Facilitating TBL - Tools to succeed

Pre Class Preparation

Introduction

Traditionally, the pre-class preparation phase of TBL involved students covering readings prior to a session (Michaelsen, 2002). Pre-class readings may have included chapters/excerpts from textbooks and articles or written content created by the educator.

Nowadays, we can share a variety of different types of content with students (Parmelee et al., 2012). We are not confined to "text". We can also provide access to content electronically e.g. through learning management systems (LMSs). This helps to cut down on paper usage.

Here we outline 5 technology-related tips to keep in mind when we are considering how we will design the pre-class preparation phase. Click on the links throughout the document for more information and guidance.

Tip 1: Integrate video content

Consider how video can used effectively in this phase (see Lin, 2019 as an example). Does it complement readings that we use in class? Can video illustrate something that just isn't possible to demonstrate on paper? For example, University of Sydney (2019) include videos of doctor patient interactions to complement reading materials. A smartphone can be used to bring a lesson to life with a demo video uploaded for students. There are also freely available tools that provide us with an opportunity to create videos and screencasts. Two useful tools for video creation include:

- **Screencastomatic** – Free version enables 15 minutes of screen recording time.

- **MS Powerpoint** - Users can record slides and webcam as well as converting to an MP4 file.

There may also be excellent existing sources relevant to your topic. YouTube, Textbook Companion Websites, Teacher Network Groups and open educational resource repositories such as OER Commons can provide of rich media content.

Idea 2: Make it more interactive

Through the use of self-completed quizzes (either stand alone or embedded within video) and other self-paced activities (e.g. reflection questions, practice activities, discussion forums) learners can be more active as they engage with prescribed content.

Quizzing tools that enable students to take a quiz and get immediate feedback before class can help students to test their understanding of a topic. These can be created using quiz tools within a Learning Management System (e.g. Moodle) or using other online quiz tools (MS Forms). Some tools like Nearpod have repositories of engaging activities that can be prescribed. Discussion forums offer students the opportunity to ask questions and share thoughts with each other. Useful tools for interaction include:

- **Microsoft Forms**– Enables the creation quizzes - students can test their understanding.

- **H5P** - Enables you to embed questions within a video.

- **Moodle** allows educators to create quizzes with instant feedback. LMSs usually provide the opportunity for class or team level discussion forums also.

- **MS Teams** can also be another option for "out of class" discussion.

Tip 3: Make it intuitive

If sharing materials online LMSs can be be used to create intuitive course pages for students (For tips, See LSE, 2018). Sending emails with instructions and resources can mean information is lost and difficult to locate. Intuitive course pages help to make pre class activities more easily locatable for students (Clarke et al., 2018).
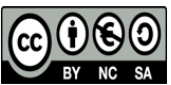
Idea 4: Sequence the steps

There may be times when we are keen to sequence the pre-class preparation that students go through. For example, during the pre assignment phase, you may wish for students to watch a video or read content prior to completing a quiz or another activity.

Tools that enable educators to sequence activities include:

- Learning Activity Management System (LAMS) – This tool enables educators to sequence activities and allow access to activities only when others are completed.

- Moodle – Moodle can enable educators to set up activities so that access to resources/activities can only be possible once other activities have been completed.

Idea 5: Consider bandwidth and student devices

Amy Lobue's (2020) paper on technology and connectivity is a must read for any educator who is designing an online or blended learning class. It highlights the importance of familiarising ourselves with the technological contexts that our students find themselves in. Students may not have the requisite connectivity for the activities that we may wish for them to do.

The quick pivot to online teaching that was required of many educators in Spring 2020 also highlighted the issue of student devices. Students were using many different devices to access content, and some had no access to suitable device at all (Harding et al., 2021). This issue needs to be considered when planning for the use of technology within a TBL unit. We need to consider how we provide access to the tools required to engage with pre-class activities as well as other TBL activities.

We also need to think about how feasible the activities we prescribe to students are due to screen size. Some students will only have access to a smartphone which may not be appropriate for some forms of resource (e.g. E-books).

Further Reading

- Verdaguer, J. (2021) Tips for making your LMS content accessible.
  This blogpost outlines how we can be accessibility-focussed when creating and laying out content for students.

- Han, E., & Klein, K. C. (2019). Pre-Class learning methods for flipped classrooms. American Journal of Pharmaceutical Education, 83(1), 6922 - .

  This article reviews the ways that the pre-assignment stage has been approached in third level education with tips on how to make this stage work well.

- Lin, J. W. (2019). The impact of team-based learning on students with different self-regulated learning abilities. Journal of Computer Assisted Learning, 35(6), 758-768.

  This article charts the ways that one educator sought to make the pre preparation stage more active using technology.

- Columbia CTL Centre for Teaching and Learning (nd) Creating Effective Educational Videos

  In this webpage tips are provided for those seeking to create compelling educational videos.

Useful Links

- How to make a narrated PowerPoint video - from Microsoft Education.

- How to make a screencast - using Screencastomatic - from Technology for Teachers and Students Youtube Channel.

- How to Create and Share Rich HTML5 Content and Applications using H5P - from H5P.org.

- OER Commons - A repository of Open Educational Resources for many educational contexts.

- Getting Started with the OneNote Class Notebook: A Walkthrough for Teachers - from Microsoft.