# Learning from home: synthesising the research

The current COVID-19 epidemic and social distancing policies are requiring educators to explore technology options and pedagogical approaches for fully online learning that can occur at home. Doing so can be especially challenging for K-12 schools, where face-to-face learning has been the default mode of delivery. Given that distance learning has a long history in many universities and select schools throughout the world, what can be learned from the research?

This report summarises meta-analysis of research findings over five hundred studies relating to learning from home — often referred to as *distance learning*. It explores the following questions:

1. What makes a home learner successful?
2. What are the most important themes from the research that educators should consider when transitioning to learning from home?
3. What supports and what constrains schools in supporting learning from home?

## Best practices in learning from home

Research concludes that across large samples, there are no significant differences between students’ academic achievement when learning at a distance compared with learning face-to-face (Simonson et al., 2011). Moreover, many good face-to-face strategies can and should be adapted for fully online learners, including:

* clear and explicit instruction, including guidelines for interaction, appropriate deadlines, and clear structure and guidance in all tasks, and communication of high expectations
* purposefully integrating discussion, collaboration, cooperation, and interdependency
* encouraging diverse opinions and viewpoints on relevant, real-world topics and creative, divergent thinking
* giving students ample opportunities to present their ideas to others
* providing both written and verbal feedback that acknowledges students’ efforts and helps them improve through multiple communication channels
* ensuring that all tasks are challenging and meaningful
* allowing students to choose topics wherever possible
* making frequent links between the topic studied and real-life
* incorporating activities for students to develop psychological connections to one another
* provide opportunities for open-ended, learner-led inquiry

(Adapted from Hung et al., 2015; Simonson et al., 2011).

### What makes a home learner successful?

Research also reveals a set of conditions around what a home learner needs to be in order to learn successfully. Successful learners are more likely to have intrinsic motivation, be capable of learning independently, exercise good time management skills, have a high degree of self-efficacy and strong locus of control, practise a growth mindset, and be comfortable with online connections (Hart, 2012; Simonson et al., 2011). Wherever possible, students should be supported and encouraged to develop these skills and dispositions.

What about the role that a student’s school plays in their success as distance learners? Research suggests that the following school-based factors are key to successful distance learning:

* committing the time and money needed to transition and deliver online lessons
* working strategically with colleagues who might be resistant to change
* having a shared vision for home learning across the school
* allocating support staff to help with course development and delivery
* having incentives for teachers and learners to succeed with learning from home
* supporting teachers to keep up with technological changes
* having adequate technology infrastructure

(Adapted from Hung et al., 2015; Simonson et al., 2011; Valai et al., 2019)

When learning from home is successful, findings show that students readily “report feeling more connected to the online experience, report higher levels of satisfaction, continue to be motivated to engage, and are more successful in group and individual work” (Watts, 2016, p. 31).

### What are the most important themes from the research that educators should consider when transitioning to learning from home?

Several themes from the research reveal important considerations with regards to provisions and practices that can be implemented to improve learning outcomes and the learner experience.

#### Theme 1: social presence

Across a huge body of research, research has shown that strong social presence is one of the best predictors of high-quality distance learning (Chen et al., 2015; Hung et al., 2015; Valai et al., 2019; Watts, 2016). Chen, Fang, and Lockee (2015) identify three main areas of social presence that distance educators need to develop: (1) intimacy —the feeling of connection with others; (2) immediacy — psychological closeness in communication; and (3) interactivity — the dependency between the actions of individuals. As the authors explain, “at its lowest degree, social presence simply means being there, and at its highest degree, social presence represents mutual dependent behavioural interaction” (p. 1802). According to the research findings, the following practices support strong social presence in the distance learning classroom:

* communication with students through multiple real-time channels;
* embedding relationship-building activities;
* allowing for social interaction outside of class time;
* having teacher presence in several forms — for example, through announcements, emails, discussion comments, and video;
* actively and regularly engaging with students;
* providing clear structure while allowing for independent and creative thought;
* asking divergent questions; and
* making jokes.

(Adapted from Chen et al., 2015; Hung et al., 2015; Watts, 2016).

#### Theme 2: student persistence

Persistence represents the learner’s capacity to maintain effort to the point where they complete and succeed with the intended learning. Across the literature, there are several well-documented key factors known to affect levels of student persistence when learning from home, including a sense of belonging to the learning community, motivation, peer and family support, time management skills, and increased communication with the instructor. To support learners to persist in distance learning settings, Hart (2012) recommends that online teachers practise flexibility, set realistic expectations about workload, establish goals, integrate asynchronous activities to support learners outside of formal class time, provide feedback that is constructive and adds meaningful input into learning, and engage in clear and unambiguous communication.
Theme 3: The role of gender

Perkowski’s (2013) meta-analysis of 18 empirical studies suggests that gender is an often-overlooked factor. Paired with historical research that shows, on average, lower levels of female participation in the classroom, the author finds that female students tend to outperform male students in fully online learning settings, citing the relative anonymity of online discussions, additional time available to formulate responses, and the ability to consult other resources to make informed, intelligent responses. Given that gender has a significant effect on both online learner self-efficacy and academic performance, there is clearly a need for gender-based inclusivity and gender relevance in the design and delivery of distance learning lessons.

#### Theme 4: the learner’s perspective

The profile of the distance learner has changed in recent years from being mostly adult, employed, goal oriented and intrinsically motivated to one that is younger, dynamic, and responsive to rapid technological innovations (Valai et al., 2019, p. 16). At the same time, recent research has begun to explore the perspectives these learners hold in relation to distance learning. The research shows that learners perceive four main areas of the distance learning experience to be most important:

1. Course design — how the course content connects with prior knowledge and the need to have strong teacher presence and involvement in the delivery of the course content.
2. Interaction — necessary for creating strong interpersonal connections, with teacher-learner interactions the best predictor of a quality online learning experience.
3. Support — both physical support (for example, access to library resources) and non-physical support (for example, high quality feedback) .
4. Technology use — the need for technology tools to be pedagogically integrated and purposefully employed.

#### Theme 5: The balance between synchronous and asynchronous interaction

Across the research, there continues to be strong support for both synchronous (occurring in real time) and asynchronous (not occurring at the same time) forms of interaction. Watt’s (2016) review shows that asynchronous interactions “allow students to take time to consider their thoughts, engage with the content more deeply, feel a part of the learning community, and post more reflective comments in discussion boards” (p. 27). On the other hand, students rate synchronous interaction positively “because of instantaneous feedback, being able to see their classmates, and because they report feeling more engaged in the online experience” (p. 27)

### Conclusion

The research reported in this summary aims to help educators understand the key themes, factors, and contextual constraints that continue to them as they support their students learning at home. Although earlier thinking may have viewed such learning as an inferior, the findings reported here show that it is simply another form of learning that is not inherently better or worse than face-to-face learning. Issues related to the learner characteristics, institutional constraints, and organisational change can and do impact on successful outcomes. Educators can and should, therefore, learn from the successes and mistakes of the past while embracing the brave future of online learning with open arms.

## References

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