

# Teaching large classes online: Bringing many voices into the conversation

Véronique Brulé, Jennie Ferris, Jasmine Parent, and Marcy Slapcoff

## Abstract

The pivot to online teaching during the pandemic brought new challenges for instructors teaching large classes. In response to instructors' need for additional support with engaging students online, two educational development units collaboratively designed the Teaching Exchange. The Teaching Exchange was a virtual series of sessions on different topics where instructors teaching large classes (150+ students) could share their classroom experiences and instructional strategies with one another. We designed and facilitated the series in a way that was responsive to the pandemic circumstances and offered instructors an experience based around community and sharing teaching ideas, where they could contribute to and benefit from the discussion. The exchange drew 83 instructors from across nine faculties at our university. The Teaching Exchange brought together knowledge experts with diverse perspectives to create a space for rich dialogue about the complexities of teaching in higher education in what we have since characterized as a pop-up learning community. Recognizing the value of informal discussion among instructor peers, we describe our transferable process for fostering a cross-disciplinary learning community built on the exchange of practice-based experiences. There is potential to adapt this process to support instructors, whatever their class size and learning environment.

**Keywords:** cross-disciplinary, large classes, learning community, teaching online

Teaching large classes can involve specific course design challenges related to teaching strategies and assessment, which may be exacerbated when those classes take place online (Trammell & LaForge, 2017; Wilsman, 2013). We are educational developers and an educational technologist at Teaching and Learning Services and the Office for Science Education at McGill University in Canada. This project was supported by two graduate student assistants, one with a focus on educational development and the other with skills related to learning technologies. In 2021, we responded to large-class instructors' need for additional pedagogical support (Hubbard & Tallents, 2020) by developing a Teaching Exchange for instructors teaching large classes. Large classes were operationally defined as those with an enrollment of 150+ students, given that all classes with such enrollments remained online in Fall 2021. The Teaching Exchange's purpose was to foster a responsive cross-disciplinary community space in which instructors preparing to teach large undergraduate classes online during the pandemic-induced time of relative disconnection could connect with colleagues from different disciplines. Such connections could occur around topics of mutual interest and with a focus on community building in a low-stakes, low time-commitment setting that we came to refer to as a pop-up learning community. We approached the Teaching Exchange with an appreciation for what instructors were bringing to their teaching during a time when, in many cases, exhaustion was high and student engagement was low (Chronicle of Higher Education, 2020; Ghergel et al., 2023), to highlight what was working while acknowledging challenges.

In this article, we describe the form and function of the Teaching Exchange, how it was developed and why it was developed that way, and its content. Specifically, we highlight established practices of fostering environments in which instructors can talk about their teaching, and how we adopted these practices within an innovative structure—a pop-up learning community—to support instructors as fully as possible given the realities of the time. We begin by drawing on literature in three intersecting areas that informed the Teaching Exchange: (1)

faculty learning communities and communities of practice, (2) rapport-building and context, and (3) the specific challenge of teaching large classes online. We then share the design and implementation of the Teaching Exchange. This includes the formation of our team, the conceptual and practical design of the series and sessions, its framing as a pop-up learning community, and the facilitation approach we took when implementing the Teaching Exchange. Finally, we share reflections and recommendations from the Teaching Exchange that have since informed other initiatives. The Teaching Exchange approach has already been adapted within our university. This is partly given the “pop-up” nature of the Teaching Exchange—that is, its ease of delivery and the low-stakes and low time-commitment nature of the sessions. The Teaching Exchange is also a good candidate for adaptation given the level of instructor participation and opportunities it presents for cross-disciplinary capacity building in support of instructors’ teaching and students’ learning. The success of local adaptations on different topics and on smaller and larger scales leads us to believe that the approach would be transferable to other institutions.

## **Faculty Learning Communities and Communities of Practice**

Instructors value opportunities to share their teaching experiences and have expressed that they find cross-disciplinary discussion of shared teaching questions and challenges helpful (Supiano, 2017). We intended the Teaching Exchange as an opportunity for instructors to break pedagogical solitude (Shulman, 1993) through participation in cross-disciplinary, community discussions. In those discussions, instructors offered reflections and experiences and shared timely teaching strategies they had applied.

While gathering to discuss an idea of common interest or concern is virtually timeless, the literature on faculty learning communities (FLCs) and communities of practice (CoPs) as such has grown dramatically since the late 20<sup>th</sup> century. The idea of community is central to

both models—in name and implementation—and was likewise key to our facilitated Teaching Exchange. A sense of community emerges through “interacting and experiencing common events” (Tosey, 2002, p. 147). To articulate the aspects of the Teaching Exchange that are coherent with both approaches, we draw on definitions from McDonald and Cater-Steel’s (2017) book that puts these community-building approaches in conversation with one another. Mercieca (2017) defines CoPs as “voluntary groups of people who, sharing a common concern or a passion, come together to explore these concerns and ideas and share and grow their practice” (p. 3). Meanwhile, Cox et al. (2014) define an FLC as “a voluntary, structured, yearlong, multi-disciplinary community of practice of around 6–12 participants (8–10 is ideal) that includes building community and the development of scholarly teaching and the scholarship of teaching and learning” (as cited in Cox & McDonald, 2017, p. 49). FLCs are a well-established format for focusing on teaching development (Cox, 2004) and can serve as vehicles for cultural transformation (Cox & McDonald, 2017; Petrone, 2004).

