

# Designing Online Professional Learning to Support In-Service and Preservice Teachers Adapting to Emergency Remote Teaching

Maya Anderson, Alison Turner, & Barbara Brown

DOI:10.51869/103/maatbb

Professional Learning

COVID-19

Online Teaching

Collaborative Learning

Preservice Teachers

In-service Teachers



*Service-learning partners, including a faculty of education and local school district, engaged in collaborative inquiry to support in-service and preservice teachers who were engaged in emergency remote teaching during a time of crisis and school disruption. This article illustrates how service-learning partners designed a professional learning series in an online learning environment to support in-service and preservice teachers adapting to teaching online. This article shares the instructional design process used to develop the series, insights about how the participants responded during the sessions, and a set of recommendations to inform design teams involved in developing professional learning or other types of non-formal learning opportunities for teachers.*

## Introduction

In March 2020, like other jurisdictions around the globe aiming to contain the spread of COVID-19, the Alberta Education Ministry in Canada mandated the closure of all school buildings and a shift to online learning for K-12. In a measure to keep students and communities safe, all students and teachers were expected to stay home for the remainder of the school year, with schools providing online learning described as emergency remote learning (Hodges et al., 2020). As the pandemic progressed, schools were permitted to reopen; however, many school boards opted to offer online learning options in conjunction with face-to-face learning. This required in-service teachers (practicing and experienced teachers) and preservice teachers (beginning teachers also referred to as student-teachers) to adapt to emergency remote teaching using different modalities and a range of digital tools. As to be expected, the complexities of this situation caused considerable stress for teachers and those supporting teachers. A survey of 1,600 Alberta teachers found high levels of fatigue, stress, and anxiety (i.e., 94%, 95%, and 81% reporting these conditions, respectively) (Alberta

Teachers' Association [ATA], 2020). Increased workload and an increased need for professional learning were cited as concerns for online teachers (ATA, 2020).

Long-standing service-learning partners, a faculty of education and a local school district engaged in a collaborative inquiry (Fullan & Hargreaves, 2016) to support in-service and preservice teachers required to adapt to emergency remote teaching. Utilizing a backward design approach (Mazur, 2018; Wiggins & McTighe, 2005), initial conversations among the partners related to the context and complexities facing teachers quickly adapting to teaching online. Service-learning partners speculated, teachers new to online teaching could benefit from additional support to design and deliver inclusive and engaging learning experiences for online learners, both synchronously and asynchronously. Timperley (2011) and Fullan (2006) argue schools need to learn from each other and collaboratively apply their learning within their regular practice. Hence, the service-learning partners decided to form a design team and involve a graduate student in the faculty of education with expertise in online teaching. Together, the partners and graduate students designed a professional learning intervention with a series of five hour-long interconnected professional learning sessions for in-service and preservice teachers delivered online through web conferencing (i.e., Zoom).

This article shares our instructional design process for other design teams to modify or adapt the strategies to support in-service and/or preservice teachers with learning about online teaching. As demand for online learning continues to grow (Donovan et al., 2019; Johnson, 2019; Morris et al., 2020), our experiences from this service-learning partnership also benefit those involved in designing or conducting research on professional learning interventions to support and advance online teaching and learning. The next section provides an overview of the literature that situates the professional learning intervention as a form of non-formal learning.

## Literature Review

Formal learning is defined as an organized and structured learning experience, such as learning that occurs during credit-bearing postsecondary programs or non-credit-bearing workplace training required by an employer (Oliver, 2019; Organisation for Economic Co-operation and Development [OECD], n.d.). Some authors suggest formal learning is that which is externally determined, teacher initiated and led, time restricted, and provided by an educational institution (Greenhow & Lewin, 2016). Formal learning is also described as learners guided through a formal set of learning goals and objectives selected by an external authority (Greenhow & Lewin, 2016). Examples of such learning include preservice teachers participating in education courses facilitated by university instructors and guided by learning objectives set out by the university and other governing bodies leading to a degree in education. Similarly, in-service teachers engage in formal learning programs that lead to certification in particular topics guided by external bodies or graduate programs at universities leading to a graduate degree in their chosen topic.

The construct of *non-formal* learning is defined as "an addition, alternative and/or complement to formal education within the process of lifelong learning of individuals" (Oliver, 2019, p. 18). By contrast, *non-formal* learning is not organized, not institutionalized, and not regulated by a set of intended learning outcomes (OECD, n.d.; Oliver, 2019). Some authors refer to non-formal learning as asynchronous, self-directed activities (Prestridge et al., 2021) where the learner determines their own goals. This type of learning is characterized as exploratory, spontaneous, and learner controlled (Greenhow & Lewin, 2016). We posit that although this learning is typically controlled or led by the learner, non-formal learning also occurs in formal learning settings where learner-learner interaction is fostered, and learners are encouraged to share resources, experiences, and ideas (Bolliger & Martin, 2018). Formal learning has been discussed as a conduit to non-formal learning, suggesting that the foundational knowledge gained in non-formal learning settings, such as workshops and seminars, may lead to self-directed follow-up of the individual to closely examine a topic and at the same time share their newfound knowledge with others (Bednall & Sanders, 2017). Additionally, it is important to note learning can be simultaneously formal and non-formal, with non-formal learning practices such as social media and discussion boards introduced into formal learning settings (Greenhow & Lewin, 2016). The blurring of lines between the two types of learning is becoming more commonplace with the increase in participatory digital cultures (i.e., Twitter, Facebook, Instagram, TikTok, and YouTube) being utilized as non-formal learning settings (Ito et al., 2013). In many ways, this connected learning (Ito et al., 2013) bridges the gap between

formal and non-formal learning, providing students the opportunity to exercise autonomy in what and how they continue prescribed learning in formal settings.

