Teaching Tips

A Forum for discussion and tips for advancing teaching and learning at Mona

Using digital technologies to promote active learning



The influence of the lecture as a sound teaching strategy has waned over the last 30-40 years or so. Active learning has definitively been the preferred approach in many sites of teaching and learning in higher education. By active learning we mean "the type of instruction that involves learners during the learning process, i.e. "learning by doing and thinking about what you are doing" (Bonwell & Eison, 1991). This might be achieved by a variety of teaching and learning strategies, including the use of digital technologies.

For proponents of active learning, practice matters. It is felt that classroom activities should always characterize the teaching and learning environment. Opportunities are to be created to give students working with concepts a real opportunity to get familiar with them through engagement. When this engagement is realised with feedback from the teacher or even appropriate feedback from peers, the possibilities for meaningful advancements in learning are extremely huge.

As a university teacher who is committed to active learning, you will want to select various kinds of teaching and learning exercises to get students interacting with each other, the content and the teacher. These exercises will have the best results when they are designed to get learners applying the knowledge in multiple ways.

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Special points of interest:

- The Teaching Tips Newsletter is a publication of the Centre for Excellence in Teaching and Learning (CETL) at the UWI, Mona.
- The newsletter is published three times during each semester and a summer edition. It provides tips for improving teaching and learning in higher education and is available online (http://myspot.mona.uwi.edu/ cetl) as well as in the office of the CETL.
- If you need additional teaching tips on specific classroom practices please contact us.

Some advocates for active learning who have switched from passive approaches to teaching and learning, for instance, from the traditional didactic lecture to case studies or problem based learning (PBL) have found greater satisfaction in seeing students learning and earning better results on summative assessment tasks. There are of course, many more instructional strategies that others have used to promote active learning. Some of these include writing, role-playing, gaming, experimenting, simulating, observing, and discussing. If you are thinking about switching, bear in mind that active learning is realised when learners are involved in their own learning, no matter what specific activity is used. Active learning creates opportunities for thinking to be made visible and this will be your task in designing your teaching and learning sessions.

Dee fink (1999) has recommended two principles for active teaching and learning classrooms and these might be of assistance as you think about creating learning opportunities to get learners involved in their own learning. Fink's two principles of active learning are:

1. Dialogue with Self

This is what happens when a learner thinks reflectively about a topic, i.e., they ask themselves what they think or should think, what they feel about the topic.

2. Dialogue with Others

A much more dynamic and active form of dialogue occurs when a teacher creates an intense small group discussion on a topic or you are required to teach your peers.

In recent years, some university teachers have promoted the use of active teaching and learning strategies with the use of digital technologies/21st century technologies. For these teachers, switching from passive classrooms to really active classrooms or learning environments is possible with the use of digital learning technologies. These technologies can enhance, intensify, increase and amplify the learning, making it active and interactive. There are various open source software, web apps, digital cameras and mobile technologies which can be used.

Digital Technologies at UWI

Student Response System (Clickers)

Digital technologies are certainly the buzz word today and they are being heralded as tools that can transform teaching and learning,



especially in relation to making it more active and interactive. But as amazing as we think digital technologies are, we should be clear: these technologies are amplifiers, not endpoints. If opportunities for active learning are not present in the classroom, digital technologies may automate processes, but are unlikely to improve learning.

One 21st century technology tool that is readily available to the UWI faculty is the audience response system or the clicker. Clickers are available from the Instructional Support Services (ISS). A clicker is a hand held device similar to a remote control device for the television. It consists of transmitters and the hand held device that is operated by the student. The clicker is able to send a signal to one or more receivers that feed into a computer controlled by the lecturer. Students are called to respond to, generally, multiple choice questions, when the teacher poses a question by selecting the correct answer. The student clicks an answer. The selected answer is picked up by the receiver and stored with the student records. The teacher is able to show the correct answer and the student will therefore know whether his or her response was correct. Further, the software is able to display a histogram of the students' answers and this can, in turn, be projected to the entire class. This means that everyone will get an opportunity to see how the entire class responded. The software also allows the lecturer to later look up the responses of students to each question and determine if some action needs to be taken to assist learners who did not seem to understand the content taught since those persons might have answered the questions incorrectly. There is also the possibility of programming the software to enable it to assign credit points if this is needed and it can generate and email the total points earned by a student to his or her email address.

The student is called to think about the course content taught in the class and respond when the question is posed. In this regard, the system is used to provide valuable feedback to both the student and the lecturer concerning performance in a course and in particular, at the conclusion, or at a particular point in a teaching and learning session. Hence, this tool is used for formative assessment or summative assessment. Further, use of this tool could lead to changes in both student and lecturer behaviour since the

specific feedback offered through the use of the clicker will inform the teacher about how the student is understanding the course content. Similarly, the feedback will help the student in determining the level of understanding that is occurring. The student will decide if he or she is clear on certain issues and this might mean more attention is needed to be paid to classroom teaching and learning activities or, for instance, there might be need for more engagement in practice activities.

Blackboard Collaborate

Blackboard Collaborate (BBC) is another technology

tool readily available to faculty at the UWI, Mona Campus. It is a webconferencing software, designed especially for teaching and learning in a virtual environment. This tool provides a rich set of teaching and educational resources. These include interactive whiteboard, polling, chat, quiz, application sharing, breakout rooms, accessibility features for the hearing-impaired, among others.

Uses of Blackboard Collaborate for Active Learning

- 1. Virtual Classroom delivering live interactive lectures and tutorials online from various locations.
- 2. Asynchronous Content Development you can record lectures or demonstrations which students can later playback and interact with it.
- 3. Remote Collaboration students from different locations and cultures can collaborate to enhance their learning experiences.
- 4. Virtual Office You can teach from any location and you can set up virtual office hours to interact with students outside of class.
- 5. Guest Lectures You can invite guest lecturers from any location to address your class or to conduct a seminar amd make it interactive.

With this tool, the principle of active learning (Fink, 1999) is certainly realizable.

References

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