Multiple characteristics of FLCs and CoPs were evident in how we developed the teaching exchange. Like FLCs and CoPs, our Teaching Exchange was initiated collaboratively (Cox & McDonald, 2017) by academic staff in a teaching and learning center (TLC) and a faculty-specific teaching support unit. The Teaching Exchange’s goals were consistent with elements of a CoP model that emphasize community, sharing practice, and building domain knowledge. In this instance, that domain knowledge focused on teaching large classes predominantly online. In terms of facilitation, we were intentional about modeling behavior in keeping with an FLC facilitator role, while we also modeled a distributed leadership approach (Jones & Harvey, 2017) between ourselves and among the participants, in keeping with a CoP approach (see the Series and Session Facilitation section for details).

The pandemic circumstances informed our decisions about the design and implementation of the Teaching Exchange. Students and instructors reported heavier workloads and lower student engagement

during emergency remote teaching (Hodges et al., 2020) in the 2020–2021 academic year, as reported by other institutions in Canada and beyond (Buckley et al., 2021; Canadian Association of University Teachers, 2020; McMurtrie, 2020; Salta et al., 2022; Taylor & Frechette, 2022; Wester et al., 2021). Given this reality, we designed the Teaching Exchange somewhat differently from a traditional FLC or CoP. Rather than an application-based membership process, we simply invited instructors teaching large classes online to register for the topic-based session(s) that interested them. Instructors were not expected to attend all sessions. Session topics were determined by the co-leads further to frequently arising questions and topics from a university-wide survey that elicited responses about teaching strategies, assessment approaches, workload, and experiences during remote teaching. Meetings were scheduled at a variable frequency over the course of the summer; we worked with the rhythms of summer scheduling and anticipated instructor availability, rather than meeting every three weeks or once a month as is typical for an FLC or CoP (Cox & McDonald, 2017). Finally, the series differed from typical FLC and CoP approaches in that two students were involved in the implementation and support of the Teaching Exchange, with responsibilities going beyond providing a student perspective on the initiative. Other institutions offering learning communities during the pandemic have also reflected upon specific decisions made in program design to respond to instructor needs and reduce potential barriers to instructor participation in their programming (e.g., Morin et al., 2023).

## **Rapport-Building and Context**

We recognized the value of intentionally building rapport with and among instructors, even as we continued to build rapport across our teams at Teaching and Learning Services and the Office for Science Education. We drew on West et al.'s (2017) definition of rapport as:

The process or experience by which individuals or teams of [educational developers] and instructors build a mutually positive connection, relationship, or shared understanding with one another in an atmosphere that is conducive to reciprocal trust, empathy, respect, openness, growth, and change. (p. 21)

The desire for an opportunity for instructors to connect with one another was, in keeping with these aspects of connection, relationship, and instructional growth, particularly salient during remote delivery and ever-relevant in non-pandemic times as well. This desire for collegial connections informed our approach of grounding each session with a strategy showcase, during which instructors presented strategies from their courses. This approach was informed by the values guiding our design of the Teaching Exchange (described in the Conceptual Design section). Felten and Lambert's (2020) work describes the value of "webs of human interactions" (p. 62) for student learning and success, noting the importance of honoring all faculty and staff contributions as a cultural imperative that can in turn foster a culture that embodies care and values a relational approach to support learning.

A relational approach to supporting learning can have particular resonance in challenging times. Amidst instructors' expressions of sustained levels of stress, a sense of being overwhelmed, and a sense of isolation (Chronicle of Higher Education, 2020), TLCs and faculty-specific support units were stretched thin as awareness of their existence and the number of requests for teaching support increased (Eaton, 2020; Marin et al., 2022; Naffi, 2020). These factors informed our session design as we strove to create opportunities for instructor co-learning and connection that would be meaningful, practical, and timely. We drew from and built on existing large-class teaching resources, emphasized a collegial approach to break the isolation, and provided clarity amidst uncertainty when possible.

## **Specific Challenge: Teaching Large Classes Online**

As we prepared the Teaching Exchange, we were keenly aware of the presence of large classes across our university and the challenges large classes can pose for students and instructors alike. Large classes are part of the landscape for many higher education institutions, and authors agree on the importance of examining such learning environments given their increased presence over the years (Exeter et al., 2010; Hornsby, 2013; Hubbard & Tallents, 2020; Kara et al., 2021; Mulyran-Kyne, 2010). The definition of a large class varies, with estimates ranging from 40 to 1000+ students (Hubbard & Tallents, 2020; Mulyran-Kyne, 2010). While numerous teaching and assessment strategies can be used in classes of nearly any size, 94% of respondents in a UK study ( $n = 80$ ) confirmed that they changed their teaching methods when teaching large classes (Hubbard & Tallents, 2020). Most large-class instructors draw on a lecturing approach, though this may vary depending on how lecturing occurs and if it is complemented by other teaching approaches (Mulyran-Kyne, 2010).

Large classes can involve challenges. Students can face challenges such as a limited number of opportunities for student-instructor interactions, a sense of anonymity, and less engaged and motivated student behavior compared to smaller classes (Exeter et al., 2010). Such challenges can impact student performance (Hornsby, 2013; Mulyran-Kyne, 2010), sometimes disproportionately impacting students with a lower socio-economic status (Kara et al., 2021). Meanwhile, instructors can face challenges in large classes such as pressure to respond to many requests, difficulty developing rapport with students (Exeter et al., 2010), difficulty fostering student participation and thus determining students' level of comprehension (Hubbard & Tallents, 2020), and assessment load (Mulyran-Kyne, 2010). The literature identifies an unmet need for supporting and training instructors who teach large classes (Hubbard & Tallents, 2020; Mulyran-Kyne, 2010). Hubbard and

Tallents (2020) call on academic developers to provide support, including training about teaching strategies for engaging students and the inclusion of learning technologies.