Formal and non-formal learning is also visualized as opposites on a continuum with: non-formal at one end, described as not organized, unstructured or unintentional; formal at the other end, described as organized, structured, and intentional; and non-formal at the midpoint, two described as organized with learning objectives (OECD, n.d.). In this article, the professional learning intervention for in-service and preservice teachers is situated midway on the continuum, given it is intentional with a set objective, occurs outside of a learning environment in a degree program, and is referred to as non-formal or professional learning. Many examples exist of the value and benefits of preservice teachers engaging in such non-formal learning opportunities (Beck et al., 2020; Brown et al., 2020). Regarding in-service teachers, several studies explore non-formal learning through professional development, including patterns of engagement and interaction among language teachers in online learning (Pawan et al., 2003), extending professional development through online learning communities such as the INSPIRE program (Liu et al., 2009), comparing formal and non-formal learning in face-to-face versus online formats (Levenberg & Caspi, 2010), and the growth of online teacher professional development (Lay et al., 2020). Although there is considerable research on non-formal learning for preservice teachers as well as professional learning for in-service teachers, there is limited literature about designing non-formal, professional learning for both in-service and preservice teachers in an online learning environment.

We use the term “professional learning” interchangeably with “non-formal learning” and describe this as organized and intentional learning that takes place outside of class time or the workplace. Online professional learning for teachers has seen a steady increase, due, most notably, to the COVID-19 pandemic (Hartshorne et al., 2020), with the focus on supporting teachers on how to teach in an online learning environment (Ferdig et al., 2020). Designing and implementing high-quality online learning, teacher support, and training is crucial (Greenhow et al., 2020) to the success of students and teachers during this crisis. The rationale for providing online professional learning (i.e, just-in-time support to teachers in a precarious situation of adapting to emergency remote teaching with limited experience) was necessitated by the ever-changing requirements of social distancing (Lay et al., 2020). There are, however, additional perceived benefits of facilitating professional learning through online platforms. Researchers cite the growth of online professional learning as being related to improved access, flexibility in scheduling and location, networking possibilities, and lower costs (Lay et al., 2020). Additionally, online options for professional learning are of great value because they can utilize resources not readily available locally or nationally (Brooks & Gibson, 2012; Stevens & Frazelle, 2016). Furthermore, online learning formats provide the opportunity to engage participants both synchronously and asynchronously, thus encouraging the development of an ongoing professional learning community that practices inquiry, innovation, and exploration (Admiraal et al., 2019).

The examination of the literature noted a scarcity of literature on non-formal learning designed for both in-service and preservice teachers. The aim is to contribute to this growing field by sharing our reflections on designing online professional learning for novice and practicing teachers. By describing the design process as well as perceptions of how the participants responded during the sessions, we endeavored to provide insights into this complex and unique design challenge.

## **Collaborative Inquiry**

Collaborative inquiry is used by educators for professional learning and school improvement efforts (Donohoo, 2013). School-university partnerships using collaborative inquiry for codesigning teacher professional learning and examining new pedagogical approaches demonstrate promising results (Cantalini-Williams et al., 2015; Harris & Klenowski, 2017). We used Donohoo’s (2013) four-frame model to guide the process of our collaborative inquiry: framing the problem, collecting evidence, analyzing evidence, and documenting (see Table 1). During the first phase of framing the problem, we determined a collaborative inquiry approach to designing the professional learning series could help teachers (both in-service and preservice) with learning how to teach online. In the second phase, as service-learning partners and members of the design team, we maintained field notes during meetings and throughout the professional learning series to document design and perceptions during the sessions to inform collaborative inquiry. We also administered

exit tasks at the end of the sessions to help inform the design of the following session. In the third phase of analysis, we reviewed the design of the professional learning series and during debriefs, we discussed our reflections. We gained a deeper understanding of current learning needs, which, in turn, led to the design of subsequent sessions in the professional learning series. As a team engaging in collaborative inquiry, during the fourth phase, we reviewed the documentation and refined our collective insights about the design including our perceptions of how the participants responded during the professional learning series.

**Table 1**

*Process for Collaborative Inquiry*

<b>Collaborative Inquiry Phase</b>	<b>Activity</b>
1. Framing the problem	The design team came together to determine the need of providing professional learning to support both in-service and preservice teachers as they were required to adapt to emergency remote teaching. Ideas for potential topics were discussed based on the perceived needs of online teachers.
2. Collecting evidence	The design team kept detailed notes during the design meetings and the professional learning sessions. Additionally, exit tasks were administered in the sessions to determine the congruency between perceived and actual needs.
3. Analyzing evidence	After each session, the design team met to reflect upon how the participants responded to the sessions. These reflections allowed the team to revisit the initial designs and make modifications for further sessions to better meet the needs of the participants.
4. Documenting	At the end of the professional learning series, the design team came together to review our documentation. Through this, we refined our collective insights about the design as well as our perceptions of how the participants responded during the professional learning series.

## Professional Learning Design

The professional learning series was based on the backward design approach (Mazur, 2018; Wiggins & McTighe, 2005). The backward design approach is grounded in constructivist learning theory and often characterized by the following three parts: (a) identifying and clarifying desired results, (b) determining acceptable evidence and multiple means of expression and representation, and (c) planning accessible learning experiences and instruction with attention to pre-instructional decisions (Mazur, 2018; Wiggins & McTighe, 2005). This model is a proven design approach that is frequently used by instructional designers (Bond & Dirkin, 2020).

