Teaching In Mixed Level Classes In Higher Education: Using Information Communication Technology in Assessments and Feedback

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Abstract: The purpose of this paper is to discuss the challenges of managing mixed level class from the teaching, learning and assessment context. This review is to critique specific traditional teaching norms and challenge learning assumptions to help teachers develop a mechanism to manage teaching, learning and assessment in a systematic manner while balancing the power relationships with students when carrying out assessment tasks within and outside the classroom. The approach taken in this paper is in the form of a similar case study of Roberts and Susans (Marton & Saljo, 1976 cited Biggs, 1999, p. 58) that outlines the direct experiences of a teacher and students in managing teaching, learning activities and assessments tasks using technology for prompt feedback and learning to take place. Future research could focus on handling effective student assessments via technology while reducing the workload volume and constraints of assessing, teaching and learning mixed level classes in higher education.

Keywords Mixed level classes • assessment and feedback • Information Communication Technology • flipped classroom

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1. Introduction

When one is teaching in a mixed class of diversified group of students, comprising of some ‘academic’ and some ‘non-academic’ students, adjustment of existing, introduction of newer tools of learning technologies, experimenting different teaching and innovative assessment task designs have to be incorporated to enable learning to take place among all levels, whether within or outside the classroom. It is a challenge to teach a mixed level class and obtain most of the students’ commitment. This scenario can be likened to the illustration on deep learning that Susan undertakes with relevant background knowledge and has the commitment while Robert, who is less committed and also perhaps, with less developed knowledge, may just want to have a minimal pass and obtain a qualification, adopting instead, a surface approach to learning (Marton & Saljo, 1976 cited Biggs, 1999, p. 58).

Teaching methods and learning technologies using blended learning and the flipped classroom approaches can further stimulate students to respond to the teaching and learning activities (TLAs). To optimise their learning, so that the Susans and the Roberts in a class ‘have every encouragement to react with the level of cognitive engagement that the Intended Learning Objectives (ILOs) require’ (Biggs, 1999, p. 67). Some of the ways recommended by the pedagogic literature to bridge the learning gap, is to pitch the lecture at a level that sets the tone for learning, (Brookfield, 1995, p.4) so the majority of the class are able to demonstrate the functional knowledge at the intermediate level, and also make available extra problem solving exercises at the advanced level, via online, so that it keeps the teacher and the Susans in the class challenged (which require them to apply their content knowledge when discussing case studies and quantitative questions in the subject and allow self-checking for enthusiastic learners like Susans). More attention can be given to the Roberts and also to the Susans.

A teacher needs to, however, constantly engage in critical self reflection, peer and student feedback on how effective the measures were and how to improve teaching practices, and to review, adapt and modify the teaching methods accordingly as time goes by, and in the process, setting the stage for student–centred approach, so that learning takes place through structured learning activities and paves the way towards deep learning. Some vital questions to fall back on, are as follows:

- What must be taught as the ground work first before the guided learning can take place in the flipped class
- What are the TLAs that must be included for the ILOs to be achieved?
- What has to be discussed in tutorial classes and what can be done during workshops?
- What can be left to students to explore and do on their own outside the classroom
- What shall be set as assessment tasks later to gauge the level of students’ understanding?
• How to assess, to measure the ability to demonstrate the functional knowledge gained by the students from participating in the teaching and learning activities as part of the assessment task?

And this is an on-going process that may assist in engaging students ‘in (appropriate) learning activities’ according to the ‘constructive alignment’ (Biggs, 1999, p.64) and attempt the assessment tasks online, that require the students to perform what the ILOs has outlined that the students are to understand and perform as functional knowledge, beyond memorising facts, digesting information and rote learning. Students especially in their senior year in undergraduate level must be able to demonstrate what they are supposed to know, synthesize information, critically reflect on their learning and practices.

2. Background And Context

Approaches like the problem-based learning allows the Susans or even the Roberts to realize their “endogenous limits” while teachers make explicit the coursework requirement, make available the rubrics, provide the right guidelines, setting a climate to excel, allowing students room for creativity and empowerment. Technology can then be used as feedback channel. For learning to take place effectively, and then again, depending on the maturity level of the students in managing the responsibility of taking charge of their own learning, a teacher, facilitates by means of scaffolding such as e-learning, adopting the nurturing perspective instead of the direct didactic style in transmission perspective described aptly in Gosling (2009, p.13).

