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CATHOLIC EDUCATION
WESTERN AUSTRALIA

Inquiry into digital innovation in secondary education: EDUCATION AND HEALTH STANDING COMMITTEE

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INQUIRY INTO DIGITAL INNOVATION IN SECONDARY EDUCATION

1.0 INTRODUCTION

Catholic Education Western Australia (CEWA) consists of 162 schools spread over the state and comprising over 78,000 students. Of these 162 schools, about 47 cater for secondary students from Year 7 and above. 35 of these secondary schools are located in the metropolitan area with 12 in regional or remote locations. Remote locations include six schools in the Kimberley, whereby CEWA are the sole provider of education.

CEWA assists schools in many ways across the broad educational spectrum. The Catholic Education Commission of Western Australia (CECWA) has developed a range of policies as part of Catholic school governance and two of these policies relate to the use of information communication technology (ICT) in schools – by staff and by students. These policies relate primarily to safe and appropriate use of technology.

As a coherent system, CEWA is well placed to direct funds to system wide initiatives in the area of digital innovation. This is outlined in Section 2.0 following where the system-wide LEADing Lights digital transformation is outlined.

CEWA notes that the stated focus of the Standing Committee is on secondary education. Notwithstanding some of the special characteristics of Years 7 – 12 (and especially senior secondary), many of the possibilities and challenges outlined in this submission also apply to primary schools.

This submission will address the five Terms of Reference separately, recognising that there will inevitably be significant overlap between them.

2.0 CEWA SYSTEM -WIDE DIGITAL PLATFORM – STRATEGIC INTENT

2.1 Digital challenges and responses

A major challenge for CEWA has been the ability to share, communicate and collaborate efficiently across the system. Since each school used bespoke systems for communication and collaboration functions, it was increasingly difficult for staff, teachers and students to share information outside of the school environment. Moreover, since schools across the system had varying degrees of expertise with technology infrastructure, many schools had not updated systems in years, causing undue risk for privacy and security. Further, since schools have varying degrees of financial and other resources, not all schools had the same access to tools that could be used to amplify and/or accelerate school and classroom related processes.

As part of the Catholic Education Commission of Western Australias (CE CWA) new Strategic Directions, and to address some of the issues outlined above, the LEADing Lights initiative

was developed to bring together the CEWA community using a unified, holistic platform that enables best-in-class collaboration, communication and efficiency.

LEADing Lights is consistent with the commitment to being a learning organisation that equips children and young adults with the knowledge and skills to prepare them for an increasingly interconnected and complex world. The strategic intent aims to create a flourishing Catholic education system that supports students to discover their true potential as envisaged by Jesus Christ.

The digital transformation aims to deliver world-class learning experiences for students, staff and parents at a time of rapid social and technological change. It aims to amplify the excellent education in our schools communities through the creation of a single digital platform for all CEWA schools, early years centres and central and regional offices.

This initiative will streamline learning and information and will ensure CEWA achieves the vision of providing an education system which is inclusive of all and can positively support student learning.

2.2 Anticipated advantages of the CEWA digital platform

The anticipated advantages for schools and the system are;

- A fully integrated 'end to end' digital platform that can significantly enhance the management and processes in schools. This will enable them to gain access to personal insights that support responsible, informed decisions for the benefit of Catholic school across the state.

- Everyone across CEWA will have access to an integrated suite of tools, cloud services, storage, communications, collaboration, student management systems and a professional learning and development environment. These will help ensure every student achieves their full potential, every teacher delivers inspiring learning and every school becomes a flourishing, successful school.

- Enhanced management, security, analytical and reporting abilities that will become invaluable for principals and leaders.

- Connection of students, teachers, principals, resources, support networks and parents to foster a more powerful learning community and equip students with skills for today and tomorrow.

- Greater efficiencies by connecting the school community to the latest communication; increasing collaboration and productivity; creating tools for learning; enhanced resource management systems; provision of personal.

LEADing lights provides the important context for the following information addressing the five Terms of Reference. CEWA argues that the most effective use of digital technology is when it occurs in a systematic and planned way, enabling efficiencies, synergies, collaboration and sustainable and equitable practice.