The backward design approach not only guided the design of the series, but also informed the sequence of the sessions. We aimed to support teachers with limited experience in online pedagogies. Designing the pathway of the sessions coincided with the backward design approach (see Table 2). First, we started the series with identifying and clarifying results and used the Universal Design for Learning (UDL) principles (CAST, 2018b) to make online learning accessible and inclusive for all learners. Second, we determined acceptable evidence and incorporated multiple means of expression and representation through digital choice board creation and design. We discussed what constituted evidence of learning. The sessions did not have formal certifications associated with them. Therefore, we explored the practical application of the skills and strategies presented in the sessions as the goal of the learning process. Utilizing the backward design approach, conscious of the goal of providing immediate support to teachers, we focused on providing opportunities for participants to apply and transfer learning into authentic teaching contexts (Hicks & Bose, 2019). Third, we focused on accessible learning experiences, engagement strategies, and social-emotional learning in online learning. Additionally, we scaffolded the learning to support the differing needs of both in-service and preservice teachers (Korhonen et al., 2019).

**Table 2**

*Roadmap for Professional Learning Sessions*

<b>Backward Design</b>		
<b>Parts</b>	<b>Sessions</b>	<b>Content Overview</b>
Part 1: Identifying and clarifying desired results	Session 1: How might I use the UDL principles to design online learning that is accessible, inclusive, and engaging for all learners?	<ul style="list-style-type: none"> <li>• Introduction to UDL principles</li> <li>• Barriers in online learning</li> <li>• Strategies for asynchronous and synchronous sessions</li> </ul>
Part 2: Determine acceptable evidence	Session 2: How might I use choice boards in online learning to increase student engagement in learning assessments?	<ul style="list-style-type: none"> <li>• Literature related to digital choice boards</li> <li>• Examples of digital choice boards</li> <li>• How to create a digital choice board</li> </ul>
	Session 3: How might I design the content for choice boards?	<ul style="list-style-type: none"> <li>• Understanding by Design framework (Wiggins &amp; McTighe, 2005)</li> <li>• 21st-century learning skills outlined by Alberta Education (2011) and incorporation into choice board designs</li> </ul>
Part 3: Plan learning experiences and instruction	Session 4: How might I design online learning to encourage student engagement?	<ul style="list-style-type: none"> <li>• Engagement strategies</li> <li>• Fostering relationships and supportive learning communities (e.g., icebreakers, whole group tasks, and exit activities)</li> </ul>
	Session 5: How might I design online learning to encourage social-emotional development to support student mental health and well-being?	<ul style="list-style-type: none"> <li>• Social, and emotional learning: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Collaborative for Academic, Social, and Emotional Learning, 2020).</li> </ul>

Another consideration while designing the series was the need for practical strategies that could be utilized by participants immediately. We aimed to design a professional learning series that was responsive and would provide just-in-time support for participants (Greenhalgh & Koehler, 2017). Though practicality was at the forefront of the design, we were also cognizant of the need to provide less experienced participants with foundational knowledge of the topics. Balancing the need for building a knowledge base and making learning meaningful while designing for learners with varied experience levels posed a unique design challenge. To mitigate this problem, we started each session with an entry task that posed a question to allow participants to consider their experiences and prior knowledge. We also incorporated reflection activities throughout the sessions to allow participants to share insights with one another and engage in reflection about personal expertise and experiences with online learning. The learning design for the sessions was similar for the preservice and in-service teachers: following a similar pattern of exploring the evidence base; presenting different methods for incorporating online learning; and encouraging personal reflection. The sessions incorporated an overview of online learning from an evidence-based perspective, as well as instruction and exploration of how in-service or preservice teachers might utilize online learning concepts with online learners. The sessions utilized experiential and active learning approaches to model tools and techniques useful for teachers when teaching online. For more detail about the five sessions and the tools used in the professional learning series, see Appendix A.

## Insights and Impressions

The sessions in the professional learning series involved 60 in-service teachers, 253 preservice teachers, and several faculty members. In this section, we report insights and impressions from our field notes about how the in-service and preservice teachers responded to the learning design of the sessions. Even though the professional learning design for in-service teachers was the same as the one designed for preservice teachers, we noticed the ways participants responded to the designs differed, particularly in the types of questions asked throughout the sessions.

We noted the questions preservice teachers asked during the sessions were related to pedagogical approaches. Preservice teachers appeared interested in learning more about how a strategy or tool could be used across different grade levels because many were uncertain as to which grade level they might be teaching in the future. Queries about how to facilitate discussions or facilitate collaboration for different age groups, how to best modify an activity for different levels, and how to differentiate tasks were asked by the preservice teachers. Other questions included whether the strategies presented could be utilized in either online or face-face learning because some participants were uncertain if they would be teaching in an online or a face-to-face scenario. Preservice teachers also asked if we could provide certificates of attendance to add to their teaching portfolios. Furthermore, preservice teachers requested

additional resources to add to their teaching toolkits: book lists; citations; and online tutorials. Preservice teachers approached these sessions as a means to gain knowledge to apply to future teaching scenarios.

In contrast, in-service teachers focused less on the pedagogical approaches and favored discussions about the practicality of the tools or strategies being presented. As in-service teachers had a robust understanding of the rationale behind utilizing different pedagogical approaches, and at the same time were figuring out how to transfer face-to-face learning to an online learning scenario, their questions centered around logistical and technical aspects. Questions such as what to do when students do not turn on their cameras during online classes and how to ensure students remain engaged in sessions were at the forefront of the discussion. Questions were also about technology integration and how, for example, to embed choice boards into the learning management system for students to see the presentation view and interact immediately. There were questions about using technology to foster collaboration and how to move students into breakout spaces while ensuring they stay on task and return to the main room when asked. In many ways, in-service teachers used these sessions to examine scenarios from their classrooms and framed their questions about specific situations to receive feedback about their learning design choices.

