewed as an additional subject but considered and identified by the Ministry for Education in Norway to be "a basic skill to be a teacher." (Egan, 2020, p.14) Likewise, Finland's education system took steps to give greater prominence to technology following a review of their National Core Curriculum. The Finnish curriculum now places an emphasis on technology competencies and skills and technology is considered "as integral to the process of teaching and learning." (Egan, A., 2020, p. 15)

In Sweden, it has been noted by Gu (2011) that technology has been included in education for almost three decades and teachers are afforded autonomy to integrate technology into subjects, dependent on class sizes and teachers own competence in the use of technology. Both issues – class size and teacher competence – are critical factors to consider when working towards the integration of technology in an Irish primary school context. It is clear from the three examples referenced above that teachers' skills are a key reason why integration in education has been

somewhat successful in these countries. In Ireland, the vacuum regarding implementation and support for teachers in the development of technology skills, coupled with the largest primary school classes in Europe must be addressed to enable technology to be assimilated into the curriculum. Within the *Digital Strategy for Schools* (DES, 2015) was a recognition of the essential skills with which educators must be equipped, based on consultation with Irish primary teachers. Subsequent action plans for education (DES 2016, 2017) state the requirement for technological pedagogies to allow educators incorporate technology effectively in their classrooms. Whilst these views echo the central messages of technology frameworks on a European level, and this marks progress in the area of technology in education, the Department of Education must concentrate on providing adequate, ongoing support for educators. One of the four key recommendations of the *Review of Technology in Teaching and Learning* was that "technology should not be introduced to an educational environment if the pedagogical reasons for it are not clear." (p. 1)

During the COVID-19 emergency closure we witnessed the value of distance learning approaches as an interim measure when the physical environment was not an option, but it has enormous potential to enhance traditional methods of teaching and learning on an ongoing basis, if supported sufficiently at system level. Recent months propelled schools into survival mode, using any resources to hand to minimise detrimental impacts of a sustained absence of routine schooling. Continuity of learning during this time cannot be characterised as online learning or teaching, but rather a reactive form of emergency remote education. While most schools will have had some degree of experience with digital learning tools prior to COVID-19, the experiences of learners and parents varied considerably.

Teachers are on a steep learning curve, being forced to think in different ways, to solve problems together, to collaborate and to communicate in different ways, to educate and be educated in a different way. This is an opportunity for children to develop independent working and thinking skills, it is an opportunity for them to spend time with their families and to develop new interests. Findings from the Maynooth University *COVID-19 Practice in Primary Schools in Ireland Report 2020*, reinforce the importance of the role that schools play and emphasise that any amount of technology cannot replace, the social aspect of schooling, the relational aspect of learning of feedback and of being part of a community.

Given the experience of the imposed closure, there will be an expectation on schools to demonstrate preparedness for continuity of learning that may not have been feasible during the months of March to June. Important lessons can be gleaned from the COVID-19 crisis. Expectations placed on school communities in the public lockdown affected the nature, extent, and quality of preparation for distance learning.

Post-COVID-19, schools will see a greater emphasis on digital integration as central to school planning. The impact of COVID-19 has redefined how various areas of society operate and served to emphasise the need to prepare our school-going population for a digital world. In this context, the provision of more online education and creative use of ICT merits extensive consideration. Digital education must be a major component of Initial Teacher Education followed by a clear focus on continued professional development for all teachers in the field of ICT. Tondeur et al. (2012) expressed their view that teacher training institutions should be acting as agents of change, and in the *New Media Horizon Report for Schools*, Johnson et al. (2014) suggested that "integrating ICT into teacher education and low digital competence" were solvable challenges (p. 24). That digital learning should permeate teacher education at all levels was stressed yet details on how this could be achieved were vague. Subsequently, the *Digital Strategy for Schools* acknowledged the potential of teacher training institutions to help effect change, with one primary objective within this document being to "ensure that ICT is embedded in the planning, design and delivery of all teacher education courses" (Butler et al., 2015).

What online teaching and learning means in the context of primary education also needs more debate and discussion. To empower teachers to embrace digital technology skills and cultivate a learning environment where children can flourish as 'digital natives', robust strategies must be

put in place to remove inequity within our society and to ensure every educator and member of the school-going population has access to learning and teaching materials. Schools also require dependable support in the maintenance of technology, one shortcoming that was highlighted in the Digital Strategy for Schools document (DES 2015) where "the challenge of attaining reliable and timely technical support" (p. 43).

Primary schools carried out incredible work to put systems, processes, and communications in place in a matter of days in schools of all types and sizes across the country and their efforts espoused innovation, creativity, and collegiality. Our educators are committed to providing our children with the best education opportunities under what can sometimes prove to be extremely challenging circumstances. Sustained investment and a commitment to a developmental approach to policy is vital to allow ambitions of integrating ICT into teaching, learning and assessment be realised. Whilst principals and teachers are positively disposed towards integration of modern technologies and are aware of the benefits that accrue in terms of teaching and learning, they demand that the basic supports be put in place to create an environment where children can engage purposefully with ICT to develop digital skills, knowledge, dispositions, concepts, attitudes and values, allowing them to become confident and critical users of digital technology. If the pupils in our classrooms today are to thrive in a digitally connected and interdependent world, teachers must be adaptable, ready to embrace change and developments in technology to support children to become competent digital learners, emulating John Dewey who maintained that "if we teach today as we taught yesterday, then we rob our children of tomorrow".

To support the development of digital technology in primary schools, the INTO recommends that:

- The Department of Education increase investment in ICT at primary level to ensure that all schools are equipped with the necessary infrastructure to allow pupils access to all the required devices;
- The Government provide high-speed broadband to all primary schools, with a reliable network that extends to all areas of the school;
- The National Council for Curriculum and Assessment (NCCA) develop digital content in both Irish and English to support the redeveloped primary curriculum that meets the diverse needs of pupils in Irish primary schools;
- The Professional Develop Support Service for Teachers (PDST) be adequately resourced to provide a range of professional development opportunities for teachers in ICT, including sustained support, enabling them to engage with digital technology and to provide digital learning opportunities for their pupils;
- The National Council for Special Education (NCSE) provide ICT resources and assistive technologies to facilitate the inclusion of children with special educational needs and to support their education;
- The Department of Education consider an integrated approach to procurement and technical support for all schools;
- The Department of Education re-establish middle management posts in primary schools to facilitate a coordinated approach to the integrated development of technology usage across the curriculum in all classrooms.

Teachers across the country have demonstrated their professional agility and adaptability in recent months, and this preparedness to adopt new methodologies is key in the coming years as ICT evolves and continues to impact on schools, teachers, and pupils. Although we cannot identify the rate of change in a world immersed in technology, a revised curriculum must recognise the importance of digital learning. As illustrated within this document, ICT has an immense potential to enhance and enrich teaching and learning, but a coherent, cross-agency vision is required to ensure that the requisite conditions are in place. To reiterate the request of teachers and school leaders, adequate and reliable hardware, software, digital content, ICT infrastructure, continuous

professional development, and maintenance and technical support are key factors to promote the type of digital learning that a primary curriculum seeks to provide. In the words of George Couros, "Technology will not replace great teachers, but technology in the hands of great teachers can be transformational."

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