3.0 TERM OF REFERENCE ONE - HOW DIGITAL INNOVATION CAN ASSIST SECONDARY STUDENTS TO LEARN ANYTHING, ANYWHERE, ANYTIME

3.1 Connectivism and learning contexts

Fundamental to effective, contemporary education, is the concept of connectivism. Connectivism is based on the observation that authentic learning lives in networks. Learning expands from being able to recall facts and figures to the ability to access networks of information and being able to make connections between varying fields, ideas and concepts. Technology provides students access to the world's experts in any content area. Provided the infrastructure is in place (e.g., devices, high-speed internet, learning platform), students can access learning experiences unlike that of any other previous generation. For example, CEWA students are participating in classes with other students from different countries including, Finland, China and Spain synchronously and asynchronously. Students are able to connect to experts, educators, classes and content from anyone of our schools in the system not just the building where they attend daily.

Digital Learning tools, such as Microsoft Teams, OneNote and Claned, provide students and teachers the capability to converse in real-time via text, video, and audio; create and share notes together; and progress through personalised learning paths crafted and based on their current progress and interests. While there are many websites and apps that students can access, the three tools mentioned allow educators to provide a structure to guide students through learning experiences. These learning experiences are delivered via the platform in a manner that some secondary students can complete whole courses with minimal interactions from the teacher. Students work collaboratively with other students across the state to learn new content and complete assignments.

Microsoft Teams provides students a voice and increases their social presence. Microsoft Teams is a platform built around real-time collaboration, sharing, and communication. Students tend to feel isolated or alone in some "learn anytime, anywhere" type initiatives. A lack of understanding how to create good learning experiences in online, distance, or eLearning programs coupled with the growing feeling of isolation, can lead to attrition in learning activities. Connectivism becomes important in this context.

Online canvas tools for collaboration and document creation, like OneNote, and learning content repositories, such as Claned, provide students with a place not only to store and share class notes, but it also allows educators to sequence content and activities whether in the classroom or while travelling the state, country or the globe. In CEWA schools, because teachers and students have access to these tools, students can continue to learn outside the physical walls of the learning institution. Now students travel the globe for academic experiences, competitions, family needs, or other reasons, without losing access to the curriculum. As digital innovations continue to progress, the definition of teaching and learning in schools will need to grow to include non-traditional synchronous and asynchronous learning experiences.

3.2 Challenges in learning 'anything, anywhere, anytime'

There are however a number of issues which continue to challenge the concept of 'learning anything, anywhere, anytime'. The lack of consistent high-speed internet across the state is a barrier to the goal of providing students with the means necessary to learn anything, anywhere,

anytime. As long there is inequitable access to high speed internet and high-quality content, there will be inequality in the opportunities digital innovation can provide for all secondary students.

Further, providing new tools in the hope of promoting digital innovation without proper professional learning around new interventions will leave schools, educators, and students frustrated, limiting its potential effectiveness. Providing an instrument or several instruments deemed to be “digital innovation” without providing proper understanding and training will not yield fruitful results. Simply equipping students with a great digital learning platform, without providing some basic understanding of why and how to use the platform will hinder adoption and will not improve student learning.

Educators will need to learn how to use the various categories of learning tools and platforms and will also require proper understanding in how to design and develop strong learning experiences for analogue, digital and hybrid experiences. Creating strong digital learning experiences is more than just assigning a YouTube video, scanning a worksheet, or talking to a PowerPoint.

The informed use of data will be necessary to help craft personalised learning experiences for students. For true personalised learning for every student, platforms will lean on Artificial Intelligence (AI) and machine learning to build pathways. AI and machine learning require the proper collection and use of various types of data points. Educators gather significant data from assessments and digital tools, but do not always have proper mechanisms for understanding how to use that information to improve student learning and outcomes.

Digital innovations can assist teachers in understanding that as students develop, there is a necessary move from the idea of pedagogy – the art and science of teaching - to beginning implementing strategies and principles from andragogy – the art and science of helping adults learn.

As students graduate or move on from our school institutions of learning, they need skills to be self-directed and responsible for their learning. Similarly, as students move to adulthood, their connection with learning will change from that of directed purely by the teacher to self-directed. As technology provides our students access to networks of knowledge, they must learn how to access and differentiate proper and good sources of learning long after the educator is removed from the picture. This is where the aspiration of ‘learning anything, anywhere, anytime’ will guide schools, through digital transformation, to best provide for changing student learning.

In summary, the advantages of digital innovation are well known as outlined above. These include rapid access to information and new learnings; connectivity; sharing and interactive learning; effective storage and access; portability; new pedagogies; rapid data analysis and information sharing regarding student outcomes; access to resources for educators; increased community liaison and connections including parents; enhanced educational partnerships especially between schools and other training providers; and the associated efficiencies of all of the above.

