Critical Teaching/Learning Activities for Optimizing Students' Learning in a Learner-Centered Environment

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Abstract

Learner-centered environment uses multiple teaching strategies to enhance students' learning and provide them with greater control over their academic learning. This paper presents some of the techniques that when applied effectively will optimize students' learning in a learner-centered environment.

Keywords: Learner-centered, learning activities, teaching techniques, collaboration, active participation

Introduction

Within the last few years we have witnessed a significant paradigm shift in teaching in the academia from teacher focused instruction to learner-centered or student-centered learning. This shift came as a result of many faculty and administrators worrying on how to get their students to learn more and better (Tagg, 2008). However, the shift was not easy because it requires teaching faculty to surrender control of their classes. Furthermore, teaching faculty have to create a learner-centered environment to optimize students' learning. This learner-centered environment is supposedly different from traditional environment where students take notes and pass tests. "It is an environment that allows students to take some real control over their educational experience and encourages them to make important choices about what and how they will learn" (Doyle, 2008, p. xv).

This type of environment focuses on collaboration as the main activity of the classroom. Learner-centered learning is therefore about students as 'active participants' in the classroom, as partners who contribute to reaching the required outcomes of a course or programme," and not passive listeners (Jungst et al., 2003; Qualters, 2000; Felder and Brent, 1996; Boyer, 1990). In fact, there have been several approaches to teaching and learning that were developed and used by faculty members that fit the criteria for student-centered learning (e.g., active learning, inquiry-based learning, collaborative learning, team-based learning, peer instruction, etc.).

There has also been considerable scholarly works on how to help students learn in this learner-centered environment (Doyle, 2008; Bishop, et al, 2014). Moreover, within the same timeframe, the Association of College & Research Libraries (ACRL), a division of the American Library Association (ALA), tried to catch up with this cultural shift and find ways of how to prepare librarians to be ready to assist students. Thus, the emergence of information literacy (originally approved in 2000), introduced with the aim to equip librarians and place them as equal partners in the creation of a learner-centered environment. Although the original information literacy standards has recently been replaced by the new "*Framework for Information Literacy for Higher Education* (Framework)," nevertheless, its core principles remain and information literacy still places the responsibility to learn squarely on the individual to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (ALA, 1989).

The intention of this short paper is to suggest teaching/learning strategies necessary for optimizing students' learning in this new paradigm called learner-centered environment. It argues that in order to optimize students' learning in a learner-centered environment, there is a need for a variety of learning/teaching activities that employ different strategies for attaining the learning outcomes. Utilizing these various strategies enables a teacher to more likely appeal to the different learning styles that are present in the student population. Further, it will also create opportunities for students to be exposed to diverse perspectives and to "stretch" themselves by trying new approaches. As Doyle (Doyle, 2008, p. xv) notes, "Teachers can make learning fun, interesting, exciting, and challenging, or they can make it awful, boring, painful, and useless." The onus is upon teachers to create a conducive environment for optimizing students' learning.

Examples of critical learning/teaching activities

As noted earlier, there are a variety of teaching/learning activities that can be applied in a learner-centered environment to optimize student learning and these may include: reflective journals; presentations; problem solving; concept mapping; case studies & scenarios; role playing & debates; projects & portfolios; and discussions, to mention but a few. All these strategies/techniques have educational benefits that will enable students to develop skills necessary for their future professional lives. In the next few paragraphs the significance of each activity to the success of learner-centered learning will be explored.

Reflective journals

Reflective journal writing has always been used as an educational strategy to promote reflection and learning. Reflective journals have been argued to have important educational value because they are very significant in long-term recall of information. This involves asking students to reflect about how their last lecture or learning changed their thinking about a specific topic, or how it altered their view of themselves or the world around them. It is a significant activity for optimizing student learning in a learner-centered environment for many reasons. Reflective journal enables students to make connections between their new course material and previous knowledge, which are further strengthened and expanded when students write about this new information, what it means, and how it can be used. These expanded connections increase the likelihood that this new information will be remembered, as it is now connected to multiple memories, not just one. Also as Doyle (2008, p. 44) notes, the "act of writing causes the students to move their ideas from the abstract world inside their brains into the concrete world outside their brains."

