TECH IN ED SUB 1
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Education and Health Standing Committee
Legislative Assembly Committee Office
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WEST PERTH WA 6005

29th July 2019

To whom it may concern:

RE: Education and Health Standing Committee: Inquiry into Digital Innovation in Secondary Education. - Submission by Autism Association of Western Australia.

Thank you for the opportunity to submit the opinion and personal experiences of our services to input into your inquiry. We have addressed the key areas of the inquiry by commenting on the points below.

1. How do you think digital innovation can assist secondary students to learn anything, anywhere, anytime?

Digital innovation can assist secondary students to learn through:

- Increased access to age appropriate and customisable visual supports.
- Access to consistent and customisable feedback and rewards.
- Alternative technology options can be used to reduce the impact of various skill deficit areas (e.g. fine motor, literacy, visual perceptual challenges) to allow students to participate at the same curricular level as their peers and build on their strength and interest areas.
- Providing information in written/text formats can reduce the impact of auditory processing challenges.
- Keyboard data entry can support individuals with perceptual and motor coordination difficulties such as dysgraphia, dyslexia, and apraxia to express their ideas through written work
- Learning can be self-paced and can be done in a range of environments using technology using mobile devices and web based material which can be accessed in multiple settings. Digital innovation would allow students to access information more efficiently throughout their day and allow for increased time to be spent on understanding curriculum and concepts at the whole class level. This would also allow opportunity to challenge students who are excelling, as well as provide additional scaffolds and modifications to those who require more support.

2. What role does digital technology play in addressing secondary student engagement and retention?

- Using technology can be motivating for some students with ASD especially where technology is a special interest. By utilising this motivation, students are likely to be more engaged in the class.
- Earning through multiple mediums can lead to greater information retention. If digital technologies are used in addition to current classroom models- of listening, watching (the teacher), copying notes etc. then adding the digital tech would provide another way of learning the content, and in turn another way to remember the content.
- Students with Autism may find it challenging to receive information from their teacher as they could experience difficulties interpreting non-literal language, non-verbal language and contextual cues. Providing information through technological media may assist to reduce the impact of these challenges and increase student engagement and performance.
- Technology allows for learning via multiple media options which can appeal to different students in different ways.
- Secondary students are often quite familiar with technology, providing familiar and accessible tools for learning.
- Students could use technological tools to enhance organisation by using schedulers, timetables, calendars and interfacing with their schooling. Reducing likelihood of lost work or materials, or issues with meeting deadlines or getting to classes.
- By reducing the impact of handwriting, fine motor, attentional or sensory processing issues, computer based work can enable an increased sense of control, mastery and predictability for them.
- If computers are able to result in higher achievements of curriculum content, students may build a sense of competence in one area, in contrast to some other possible challenges e.g. meeting social skills demands.

3. How can digital innovation increase equity of opportunity in secondary education?

- As described in previous sections, providing learning opportunities through digital media can reduce the functional impacts of impairments in communication, fine motor abilities, sensory processing and attention. Using technology can appeal to the strengths of people with Autism who are often visual learners. Reducing these impacts can place students on a more level/equal level as their peers allowing them greater achievements in curriculum content.
- For individuals who have learning difficulties or intellectual disabilities, Access to learning material via digital media can allow for easy adaptation of materials, and an ability to easily access materials to gain repetition of academic tasks which is beneficial to learning and information retention.

- Individuals who have specific sensitivities or preferences with sensory input can be provided through digital media, with the option to take control over the modulation or levels of sensory input. I.e. they can personalise the accessibility and sensory aspects of their devices to better support their sensory needs.
- For individuals with executive processing difficulties and/or learning difficulties. Digital technology can improve access to the curriculum and allow them to demonstrate their knowledge and learning in a range of different ways. Many students with Autism and other disabilities may not perform in testing situations in a way that accurately reflects their academic ability. Access to online or digital assessment tasks may provide a more familiar and accessible means for students with disabilities to be assessed.
- For individuals with significant social skills challenges, online and technological innovations could allow for increased success with social interactions. By reducing the need to communicate in real-time, interpret non-verbal language, auditory tones of speech and contextual cues, students may feel more confident and successful interacting with others providing increased opportunities to practice interaction. This could open up opportunities to new social relationships which extend beyond communication via technology.

4. How can digital technology to cater to the needs of high performers and at-risk learners in secondary education?

- Access to information - Potential to record information (camera/video) - Calendar and planning apps - Typing in lieu of handwriting for those with motor planning difficulties - Removal/modification of data/re organise information without compromising work, time or effort e.g., erasing/starting again
- Digital innovations can enable students with learning difficulties to capture elements of their lessons using cameras and microphones for photo, video and audio recording. Learning materials can be provided electronically to not only reduce the demands for handwriting and capturing details in real-time, but also to allow students to learn at their own pace, or revisit the materials for revision at a later time.
- High performers would likely benefit from the implementation of digital technology as it would provide them with the opportunity to be extended beyond the standard curriculum if they are achieving above the rest of their peers.

5. What are the challenges you have come across which might impact on best implementation of digital innovations in High Schools?

- If a child is using digital technology in class and this is different to the remainder of classmates, this could potentially be a barrier to socialisation and inclusion. A person may be seen as being different if the technology were not implemented in a universal approach.
- Increased time on computers could limit the opportunities for social interactions with peers.

- There may be opportunities for distraction or increased risk when using online tools and for students to stray from tasks to use other aspects of the technology or internet access. Certain strategies may be required to ensure adequate supervision and support.
- There could be challenges associated to costs and affordability for families and schools.
- Lack of parental or teacher knowledge relating to specific technical skills of using technology, but also skills to adequately support and monitor the student's use of digital technology.

Kind Regards

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