In an ideal world, the capacity and opportunity for students to ‘learn anything, anywhere, anytime’ would be readily available. While most education, is, and will continue in the short to medium term, to be delivered, in current or similar structures of the ‘school’, digital innovation

will continue to value-add and modify existing practice. It is important to always be mindful of the balance between education transformation and the role of secondary schools in the socio-cultural transformation facing students. With finite resources, this is the challenge schools face. This will be elaborated further in Section 8.0 – Concluding Comments.

4.0 TERM OF REFERENCE TWO - THE ROLE OF DIGITAL TECHNOLOGY IN ADDRESSING SECONDARY STUDENT ENGAGEMENT AND RETENTION

4.1 Student engagement

Research shows that students are more engaged in their learning when they are interested and when the learning has some importance to them.

The possibilities of digital learning have been well described in this submission, and in terms of engagement, include:

- Allowing students to access new information and understandings of interest and importance to them
- Potentially speeding up the education process and capitalising on student momentum
- Providing tailored individual learning programs that meet specific levels and needs
- Providing learning opportunities which allow students to work autonomously in some contexts and thereby increase personal interest and engagement; this includes out of school and at-home contexts
- Specialised support for students with disability and various physical and cognitive needs
- Opportunities for students to interact with other students and schools
- Opportunities for students to work at their own pace in certain contexts
- Opportunities for students in smaller secondary and country schools to access a wider range of relevant programs and subjects
- Support for students in Curriculum and Re-engagement Education (CARE) schools where meaningful engagement in mainstream schooling has been a serious challenge
- Reducing the emphasis on didactic learning and teaching

4.2 Student Retention

As with student engagement, retention until the completion of senior secondary studies is more likely to occur when students are interested, and can see relevance in their schooling in terms of the links to post-secondary pathways including further education/training and/or employment. Retention rates in Western Australia are already high by comparison, due largely to the requirement to remain at school until the year a student turns 18. Notwithstanding, students can mix school with other options through a Notice of Arrangement or leave school subject to approval by the Government.

Digital innovation can assist in increasing retention rates through;

- Improving student engagement as outlined above

- Widening breadth of study options in senior secondary years especially in smaller secondary schools and country schools and thereby encouraging students to remain at school
- Enhancing Vocational Education and Training options at school by improving opportunities for online delivery, including virtual workplaces
- Providing enhanced opportunities at CARE schools, which typically focus on years 10 – 12
- Increasing the level of engagement for Aboriginal students; self paced learning possibilities are often highly relevant for these students where irregular attendance and wide achievement backgrounds are often present
- Potential to involve families more in the education process; this can assist with attendance and retention

5.0 TERM OF REFERENCE THREE - HOW DIGITAL INNOVATION CAN INCREASE EQUITY OF OPPORTUNITY IN SECONDARY EDUCATION

5.1 Broad equity challenges

Providing an equitable education environment in secondary education, particularly Years 10 – 12, is challenged by a number of factors, including, but not limited to:

- Relatively higher costs of education – school equipment, specialist facilities; specialist staffing; ongoing professional learning for staff
- Disparate backgrounds and needs of students; wide variations in levels of literacy and numeracy; variations in student backgrounds in STEM; complex socio-emotional needs; increasing number of students for whom mainstream education is unsuitable
- Wider range of curriculum pathways and associated courses at senior secondary levels – Australian Tertiary Admissions Rank (ATAR); General and Vocational Education and Training (VET); mixtures of pathways; the associated equity issues of providing sufficient choice
- Issues for smaller schools to provide this curriculum choice due to resourcing issues, many of these smaller country schools are in non-metropolitan centres
- Addressing equity issues for vulnerable and lower SES families, including Aboriginal students.
- Access to devices that enable digital learning at school and at home

As the breadth of learning needs of our secondary students grows, education systems and schools are required to think laterally about the role technology has to play in meeting those needs and challenges described above.

Catholic Education Western Australia (CEWA)'s LEADing Lights project has connected all schools on a single digital platform, and in doing so, has created three specific opportunities for digital innovation and collaboration between schools and systems not previously possible. The following examples illustrate how digital innovation can directly assist in addressing equity issues.

5.2 Virtual School Network (ViSN)

CEWA's Virtual School Network (ViSN) is an example of what is possible as a result of this common digital platform, ensuring students can engage in learning that suits their needs, interests and learning preferences, irrespective of geographical and school resourcing challenges. This (mostly asynchronous) award winning, online learning program provides access to quality online courses for students in metropolitan, regional, remote and rural (RRR) settings. Based on a network model of online learning, CEWA schools contribute a teacher to design and deliver a course, in return for student enrolments in ViSN courses. Students in schools who are not able to provide a teacher can still access the courses through a fee for service arrangement. Students are well supported with daily access to their teacher and come together online weekly as a whole class for further discussion and learning.