Queries related to the professional learning sessions were also noted by the district partner following the sessions. For example, in-service teachers asked the district partner practical questions about creating choice boards to support self-directed learning pathways and as a way to provide options for students to demonstrate their learning. Some teachers expressed once they became more comfortable teaching online, they could focus on their questions about incorporating ideas from the professional learning series. It is possible that non-formal learning for experienced teachers accompanied by coaching provided by the school district benefits teachers well past the initial professional learning sessions. This allows coaches to continue responding to questions and supporting online teaching and learning.

A few faculty members also attended the professional learning series alongside the preservice teachers. We noted that instructors in higher education asked questions about the ways to adapt some strategies for their classes with preservice teachers. In much the same way as the in-service teachers, postsecondary instructors asked questions related to scenarios from their classes. Their queries related to how to enact the strategies for an adult audience while modeling strategies and techniques their students could use with K-12 students. When reflecting on the sessions, we noted that it helped to have participants in the sessions with a range of teaching experiences to provide scenarios from their practice and deepen the inquiry by asking different types of questions.

Each of the sessions included time for small groups to convene in breakout rooms. We noticed in both the in-service and preservice groups, the participants remained for the duration of the hour-long sessions, including the breakout room segments. When groups returned from the breakout rooms, one or more of the group members shared insights or questions with the larger group. The participants asked a range of pedagogical and practical questions during these non-formal learning sessions, and the design team benefitted from reflecting on the types of questions to continually inform the evolving design of the sessions.

## **Discussion**

Designing professional learning experiences as part of a collaborative design team involving service-learning partners from the university and a school district and using a backward design approach was valuable for supporting both in-service and preservice teachers. Generally, designing sessions was similar for in-service and preservice teachers. In observations, we noted the types of questions generally asked by the in-service teachers were practical, and questions asked by pre-service groups were pedagogical. We speculate this was related to their teaching experiences. A design team with a broad range of educational experiences, along with participants themselves, help with responding to different types of questions asked during the sessions. The professional learning series attracted the intended audiences of in-service and preservice teachers and included a few faculty members who teach courses in undergraduate programs. Future professional learning sessions could be offered to a broader audience combining in-service and preservice teachers with postsecondary instructors. We suggest deepening the community of knowledge

increases the likelihood of developing a collaborative learning community (Chatterjee & Correia, 2020) because collaborative learning promotes higher levels of engagement and fosters deeper relationships within the participant groups (Bergmark, 2020).

Professional learning has the potential to inform the design of formal programs. From a program perspective, the design team noted that the professional learning series, although a non-formal program, helped inform the development of a new course designed for preservice teachers focused on digital pedagogies (Brown et al., 2020). Arguably, the design and observations made during the sessions designed for in-service and preservice teachers contributed to and informed new program development related to online teaching at the faculty of education. Likewise, the design of the professional learning and responses of the participants can also contribute to future designs of non-formal learning programs. Preservice teachers prompted thinking about incorporating ways to recognize participants for enrolling and participating in the professional learning series. The design team is currently considering the use of micro-credentials in the form of badges in future series to provide participants with recognition for involvement in professional learning (Ralston, 2021).

One limitation of this report is that descriptions of the design process and insights about non-formal learning are based on our experiences as a design team and our reflections from designing and participating in the sessions. Further studies could be conducted to continue to improve the design of this type of professional learning for teachers. Future studies could involve an in-depth examination of how in-service teachers, preservice teachers, and faculty enact and refine online pedagogies in classroom practice. Additionally, further studies could explore the efficacy and impact of the inclusion of in-service and preservice teachers, as well as post secondary instructors, in professional learning.

In reflecting on the professional learning series, we also noted the importance and value of collaborative instructional design (Brown et al., 2013). Engaging in collaborative inquiry with service-learning partners for instructional design of a professional learning series provided a greater understanding of designing for different contexts. A collaborative inquiry approach worked well for our design team with all of us located in non-proximal locations due to the pandemic and health restrictions (Mehlenbacher et al., 2018). Although in a lockdown scenario during our design phase, our team came together virtually to support teachers and contribute to instructional design of the professional learning series. For instructional designers, professional learning providers, and other educators involved in designing professional learning design with learning partners for multiple audiences such as in-service teachers, preservice teachers, graduate students, and faculty, we offer the following recommendations:



