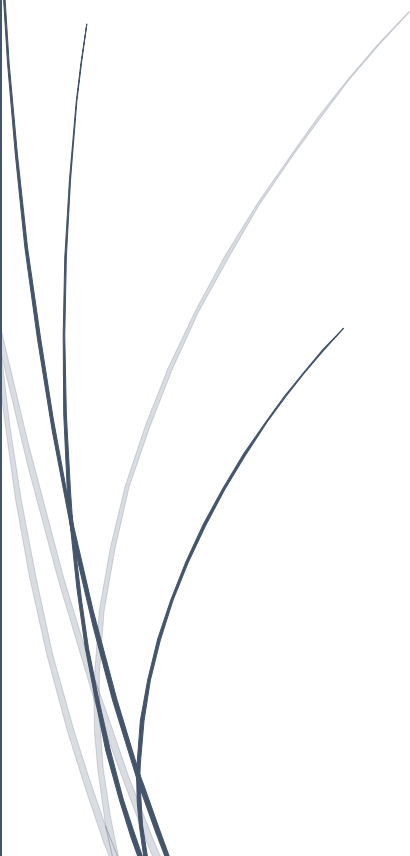# CPSMA

Submission – Development of the new Digital Strategy for Schools

Please outline your observations and comments on how the existing Digital Strategy for Schools 2015-2020 has supported the integration of digital technologies into teaching, learning and assessment practices in schools.

Catholic Primary School Management Association (CPSMA), is the representative management body for Catholic primary schools in Ireland and this submission seeks to represent the perspective of those tasked with the governance of Catholic primary schools. As a management body which provides training and advice on a wide range of areas to over 2,800 schools, we are in a unique position of being able to understand and react to the needs of a large number of primary schools.

The relentless pace of change in modern society has oriented towards a knowledge based society, where citizens require lifelong learning competencies (Law, Pelgrum, and Plomp 2008), made up of knowledge, skills and dispositions considered necessary to fully contribute to the world in which we live.

Implicit in these competencies is the use of ICT, not only due to its ubiquitous use but also in the effective use, management, evaluation and production of information via this medium (Joke Voogt and Pareria Roblin 2010), requiring skills such as problem solving, critical thinking, communication and collaboration. Consequently, ICT is regarded as important in our education system to support pupils in the acquisition of these skills and competencies (Anderson 2008) and also as a resource to assess the learning process of doing so.

The degree to which the use of digital technologies in schools has produced improved pupil academic achievement is still a matter of debate, but as the OECD (2016) has acknowledged, appropriate technology, as part of well-planned teaching and learning and led by well-informed teachers, can make a positive difference.

The *Digital Strategy for Schools 2015-2020* (DES 2015) was created with such an aim in mind by providing a framework for the integration if ICT into teaching, learning and assessment in schools over its five year period. Below, we outline our observations on its integration in teaching, learning and assessment.

Teaching and Learning

The embedding of ICT in teaching and learning has the capacity to enhance the traditional teaching and learning methodologies and was historically most commonly used by teachers in Irish classrooms to research and present information in class and access resources for lesson preparation (Butler et al. 2015). However, patterns of usage have changed significantly since then. Funding associated with the Digital Strategy, supplemented by school fundraising has enabled schools to increase the supply of hardware (desktop computers, laptops,

iPads or tablets or a combination of the above), software (applications and websites) and improve internet connectivity for teacher and pupil use in schools. The result has allowed teachers to augment and supplement traditional teaching and learning practices through the use of digital presentations, videos, virtual connectivity with other schools and organisations and the use of applications as aids to supplement core teaching.

There has also been an increase in opportunities for pupils to consolidate learning through these aids and to acquire aforementioned skills such as collaboration, critical thinking and innovation through group and project work using digital resources, hardware and software. Many pupils now have school email addresses, school platform connectivity or USB sticks to provide a seamless transition from school to home to assist with homework and project work. The increased embedding of digital skills in teaching and learning has also afforded the opportunity to personalise the pupil learning process.