The Virtual School Network has many similarities to services offered to schools by the School for Isolated and Distance Education (SIDE) and Schools of the Air. CEWA schools can only access SIDE on a fee-for-service basis where costs are greater than $3,000 per student per subject each year, and only when places are available to CEWA students. For many smaller schools, these costs are unsustainable.

Despite only being in in its second year of delivery, ViSN has experienced significant growth in courses offered, in response to school requests.

	2018	2019
Schools	13	19
Courses	8	17
Students	60	130

The following reasons were cited by schools for accessing ViSN courses;

- Retention of student enrolments via increased offerings students remain in their school, as they are able to access the courses they wish to do.
- Economic rationalization. At a cost of approximately $25,000 per traditional class, it is an expensive use of school resources to run a class for only three or so students. These three students can still access the course they wish to take by doing it online through ViSN, in a low/no cost structure.
- Increased timetable flexibility for students. School timetablers can ensure school-based courses are timetabled first, then the online courses, creating more flexibility to meet student needs.
- Addressing staffing issues, particularly in specialised courses such as mathematics and sciences.

ATAR courses require specialist staff who can be difficult to source, especially in rural, remote or regional areas. Without the staff, the courses do not run and students miss out on learning in that area.

- Support for elite athletes or students who are too unwell to attend school in a traditional manner. ViSN allows students the flexibility of managing their own learning schedule. ViSN enables students to manage school and training/medical commitments.

- Teacher Professional Learning
  ViSN teachers undergo a year of bespoke training, prior to delivery, to ensure quality online experiences and learning for all involved. These skills are transferrable to classroom teaching and ViSN teachers are improving their teaching practice both in the online and face to face environment as a result of the training. These teachers are often 'digital champions' in their own school and lead the upskilling of their colleagues.

- Independent Learning Skills
  ViSN requires students to be independent, self-motivated, creative and collaborative learners. These are skills needed for a successful transition to further study and the 21st century workplace. Providing students with an opportunity to develop these skills is appealing to many schools.

The low-cost, scalable model that ViSN has adopted also has social and economic benefits for regional, remote and rural communities where students attend school, keeping them and their families in situ. Boarding school costs are prohibitive for many families, reported in the West Australian newspaper recently published as a minimum cost of $250,000 over six years of high school, before tuition fees. With access to online learning, families do not need to spend this money and can instead access the same range of learning opportunities through ViSN at their local Catholic school. This money is also then freed up to invest in the local community.

The 2018 Independent Review into Regional, Rural and Remote Education (Halsey, 2018) made 11 recommendations. Through ViSN, CEWA is addressing the following:

- Recommendation 3: Ensure RRR contexts, challenges and opportunities are explicitly included in the selection, preparation, appointment and on-going professional support of educational leaders
- Recommendation 5: Expand the availability, affordability and accessibility of high quality work experience placements, VET, dual VET/university options and two year associate degree programs for RRR students
- Recommendation 8: Improve opportunities for regional, rural and remote schools to implement entrepreneurship in education through curriculum, teaching, system and cultural changes and building on good practice.

See Appendix 1 for more detail on each of these recommendations and how ViSN addresses them.

5.3 TransitUs

CEWA is also running a transition to boarding program, TransitUS, aimed at supporting rural Year 6 students who are transitioning to their secondary boarding schools. This four-part

blended learning program focuses on removing two significant barriers to a successful transition to secondary for new boarders:

- connecting to other new boarders and boarding staff for the formation of friendships and relationships prior to arrival, and
- upskilling on the Office 365 technology tools suite.

The LEADing Lights platform is enabling students and boarding staff to connect ahead of the commencement of boarding which is relieving the anxiety associated with boarding, for both parents and students. In turn, this allows students to focus on the academic requirements on arrival in their new school, improving equity of opportunities for these students. Once in their new school, the boarding students are on par with the technical skills of their metropolitan counterparts, allowing them the same academic achievement opportunities.

5.4 Partnership with Department of Education, to support RRR students with a hearing or vision loss

In 2019, CEWA and the WA Department of Education (DoE) brokered a partnership, in which CEWA would train DoE Visiting Teachers, to provide virtual support RRR students with a hearing or vision loss. These teachers have received small group training from CEWA's Virtual School Program Manager and as a result, the DoE Visiting Teachers have been able to provide additional support in an economical, scalable manner for students who would otherwise only receive face to support in quarterly visits from these teachers.