1. Begin from an empathetic perspective and look at how the needs of all potential participants intersect. We utilized the backward design framework as a guide for our process as well as the sessions themselves: (a) identifying and clarifying desired results, (b) determining acceptable evidence and multiple means of expression and representation, and (c) planning accessible learning experiences and instruction with attention to pre-instructional decisions (Mazur, 2018; Wiggins & McTighe, 2005). This provided us with a clear action plan that provided structure, clarity, and focus working together. We see this theoretical framework as one that could be used by other design teams engaging in a similar process.
2. Utilize digital technologies and resources (Brown et al., 2013) to support ongoing communication between all partners involved in the design team. Working remotely due to the COVID-19 pandemic, we embraced the use of digital and collaborative technologies to work within the design team and to support our continual communication, collaboration, and sharing of materials. We relied on shared online spaces that were readily available to all partners (e.g., Google Docs, Google Slides, Zoom, and email) to maintain ongoing communications for collaborative inquiry. Docs and Slides were used to develop course materials. Zoom and email were used to connect throughout the design process. We recognize other platforms can be used to support communication and collaboration. Effective collaboration relies on dialogue and discussion (Mehlenbacher et al., 2018), and shared online spaces allowed our design team to debrief and share insights virtually.
3. Learn from one another and celebrate diverse viewpoints. We engaged in a process that encouraged all members of the design team to learn from one another and contribute ideas. We came into this partnership with different experiences and throughout our collaborative inquiry, we maintained a level of respect for the knowledge and expertise each team member brought with them which allowed us to be co-producers of knowledge (Hill et al., 2019). Our design team members had a robust understanding of protocols for giving and receiving constructive feedback; however, for teams with less experience, we recommend having explicit discussions on how to debrief and provide feedback to maintain a dialectic and open process. We also valued the perspectives of the participants and provided space for questions to adapt the sessions to meet the needs of different audiences. Also, we learned participants were interested in recognition for participation in a professional learning series, and plan to consider developing a micro-credential badge in future.

## Conclusion

Professional learning opportunities are necessary for in-service and preservice teachers. We argue designing professional learning using a backward design approach proved valuable for service-learning partners from a university and school district. This approach helped our design team engage in collaborative inquiry while offering a professional learning series to experienced and beginning teachers adapting to emergency remote teaching. We also learned faculty members who teach preservice teachers were interested in participating in professional learning opportunities alongside their students. The questions asked by participants during the sessions provided additional information to tailor the design responsively to the different audiences in the sessions. As designers, we reflected on the participants' responses to the non-formal learning, and the pedagogical and practical questions asked. Observations and reflections were used to inform the development of future offerings and to provide a foundation for future study.

## Appendix A

### Session 1: Universal Design for Learning (UDL) Principles for Online Learning

UDL was presented as a framework for designing learning that meets the needs of the largest number of learners (La, Dyjur, & Bair, 2018). In the session, students were guided through a review of the principles of UDL as well as the rationale for using UDL to design learning material. The rationale for using UDL as the basis of learning design is the importance of emotional engagement in optimizing lifelong learning (Immordino-Yang, 2016), and the idea that when the three principles of UDL are used across all areas of learning design (course design, teaching practices, learning



experiences, and assessments) student success is greatly improved (Al-Azawei et al., 2016). Equally, UDL results in increased student engagement resulting from multiple entry points and levels of challenge which meets the diversity of students (La et al., 2018). After reviewing UDL and the rationale for using UDL as a framework, participants looked at the variety of barriers that present in online learning and explored ways to mitigate these barriers. Strategies for both asynchronous and synchronous sessions were outlined with a focus on the three aspects of UDL: engagement, representation, and actions and expression (CAST, 2018a). To synthesize the learning, participants spent time in breakout groups discussing a scenario and how they would use the UDL principles to address potential barriers contained in the scenario. Participants were encouraged to think about both asynchronous and synchronous strategies. The session closed with a request for participants to reflect on the session and record the most important takeaway in the chat box. The exit task responses were used for formative assessment for the instructor to evaluate which concepts were of most value to participants, and if any concepts needed to be revisited in the following session.

## Session 2: Creating Choice Boards for Online learning

The second session in the series introduced participants to the idea of incorporating choice in learning assessments. The first segment of the session provided a brief summary of the literature surrounding choice in learning from the perspectives of Parker et al. (2017). The researchers explain student motivation and engagement can be increased when students are given choice about the material they study, assessments they complete, and who they work with because this allows students to capitalize on their strengths and meet their learning needs. We discussed how student choice can be motivating when options are relevant to students' interests and goals, not too numerous and complex, and congruent with the values of students' culture (Katz & Assor, 2007). The second segment of the session was a hands-on tutorial. After participants had the opportunity to explore an exemplar created by the instructor, participants were guided through a step-by-step process for creating a digital choice board in Google Slides.

## Session 3: Creating Content for Choice Boards

The third session incorporated an introduction and review of the Understanding by Design framework (Wiggins & McTighe, 2005). Participants were encouraged to use this framework and think about designing learning choices from a backward design perspective (Wiggins & McTighe, 2005). Additionally, the concepts of utilizing learner preferences as well as 21st-century learning skills to design learning activities were highlighted. The learner preferences inventory developed by Alberta Education (2010) looked at preferences based on how individuals complete tasks. Options include working in groups, working alone with time to think, making and using pictures to learn, talking about new ideas and information, and moving and trying things out (Alberta Education, 2010). The 21st-century learning skills outlined by Alberta Education (2011) include critical thinking, problem-solving, innovation, communication, collaboration, self-directed learning, global awareness, civic engagement, information and media literacy, and financial and economic literacy. After a discussion of the key concepts, participants were given time in breakout groups to design and develop learning activities to fit each of the 21st-century learning skills, the learner preferences inventory, or both. The session closed with an invitation for participants to take their co-created list of activities and further develop these to complete their digital choice board from the previous session.

