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SUPPORTING STUDENT WELLBEING in a digital learning environment

Evidence-based opportunities for innovation in learning and teaching during school closures related to the COVID-19 pandemic and beyond

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BOOSTING LEARNING ENGAGEMENT in a digital environment

Evidence-based opportunities for innovation in learning and teaching
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BOOSTING LEARNING ENGAGEMENT in a digital environment

- Definition: Student engagement is determined by the interaction between the time, effort and other relevant resources invested in optimizing the student's experience and learning outcomes.
- What do we know about the effect of student engagement on learning and wellbeing?
 - robust correlations between student engagement and positive learning outcomes, including satisfaction, persistence, academic achievement and social engagement

BOOSTING LEARNING ENGAGEMENT

Strategy 4: Gamification of learning

Strategy 5: Digital stories

Strategy 6: Digital participation and resilience

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STRATEGY 4: Gamification of learning

What is Gamification?

- Gamification in the context of learning is a design process of adding game elements in order to change existing learning processes (Sailer, Homner 2020). Gamification is not the same as game-based learning. Where game-based learning implies the design of fully fledged (serious) games (Deterding et al. 2011), gamified learning focuses on augmenting or altering an existing learning process. The intent here is to revise the process, so that users experience it as game-like (Landers et al. 2017).

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STRATEGY 4: Gamification of learning

- *What has research shown?*

STRONG	Gamification has significant small effects on cognitive, motivational and behavioural learning outcomes. The effect of gamification on cognitive learning outcomes appeared to be stable, with a level of heterogeneity of effect sizes for motivational and behavioural learning outcomes (Sailer, Homner 2020).
STRONG	Inclusion of game fiction (invented stories) and social interaction were significant moderators of the effect of gamification on behavioural learning outcomes (Sailer, Homner 2020).
STRONG	Gamification with combinations of competition and collaboration showed a medium-sized effect on motivational learning outcomes and outperformed gamification environments that solely used competition (Sailer, Homner 2020).
LIMITED	Gamification can have a positive impact on health and wellbeing, particularly for health behaviours (Johnson et al. 2016).

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STRATEGY 4: Gamification of learning

- ***Ideas for schools***

- Before starting a gamified learning process, consider what pedagogical approaches would guide the overall design and sequencing of critical learning interactions and what the expected learning outcomes would be.
- Provide options for students to choose between gamification and traditional methods in order to decrease potential anxiety and ensure a positive level of engagement.
- Continuously involve students in self-assessment and reflection on their engagement with gamified learning experiences.

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STRATEGY 5: Digital stories

- ***What are Digital stories?***
- Digital stories are short videos/presentations that combine stand-alone and first-person narratives with the use of multimedia (Gladstone, Stasiulis 2019). There are many different types of digital stories, for example: personal narratives – stories that contain accounts of significant incidents in one’s life; historical documentaries – stories that examine dramatic events that help us to understand the past; and stories that inform or instruct the viewer on a particular concept or practice (Robin 2006).

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STRATEGY 5: Digital stories

- *What has research shown?*

MODERATE	Digital storytelling increases students' motivation, creative and critical thinking skills and problem-solving skills. A quasi-experimental study suggests that after 20 weeks of digital storytelling instruction, senior high school students demonstrated significant improvement in English proficiency, critical thinking, and learning motivation, especially for English listening, reading and writing, interpretation and evaluation of arguments and task value and self-efficacy (Yang, 2012).
MODERATE	Digital storytelling is an effective method in mental health and trauma-related therapy (De Vecchi et al. 2016).
LIMITED	Digital storytelling can help students improve their confidence and can contribute to better social and psychological skills (Smeda et al. 2014).
LIMITED	Digital storytelling can be used in mental health and trauma-related therapy disciplines and can be applied to students at different age levels (Demirbas, Sahin 2020).