5.5 Other equity groups

ViSN provides a number of opportunities broadly described above, which address a range of equity issues, mainly concerning students in smaller secondary schools; country and remote schools; boarding students and students with disability. These groups will also be addressed in further detail in Section 6.0 below, under considerations of at-risk students.

6.0 TERM OF REFERENCE FOUR – THE POTENTIAL FOR DIGITAL TECHNOLOGY TO CATER TO THE NEEDS OF HIGH PERFORMERS AND AT RISK LEARNERS IN SECONDARY EDUCATION

6.1 Broad digital learning possibilities to increase inclusivity

Technology provides tools and mechanisms giving schools opportunities to improve classrooms by making them more inclusive. Inclusive education provides a pathway to educating all Australian students and is a cornerstone of Catholic education. Digital innovation potentially takes schools in a direction where students can manage and direct much of their own learning. Networked tools potentially allow schools to juxtapose learning content with social learning platforms for all students across all schools to access at any time.

Struggling students will have access to content below, at and above their level of achievement. With the use of AI, purpose-built programs and educator guidance, students can actively access the learning content and experiences they need to be successful. Learning content can be tagged appropriately to align to the curriculum. This will help students sequence their major learning efforts, while also ensuring educators meet the requirements and standards set by

organisations such as the School Curriculum and Standards Authority and the Australian Curriculum Assessment and Reporting Authority.

6.2 Opportunities for higher performers

Eventually, students may have the option to select courses and instructors based on their interests and proficiency level regardless of where the expertise and delivery exists across the system. With tools like Claned, which is being developed to contain many of the course sequences and experiences, students are able drive their own learning. Guided by mentors, educators and augmented with learning AI, students can progress at their personalised learning pace in each learning area. CEWA is beginning to use Microsoft Teams to help build a virtual community to help reduce isolation in virtual learning spaces.

Many of the digital tools CEWA is adopting as a system for students, have an inclusive mindset at the centre of the features provided and future releases will preserve this inclusivity. Technology provides options to assist teachers and students address barriers to education due to varying sensory abilities more easily than ever before. Learning tools provide features to allow any learner to control their visual, hearing, and vocal interactions with the technology and thus improving their access to learning material. As more digital standards are created in the software we choose to implement, students of all abilities will have more options for interacting with learning content including improved braille readers, redesigned switch controls, and the augmentation of wearables that tap into the cognitive services of our tools. Educators learn more about the tools and techniques they can implement in their classroom and students can feel more at ease in an inclusive classroom. In addition to the features that the software tools provide, frameworks such as Universal Design for Learning provide steps to help educators create specialised learning content. Universal Design for Learning (UDL) is a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn. The principles include providing multiple modes of engagement, representation, action and expression. Digital technology helps educators meet these principles. Following principles from UDL or similar frameworks and research provides the contexts to meet the needs of all learners.

6.3 Opportunities for students with disability

In terms of students with physical or cognitive disabilities, education specialists who are knowledgeable about accessible devices that can make access to learning content easier for all students and educators.

Some of the advantages of increasing use of digital technology for these students are:

- Provides opportunities for alternative methods of assessment for students with disability, for example using audio and visual technology
- Extends the capacity of student engagement and allows students who are reluctant to read or, who have specific learning disorders, to participate in curriculum through accessibility features, for example, speech to text, text to speech
- Provides access to alternative communication methods for students with communication disorder
- Enables students to access learning remotely

- Allows learners to present work in different methods for example as a Powerpoint/Keynote instead of written.
- Note taking is easier for students through the use of technology
- Access to online tutorials, online info, audio books etc
- Students can also work collaboratively on projects/activities online

6.4 Opportunities for Vocational Education and Training (VET) students

In terms of non-ATAR students studying VET, some of the credentials available can be accessed on line, including some of the practical components using, virtual workplaces and training opportunities. While VET students are not necessarily classified as being at risk, there are challenges for schools to provide highly relevant training credentials that meet their needs while also meeting employment demand trends. Most students undertaking VET in senior secondary years complete qualifications in areas of very limited employment opportunities such as sport and recreation and outdoor education or low level training in areas such as retail and information technology. Less than 15% of students undertake training in trades areas. These patterns are largely driven by a lack of suitably qualified staff at schools, the 'ease' of embedding some qualifications within mainstream subjects simply to satisfy Western Australian Certificate of Education (WACE) requirements, and high costs. Digital innovations potentially increase the possibilities for VET students to link to workforce priorities although access to courses.