Large-class teaching challenges were exacerbated during the pandemic; instructors of large classes had to adjust quickly to an online teaching approach with which most had limited (if any) prior experience. In shifting to online teaching, instructors did not have the luxury of the typical process or support for preparing and offering a fully online course, which instead had to happen quickly and with limited planning (Hornsby, 2020). Within this reality, we conceived of the Teaching Exchange as an opportunity to support instructors in collectively meeting the enduring challenges of large-class teaching within the pandemic-induced online context. Given the benefits of drawing on multiple teaching approaches rather than only a one-way lecture (Mulyran-Kyne, 2010), the Teaching Exchange had potential value in offering exposure to different teaching approaches that instructors of large classes had used. It was a chance to highlight opportunities for both students and instructors to play a role in students' engagement (Exeter et al., 2010) in large online courses. In 2021, instructors had been teaching remotely for a year, which meant that they had opportunities to adapt and adopt practices that had worked, as well as share lessons learned along the way. Making changes to a large-class teaching approach can be a challenge, as the process may bring discomfort and anxiety and, often, planning and implementing the change itself requires extra work and time (Mulyran-Kyne, 2010). The Teaching Exchange was a chance for instructors to share with peers their experiences and examples of how specific course changes of varying complexity were beneficial to students' learning and to instructors' teaching.

## **Design and Implementation of the Teaching Exchange**

In this section, we share the roles involved in the Teaching Exchange team. We then describe the conceptual and practical design of the



Teaching Exchange and its framing as a pop-up learning community, as well as its implementation. We end this section by sharing our process for documenting the initiative and gathering quality assurance feedback.

### ***Team Formation***

The Teaching Exchange collaboration drew upon both our units' extensive experience supporting instructors of large classes. We expected that our shared knowledge and ways of managing, developing, and carrying out projects would greatly facilitate the design, promotion, and implementation of the Teaching Exchange.

The team included the following members and roles:

- Two project/facilitation co-leads: An educational developer from each unit had experience providing support to instructors teaching large classes and facilitating pedagogical offerings.
- Technology lead: An educational technologist presented institution-supported learning technologies related to each session's pedagogical theme during the "Tech Talk" (described further in the Series and Session Facilitation section).
- Graduate students: An Education Fellow (EF) worked with the Office of Science Education and a student learning technology assistant from Teaching and Learning Services. The EF documented teaching strategies discussed during each session in a resource document shared with all registrants. The student learning technology assistant managed virtual meeting logistics and drew on technology expertise to ensure smooth functioning of the sessions, so the co-leads could focus on facilitation.

### ***Conceptual Design***

To support large-class instructors with continued online teaching, we decided to highlight instructional strategies that were straightforward to implement—a "plug-and-play" approach, ideally with examples

from local classrooms. We wanted to avoid sharing strategies that would necessitate extensive changes to instructors' courses, since instructors were seeking ideas for how to make their large online classes more engaging while keeping their teaching workload manageable. We therefore focused on connecting instructors to exchange instructional strategies that they had adopted or adapted for online teaching since the onset of the pandemic. Our reasoning for designing pedagogical support in this way was twofold: First, through consultations and outreach, we knew that many instructors were already using effective online delivery strategies in their courses, but their stories were not being widely shared. A space to showcase these strategies would offer an opportunity for cross-disciplinary knowledge building (Wu, 2022) through dialogue with others (Vygotsky, 1978), as well as appreciation for success stories amidst a generalized perception of critique for instructors' online delivery efforts (Daumiller et al., 2021; Gravett et al., 2023; Li & Yu, 2022). Second, it is well established that instructors value opportunities to hear about strategies that other instructors have used in the classroom and to pose questions to their teaching colleagues (Palmer, 1993). When instructors share strategies that worked well for them, their sharing offers a local proof of concept that other instructors may find convincing and choose to adopt (Andrews et al., 2016).

In centering the Teaching Exchange around instructors' lived experiences with online course delivery, we considered in our design the following elements that can contribute to meaningful conversations about teaching practices (Boyd & Glazier, 2017; Iqbal & Vigna, 2021; Pleschová et al., 2021; Roxå & Mårtensson, 2009; Thomson & Trigwell, 2018):

- **Informal discussion:** We purposefully framed the Teaching Exchange as an informal conversation space to promote candid discussions of online teaching. We wanted instructors to feel comfortable sharing not only what worked in their classrooms but also what did not go as planned and lessons learned.

- **Instructors as the knowledge experts:** We chose to have instructors present teaching strategies given their firsthand experience with online delivery and to provide a variety of teaching narratives and local classroom examples. While we supplemented these presentations with resources, learning technology overviews, and occasionally additional instructional ideas, the emphasis was on instructors' sharing.
- **Cross-disciplinary audience:** We designed the Teaching Exchange as a university-wide offering for instructors to hear teaching ideas from outside their departments and to deepen their social networks beyond the silos of discipline-specific conversations (Lemelin et al., 2023; Supiano, 2017). We reasoned that since instructors of large classes were all teaching online, they were potentially facing similar classroom challenges regardless of discipline, providing common ground for discussion of online instructional practices (Goedereis & MacCartney, 2019).
- **Camaraderie and trust:** We set out to create a conversation space of trust and openness. We hoped the sense of camaraderie of co-experiencing the pivot to online delivery would encourage instructors to trust the pedagogical support we were offering and to critically engage with their colleagues (Gravett et al., 2023).

