Colloquium

Are 20th-century methods of teaching applicable in the 21st century?

Sandra Leigh Bassendowski and Pammla Petrucka

Address for correspondence: Dr Sandra Leigh Bassendowski, University of Saskatchewan—Nursing, 4500 Wascana Parkway Regina Saskatchewan, Canada S4P 3A3. Email: s.bassendowski@usask.ca

The image of students passively absorbing information from an educator who is lecturing from behind a podium does not reflect the current scope and dimension of higher education. We have the tools of technology that can be used to create learning experiences to actively and meaningfully pull students into course content. I started to think about the idea of push–pull whereby in the past, educators (the experts) usually passed the information from them to the students (push). Today, the literature is replete with articles about the need for collaboration, cooperation, communities of learners and engagement with students (pull).

I like the idea that Menninger (2011) puts forward about encouraging dialogue among educators about the physical classroom and the need to consider teaching as a “total work of art” in that “a total work of art serves not only as an all encompassing intellectual, emotional, and spiritual experience, but also as a means of conceptualizing the act of teaching itself; instruction should inspire while it informs, just as art informs as it inspires” (p. 97). I searched online for literature about art and the concept of push–pull and explored the work of the artist, Hans Hofmann. Hofmann provides a perspective of the theory of “push and pull” and how all of the forces, push/pull, movement and light, combines to create a state of dynamic equilibrium in a good piece of art (Wolf, 2011). I think educators need to consider the influences from the art world and reflect on how to configure contemporary teaching strategies in a different way.

Education has garnered the same attention as the arts to “open up” over the years and allow exploration of the history and possibilities through the wide array of media and technology that is available to transform ideas, processes and strategies. Pull approaches are exemplified by constructivist and connectivist approaches, which are cocreated by students as in virtual and socially shared spaces. In educational contexts, pull models view students as active participants in the sharing of their learning by working alongside the educators in both traditional, online settings, and blended environments. The delivery of information (“push”), along with student-centered activities (“pull”), enhances collaborative learning experiences and the positive effects of shared learning spaces. In these types of learning spaces, students can communicate their thoughts and feelings with others in a safe environment and explore different aspects of expected learning outcomes.

I sometimes wonder if 20th-century methods of teaching are applicable in the rapidly moving 21st-century world? In the late 1920s, very few resources existed and the teaching methods consisted largely of lectures, occasional case studies and some problem-solving situations. Students were passive learners who focused on note-taking, memorization and the ability to sit quietly throughout the lectures. They were generally overwhelmed with the amount of factual knowledge that was pushed upon them and often dropped behind in the note-taking. So, in 2012, what instructional strategies support the delivery of selected content? What technology and tools should students use to support their own learning and that of other students? What percentage of time is committed to lectures in comparison with other methods?

How can the push–pull theory be used to rationalize the move to an environment characterized by pull strategies and the cocreation of content? In the 2010–2011 academic year, I decided to
use an idea I developed about Concept Capture and a social networking tool called NING© as an approach to engage 4th-year nursing students in cocreation of course content for a blended learning experience. The class enrollment was 125 and the students spent 9 weeks in the face-to-face classroom and 4 weeks online with the social networking tool. I identified the key concepts each week and used them as the organizers for student activities both in and out of the classroom.

The project was designed as a research study with approval of an ethics application in order to use an innovative strategy such as NING© with the designated student group, and then to assess student responses on blog postings following the end of the semester. Students were asked to complete pre- and postsurveys that asked questions about the types of multimedia tools whether they are used for their personal or professional purposes such as NING©, blogs, wikis, podcasts, video clips, photovoice, Twitter, VoiceThread or Wallwisher. The learning environment was redesigned for case studies, dyad discussions, question-quests and other interactive strategies. These strategies encouraged students to share their learning from the Concept Capture tools as well as seek new solutions during class time with other students in their group. Together with the faculty member, students actively contributed to creating and/or editing blogs on professionally relevant topics as well as posting photos, videos, links and articles that related to and added to course content. Student learning assignments consisted of a blog discussion (with inclusion of evidence), posting of relevant research links and their participation in the addition of relevant course material.

The balance between push–pull strategies was achieved through two strategies, both rooted in principles of minimum interference and maximum inclusiveness. First, as the faculty member, I monitored the discussions on the blogs and commented as needed to provide additional probing questions or comments. Critical questioning contributed to ensuring clarity, comprehensiveness and correctness within the discussion and contribution threads. Second, monitoring of the discussion and feedback was continuous, real/near real time and inclusive of the perspectives of both students and educator. These two strategic imperatives were seen as appropriate and necessary to support and catalyze the Concept Capture approach.

Reinventing pedagogy is critical to moving teaching and learning into the 21st century, but educators require evidence and evaluation to transition from “push” to “pull” teaching strategies. Using NING© and Concept Capture within the push–pull teaching strategy, evaluation of the blogging began with an overview of the original discussion of themes. Each student was required to post an initial 250- to 300-word posting along with research-based evidence and two to three probing questions for group reflection. A thematic analysis of the blog postings was undertaken using Wordle© as the folksonomies or social taxonomies tool.

Each posting was consistently scrutinized through a three-step approach. First, postings were reviewed to look at how the topic was originally introduced by the students—essentially the push. The focus was to determine a student’s particular slant on the issue and his or her appropriate use of research and evidence to support a particular viewpoint. Second, the responses—the pull—to the original posting were explored by focusing on areas such as critical thinking, insight and engagement (ie, encouraging ongoing discussion). Each topic blog and associated postings were submitted to the Wordle© tool resulting in an automatic text visualization. The resulting diagram represented a frequency count in which the most commonly occurring words and/or phases were operationalized as dominant or larger than other competing terms. The Wordle© diagram clearly identified the concepts that were most prominent for specific topics within the discussion and the less frequently discussed concepts (see Figure 1). Based on these presentations, the educator and graduate student reviewed the diagrams (in this sense the push) to determine the breadth and depth of discussion and to identify where gaps in knowledge occurred within the course content and dialogues (the pull).
The theory of “push and pull” from the art world influences contemporary thinking about teaching and learning in current contexts. The theory can be used to explore current educational pedagogy and support an adapted model of teaching. A wide array of media and technology is available to create new hybrid forms of teaching. The integration of technology enables educators to create learning experiences that actively and meaningfully pull students into course content. What technology and tools are available to students to support their own learning as well as the learning for other students? What percentage of time is committed to pull strategies in comparison to push strategies? How can tools of social media tools be combined with the best practices in teaching and deal effectively with issues of student inattention, passivity and disengagement? I think these questions are critical when considering push–pull teaching strategies. Are the 20th-century methods of instruction applicable in a rapidly moving 21st-century world? Perhaps the time is now to make the change!

References