6.5 Significantly disengaged students

An increasing number of secondary students are severely disengaged from mainstream education and are at significant risk. Curriculum and Re-engagement Education (CARE) schools are specifically designed to cater for students for whom mainstream education is unsuitable for a variety of reasons, including, but not limited to; mental health issues; alcohol and substance abuse; dysfunctional home and family situations; juvenile justice backgrounds; victims of bullying and intimidation; poorly developed social and interpersonal skills; and low self esteem and self efficacy. As a result of this, these students have become disengaged from education and they are typically well behind in educational achievement. CARE schools typically enrol a maximum of about 40 – 60 students with each student working on an Independent education program as part of their studies. Digital technology plays an important role for these students as they blend online learning, including VET, with face to face experiences. Some students in CARE schools study ATAR courses, for which online learning becomes essential.

CEWA currently operates four CARE schools with two more to open in Carnarvon and Broome in 2020. Digital learning forms an important role in student engagement and learning.

6.6 Other at-risk groups

Other disadvantaged groups such as Aboriginal students in remote areas also benefit from the opportunities provided by remote digital learning. This can work well where students are placed on an individual education program, especially were their attendance and engagement is irregular. In Kimberley schools, secondary numbers are often very small and trained staff difficult to secure. Online learning provides opportunities for these students, although not

without challenges. These include connectivity issues; lack of support resources and facilities at home, and lack of trained staff and technical support

7.0 TERM OF REFERENCE FIVE - CHALLENGES TO IMPLEMENTATION, INCLUDING PROVISION OF DIGITAL INFRASTRUCTURE, RESOURCES AND TECHNICAL SUPPORT

7.1 Resourcing and Connectivity

Historically, many WA Catholic schools have operated as autonomous units, providing digital infrastructure, resources and technical support independently from each other. As schools have 'done their own thing' initiatives are largely isolated to individual school sites and dependent on a few key staff to implement and resource.

The situation is particularly difficult for schools in regional areas, and more so in remote areas such as CEWA Kimberley schools. In these remote regions, the schools are often very isolated, may have inexperienced teachers, particularly in the areas of ICT experience, experience difficulties with many family environments in terms of the existence of ICT at home, experience low and variable levels of student attendance; and are often faced with large cost differentials compared with larger schools.

In terms of connectivity, key challenges when implementing education technology initiatives across W.A. include:

- A strategy for education technology implementation - this involves a manageable and sustainable plan and is sometimes inadequate or short term only
- Reliable internet connectivity – and at an affordable cost
- School infrastructure to support connectivity (switching, wi-fi)
- Supply chain (procurement, installation, ongoing support of infrastructure and end user hardware devices)
- Professional learning and development for teachers, students and parents
- End user device set up, configuration and support
- Hardware renewal and replacement
- Trouble shooting and support services
- Collaboration and sharing of success in school community and across school networks

7.2 Addressing equity issues

The experience in WA Catholic schools has seen a relative divide between schools that are demonstrating great success with the infrastructure, training and support to maintain digital innovation initiatives, and those that are juggling the demands of supporting innovation initiatives with competing factors. The ongoing challenge is to bring schools and communities together in partnership to share the resourcing, support and implementation load.

With LEADing Lights, CEWA has developed a collaboration platform to bring people together and to provide a coherent and more equitable experience across W.A. LEADing Lights is a single digital ecosystem for all CEWA schools, support partners and early years centres, as well as central and regional offices.

The experience of CEWA is that a strategic, coordinated and sustainable approach is most important in attempting to address challenges of implementation and ongoing good practice.

7.3 Low student numbers and cost issues

The conundrum facing smaller secondary schools is that on the one hand, the smaller numbers require online learning opportunities to provide choice and equity to students, while on the other hand, their size challenges adequate resource provision in terms of funds and suitable staff. CEWA cross-subsidises smaller schools to assist in overcoming such issues. While this is possible for an education system such as CEWA, it is nevertheless a diversion of resources from other needs and priorities. These ongoing cost and resource issues are a major challenge, especially if schools seek to improve in this area as well as remaining contemporary.

7.4 Equitable Access to VET

In Section 6, reference was made to the potential of accessing VET online for part or all of the qualification. In many cases it is a blend of online and face to face delivery. Access to training through TAFE is difficult in many training areas, with government schools often being given preferential places. The costs of accessing most TAFE credentials is usually based on a full cost recovery bass, which is the same as for private providers. Given that VET is well recognised as being much more expensive than other courses, this is an area of concern, particularly in supporting students at-risk.