## Session 4: Student Engagement in Online Learning

The fourth session in the series focused on providing an overview of engagement strategies for use in synchronous sessions to encourage student participation and interaction with learning materials. Working from the definition of student engagement (i.e., both the effort and commitment that students expend in learning endeavors, Kahn et al., 2017), the workshop explored the idea of building relationships and supportive learning communities through the incorporation of various activities. Martin (2019) suggests building relationships with students in online learning is imperative as it increases engagement levels, satisfaction, and retention. Additionally, Jaggars and Xu (2016) posited students are more motivated to learn when they feel connected to their online course community. Building from these ideas, participants were introduced to numerous activities to use in synchronous sessions to encourage relationship building and connection. Activities included setting the scene, icebreakers, entry tasks, collaborative activities, whole group tasks, and exit activities. Setting the scene ideas included entry music, the use of waiting rooms, camera on/off

policies, and chat box protocols, and a discussion on teacher presence. Icebreakers included open-ended questions with no single correct answer. Entry/engage/hook tasks included topic and class trailers, three-question polls, and notice and wonder exercises. Collaborative activities included jigsaw and think, pair, share, and gallery walks with peer feedback in breakout spaces. Whole group tasks included opinion sharing, U-shaped discussions using Zoom whiteboards and Google Jamboards, and Kahoot! quizzes. Exit activities included the next steps in Google Jamboards, selecting a traffic light color, and writing a key idea as a tweet. The session culminated in a breakout session where participants discussed and chose the activities that they would use in their own sessions.

## Session 5: Social-Emotional Learning for Online Learning

The final session in the series focused on social-emotional learning and how in-service and preservice teachers incorporate it in online learning environments. This session began with an overview of this type of learning and its components: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Collaborative for Academic, Social, and Emotional Learning, 2020). Participants also discussed the rationale for incorporating social-emotional learning including the likelihood of more positive social behaviors, enhanced self-efficacy, confidence, persistence, and connection to learning, decreased emotional stress, and improved grades (Durlak et al., 2011). Following the foundational knowledge segment, participants engaged in three social-emotional learning activities: a feelings check-in using the Zoom whiteboard, an all-about-you drawing activity, and a “what’s in the tin” discovery activity. The session ended with a breakout activity where participants worked collaboratively to design an activity to use in their online learning environments. To maximize collaboration, participants were asked to share their activity in a shared Google slideshow to learn from one another.

## References

- Admiraal, W., Schenke, W., de Jong, L., Emmelot, Y., & Sligte, H. (2019). Schools as professional learning communities: What can schools do to support professional development of their teachers? *Professional Development in Education*, 47(4), 684-698. <https://doi.org/10.1080/19415257.2019.1665573>
- Al-Azawei, A., Serenelli, F., & Lundqvist, K. (2016). Universal design for learning (UDL): A content analysis of peer-reviewed journal papers from 2012 to 2015. *Journal of the Scholarship of Teaching and Learning*, 16(3), 39–56. <https://doi.org/10.14434/josotl.v16i3.19295>
- Alberta Education. (2010). *Making a difference: Meeting diverse learning needs with differentiated instruction*. [https://education.alberta.ca/media/384968/makingadifference\\_2010.pdf](https://education.alberta.ca/media/384968/makingadifference_2010.pdf)
- Alberta Education. (2011). *Framework for student learning: Competencies for engaged thinkers and ethical citizens with an entrepreneurial spirit*. <https://open.alberta.ca/publications/9780778596479>
- Alberta Teachers’ Association. (2020). *Seven key findings*. <https://www.teachers.ab.ca/SiteCollectionDocuments/ATA/News%20and%20Info/Issues/COVID-19/Infographic%20-%20ATAPandemicPulseSurvey2.pdf>
- Beck, J., Fowler, T., & Brown, B. (2020). Asynchronous professional learning: An online conference to connect pre-service and in-service teachers to current research. In R. E., Ferding, E., Baumgartner, R. Hartshorne, R., Kaplan-Rakowski & C. Mouza (Eds.), *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field* (pp. 565-567). Association for the Advancement of Computing in Education (AACE). <https://www.learntechlib.org/p/216903/>
- Bednall, T., & Sanders, K. (2017). Do opportunities for formal learning stimulate follow-up participation in non-formal learning? A three-wave study. *Human Resource Management*, 56(5), 803–820. <https://doi.org/10.1002/hrm.21800>