Furthermore, reflective journaling enables students to engage with the information personally through "touch and movement" (tactile and kinesthetic processes), which offers the opportunity to encode the information through additional sensory patterns, thus aiding their retrieval ability (Doyle, 2008). According to Doyle (2008, p.44), reflection is one of the most important learning processes we can use because it enables individuals to develop "open-mindedness and a willingness to accept responsibility for self-directed learning as well as foster a keen sense of observation, critical thinking and reasoned analysis" (see also, Loughran, 2002; Brookfield, 1995). In fact, "if used effectively and

purposefully reflection can provide a structure in which to make sense of learning, so that concepts and theories become embedded in practice, and constant thought and innovation are simultaneously fostered" (Helyer, 2015, p. 15).

Presentations

According to Aristotle, "teaching is the highest form of understanding." Having students teach each other via classroom presentations has an educational value and is an important strategy for enhancing learning in a learner-centered environment. There are many people who struggle with public speaking; and speaking in front of others is one of the most important skills students need to learn to be successful professionally. The only place to gain confidence and practice speaking in front of others is the classroom. Presentation is an effective learning strategy because it helps students to develop creativity, critical thinking, writing, speaking, and research skills – skills that epitomize the core values of information literacy. As Doyle (2008, p. 108) notes, "having students teach one another promotes deep learning; independent learning and the willingness, ability, and confidence to accept increased responsibility for their own learning."

Usually, in a presentation, before a student chooses a topic, he or she has to explore sources beyond the text book; consult with teaching faculty/librarians, content experts physically or virtually through the internet. These actions provide the student with important lifelong learning skills which in turn gives the individual (student) the opportunity to deepen his/her understanding and help prepare him/her to deliver the lesson. In the process the student develops a greater understanding of the depth and breadth of knowledge needed to teach the material to others. Also the student learns how to organize the information in a structure that is optimal for learning. As the Chinese proverb states, ""Tell me, I'll forget. Show me, I'll remember. Involve me, I'll understand." Furthermore, presentation helps students develop communication skills that will enable them to be successful in their professional lives. According to Doyle (2008, p. 108), "communication is one of the most important career and lifelong learning skills for our students to develop."

Problem solving

Problem solving is regarded as a teaching method that enables students to be more effective learners. Solving problems is a part of life and many people do it on a daily basis. As a matter of fact, "problems come in all shapes and sizes, from the small and simple to the large and complex, and from the small and complex to the large and simple" (Robertson, 2001, p. 1). Problem solving is based on the general understanding that allowing students to apply the knowledge they gain early on during the course of their learning (thus not merely at exam time), they will be more exposed to situations they would normally face outside of the classroom and can thus become more adaptable. This activity enables students to develop both analytical and creative skills, lateral thinking, initiative, logical reasoning and persistence. In order to solve a problem one needs to be able to evaluate the situation, find information, evaluate the sources, organize the information, propose a solution and assess the quality of the solution – steps that form the basis of information literacy skills taught by

librarians. Thus, if students are to be effective independent learners, they must be taught how to solve problems on their own.

Concept mapping

Concept maps are tools that assist individuals to visualize the nature of a concept's development from an idea to its end product and future developments (Wilson, Mandich, & Magalhães, 2016; Butler-Kisber & Poldma, 2010; Gallenstein, 2005; Hunter, Lusardi, Zucker, Jacelon, & Chandler, 2002). In other words, concept mapping is a graphical way of organizing ones thoughts and showing how concepts are related or differentiated. It is an active learning strategy that moves one beyond rote memorization to critical thinking; assist in learning about how one learns; provides an explicit, encapsulated representation of important ideas on one page which is great for review; promotes a richer construction of knowledge because you must organize, select, relate and interpret data. It helps one to see gaps in knowledge and areas of oversimplification, contradiction or misinterpretation. Developed by Joseph D. Novak and his research team at Cornell University in the 1970s, concept mapping has been used for reviewing for exams; conceptualizing processes, systems and relationships; brainstorming, organizing concepts and principles; identifying mistakes and areas of confusion; and assessing prior knowledge, generating questions and answers from a reading or writing assignment, and organizing arguments. In fact, concept mapping has been experimentally proven to have "positive effects on students' academic achievement" (Jaafarpour, Aazami, & Mozafari, 2016, p. 129).