ICT has the potential to have a transformative impact for pupils with special educational needs, by improving accessibility, facilitating inclusion and enabling pupils to overcome barriers to learning (Florian 2003). Schools have used ICT funding for this purpose, as well as availing of the DE assistive technology scheme for individual pupils to enhance and support their educational experience, narrowing gaps in attainment with their peers. Resources include specialist equipment, communication aids, software and web accessibility.

Formative Assessment

Assessment for learning or formative assessment is feedback to pupils in the assessment of their learning. It is considered more effective when it is specific and related to pupil needs (Hattie and Timperley 2007). Technology has now provided the opportunity to provide immediate and personalised feedback to pupils on their learning and performance improvement (Liu et al. 2016) and the use of such student response system tools for this purpose by schools has become more prevalent. Many of the applications use a motivational or reward based strategies to engage pupils and inform them of their progress in goal attainment and they provide teachers with relevant and easily accessible data on such progress. Schools use these resources in the development of cross curricular competencies. The data also provides valuable information for teachers on the impact of their teaching methodologies.

Summative Assessment

Summative assessment is used to assess pupil achievement at the end of a programme of work (NACCCE 1999). The use of digital e-portfolios to assess collections of work including videos, audios and text for this purpose increased

hugely during the periods of remote learning brought about by school closures due to Covid-19. The use of e-portfolios also allowed for content to be retained as pupils progressed through the school year as well as affording parents an opportunity to recognise and understand their child's learning. The e-portfolio platforms also allowed for collaboration and communication between teachers, pupils and their parents, enhancing the teaching and learning process. Evidence suggests that their use has continued since school buildings reopened.

One additional advantage of the increased stock of ICT hardware and increased internet connectivity in schools has recently been the option of the digital completion of standardised testing, which is now available in Ireland. The benefit of the system includes the automatic collation of results and breakdown of statistics in performance in areas for individual pupils, classes and at whole school level and is expected to see an increase in usage in the coming years.

Teacher Professional Learning

Teacher professional development and appropriate support frameworks are vital for them to make use of ICT to support pupil learning and also to develop their ability to vary their teaching methodologies (Joke Voogt and Pareria Roblin 2010). One point referenced in the Digital Schools Strategy was an acknowledgement that teachers required support to develop their practice, knowledge and skills (DES 2015) in order to assist them in integrating ICT as part of their teaching and learning methodologies.

Initiatives, such as the Digital School of Distinction Award (DSoD), promoting digital excellence, innovation and creativity and the work of Professional Development Service for Teachers Technology in Education (PDST TiE) have supported schools and individual teachers to improve and support the embedding of ICT practice in teaching and learning throughout the five year period of the Strategy.

In addition to this, the role of the Education Support Centres Ireland (ESCI) in providing flexible differentiated ICT Continuous Professional Development (CPD) models for teachers when school buildings closed from March 2020 onwards became invaluable to support the transition to remote teaching and learning. The Covid-19 pandemic has certainly accelerated the development of digital literacy skills of teachers and pupils.

Leading Teaching and Learning

Another consequence of the move to remote teaching and learning during Covid-19 was the requirement for schools to establish a digital platform/ communication management system to support distance learning and enhance communication

between all in the school community during this time. For many this was a seamless process as such platforms were already in place but for others it was a steep learning curve.

In any event, such platforms have enabled teachers to collaborate and plan teaching together, as well as host a repository of resources and planning notes, maximising teaching and learning time and assisting with the transition for teachers to new class levels. CPSMA does, however, have concerns about the provision of such platforms or administrative systems by private providers alone which could be resolved with the introduction of a similar DE system.

The infrastructure has also enabled supplementary communication methods for boards of management through remote meetings and recruitment processes and school leadership and management systems of communication with staff and parents, reducing workload and time on such matters and are likely to continue post pandemic.