- Bergmark, U. (2020). Teachers' professional learning when building a research-based education: Context-specific, collaborative and teacher-driven professional development. *Professional Development in Education, Ahead-of-print*, 1-15. <https://doi.org/10.1080/19415257.2020.1827011>
- Bolliger, D., & Martin, F. (2018). Instructor and student perceptions of online student engagement strategies. *Distance Education*, 39(4), 568–583. <https://doi.org/10.1080/01587919.2018.1520041>
- Bond, J., & Dirkin, K. (2020). What models are instructional designers using today? *Journal of Applied Instructional Design*, 9(2). <https://doi.org/10.51869/92jbkd>
- Brooks, C., & Gibson, S. (2012). Professional learning in a digital age. *Canadian Journal of Learning and Technology*, 38(2), 1-17. <https://doi.org/10.21432/T2HS3Q>
- Brown, B., Burns, A., Kendrick, A., Kapoyannis, T., & Delaney, N. (2020). Adapting to changing K-12 contexts during COVID-19: Teacher education perspectives. In M. K. Barbour & R. LaBonte (Eds.), *Stories from the field: Voices of K-12 stakeholders during pandemic* (pp. 65–70). <https://sites.google.com/view/canelearn-ert/>
- Brown, B., Eaton, S. E., Jacobsen, M., Roy, S., & Friesen, S. (2013). Instructional design collaboration: A professional learning and growth experience. *Journal of Online Learning and Teaching*, 9(3). [https://jolt.merlot.org/vol9no3/brown\\_0913.htm](https://jolt.merlot.org/vol9no3/brown_0913.htm)
- Cantalini-Williams, M. T., Curtis, D., Eden-DeGasperis, K., Esposito, L., Guibert, J., Papp, H., & Roque, C. (2015). Exploring the benefits of a Collaborative Inquiry Team in Education (CITE) initiative to develop a research community and enhance student engagement. *Brock Education*, 25(1), Article 1. <https://doi.org/10.26522/brocked.v25i1.439>
- CAST. (2018a). *Optimize individual choice and autonomy* (version 2.2). <http://udlguidelines.cast.org/engagement/recruiting-interest/choice-autonomy>
- CAST. (2018b). *Universal Design for Learning guidelines* (version 2.2). <http://udlguidelines.cast.org>
- Chatterjee, R., & Correia, A. (2020). Online students' attitudes toward collaborative learning and sense of community. *American Journal of Distance Education*, 34(1), 53–68. <https://doi.org/10.1080/08923647.2020.1703479>
- Collaborative for Academic, Social, and Emotional Learning. (2020). *Evidence-based social and emotional learning programs: CASEL Criteria updates and rationale*. [https://casel.org/wp-content/uploads/2021/01/11\\_CASEL-Program-Criteria-Rationale.pdf](https://casel.org/wp-content/uploads/2021/01/11_CASEL-Program-Criteria-Rationale.pdf)
- Donohoo, J. (2013). *Collaborative inquiry for educators*. Thousand Oaks, CA: Corwin.
- Donovan, T., Bates, T., Seaman, J., Mayer, D., Martel, E., . . . Poulin, R. (2019). *Tracking online and distance education in Canadian universities and colleges: 2018*. [http://www.cdlnra-acrfi.ca/wp-content/uploads/2020/07/2018\\_national\\_en.pdf](http://www.cdlnra-acrfi.ca/wp-content/uploads/2020/07/2018_national_en.pdf)
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Ferdig, R. E., Baumgartner, E., Hartshorne, R., Kaplan-Rakowski, R., and Mouza, C. (Eds.). (2020). *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field*. Association for the Advancement of Computing in Education.
- Fullan, M. (2006). Leading professional learning: Think 'system' and not 'individual school' if the goal is to fundamentally change the culture of schools. *School Administrator*, 63(10), 10–15. Retrieved from <http://michaelfullan.ca/wp-content/uploads/2016/06/13396072310.pdf>
- Fullan, M., & Hargreaves, A. (2016). *Bringing the profession back in: Call to action*. Learning Forward.

- Greenhalgh, S., & Koehler, M. (2017). 28 days later: Twitter hashtags as “just in time” teacher professional development. *TechTrends*, 61, 273–281. <https://doi.org/10.1007/s11528-016-0142-4>
- Greenhow, C., & Lewin, C. (2016). Social media and education: Reconceptualizing the boundaries of formal and non-formal learning. *Learning, Media and Technology*, 41(1), 6–30. <https://doi.org/10.1080/17439884.2015.1064954>
- Greenhow, C., Lewin, C., & Staudt Willet, K. (2020). The educational response to Covid-19 across two countries: A critical examination of initial digital pedagogy adoption. *Technology, Pedagogy and Education*, 30(1), 7-25. <https://doi.org/10.1080/1475939X.2020.1866654>
- Harris, J., & Klenowski, V. (2017). *Using collaborative inquiry to improve student engagement and agency through innovative pedagogy*. SAGE Research Methods. <https://doi.org/10.4135/9781473992641>
- Hartshorne, R., Baumgartner, E., Kaplan-Rakowski, R., Mouza, C., & Ferdig, R. E. (2020). Special issue editorial: Preservice and inservice professional development during the COVID-19 pandemic. *Journal of Technology and Teacher Education*, 28(2), 137–147. <https://www.learntechlib.org/primary/p/216910/>
- Hicks, S., & Bose, D. (2019). Designing teacher preparation courses: Integrating mobile technology, program standards, and course outcomes. *TechTrends*, 63, 734–740. <https://doi.org/10.1007/s11528-019-00416-z>
- Hill, J., Thomas, C., & Brown, B. (2019). Research assistant as partner: Collective leadership to facilitate co-production. *International Journal for Students as Partners*, 3(2), 129–138. <https://doi.org/10.15173/ijsap.v3i2.3674>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Immordino-Yang, M. H. (2016). *Emotions, learning, and the brain: Exploring the educational implications of affective neuroscience* (1st ed.). W. W. Norton & Company.
- Ito, M., Gutiérrez, K., Livingstone, S., Penuel, B., Rhodes, J., Salen, K. . . . & Watkins, S. C. (2013). *Connected learning: An agenda for research and design*. Digital Media and Learning Research Hub. [https://dmlhub.net/wpcontent/uploads/files/Connected\\_Learning\\_report.pdf](https://dmlhub.net/wpcontent/uploads/files/Connected_Learning_report.pdf)
- Jaggars, S. S., & Xu, D. (2016). How do online course design features influence student performance? *Computers & Education*, 95, 270–284. <https://doi.org/10.1016/j.compedu.2016.01.014>
- Johnson, N. (2019). *Tracking online education in Canadian universities and colleges: National survey of online and digital learning 2019 national report*. [http://www.cdla-acrf.ca/wp-content/uploads/2020/07/2019\\_national\\_en.pdf](http://www.cdla-acrf.ca/wp-content/uploads/2020/07/2019_national_en.pdf)
- Kahn, P., Everington, L., Kelm, K., Reid, I., & Watkins, F. (2017). Understanding student engagement in online learning environments: The role of reflexivity. *Educational Technology Research and Development*, 65, 203–218. <https://doi.org/10.1007/s11423-016-9484-z>
- Katz, I., & Assor, A. (2007). When choice motivates and when it does not. *Educational Psychology Review*, 19, Article 429. <https://doi.org/10.1007/s10648-006-9027-y>
- Korhonen, A., Ruhaalahti, S., & Veerman, M. (2019). The online learning process and scaffolding in student teachers’ personal learning environments. *Education and Information Technologies*, 24, 755–779. <https://doi.org/10.1007/s10639-018-9793-4>
- La, H., Dyjur, P., & Bair, H. (2018). *Universal design for learning in higher education*. University of Calgary, Taylor Institute for Teaching and Learning.