7.5 Professional learning for teachers

The effectiveness of online and digital innovation is largely determined by the capability of the educators involved at the school. This refers both to their technical expertise as well as their capacity to use the technology to develop appropriate learning and teaching contexts. Interpretation of data and analytics are also required to ensure that the learning and teaching is agile and responsive to changing student needs.

The capability of teachers varies between schools and between teachers in the same school; this can be unsettling for secondary students where they typically have more than six different teachers who may be engaging in varying delivery modes in terms of ICT.

Teacher professional learning in this area is extremely expensive, especially where teacher relief is involved at approximately $500 per day, and more for non-metropolitan schools where travel is involved. Course costs may also be involved. A further feature of professional learning is that it is often ongoing to keep up with emerging opportunities in the digital landscape.

The support for teachers can vary significantly between larger well resourced schools and smaller, less well resourced schools. In the former, hardware tends to be more contemporary; technical support staff more numerous and skilful; the professional learning budget tends to be larger; and specialist professional staff such as a Dean of Technology or equivalent, often exist.

The quality of newly graduated teachers can also vary greatly between institutions and an issue facing the pre-service providers is that approaches can vary considerably from school to school. There appears to be a need for pre-service education providers to engage more closely with education systems.

7.6 Developing and sustaining independent learning

The successful implementation of digital innovation also depends greatly on the capacity of many students to become independent learners and to sustain these capabilities. Learning independently in an online mode can be very difficult for many students, even if only one or two of their subjects are delivered in this way. Independent learning requires training from the school and needs to commence during primary and lower secondary years. Independent learning also requires highly skilled educators, all of school approaches and support staff for individual students. This is a challenge for smaller and less resourced schools. The CEWA Virtual Learning Network assists students to develop independent learning skills.

7.7 Associated consequences

Associated with all forms of digital technology are unintended, but nevertheless unavoidable consequences. These include, but are not limited to; security issues; access to and use of inappropriate information; illegal activities; bullying, harassment and intimidation; inappropriate sharing of information; issues associated with the use of social media; use/misuse of mobile phones and similar devices; and plagiarism and copyright issues.

CEWA has developed policies and guidelines to assist schools to address these issues. Notwithstanding, this area is an extremely difficult one to manage, particularly confounded by the use of digital technology in out of school settings.

Most schools have reported an increase of issues in this area, and accordingly requiring a significant amount of school and staffing resources to address incidents.

8.0 CONCLUSIONS AND FINAL COMMENTS

8.1 Maximising opportunities

This submission has outlined the opportunities that digital innovation presents to students' learning. It is important to also recognise the increased efficiencies which digital technology provides to the operation of schools. As previously discussed, CEWA is implementing a digital transformation across schools through LEADing Lights. In addition to the enhancement of student learning, there are a number of improvements and efficiencies in CEWA schools, including; improved financial management systems; centralising of school and student data; greater connectivity between schools; enhanced opportunities for school partnerships; enhanced adherence to system and government regulatory frameworks including school audits; greater connectivity with other agencies and organisations; better communication, especially with parents and communities; increased opportunities for online staff training and development; and improved storage, retrieval and sharing of information. As schools move to more uniform and consistent technological approaches, CEWA is able to negotiate more favourable arrangements with suppliers. All of the preceding have greater efficiencies which has allowed more resources to be directed to student learning and teaching.

An important underpinning aspect is the importance of a system-wide approach. This helps to assure consistency, efficiency and sustainability. Individual school approaches can often lead to a lack of consistency and quality, unnecessary duplication and may not maximise opportunities provided by digital innovation.

8.2 The need for partnerships

As well as a system-led approach, the success of digital innovation in schools will also depend, to some extent, on the quality of partnerships developed not only between schools, but with outside agencies. These include universities, TAFE Colleges and other Registered Training Organisations, other education agencies, government and the business sector.

8.3 The 'conundrum of equity'

The conundrum of equity in education is that the schools who are often most in need of ICT and other technologies are usually the schools which are least well resourced to acquire and maintain them. Smaller schools and many country schools may also have a lower resource base. Digital innovations, as outlined in this submission, provide significant opportunities to cater for the individual and collective needs of these students. The resource base of these schools and their communities often precludes them from acquiring the equipment and trained staff necessary. As the pace of change in technology continues, there is the probability that these schools may fall further behind other schools.

CEWA cross-subsidises less resourced schools but the capacity of parents to purchase the necessary hardware and also maintain sufficient technology in the home environment, remains as an ongoing challenge. For schools outside CEWA where system level support may not be available, the issue is further compounded. As outlined in Section Seven, the success of digital innovation also depends on having qualified staff and being able to professionally support these staff.