### ***Practical Design***

Based on the conceptual elements above and loosely inspired by FLC and CoP frameworks (Cox, 2004; Cox & McDonald, 2017), we designed a virtual Teaching Exchange series comprising six discussion-based sessions (Table 1).

Sessions lasted one hour over lunchtime and took place from May through August 2021 via our university's virtual meeting platform. This allowed for online demonstrations, screen sharing, and breakout rooms, while also being consistent with local social gathering practices of the time. Each session focused on a specific teaching topic arising from qualitative data gathered through a university-wide survey on

**Table 1. Teaching Exchange Series Overview**

Session #	Session theme	Month
1	Fostering class participation and discussion	May
2	Promoting learning through assessments	June
3	Focus session on labs for science instructors	June
4	Collaborating with GTA and ULA students*	June
5	Connecting online classes to in-person learning activities	July
6	Implementing “first day of class” strategies	August

\* GTA (Graduate Teaching Assistant); ULA (Undergraduate Learning Assistant).

remote teaching and in individual conversations with a subset of faculty teaching large classes. All sessions followed a similar format with five components (discussed further in the Facilitation section):

1. The welcome (five minutes) was a time for introductions, to set the tone for the session, share engagement expectations, and introduce the session’s topic.
2. The strategy showcase (15 minutes) involved multiple instructors who each shared an online teaching strategy that they used in their large class during the past year, with relevant examples.
3. The “Tech Talk” was a short presentation (five minutes) offering ideas for institution-supported learning technologies that instructors could use to carry out presented teaching strategies in their own courses.
4. The open discussion period (30 minutes) provided an opportunity for instructor participants to ask questions about presented strategies or to share their own strategies.
5. The wrap-up (five minutes) gave a chance to share complementary resources and opportunities for further engagement on the session topic (upcoming webinars, articles, etc.).

The order and timing of the strategy showcase, “Tech Talk,” and open discussion period was intentional; we wanted instructor experiences to be front and center, such that the information presented as part of

the strategy showcase could then serve as a foundation for the discussion period.

### *Framing the Teaching Exchange as a Pop-Up Learning Community*

Although a departure from traditional FLCs and CoPs, we came to characterize the Teaching Exchange as a pop-up learning community. We did so because several aspects of the Teaching Exchange were coherent with the aegis of a pop-up shop, event, or show. These aspects included how it increased the visibility of a product or topic (in our case, teaching large classes online); its informal, ephemeral nature; the intentionally low barrier to entry and participation; and the opportunity for instructors to join and interact as they wished, when they wished (Silveira Dias et al., 2017). The term “pop-up learning community” therefore applied well to the Teaching Exchange. The pop-up nature of the learning community extends beyond a traditional workshop series in its emphasis upon building community among instructors, and in that there is not an expectation that instructors participate in every session. Framing a learning community as a pop-up experience was appropriate for the pandemic reality in which we were working. Instructor stress and workload were high (Chronicle of Higher Education, 2020; McMurtrie, 2020; Teaching and Learning Services, 2021). Asking an instructor to commit to a six-part discussion series during precious summer months would not only have been unrealistic but also potentially insensitive, representing one more “ask” during a trying time. By instead having the common thread of large-class teaching online connecting the six sessions, we ensured that instructors who were truly interested in the topic could take part based on a shared interest, not out of a sense of obligation to the learning community itself. Meanwhile, that shared interest could provide a common starting point for instructors’ discussions with one another: Instructors knew that despite coming from varied disciplinary backgrounds, they had an interest in teaching classes of 150+ students online in common.

## ***Implementation***

Now that we have described the conceptual design, practical design, and framing of the Teaching Exchange with accompanying rationales, we share our processes related to presenter recruitment and series promotion, session preparation, series and session facilitation, and documentation and feedback.

### *Presenter Recruitment and Series Promotion*

Once session topics were selected, we recruited large-class instructors willing to present their online instructional strategies at the Teaching Exchange. We made efforts to have varied representation among presenters in terms of career level, gender, faculty/department, and complexity of strategies shared. Of the 20 instructors invited to present, 12 (eight female, four male) from across five faculties agreed to participate. These instructors included six tenure-track/tenured instructors and six teaching-stream instructors.

We promoted the series through the TLC newsletter and our units' respective webpages. We also sent personalized email invitations to all instructors teaching large classes to encourage instructors at all levels of teaching experience to attend. The Teaching Exchange was planned for the summer term, when we expected that instructors would be busy with research and vacation but also planning for fall teaching. To promote buy-in and attendance, we wanted the series to present a limited time commitment. We therefore framed the series as an experience where instructors could attend as many or as few sessions as they liked. We also provided a brief overview of the session structure to help instructors understand what to expect and how they might contribute as participants during the session (e.g., to the open discussion).

### *Session Preparation*

Prior to each session, the Teaching Exchange team prepared a session plan/facilitation script (Appendix A) detailing the session agenda,

individual team member responsibilities, and presenter information. We also held pre-session check-in meetings with instructors involved in the strategy showcase. These meetings were an opportunity for the co-leads and instructors to meet one another and build rapport and for instructors to share what they planned to speak about. This sharing enabled presenting instructors to proactively make connections across courses and strategies and to anticipate where they could build on each other's ideas during the session.