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STRATEGY 5: Digital stories

- *Ideas for schools*
- There are multiple resources available for teachers on how to design a pedagogically sound digital story task. Explicitly define the wellbeing aspect that you want to address through digital stories and provide sufficient information to students about the process.
- Make sure students possess enough digital literacy to be able to use appropriate tools in the process of digital story development.

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STRATEGY 6: Building digital participation and resilience

- ***What is building digital participation and resilience?***
- Digital participation refers to active involvement in digital society through the use of modern information and communication technology (ICT), such as the internet. This participation includes access not only to the internet, but also to various online services and content (Seifert, Rössel 2019). Digital resilience represents the technical, emotional and critical thinking skills students (and educators) need to enjoy the benefits of the internet, while still spotting the dangers and managing the risks (Young Minds 2016).

STRATEGY 6: Building digital participation and resilience

- *What has Research shown?*

STRONG	Moderate use of digital technology tends to be beneficial for children's mental wellbeing with significant small positive effects, while no use or too much use can have a small negative impact (Kardefelt-Winther, 2017).
STRONG	14- to 16-year-olds spend nearly twice as much time in digital environments than 9- to 10-year-olds (Smahel et al. 2020).
STRONG	Children who take up a wider range of digital activities are usually exposed to more digital risks. However, they may also be better equipped to cope with such risky situations, thus experiencing less harm (Smahel et al. 2020).
MODERATE	Non-participation in the digital world can lead to a feeling of social exclusion, whereas a feeling of social inclusion may be induced by having access to the internet, as well as the willingness and skills to use it (Seifert, Rössel 2019).

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STRATEGY 6: Building digital participation and resilience

Ideas for schools

- Various impact evaluations have shown that digital risk prevention and intervention programmes can be effective. The most frequently used intervention components include: education about cyberbullying, coping skills, empathy training, communication and social skills, digital citizenship, and parent education on cyberbullying (Hutson et al. 2018).

CONCLUSIONS AND POLICY CONSIDERATIONS: Main takeaways

- **Wellbeing is a critical component of designing an effective digital learning environment.** Lacking a direct connection with their teachers and peers, many students may encounter isolation and loneliness, decrease their learning engagement or struggle with their tasks. However, other students may benefit from learning remotely if they are equipped with self-directed learning skills. Less direct social interaction may also decrease the level of negative behaviour, such as bullying or negative peer pressure. The current paper has presented a variety of strategies that may help teachers to foster the wellbeing of all students.
- **To benefit from digital learning, students need the right set of skills and support systems.** Before implementing a digital learning system, it is essential to monitor students' ability to deal with online learning. The current paper has presented a set of skills that can enhance students' wellbeing while promoting their digital participation, media literacy, metacognition, and the ability to manage various risks online, such as cyberbullying.
- **It is important that teachers design a wellbeing infrastructure in any digital learning environment to boost learning outcomes and wellbeing.** The relationship between technology, wellbeing and learning outcomes is complex. However, schools should consider the wellbeing of all students as a design principle. Without a clear rationale for the support and implementation of wellbeing measures, the use of technology is far less likely to have a positive impact on learning.
- **Teachers need appropriate training and support in monitoring and assessing student wellbeing in a digital environment.** In addition, teachers' wellbeing should be a key priority when planning for a digital learning environment.

CONCLUSIONS AND POLICY CONSIDERATIONS: Policy considerations

- **Put wellbeing and pedagogy first.** Effective use of digital learning technology should be driven by learning, teaching and wellbeing goals rather than by a specific technology.
- **Critically assess the impact of various tools and technologies on wellbeing before implementing them.** Reflect on the benefits, limitations and strategies to overcome the potential risks for various categories of students.
- **Use evidence to monitor, assess and improve students' wellbeing in digital learning environments.** Many aspects of student wellbeing in a digital learning environment are yet unknown. Therefore, there is an opportunity for schools and teachers to engage in thoughtful innovation and experimentation in this area.



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