Basically, one expects in higher education to adopt the apprentice perspective in some modules like our science subjects requiring lab sessions, student internships or industrial training. In the nurturing or social reform perspectives, different degrees of empowerment in a student learning environment exists, instead of too much concentration on teaching as an activity (Gosling, 2002, p.4). However, there is no denying that the underlying power system still exist and is exerted by teachers through the constructive alignment as asserted below,

along with the popularity of the idea of ‘constructive alignment’ (Biggs 2003,p.3 ) in which learning outcomes, learning tasks, teaching methods and assessment are all predetermined by the lecturer and approved by institutional procedures, means that the scope for students to challenge the teacher have been much reduced (Gosling, 2009, p.20)

On the other hand, this alignment would work well if the students are responding well to the independence granted to them by pursuing the subject knowledge and understanding the requirements for the performance of the assessment tasks and enthusiastically taking charge of their learning.

The above plan was based on the constructive alignment which also keeps one on track, as a teacher. The students, as learners, may overcome ‘surface learning’ or merely learning to pass since students as learners are more likely to engage with the appropriate TLAs, knowing that the assessment tasks are also related to the TLAs and ILOs that has been outlined.

Assessments that test the ability of the students to be able to demonstrate their performance of their understanding as indicated as the subject’s ILOs, in putting the knowledge to work, to make it function as required, beyond declarative knowledge (Biggs, 2003, p.2) are equally important in paving the way towards a better understanding of the ILOs and learning.

3. Assessing Learning Through e-Learning Discussions And Student Feedback

By promoting better teaching and e-learning environment in small groups through online, live discussions via Vimeos, Poll Everywhere etc., by paraphrasing questions, introducing critical thinking and encouraging live chats, discussions through the different e-learning platforms that varies the art of questioning and content delivery, widens one’s perspectives and encourages informal, friendly exchanges of thoughts, opposing or similar views and opinions while it gives opportunity to everyone to discuss without fear, armed with their social device, or being sidelined by domineering students in a traditional classroom discussion setting.

Democracy and discussion are inseparable because both have the same root purpose – to nurture and promote human growth (Brookfield and Preskill 1999, p.29).

Prompting students, especially the introverts, to respond to the topic taught, for instance, on the ‘sources of finance’ topic, by showing a cartoon on various debtholders with these quips, ‘What are good debts and what are bad debts?; posing a series of questions like ‘Do you like to getting into debts?’. (Students are always quick to say “ No! “) ’But do you wish to buy a house upon graduation?’ ‘If so, how do you plan to cover the financing- cash or debt?’. Again, set the poll and watch
for the students responses. That is to trigger the thinking process on the debt instruments and other numerous ways to source for funds, demonstrate to the students how credit analysis is done, for both consumer credit and business credit, thus addressing the ILOs such as the ones found below that has been set for the particular topic:

**SLO1:** The learner will have reflected on the overriding principles of managing consumer credit in comparison to business credit

**SLO2:** The learner will have demonstrated the ability to make decision based on a variety of financial resources available as sources of finance as consumer credit

All four lenses by Brookfield (1995, p. 29) advocate consideration of views from various perspectives to evaluate oneself as a teacher and measure the effectiveness of the content delivery. And proper feedback mechanism should be carried out to gauge the level of understanding of the subject knowledge beyond its declarative knowledge and whether ILOs were attained.

Stead (2005, 119) suggested using the One-Minute Paper, to ask questions like, ‘What is the most important thing you learned in class today?’ towards the end of the class. One can use the Vimeos or the Poll Everywhere to collate such information. The next question is to ask, “Did you achieve the ILOs that were intended for you, as a student? or “What was the muddiest point in today’s lesson?” That would require responses that would indicate a quick answer and help the teacher to assess whether the ILOs were achieved during the TLAs or whether the assessment tasks can be redesigned to better measure them.

### 4. Wider Issues On Teaching And Learning: Information Communication Technology For Assessment And Feedback

As Biggs (1999, p. 67) recommended, the selection of the teaching and learning activities can be peer-directed or self-directed instead of being controlled by the teacher alone. This they can do during the flipped classroom session when one ends the mini lecture. By flipping the classroom, the students can be encouraged into attempting the ‘Do-it-now’ sessions with the questions that leaves them very little opportunity to do other than the classroom exercise prepared for them, while the teacher is there, available for them, walking around the classroom attending to those needing any coaching on some of these questions. As the teacher works with the Roberts in the class, gradually guiding them through a few basic level questions, trying to build their confidence to attempt a few more questions that address the intended learning outcomes, on their own, the Susans in the meantime, can opt to do the intermediate level and other challenging questions posted on their e-learning portals, answer online and receive the feedback. If there are anomalies, the Susans can attempt to discuss solutions with the teacher during consultation time or after class. The teacher can make herself available to Susans for a quick discussion, sometimes, during the ‘Do-it-now’ sessions while the Roberts are attempting to answer the questions. But once the lecture materials are uploaded in the e-learning portal, the focus can shift towards addressing the students’ concern and challenges in grasping the knowledge content, testing the declarative and content knowledge, assessing their ability in demonstrating functional knowledge, as mentioned by Biggs (2003, p.2). The assessment tasks are to measure the ILOs.