From your understanding of the current Digital Strategy for Schools 2015-2020 what challenges have school faced in the integration of digital technologies into teaching, learning and assessment practices.

Technical Support and Maintenance

Managing and maintaining digital infrastructure in a school setting requires technical expertise and is a time consuming endeavour. Despite recommendations in numerous reports, including *Investing Effectively in Information and Communications Technology in Schools 2008-2013* (DES 2008) and *Smart Schools=Smart Economy* (DES 2009), no such meaningful supports for schools were introduced in tandem with funding for ICT equipment and infrastructure. The Digital Strategy aspired to evaluate technical support options to identify solutions for schools but this aspiration has not been realised in any meaningful way. As a result, it has been left to each individual school to privately fundraise to pay for such support, depend on a staff member or parent with competency in this area to do so, to leave it up to each individual teacher to maintain ICT in their own classroom or a combination of some or all of the above. Not only do each of these options eat into valuable teaching and learning time generally but also inhibit the integration of ICT into teaching and learning when, for example, devices are not charged, require repair, have out of date operating software or inadequate anti-virus software installed. The individual ad hoc fire-fighting systems in schools result in recurring technical and infrastructural problems and are a constant source of frustration, as reported to us by member schools.

Internet Connectivity

School broadband speed data published in 2019, near the end of the term of the Digital School Strategy 2015-2020 were stark with 57% of primary schools with an expected download speed of less than 30Mbps, the minimum acceptable level for households (McCárthaigh 2019). There was also a huge regional variation in the figures with 87% of Dublin schools above this minimum threshold. This data came as no surprise to CPSMA as we had undertaken a survey of member schools in the same year with similar results. Of the 427 respondent schools, almost 50% considered their internet provision to be inadequate for their educational needs and 75% stated that teaching and learning in their school had been affected as a result of their broadband provision. The reasons given included an inability to engage in teaching and learning with multiple devices simultaneously, difficulty in accessing and using online applications and resources and challenges when engaging with ICT based project work. The poor provision also had ramifications for leadership, management and administration in schools, given that administration and communication systems in schools are predominantly cloud based. 15% of boards of management had taken matters into their own hands and accessed and paid privately for broadband provision. The prioritisation of 100 Mbps broadband for secondary schools has led to a two tier system of provision with many primary schools left behind. The Digital School Strategy outlined an intervention to conclusively address broadband provision with a target of 1500 primary schools. We can find no evidence that this has been concluded with any reasonable degree of success.

Widening of Inequity Gap of ICT Provision

The principle of subsidiarity proposes that decisions should be taken at the most immediate or local level possible and as close to those affected as possible (Lopatka 2019). This principle has, up until now, underpinned the roll out and embedding of ICT in schools since 2008. However, the decentralisation of equipment procurement, maintenance and expertise to each individual school board of management has meant that each school has had to create, implement and embed their own ICT vision for their school. This process has been inequitable as schools have had access to varying levels of broadband provision, in house technical expertise, physical space for ICT storage and group lessons, support from private industry, number of staff in schools, administrative leadership time to formulate school policy and additional funding to supplement grants from the Department of Education (DE). The gap that has emerged has been exacerbated by the addition of the Digital School Excellence fund. Schools that were already at a disadvantage as a result of the above factors were obviously not in as favourable a position to apply for and participate in such a scheme. The

result has meant that the gap continues to widen between those who have and those who have not. A positive bias in favour of supporting schools with less is required to rebalance the system.

Finance

The investment of 210 million euro to fund the Digital Strategy was a very much welcomed because in the preceding six years, there were no substantial funds allocated for use by schools (Eivers 2019) for ICT provision. This has meant that schools have been playing catch up with regard to the initial purchase and installation of digital infrastructure and also the implementation and embedding of pedagogical approaches using technology to support teaching and learning and assessment. In relation to the investment itself, the total amount available to the primary and special school system to invest in ICT is diluted significantly as a result of a higher amount being paid per secondary pupil. The requirement for school communities to sell buns to each other to fund ICT as well as many other areas of school life has not gone away.