### *Series and Session Facilitation*

The Teaching Exchange team took a light-touch approach to facilitation. We were mindful of trying to model the type of collegial, inclusive atmosphere we wanted to foster throughout the series, both in our manner of speaking and in how we guided the flow of discussion during the sessions (Martin et al., 2022; Ortquist-Ahrens & Torosyan, 2009). This included offering a brief welcome to set the tone, group norms (Center for Research on Learning and Teaching, 2021), and topic of the session, as well as closing words to draw participants' attention to opportunities for further engagement. Our modeling was also intended to communicate a sense of shared responsibility for the success of a given session, which was anchored in large part by the contributions of the instructor participants (Kayser, 1990). In the following sections, we describe the contributions of other facilitators and participants in shaping the flow and tone of session conversations.

**Instructor Strategy Showcase.** In each session, two or three instructors briefly presented an online instructional strategy. Presentations summarized the main features of the teaching strategy, along with instructor-provided data, classroom examples, or student feedback. For accessibility reasons, we encouraged instructors to prepare a couple of slides as visual aids to complement verbal explanations and organize information (CAST, 2024). We also invited instructors to optionally share their slides with participants following the session.

**“Tech Talks.”** The “Tech Talk” highlighted one or more learning technologies offered by our institution related to each session’s theme, focusing on technologies scalable to larger classes (e.g., polling, online grading software). These talks included a brief description of the tool, key points, and a demonstration.

**Open Discussion.** We approached this with the mindset of allowing instructors to both generate the discussion and to guide it, with the co-leads only joining in to reignite dwindling conversation with a question or prompt or to address questions that were directed to the Teaching Exchange team (Petrone & Ortquist-Ahrens, 2004). While each session focused on a specific teaching and learning topic (Table 1), the topics were broad enough to allow discussions to flow based on the aspects of online teaching that instructors wanted to discuss with other participants.

### *Documentation and Feedback*

Below, we share how we documented instructional strategies discussed during the Teaching Exchange series, as well as how we gathered quality assurance feedback from instructor participants, project team members, and colleagues from our two units.

**Resource Document and Post-Series Blog.** We shared a regularly updated document with all registrants to outline the strategies that participants described during each session plus additional resources (Strategy Showcase slides if shared, articles, and “Tech Talk” presentations and recordings) to house the knowledge shared and built upon during the series (Wu, 2022). The collaborative resource document offered strategy descriptions that instructors could choose to draw upon as appropriate in their respective courses, thus asynchronously sharing knowledge accessible to all participants (Clancy, 2019) as a complement to the sessions themselves. A post-series blog that summarized instructional strategies helped expand asynchronous knowledge sharing to the university community at large, allowing instructors who did not participate in the Teaching Exchange to nevertheless access ideas of potential interest.



**Instructor Feedback.** We solicited feedback from participants via a post-series feedback survey for quality assurance purposes—specifically, to ascertain whether the Teaching Exchange series addressed instructors’ desire for more support for teaching large classes. The feedback focused on actionable steps (Patton, 2008) that the Teaching Exchange team or our individual units could take to further support instructors and to inform the design of future pedagogical offerings. Participants were invited to complete an anonymous survey following the final session. The survey asked through Likert scale and written answer questions what elements of the Teaching Exchange instructors found most useful or meaningful to their experience, how likely they were to implement strategies discussed, and if they would attend similar offerings in the future. Data were summarized in the aggregate for our internal audiences. Since this survey was for quality assurance purposes, approval from the institutional ethics review board was not required for this project.

**Session and Series Debrief.** Since the Teaching Exchange was a new offering and a cross-unit collaboration, we integrated multiple debriefing opportunities throughout the series, both within the Teaching Exchange team and with colleagues from our respective units. The team met briefly after each session to share immediate thoughts on the experience, to note any format adjustments for upcoming sessions, and to assign follow-up tasks. We also held two feedback meetings with colleagues to discuss the Teaching Exchange as a pedagogical offering in terms of achieving the goal of providing support to instructors teaching large classes online, the collaboration process between our units, and aspects of the series (format, content, etc.) that were working well or that could be improved upon.

## Reflections and Recommendations

In this section, we note local instances of transferability that indicate the adaptability of the Teaching Exchange approach. We then share

reflections framed in terms of the barriers/challenges, followed by the perceived opportunities/benefits of the Teaching Exchange as a pop-up learning community. Next, we offer recommendations for colleagues who may wish to adopt or adapt the Teaching Exchange format to their institutions, focusing on takeaways in terms of transferability, scalability, and iterating from one Teaching Exchange experience to the next. These recommendations are based on our experience and informed by feedback received through the quality assurance process.

### ***Transferability and Adaptability***

The local transferability of the Teaching Exchange approach has already been demonstrated. One instructor who participated in the series created and led a discussion group informed by conversations with colleagues during the Teaching Exchange. Meanwhile, within the facilitation team, the technology lead later led a series of learning technology exchanges that shared feasible technology-related strategies and tools based on the Teaching Exchange model. This exchange series built on the popularity of the “Tech Talks,” for which instructors had expressed particular appreciation in their responses to the feedback survey that was offered for quality assurance purposes. Furthermore, the facilitation co-lead implemented a town hall-style session informed by the Teaching Exchange, with a substantially larger instructor population in attendance, pointing to scalability (see Recommendations for additional scalability considerations). These examples of local transferability of the Teaching Exchange approach suggest that its design was sensitive to—but not *limited* to—the realities of the pandemic, as it can support instructors across disciplinary silos, reducing isolation and permitting cross-pollination of ideas.

