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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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# IMPROVING SELF-REGULATED LEARNING SKILLS in a digital 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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# IMPROVING SELF-REGULATED LEARNING SKILLS in a digital environment

- Definition: Self-regulated learning is an academically effective form of learning in which learners must set their goals and make plans before starting to learn.

- What do we know about the role of self-regulated learning and wellbeing?
  - Students who consider themselves highly competent in self-regulated learning are more motivated to learn.

# IMPROVING SELF-REGULATED LEARNING SKILLS in a digital environment

# STRATEGY 7: Supporting metacognitive skills

- ***What are metacognitive skills?***

- Metacognitive skills are strategies applied consciously or automatically during learning, a cognitive activity, and communication to manipulate cognitive processes before, during or after a cognitive activity. Examples are executive-function processes, such as verbal mediation, self-regulation, planning, judgment and self-monitoring (Flavell 1979).

# IMPROVING SELF-REGULATED LEARNING SKILLS in a digital environment

# STRATEGY 7: Supporting metacognitive skills

- ***What has Research shown?***

| | |
|---|---|
| **STRONG** | Metacognition and self-regulation approaches consistently have high levels of impact, with students making an average of seven months' additional learning progress (EEF 2018). |
| **STRONG** | Metacognition strategies are usually more effective when taught in collaborative groups, so that learners can support each other and make their thinking explicit through discussion (EEF 2018). |
| **STRONG** | Metacognition programmes that seek to improve "learning to learn" skills have positive impacts, although smaller in size (around two months' progress on average) than the average seen in the wider evidence base. For some programmes there were indications that they were particularly beneficial for pupils from low-income families (EEF 2018). |
| **MODERATE** | The potential impact of metacognitive approaches is high, but it can be difficult to achieve in practice, as they require students to take greater responsibility for their learning and develop their understanding of what is required to succeed (EEF 2018). |
| **MODERATE** | The evidence indicates that teaching these strategies can be particularly effective for low-achieving and older students (EEF 2018). |
| **MODERATE** | Younger children are less likely to make accurate judgments about what they have learned, what they know, and how easy or difficult it will be to learn. Older students often have a deeper base of metacognitive knowledge than younger students (Steiner et al. 2020). |
| **MODERATE** | Metacognitive training programmes may be more effective for increasing motivation in the primary years and strategy use in the secondary years (Steiner et al. 2020). |
| **MODERATE** | Metacognitive scaffolding prompts, either from teachers or built into the technology, facilitate the development of metacognitive strategies in students engaged in digital learning (Bannert, Mengelkamp 2013). |
| **MODERATE** | Interventions that are longer in duration have been found to be most effective (Dignath, Büttner 2008). |

# STRATEGY 7: Supporting metacognitive skills

***Ideas for schools***

- Encourage students to think about the goal of their learning (set by the teacher or themselves) and to consider how they will approach the task; this includes ensuring that they understand the goal, activate relevant prior knowledge about the task, select appropriate strategies and consider how to allocate their effort (Darling-Hammond et al. 2020).
- Support students to self-assess the progress they are making; this includes the self-testing and self-questioning activities necessary to control learning and make changes to chosen strategies (EEF 2018).
- Adjust efforts to promote metacognition to grade levels. Primary students need more scaffolded support for developing metacognition than secondary students. Older students should make use of cognitive regulation strategies more heavily than primary students (Askell-Williams et al. 2012).

# STRATEGY 8: Managing workload

## *What is managing workload?*

- Managing workload is a complex set of self-management skills, covering planning and monitoring skills, time management skills, the ability to manage distraction and perseverance towards a learning goal. Objective workload commonly comprises compulsory curriculum instruction hours; additional instruction time; the number of assessment events or concentration of the internal or external assessment moments in a given period. Subjective workload expresses the impact of the objective workload on students' perceptions, emotions and attitudes (Ganzeboom et al. 2020).

# IMPROVING SELF-REGULATED LEARNING SKILLS in a digital environment

# STRATEGY 8: Managing workload

***What has Research shown?***

| | |
|---|---|
| **STRONG** | PISA study 2015 has shown that being stressed by schoolwork influences a wide range of non-academic outcomes, such as health, health behaviour and wellbeing (OECD 2017). |
| **STRONG** | On average, across OECD countries participating in a 2015 PISA study, 59% of students reported that they often worry that taking a test will be difficult and 66% reported that they worry about poor grades. Some 55% of students reported feeling very anxious about a test, even when they are well prepared, and 52% reported that they get nervous when they don't know how to solve a school task (OECD 2017). |
| **STRONG** | Available data at the OECD countries participating in PISA (2015) have shown little to no direct link between the objective workload of students, on the one hand, and their life satisfaction and anxiety in school, on the other. PISA studies have shown no relationship between the time students spend studying, whether in or outside of school, and their life satisfaction (OECD 2017). |
| **LIMITED** | Information and cognitive overload are important factors that challenge student wellbeing in an online environment (Bradford 2011). |

# STRATEGY 8: Managing workload

***Ideas for schools***

- Help students to set small, reachable goals that they can work towards.
- Use various tools to track students' progress such as: time management logs, checklists, rubrics and rating scales for students' self-assessment.
- For challenging content, break learning content into units with clearly specified objectives which are pursued until they are achieved.

# STRATEGY 9: Mindfulness

***What is mindfulness?***

- Mindfulness means maintaining a moment-by-moment awareness of our thoughts, emotions, bodily sensations, and surrounding environment with openness and curiosity (Mindful Schools | Mindfulness for Your School, Teachers, and Students. 20 July 2021. Mindful Schools. https://www.mindfulschools.org/).

# IMPROVING SELF-REGULATED LEARNING SKILLS in a digital environment

# STRATEGY 9: Mindfulness

- ***What has Research shown?***

| | |
|---|---|
| **MODERATE** | Students who are self-focused, as well as non-judging towards their inner experiences, are better at self-regulated learning (Hillgaar 2011). |
| **MODERATE** | The interventions are more effective for decreases in negative mental traits (eg affective disturbances, anxiety) than increases in positive mental traits (eg positive affect, pro-social functioning). Benefits were stronger for pre-adolescent students compared to their early adolescent peers (Schonert-Reichl, Lawlor 2010). |
| **LIMITED** | A mindfulness-based programme was implemented in Canada with early adolescent students and resulted in improved emotional control and self-monitoring, as well as decreased anxiety, depression and negative rumination (Lam, Seiden 2019). |

# IMPROVING SELF-REGULATED LEARNING SKILLS in a digital environment

# STRATEGY 9: Mindfulness

***Ideas for schools:***

- Teachers identified a range of enablers that together created environments conducive to the successful implementation of mindfulness interventions: teachers' ability to embody mindfulness; collaboration with fellow teachers; support from school administrators and parents; a relaxing physical environment; and students' willingness to learn. Conversely, teachers identified time pressure and crowded curriculum content as the biggest barriers, along with students' disengagement with the programme (Joyce et al. 2010).

# 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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