3. Your comments and observations on the key areas and priorities that should be addressed in the development of the new Digital Strategy for Schools.

The Draft Primary Curriculum Framework (NCCA 2020) proposes pupils as digital learners as one of seven key competencies supporting the new curricular vision. As part of this competency, pupils will be encouraged to use a wide range of digital media to critically engage with information and to collaborate with others and be creative with its use. To achieve this aim, CPSMA believes that the following areas require prioritisation with regard to the new Digital Strategy for Schools:-

Internet Connectivity

As previously outlined in this submission, the provision of internet to many primary and special schools in Ireland is patchy, intermittent or almost non-existent, causing a digital divide between schools. All primary and special schools require high speed fibre broadband as a prerequisite for the achievement of any other Strategy aims. Schools with inadequate or intermittent broadband provision should be identified and targeted as a matter of urgency to accelerate the provision of high speed broadband to support teaching and learning and effective school administration.

Technical Support and Maintenance

Schools also require centralised technical support and maintenance to assist with local networking and infrastructure issues within school buildings caused by

routers and other digital infrastructure problems, multiple devices connecting simultaneously, buffering and slow upload and download speeds and. The resolution of these issues on a constant basis is a never ending drain on time and energy which would be better focussed on teaching and learning. The vast majority of school staff are not qualified IT technicians. The Strategy should consider lessons that could be learned from the Education Network structure in Northern Ireland which provides a centralised service for schools managing internet connectivity, security support, other technical issues and device maintenance.

Procurement

A large amount of DE money and private funding by schools is now being invested in IT. However, each of the 3,200 primary and special school is doing so as a single entity, either by following procurement regulations to purchase from independent companies or by using what is considered an unwieldy and time consuming procurement framework . We recommend that the DE reviews current procurement arrangements and creates an easy to use procurement framework for schools to use, which would ultimately be of benefit to schools and public finances.

Policy Provision

The embedding of technology in schools results in increased responsibilities on school boards of management with regard to privacy, digital security and safety. The Strategy should include a suite of template policies and resources for schools to assist in the safeguarding of data storage and processing and in responding to data breaches, all of which would be compliant with current Data Protection legislation.

Enhanced Continuous Professional Development

The proposed increased incorporation of ICT into teaching, learning and assessment as outlined in the draft new curriculum will be predicated on the mastery of teachers in this area. Teachers have already demonstrated an admirable capacity to upskill in this area as a result of recent school building closures and have been well supported by PDST TiE and ECSI in this regard. However, providing system wide, co-ordinated and sustained support to encourage teachers to use ICT in their teaching should therefore be a priority as part of both professional development and initial teacher training.

Collaborative Clusters

In tandem with the provision of improved connectivity, technical support, maintenance and hardware and software, consideration should be given to incentivising schools requiring support to enhance their digital learning plan by

creating collaborative clusters with schools where ICT is firmly embedded in teaching, learning and assessment. This would give an opportunity for such schools to see and learn from best practice first hand and support change in their own schools.

Digital Safety

While digital media presents many opportunities for our pupils, it also presents significant challenges. While the current Webwise resources on this area for schools are welcome, further consideration should be given to a whole school approach to digital safety, including support for pupils to navigate the complex world of social media communication.

Cloud Based Resource Repository

Scoilnet has, for years been an invaluable resource for schools. However, we recommend that Scoilnet be redesigned as a one stop shop cloud based repository with resources and digital teaching and learning software, which would be free to schools to borrow. This should also include access to up to date research on the inclusion of technology in teaching and learning internationally to assist schools to make fully informed decisions in relation to its integration.

Communication

The Department of Education should give consideration to the communication strategy utilised to publicise and implement the new Digital Strategy for Schools. Current guidance, circulars, information notes and initiative launches are published using an array of mechanisms and to schools in a variety of ways. Current commentary on an integrated communication system from the DE would be of benefit not only to maximise the implementation of the Digital Strategy for Schools but for all communication from the DE.