### ***Barriers/Challenges***

Potential barriers that we anticipated and intentionally designed the Teaching Exchange to mitigate included limited instructor time,

instructor overwhelm and Zoom fatigue; lack of a sense of community online; specificity of target audience; and reaching the target audience. The design of the Teaching Exchange as a pop-up learning community mitigated each of these potential barriers in turn. Specifically:

- **Limited instructor time, instructor overwhelm and Zoom fatigue:** Unlike traditional FLCs and CoPs, instructors could attend as many or as few sessions as desired. This meant that instructors could decide to participate in a given session out of interest and further to their capacity, rather than a sense of obligation. This flexible time commitment lowered the barrier to participation. Meanwhile, the cumulative written resource that was shared every session meant instructors could access strategies and resources from a given session even without attending. We kept the workload for instructors to a minimum, inviting (but not requiring) those sharing their own strategies to prepare a couple of slides. There was no preparation expected of session participants who did not present.
- **Lack of a sense of community online:** Aware that building community online is not a given, we designed our sessions to rely heavily on relational aspects and facilitated our sessions in a welcoming, open way that aimed to inspire trust and consistently put instructors as knowledge experts. The facilitation team's camaraderie and enjoyment of working with each other and with instructors also helped set the session tone. Further, it modeled an approach that instructors could take with their students in turn. To foster a sense of representation for all instructors, we invited instructor presenters with careful attention to diversity in terms of discipline and career stage (though we were less successful in assuring gender balance among presenters, despite efforts).
- **Specificity of target audience:** While the target audience of the Teaching Exchange was instructors teaching large classes of 150+ students online, the pop-up nature of the learning community meant that all interested instructors were welcome to attend.

This allowed us to reach a vastly greater number of instructors than would have been possible with a traditional FLC structure without having to exclude interested instructors based on their class size.

- **Reaching the target audience:** We knew from experience that having sufficient instructor attendance at sessions could be challenging. Furthermore, given the value instructors attributed to learning from other instructors (Palmer, 1993), insufficient attendance could even be a barrier to instructors' learning. To encourage registration, we informed all instructors about the sessions in our units' respective newsletters. Further, we reached out personally to instructors who commonly attended our events and those who we were aware were doing interesting things in their classes. We also sent personalized email invitations to all instructors teaching large classes to reach those who may implement effective teaching practices yet tend to fly more under the radar. We hoped that they would contribute to the discussion. Though this multi-pronged outreach approach was time-consuming, it paid off as we had participation at sessions from more than the "usual suspects." For instructors who were less familiar with our units' offerings, the option of taking part in one or a couple of sessions with the pop-up learning community approach may have felt like a smaller, more feasible commitment.

There were several opportunities and benefits occasioned by the pop-up learning community approach of the Teaching Exchange that we implemented. These build on the ways in which we successfully addressed the potential barriers described above:

- **Increased visibility for teaching large classes online:** We sustained visibility for teaching large classes online by spreading the sessions over the summer and keeping in mind what themes would be relevant at different points in instructors' preparation for the fall term.

- **Informal, ephemeral nature:** At the same time, this was targeted, timely (but not time-consuming) support, where each session had a discussion-based, intentionally informal feel and lasted only an hour.
- **Flexible participation:** Since instructors could take part at any time, if an instructor found out about the Teaching Exchange partway through the series, they could still participate in later sessions without feeling like they had missed out. Instructors could join and interact in keeping with their interests, availability, and capacity.
- **Relevance, focus and flexibility of discussion:** As we shared in Table 1, each session addressed a particular theme within the larger topic of teaching large classes online. The theme focused the discussion while allowing some flexibility for it to move in the directions that were most useful for the instructors present that day.
- **Periphery to Core Participation:** A small core group of instructors who participated in several sessions contributed to our sense of the Teaching Exchange as a learning community. Other instructors who joined for select sessions contributed specific, timely expertise to the group. This was consistent with Lave and Wenger's (1991) concept of legitimate peripheral participation, in which newcomers may find themselves at first on the periphery of discussions in a community, and then with time, they may take on a more core, central role within the community. Each session varied from 17 to 41 instructors. Most of the 83 participants participated in one or two sessions in the series (55% and 21%, respectively), while a smaller proportion attended three to five sessions (20% combined), and 4% attended all the sessions (Figure 1).

There were also multiple benefits of our cross-unit collaboration between Teaching and Learning Services and the Office of Science Education that helped us meet the goal of the Teaching Exchange. These benefits included drawing on our diverse perspectives, ways of

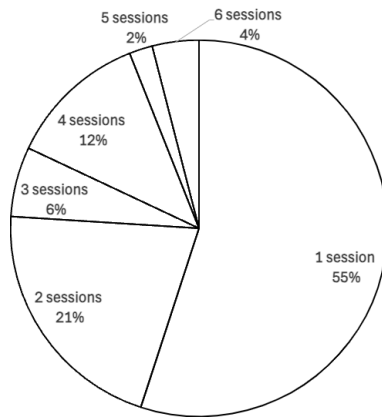


Figure 1. Percentage of Participants by Number of Sessions Attended

knowing and expertise (as staff and students), and the chance to share social networks, communications, decision-making, and workload during the Teaching Exchange.