The teacher can also source and crop the relevant section of the video clips and prepare related questions for students’ reflection and learning purposes using EDpuzzle , Screencast-O-Matics and Educreation tools and other tools, to engage the current generation Z to quickly understand and catch up with the lectures or tutorials, integrating blended learning and flipped classroom approaches to assist learning (being the current trend). As for assessing their progress, their participation in interactive online video quizzes that gives prompt individual feedback and scores along with reflective questions can be implemented as alternative assessment tools and the results can be monitored.

Digital classroom tools like computers, tablets and smartphones offer exciting opportunities to deepen learning through creativity, collaboration and learning, but those very devices can also be distracting to students The concern is the students’ attentional capacities that other generations had naturally had before the distractions of digital devices. It’s about using the devices smartly but having the capacity to concentrate as you need to, when you want to” (Goleman cited Shwartz, 2013).

It calls for discretion in using the devices and exercising mindfulness in learning and also self-discipline in this wide, world of distractions. Using the flipped classroom approach can motivate a mixed level class of students as students can learn at their pace within the acceptable timeframe, meaning they can revisit the lectures, take the online tests and quizzes and gain feedback promptly.

Scholars have proposed that educators need to adjust their pedagogical models if they were to use Web 2.0 for teaching and learning in order to suit this kind of new generation learners. (Hamid, Chang and Kurnia, 2009, p. 419).

Students who are labeled as ‘below average’ students, if given the right tool, can take the responsibility for their own learning and a teacher must be able to facilitate such ways of learning, including social learning using online social networking and other social technologies, ‘new kind of a participatory medium that is ideal for encouraging multiple types of learning’ (Brown, 2008, cited Hamid, Chang and Kurnia, 2009, p. 420).
There is the need to encourage and empower students to take part in e-learning activities and discussion sessions so that learning takes place, by turning to the many available, engaging blended classroom tools (available at the time of writing this paper), such as Vimeos, Poll Everywhere, Movemenote, Presentme, Prezi, Knowio, Camtasia, iStudio, Powtoon, Blendspace, Screencast-O-Matic, EDpuzzle, Ted-edLessons, moving beyond mere powerpoint slides to engage the students. A slide with too much detail could obscure the “larger picture,” could be difficult to prepare, and difficult to read and use.

An article on ICT for assessment and feedback on undergraduate accounting modules outlined the process of carrying out the ICT implementation of online assessment, obtaining immediate feedback and student scores on routine tests. The article related 2 case studies on the accounting education technologies (Marriott and Lim, 2012, p.4). ICT as a tool for assessment and feedback allows the use of simple online exercises, online quizzes and online tests that enable the students to receive online feedback, answers programmed with the right working as a learning tool when students attempt the questions and if students answer wrongly, the rationale or logic for the right answers are provided. Since there are learning tools that offer the monitoring of the students’ participation, allowing repeated attempts and assessing the performance of the students via these self-learning activities, a teacher can gauge the engagement level of the students and could, then, devote his or her time and energy to troubleshoot on problem questions faced by the students, address assignment issues, create a variety of assessments tasks, research on current issues and news, prepare innovative learning materials and experiment with effective learning tools and brush up his or her teaching methods. Above all, the focus can shift to giving quality feedback for learning.

Equipped with the awareness that the assessment is the curriculum, as far as the students are concerned (Ramsden, 1992 cited Biggs, 2003, p. 3) and that they will learn what they think they will be assessed on, not everything that is in the curriculum, address the relevant ILOs. So, there is a need to review the curriculum for this purpose. Students, once they know what are expected of them, would be drawn into this flow to achieve the ILOs. ’The trick is, then, to make sure the assessment tasks mirror the ILOs. And in preparing for the assessments, students will be learning the curriculum’. (Biggs, 2003, p. 3).

5. Conclusion

As one needs to assess the progress, take remedial actions where necessary and then, measure the outcomes whether learning took place, it is important that the assessment task must be valid, set to measure the ILOs. As Boud (1995, p. 35) says,’Students can, with difficulty, escape from the effects of poor teaching, they cannot (by definition if they want to graduate) escape the effects of poor assessment’. Plus, assessment is a vital, compulsory exercise unlike lecture attendance.

Referencing


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