4. Please provide below any other comments and observations you wish to make on the development of a new Digital Strategy for Schools.

The Catholic Primary School Management Association (CPSMA) would like to thank the committee for the opportunity to provide this submission and we are available for further discussion which may arise from this submission or to clarify any points made.

Bibliography

Anderson, Ronald. 2008. "Implications of Information and Knowledge Society for Education." In *International Handbook of Information Technology in Primary and Secondary Education*, edited by J Voogt and G Knezek, 5–22. New York: Springer.

Butler, Deirdre, Margaret Leahy, Gerry Shiel, and Jude Cosgrove. 2015. "Towards the Development of a New Digital Strategy for Schools in Ireland." Las Vegas, NV. https://www.learntechlib.org/p/150177/.

DES. 2008. "Investing Effectively in Information and Communications Technology in Schools, 2008-2013." https://www.education.ie/en/Publications/Policy-Reports/Investing-Effectively-in-Information-and-Communication-Technology-in-Schools-2008-2013.pdf.

DES. 2009. "SMART SCHOOLS=SMART ECONOMY Report of the ICT in Schools Joint Advisory Group to the Minister for Education and Science." https://www.education.ie/en/publications/policy-reports/smart-schools=smart-economy.pdf.

DES. 2015. "Digital Strategy for Schools 2015-2020." https://www.education.ie/en/Publications/Policy-Reports/Digital-Strategy-for-Schools-2015-2020.pdf.

Eivers, Eemer. 2019. "Left to Their Own Devices Trends in ICT at Primary School Level." Cork. https://www.ippn.ie/index.php/advocacy/publications/6044-left-to-their-own-devices-trends-in-ict-at-primary-school-level.

Florian, Lani. 2003. "Editorial." *Journal of Research in Special Educational Needs* 3 (3): 139–40. https://doi.org/10.1111/1471-3802.00007.

Hattie, John, and Helen Timperley. 2007. "The Power of Feedback." *Review of Educational Research* 77 (1): 81–112. https://doi.org/10.3102/003465430298487.

Law, Nancy, W.J. Pelgrum, and T Plomp. 2008. *Pedagogy and ICT Use in Schools around the World: Findings from the IEA SITES 2006 Study*. CERC studi. New York & Hong Kong: Springer. https://doi.org/10.1007/978-1-4020-8928-2.

Liu, Ou Lydia, Joseph A Rios, Michael Heilman, Libby Gerard, and Marcia C Linn. 2016. "Validation of Automated Scoring of Science Assessments." *Journal of Research in Science Teaching* 53 (2): 215–33. https://doi.org/10.1002/tea.21299.

Lopatka, Reinhold. 2019. "Subsidiarity: Bridging the Gap between the Ideal and Reality." *European View* 18 (1): 26–36. https://doi.org/10.1177/1781685819838449.

McCárthaigh, Sean. 2019. "Broadband Speeds Too Low in Most Primary Schools." *Irish Times*, 2019. https://www.irishtimes.com/news/education/broadband-speeds-too-low-in-most-primary-schools-1.4065186.

NACCCE. 1999. "All Our Futures:Creativity, Culture and Education." http://sirkenrobinson.com/pdf/allourfutures.pdf.

NCCA. 2020. "Draft Primary Curriculum Framework." Dublin.

https://ncca.ie/media/4456/ncca-primary-curriculum-framework-2020.pdf.

OECD. 2016. "Innovating Education and Educating for Innovation: The Power of Digital Technologies and Skills." Paris. https://doi.org/10.1787/9789264265097-en.

Voogt, Joke, and Natalia Pareria Roblin. 2010. "21st Century Skills. Discussion Paper." Twente. http://www.billielee.co.nz/wp-content/uploads/2015/04/White-Paper-21st-CS-Reading-week-2.pdf.