Design Principles for K–12 Online Learning:

Shared Learnings From 3 Years of Conversations With Canadian K–12 Educators

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WHO WE TALKED WITH

Phase 1: Design Principles for K-12 Online Learning BC Study (2020/21)

► Surveys N=260 respondents; Design Conversations N=22

Phase 2: Design Principles for K-12 Online Learning: National Validation Study (2021/2022)

► Surveys N=58

Phase 3: Design Principles for K-12 Online Learning Expanded BC Study (2022/2023)

► 38 Survey participants; 20 Design Conversations

WHAT PARTICIPANTS DID

► Co-generated design principles for K-12 online learning

► Collaboratively commented on contributions of fellow educators across Canada

► Considered national feedback and suggested revisions to the design principles

► Discussed relevance & ways forward in their practice

KEY FINDINGS

► The design principles provide a framework for effective practice & reflect real world processes.

► 71% taught themselves how to teach online.

► 50% received no formal training to teach online.

► 29% felt the DP would help them do their work more effectively.

► Educators want to connect, share, and learn together as their iterate their online practice.

► Online learning offers a new pedagogy and approach that can inform bricks and mortar educational settings.

► Teacher education programs offer little to support online educators in their work.

► The job of the K-12 educator is increasingly complex.

► Increases in anxiety & mental health issues in the school community requires more communication & support.

► Access to appropriate technologies & an increased level of digital literacy is necessary in the contemporary K-12 setting.

FASCINATING FACTS

► Most educators identified as expert or distinguished teachers (Steffy et al., 2002) career stages

► Over 60% of educators specifically applied to teach online

► Relationships, care, and connection with students, parents and educators are at the heart of good online learning

The design principles "are reflective of real-world processes, it encourages active formative assessment and self-reflection, it accurately embodies the spirit of revision and continuous improvement" (Participant 2023)

WHAT THE SHARED LEARNINGS WERE USED FOR

► Creation of initial design principles created by study participants Phase 1: Initial BC study

► Validation of initial design principles – Phase 2: National Study and creation of National design principles

► Expansion of BC study – Phase 2: design principles revisited and stories of implementation shared

DESIGN PRINCIPLES (DP) FOR K–12 ONLINE LEARNING

DP *"represent the accumulated wisdom of researchers and practitioners" (*https://www.interaction-design.org/literature/topics/design-principles*).*

Principle 1 – Educators require **access to models** of effective online teaching and learning and a repository of open, curated resources to support their practice.

Principle 2 - Educators require ongoing, timely and relevant **professional learning opportunities** and supports that (1) model effective online teaching and learning design principles and (2) are fostered and honed through the development of supportive and flexible learning communities that reflect educators' career cycles and contexts.

Principle 3 - Educators, families, and the school community require a deep understanding of the importance of various forms of **engagement**, including how to foster it in learning, teaching, and educational resources.

Principle 4 - Educators and families require a deep understanding of ways to enhance **relationships and foster connection** and relatedness with students in academic, intellectual, creative, and social activities.

Principle 5 – Educators require support in understanding that (1) technologies are the enablers of online teaching and learning and (2) **the technologies support, not dictate**, effective teaching and learning.

Principle 6 – Educators require **intentional professional preparation** specific to online teaching and learning in post-secondary degree, certificate, and micro-credential programs that is supported by formal, intentional mentorship programs throughout the educator career cycle.

Principle 7 - Educators require ongoing **strategic research** specific to teaching and learning online to inform both practice and policy and contribute to the field of study.

Principle 8 - Educators and the entire school community require a system-level **focus on health, wellness, and well-being** specific to teaching and learning online.

RECOMMENDATIONS:

► Use the eight design principles as a framework to review and inform K-12 jurisdictions as well as post-secondary teacher and graduate education programs.
  - SD embrace principles and contextually adopt them and make them their own.
  - BCTC incorporate the design principles into teacher regulation standards for certification in B.C.

► Create a curated, national shared collection that showcases Canadian models and examples of a variety of ways to use the online environment in teaching and learning.

► Create an online community of practice for K-12 online educators that recognizes time constraints and needs, allowing for the creation of a safe and timely way to learn from one another and see what design principles could look like in practice.

► Offer professional learning opportunities that are timely and reflect the career cycles, experiences, specific needs, and the projected shortfall of K-12 educators in the near-term.
  - Create a mentorship model that supports K-12 online educators and addresses the concerns of wellness, burn out, ergonomics, and stress.

► Promote quality online learning and celebrating the role it plays in many learners' education by engaging with education leaders to guide the determination of quality teaching and learning to help shape teacher preparation and professional development.
  - Leverage the national conversation of K-12 online learning to affect change in the design and delivery of undergraduate education, diploma, and micro-credential programs to recognize the changing work environment of a K-12 educator.

► Engaging those with leadership and certification responsibilities in Canadian education to adopt these principles as a way preparing K-12 teachers to be responsive to changes and to be a position to respond rather than react to emerging pressures and a changing nature of the work of a K-12 educator in Canada.

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