Case studies and scenarios

Case studies and scenarios have been noted to accelerate learning and can transform an abstract discussion into an opportunity to demonstrate concrete problem-solving skills. Instructors can present case studies and ask students to apply analysis to and answer questions based on case studies (as part of a quiz or a paper or a discussion) or they can ask students to identify or devise a plan or solution to a problem presented in a case study. Such assignments may be completed by individual students or students working in teams. Case studies may be relatively simple or quite complex but they are usually very effective when drawn from concrete real-life situations and help students translate principles into practice (Davies, 2004). For example, a case study in an accounting class might describe the accounting procedures used for a business and ask students to critique and devise a better approach. Scenarios can be more open-ended, asking students to respond to a series of changing factors and ramifications. A scenario may be combined with a role-playing or debate exercise. In short, the use of case studies and scenarios enhances students' reasoning, problem solving skills, and decision making.

Role Playing and debates

Role playing and debates can be used together with both case studies and scenarios since they belong to a repertoire of experiential learning strategies. These techniques are not new and have been around since the 20th century (Zaleski, 2003). In role playing, instructors can ask students to research and take the part of a particular player in a given situation. For example, students can be asked to play the role of someone conducting an interview with a client, employee or student. Students may be asked to research the types of questions the law permits interviewers to ask in a

particular situation. Alternatively, students may be asked to act as members of an international organization (e.g. the World Health Organization, WHO) engaged in a negotiation of a current issue, e.g. climate change. If applied properly, role playing can be an effective and rewarding learning experience to students since it is an engaging activity.

Whereas, a debate is particularly effective in highlighting and bringing to life a current issue in the news and helping students to see more than one side of an issue. For example, students may be asked to read about proposed changes to certain policies and assigned to defend one side of the issue or the other. In order for debate to be an effective technique, students should be asked to play the side with which they have the least sympathy or agreement. You can also divide students into small groups and have each group research, present, and defend their assigned position. Finally, role playing and debates can be made even more effective when they are followed up by an activity that asks students to reflect on what they have learned from their own involvement in the activity as well as from listening to others in the debate. In short, both role playing and debates enable students to develop skills such as communication, research, problem solving & critical thinking, and team and group work skills.

Projects and portfolios

Generally a project or portfolio is a work which occupies the greater part or all of the length of the course. It may be research-based, or involve creation of essays, reports, PowerPoint presentations, etc. Both projects and portfolios have been used as a teaching strategy across several disciplines within the last few decades (Swigonski, Ward, Mama, Rodgers, & Belicose, 2006; Alvarez & Moxley, 2004; Schatz, 2004; Sidell, 2003; Coleman, Rogers, & King, 2002; Taylor, Thomas, & Sage, 1999; Franklin, 1996). A portfolio should ideally require that students choose and evaluate representative work. Some activities are suggested by the nature of the course subject matter. For example, a course in marketing might have students work as a team on a mock marketing campaign, then present it to the entire class. A course involving environmental issues might ask students to identify, research, and report on problems in their local areas. In short, a well-planned project or portfolio will help students to plan their own academic pathways as well as promote deeper learning. According to Ajandi, Preston & Clark (2013), "the portfolio offers an opportunity for students to be introspective, to reflect upon their strengths and learning needs, and to select the pieces they want to include in their portfolios and understand the meaning of those choices."

Discussions

Class discussion as a teaching technique is much prevalent in academe nowadays (Davies, 2009). Discussions allow students to test their ideas and opinions against the ideas and opinions of their peers and in the process foster intellectual agility and democratic habits. The use of discussions helps learning in several ways such as: helping students to explore a diversity of perspectives; increasing students' awareness of and tolerance for ambiguity or complexity; helping students recognize and investigate their assumptions; encouraging attentive, respectful listening; increasing intellectual agility; helping students become connected to a topic; showing respect for students' voices and experiences; affirming students as creators of knowledge; developing habits of collaborative learning; and helping students develop skills of synthesis and integration. In short, discussions are useful tools for exploration and discovery.

Conclusion

Learner-centered learning refers to any teaching activities such as active learning, student engagement and other strategies that focus on the student as a learner, rather than on the transmission of information. This paper presented teaching/learning techniques deemed suitable to optimize students' learning in a learner-centered environment. It argues that application of a variety of teaching strategies is necessary if we intend to optimize students' learning in a learner-centered environment.

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