- Lay, C., Allman, B., Cutri, M., & Kimmons, R. (2020, September 15). Examining a decade of research in online teacher professional development. *Frontiers in Education*. <https://doi.org/10.3389/educ.2020.573129>
- Levenberg, A., & Caspi, A. (2010). Comparing perceived formal and non-formal learning in face-to-face versus online environments. *Interdisciplinary Journal of E-Learning and Learning Objects*, 6(1), 323–332. <https://www.learntechlib.org/p/44790>
- Liu, W., Carr, R., & Strobel, J. (2009). Extending teacher professional development through an online learning community: A case study. *Journal of Educational Technology Development and Exchange*, 2(1), Article 7, 99-112. <https://doi.org/10.18785/jetde.0201.07>
- Martin, J. (2019). Building relationships and increasing engagement in virtual classroom: Practical tools for the online instructor. *Journal of Educators Online*, 16(1). [https://www.thejeo.com/archive/2019\\_16\\_1/martin](https://www.thejeo.com/archive/2019_16_1/martin)
- Mazur, R. (2018). Backward design. In B. B. Frey (Ed.), *The SAGE encyclopedia of educational research, measurement, and evaluation* (pp. 164–168). SAGE.
- McTighe, J., & Brown, P. (2020). Standards are not curriculum: Using understanding by design to make the standards come alive. *Science and Children*, 58(1), 76-81. <https://www.nsta.org/science-and-children/science-and-children-septemberoctober-2020/standards-are-not-curriculum>
- Mehlenbacher, B., Kelly, A., Kampe, C., & Kittle Autry, M. (2018). Instructional design for online learning environments and the problem of collaboration in the cloud. *Journal of Technical Writing and Communication*, 48(2), 199–221. <https://doi.org/10.1177/0047281616679112>
- Morris, N. P., Ivancheva, M., Coop, T., Mogliacci, R., & Swinnerton, B. (2020). Negotiating growth of online education in higher education. *International Journal of Education Technology in Higher Education*, 17, 1-16. <https://doi.org/10.1186/s41239-020-00227-w>
- Oliver, B. (2019). *Making micro-credentials work for learners, employers and providers*. <https://dteach.deakin.edu.au/wp-content/uploads/sites/103/2019/08/Making-micro-credentials-work-Oliver-Deakin-2019-full-report.pdf>
- Organisation for Economic Co-operation and Development. (n.d.). *Recognition of non-formal and non-formal learning – home*. <https://www.oecd.org/education/skills-beyond-school/recognitionofnon-formalandnon-formallearning-home.htm>
- Parker, F., Novak, J., & Bartell, T. (2017). To engage students, give them meaningful choices in the classroom. *Phi Delta Kappan*, 99(2), 37–41. <https://kappanonline.org/engage-students-give-meaningful-choices-classroom/>
- Pawan, F., Paulus, T., Yalcin, S., & Chang, C. (2003). Online learning: Patterns of engagement and interaction among in-service teachers. *Language Learning and Technology*, 7(3), 119–140. <https://doi.org/10.125/25217>
- Prestridge, S., Jacobsen, M., Mulla, S., Gudiño Paredes, S., & Charania, A. (2021). New alignments for the digital age: Insights into connected learning. *Educational Technology Research and Development*, 1-16. <https://doi.org/10.1007/s11423-021-09968-5>
- Ralston, S. J. (2021). Higher education's micro credentialing craze: A postdigital-Deweyan critique. *Postdigital Science and Education*, 3, 83–101. <https://doi.org/10.1007/s42438-020-00121-8>
- Stevens, D., & Frazelle, S. (2016). *Online credit recovery: Enrollment and passing patterns in Montana Digital Academy courses* (REL 2016–139). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest. <http://ies.ed.gov/ncee/edlabs>

Timperley, H. (2011). *Realizing the power of professional learning*. Open University Press.

Wiggins, G. P., & McTighe, J. (2005). *Understanding by design* (2nd ed). Association for Supervision and Curriculum Development.



### Maya Anderson

University of Calgary

Maya Anderson is a graduate student at the Werklund School of Education at the University of Calgary and a middle school teacher at the Rocky View School Division. Her research interests include professional learning, supporting student mental health and well-being, and technology enhanced learning.



### Alison Turner

University of Calgary

Alison Turner has taught grades 5-12 and coaches and supports educators with Professional Development and facilitation of Professional Learning Communities. Currently, she is an Educational Technology and Program Specialist with the Rocky View School Division as well as a Sessional Instructor with the University of Calgary.



### Barbara Brown

University of Calgary

Dr. Barbara Brown is Associate Dean, Teaching and Learning and Associate Professor, Learning Sciences in the Werklund School of Education at the University of Calgary. Her research interests include research-practice partnerships, professional learning, and instructional design in digital learning environments.



This content is provided to you freely by EdTech Books.

Access it online or download it at [https://edtechbooks.org/jaid\\_10\\_3/designing\\_online\\_pro](https://edtechbooks.org/jaid_10_3/designing_online_pro).