Without additional funding being made available to less resourced schools, there is the very real prospect that the socio-economic and related achievement divide, will increase.

8.4 Balancing needs in schools

Schools are fundamentally deeply relational organisations. The socio-cultural and health needs of children and young adults are becoming highly complex and there is a growing expectation that schools will play an important role in supporting them.

Schools are devoting considerable resources to support these socio-cultural and related needs additional to learning and teaching and community building. As previously outlined, the opportunities provided by digital innovations are compelling and will figure prominently in future practice. Notwithstanding, digital technology comes with its own set of challenges in terms of creating some of the relational problems in schools. Cyber bullying and the misuse of social media create serious issues which often involve the schools in allocating staff resources to address. The boundary between what occurs in the school and outside the school setting is becoming blurred.

Digital technology, even properly used, also challenges the relational aspects of school life. Increasingly schools, with the support of their community, are limiting or banning the use of many devices during school hours to increase meaningful interactions and relationships.

The ongoing challenge for schools is to create and maintain the right balance to ensure that the dignity of every child is protected and that students become effective citizens in the local and wider community.

APPENDIX I - ALIGNMENT OF THE HALSEY INDEPENDENT EDUCATION (AND THE SUBSEQUENT GOVERNMENT RESPONSE) TO VISN

Halsey Report – https://docs.education.gov.au/node/50281
Government Response - https://docs.education.gov.au/node/50796

Halsey Report	Government response	ViSN purpose and practices
General comments	We want students to have a quality education with access to the best teachers Need to bring together interested parties to collaborate and share good practice. Curriculum delivery and assessment needs to be tailored to meet the needs of all students, including those in rural, regional and remote schools. Innovation must be supported by evidence and data, can be identified through good practices and built upon by actively encouraging continuous improvement, as well as through ensuring teachers have opportunities to work collaboratively and time to devote to professional learning. It acknowledges the financial difficulties which some students and their families may experience in undertaking education and training.	ViSN has a strong synergy with the government responses. The ViSN model and practices: 1. Require CEWA schools to work collaboratively to provide quality online education. 2. Allow students to access courses not available at their own school, to meet their current and future needs. 3. Are both unique and innovative in comparison to other national and international models of K-12 online learning. 4. Are evidence based, both as a model and its practices, including annual cycles of feedback to inform continuous practice. 5. Includes an intentional teacher training program, to ensure teachers are engaged in best practice online learning delivery. The program involves face-to-face training and an ongoing virtual community of professional learning, highlighted by shared practice, collaboration and professional conversation. 6. Are inclusive of all CEWA schools, enabling participation and access via two options: a. 15 free course enrolments, in return for a teacher to design and deliver an online ViSN course. b. Low cost fee for service, particularly aimed at low

		SES schools and its students. 7. Enables families to remain together (rather than attend boarding schools) and instead access low cost quality online education. In doing so, the social and economic capital of the local community which they remain a part of also benefits from a more stable population.
Recommendation 3 Ensure RRR contexts, challenges and opportunities are explicitly included in the selection, preparation, appointment and on-going professional support of educational leaders	The Review refers to Professor John Hattie who stated in 2009 that teachers have the greatest in school impact on student learning, and Professor Halsey therefore acknowledges that having a highly competent teacher workforce is critical to raising the achievements of students and their transitions to further study, training and employment.	ViSN teacher training is • evidence based. • intentional in its design • combination of face-to-face and online delivery. • subject to annual reviews and teacher surveys which measure the impact the teacher training is having. • supported by an ongoing, virtual professional learning community that is enabled by the LEADing Lights platform.
Recommendation 8 Improve opportunities for regional, rural and remote schools to implement entrepreneurship in education through curriculum, teaching, system and cultural changes and building on good practice.	Through critical and creative thinking, students are encouraged to develop enterprising behaviours, such as showing initiative and adaptability, and to develop entrepreneurial approaches to imagine possibilities, consider alternatives, test hypotheses, seek and create innovating pathways and draw conclusions. Our challenge is to bring	ViSN delivery practices: • require teachers to engage local and global business and organisations to provide authentic learning experiences. • Help ViSN students to develop the enterprising behaviours noted in the government response.

	these worlds together – of entrepreneurs and curriculum – and how to best engage, including through initiatives such as P-TECH and the National Career Education Strategy.	

Documents

- Halsey Report https://www.education.gov.au/independent-review-regional-rural-and-remote-education
- West Australian Newspaper report https://www.abc.net.au/news/2019-07-21/boarding-school-tax-remote-rural-parents-western-australia/11326248