### ***Recommendations for Implementing a Teaching Exchange***

The barriers addressed and benefits described above focus particularly on the pop-up learning community format. Our first recommendation for colleagues who wish to implement a Teaching Exchange at their institutions is thus to consider drawing on the pop-up learning community format, for the reasons explained above. Other complementary recommendations specific to session design elements follow:

- Prepare prompts to get the discussion started, in case the discussion is slow to start.
- Meet briefly with presenting instructors for a pre-session check-in. This helps the cohesion of the strategy showcase talks: presenting instructors could pick up on one another's ideas and extend them or distinguish how their own teaching practice differed and why. It is also a chance for co-leads to respond to any questions the presenters have and to emphasize the informal tenor of the discussions.

- Be intentional about your facilitation approach, and be aware of what it communicates to session participants. For instance, we aimed for an informal, welcoming, and open tone, consistently emphasizing instructors' role as knowledge experts. We perceived that this helped contribute to a sense of community.
- Integrate relevant learning technologies in a brief and accessible way.
- Schedule sessions considering the semester's rhythms (e.g., avoid times when instructors are likely to have a high workload or are otherwise unlikely to be available).
- Time the different elements of the session so there is ample time for discussion. We found that 15 minutes of presentations provided sufficient listening time, and 30 minutes was ample time for instructors to engage in discussion. While we sometimes had to cut discussion short as the session neared its end, that could be a motivating factor for instructors to look forward to the next session.
- Ask participants what other topics they are interested in to help identify relevant needs and flesh out plans for future sessions.
- Consider ordering session themes based on when the information is likely to be most useful. For instance, we intentionally explored assessment in large classes earlier in the summer, when instructors might be more likely to be setting up their assessment schemes. Then, we addressed strategies for the first day of class nearer to the start of the fall term.
- Determine whether an in-person or online setting makes the most sense for your situation. In our case, as well as being consistent with local guidelines at the time, the online setting allowed instructors to participate wherever they were without absenting themselves from other life commitments. Likewise, they need not spend time commuting to campus for a single session during the summer months. We have since noticed that some instructors strongly prefer online sessions for convenience.

- Identify whether the scale of your local implementation of the Teaching Exchange will require adjustments to the session design described. Table 2 shows decision points for scaling.

Draw on timelines and session plans to the extent appropriate at your institution. Following knowledge management practices (Al-Kurdi et al., 2020; Dei & van der Walt, 2020), we drew upon protocols created by our individual units for the series’ design, facilitation, and documentation. Our overall approach is summarized in Appendix B. This appendix can serve as a guide for units and colleagues at other institutions wishing to develop conversation-based pedagogical offerings informed by the Teaching Exchange approach.

Meanwhile, the flexible session plan (Appendix A) also lends itself to transferability or adaptation in different settings well beyond the pandemic context and regardless of the pedagogical topic of discussion. This is a highly adaptable template for organizing event information, particularly team-facilitated events. The template allows team members to easily keep track of each other’s roles.

**Table 2. Scalability with Examples of our Approach**

Decision points for scaling	Our approach
Number of sessions	Six sessions offered over the course of the summer
Session duration	One hour
Team size	Five people from two units
Disciplinary scope (within a discipline or interdisciplinary)	Interdisciplinary
Focus of topics (broad versus deep)	Broad focus with a different theme each session
Resources	One ongoing resource document with notes from each session
Location	Online
Number of presenters	Two-three instructor presenters and one “Tech Talk” per session
Number of participants	No registration limit
Sharing out	We followed up with instructors who described strategies during the discussion period and wrote a blog post series to share ideas more widely



The above recommendations emerged from our development and implementation of the Teaching Exchange, our reflections on it, and feedback instructors generously offered for quality assurance purposes. In working with the feedback, we observed that it coalesced into the following three transversal aspects that instructors noted as valuable elements in their experience and takeaways from the Teaching Exchange.

### *Bringing Many Voices into the Conversation*

We heard repeatedly from participating instructors that the opportunity to engage with other colleagues teaching large classes and to learn from their online delivery experiences was the most appreciated component of the Teaching Exchange. This aligns with previous observations that instructors place value on conversations of personal experiences and colleague support when making decisions about teaching practices (Andrews et al., 2016; Palmer, 1993), drawing upon both explicit and tacit knowledge (Schön, 1987) shared through firsthand teaching narratives (Krátká, 2015). In particular, instructors commented positively on the cross-disciplinary nature of the Teaching Exchange conversations, noting their appreciation for hearing about instructional strategies from colleagues outside of their own disciplines. Cross-disciplinarity was an intentional element of our series design, to bring many voices and perspectives into the Teaching Exchange and provide opportunities for instructors to expand their social networks to include colleagues with whom they might not have otherwise connected to discuss teaching (Lane et al., 2022; Wu, 2022).

### *Crafting an Informal Discussion Space with Community in Mind*

Motivation to share personal teaching practices can be greatly influenced by the environment and social contexts in which instructors are situated (Englund et al., 2018; Ipe, 2003; Lane et al., 2022). Informal conversation channels can result in greater willingness to discuss the ins and outs of teaching than formal ones (e.g., workshops) because

informality can foster a sense of trust among conversation participants (Lane et al., 2022; Roxå & Mårtensson, 2009). Throughout the design and facilitation of the Teaching Exchange, we worked to create and promote an informal environment to engage instructors in open dialogue about teaching large classes online, and instructors noticed. Responses to our post-series feedback survey identified the informal atmosphere of the discussions as one of the elements that contributed to participants' positive experience in the Teaching Exchange.

#### *Raising Awareness of Relevant Learning Technologies with "Tech Talks"*

While learning technologies can help mitigate some challenges of large-class teaching (Kerr, 2011; Saunders & Gale, 2012), such as high grading volumes, they are often considered underused in academic settings (Liu et al., 2020). Involving an educational technologist to facilitate "Tech Talks" as part of the Teaching Exchange raised instructor awareness of available learning technologies at our institution. Familiarization with such technologies was essential given the need for instructors to teach online. Indeed, Teaching Exchange participants noted the usefulness of the "Tech Talks" in presenting practical suggestions for adapting and implementing relevant learning technologies in large classes.

## **Conclusion**

The Teaching Exchange began as a way to pedagogically support instructors teaching large classes online during the pandemic, but the approach outlined here for designing and implementing a discussion-based offering is by no means limited to those circumstances. At its core, the Teaching Exchange is a collaborative process for providing pedagogical support quickly and when needed. It brings together knowledge experts with diverse perspectives to create a space that invites rich dialogue about the complexities of teaching in higher education. Meanwhile, the pop-up nature of this learning community—including

its visibility, informality, low barrier to entry, and flexible opportunities for interaction—means that instructors can engage to the extent that they feel able. Local adaptation suggests the potential to adapt the Teaching Exchange model to support instructors interested in a given topic or teaching question, whatever their class size and learning environment. We invite readers to consider the relevance of the Teaching Exchange approach to their future offerings that have a similar structure or purpose.

## ORCID*s*

Véronique Brulé: <https://orcid.org/0000-0002-3896-0635>

Jennie Ferris: <https://orcid.org/0000-0002-1213-1564>

## Biographies

**Véronique Brulé** (PhD) is an Academic Associate at the Office of Science Education, McGill University. She supports science instructors and teaching assistants in exploring evidence-based methods of teaching through facilitating learning communities, leading workshops, and offering course consultations.

**Jennie Ferris** (PhD) is an Academic Associate at Teaching and Learning Services, McGill University. She supports instructors' teaching success by leading workshops and retreats, facilitating learning communities, and offering pedagogical consultations within and across disciplines.

**Jasmine Parent** is an Educational Development and Digital Learning Designer at Teaching and Learning Services, McGill University. She supports instructors in using various learning technologies by providing pedagogical consultations, facilitating workshops, and assisting with their successful integration into course design.

**Marcy Slapcoff** is the Richard Tomlinson Chair in Science Education and the founding Director of McGill University's Office of Science Education, a unit dedicated to fostering a culture of teaching and learning within the Faculty of Science. In these roles, she initiates new programs that support the professoriate, engage students, and bring people together in a spirit of inquiry to develop meaningful pedagogical approaches.

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## Conflict of Interest Statement

The authors have no conflict of interest.

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Appendix A

Generalized Session Plan Detailing Team Roles and Logistical Information

Section	Facilitation Details	Logistics and Virtual Meeting Details
Team Arrival (10 minutes prior to event)	Everyone <ul style="list-style-type: none"><li>Facilitation team and presenters arrive</li><li>Last minute event updates</li></ul>	Learning Technology Assistant <ul style="list-style-type: none"><li>Enable waiting room and closed captioning</li><li>Make facilitation team and presenters co-hosts</li><li>Mic/video/screen sharing check</li></ul>
Welcome (5 minutes)	Facilitator <ul style="list-style-type: none"><li>Welcomes participants</li><li>Team introductions</li><li>Session agenda</li></ul>	Learning Technology Assistant <ul style="list-style-type: none"><li>Admit participants from the waiting room</li><li>Send a welcome message in the chat</li><li>Send session agenda in the chat:<ul style="list-style-type: none"><li>Presentations + Tech Talk (20 minutes)</li><li>Q&amp;A + group discussion (30 minutes)</li><li>Next steps (5 minutes)</li></ul></li></ul>
Strategy Showcase [instructor presentations] (15 minutes)	Facilitator introduces presenters and facilitates transition between them: <ul style="list-style-type: none"><li>Instructor 1 (3–5 minutes)</li><li>Instructor 2 (3–5 minutes)</li><li>Instructor 3 (3–5 minutes)</li></ul>	<ul style="list-style-type: none"><li>Education Fellow takes notes of strategies presented and chat questions</li><li>Facilitation team keeps time and answers questions posed in the chat or saves them for the discussion period</li></ul>
Tech Talk (5 minutes)	Educational Technologist Presents a learning technology related to the session topic	<ul style="list-style-type: none"><li>Facilitation team answers chat questions or saves them for the discussion period</li></ul>

(Contd.)

Section	Facilitation Details	Logistics and Virtual Meeting Details
Open Discussion (30 minutes)	Facilitator <ul style="list-style-type: none"><li>Invites questions from participants for instructor presenters and the educational technologist</li><li>Invites participants to share strategies related to the session theme</li><li>Guides discussion</li></ul>	<ul style="list-style-type: none"><li>Education Fellow takes notes on strategies presented/questions</li><li>Facilitation team keeps time answers chat questions or redirects them to Facilitator</li></ul>
Wrap-up (5 minutes)	Facilitator Thank participants for attending and direct them to follow-up resources	Learning Technology Assistant <ul style="list-style-type: none"><li>Saves chat</li><li>Posts teaching resource links in the chat as Facilitator describes them</li></ul>
Post-sessionResources	Education Fellow compiles discussed strategies into a summary sheet for distribution to session participants and registrants	



## Appendix B

### Timeline of Key Events in the Teaching Exchange Design and Implementation

