
INTERACTIVE TUTORIALS PROMOTE EFFECTIVE LEARNING

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ABSTRACT

Learning becomes more effective when students participate with a high level of engagement. Many modern education theorists support the view that students need to be more actively engaged in the process of their education. This article outlines one attempt to experiment with an interactive tutorial.

KEYWORDS

interactive learning – multicultural – pedagogical

INTRODUCTION

Universities are places of research and learning. But what about research into the ways in which students learn? University lecturers, unlike their primary and secondary school counterparts, generally have little training in pedagogical methods. Halpern and Hakel (2003) in writing about applying the science of learning to the university and beyond state that very little, if any, of our formal training addresses topics like how adults learn, the role of memory, or the transfer of learning. Further to that, today's classes are multicultural which means that many students, new to the country, have difficulty coping with their limited understanding of the English language.

THEORETICAL FRAMEWORK

In the last few decades, several important theories of interactive learning have been developed. Within Western culture, theorists such as Piaget, Vygotsky, Bruner, Kolb and Bandura, to name a few, have each developed theories about learning. If there is one thing that all these educational theorists have in common, it is that students need to play a more active role in their own learning. Borzak (1981) suggested that experiential learning involves a direct encounter with the phenomena being studied rather than merely thinking about the encounter. Bruner (1966) also has said that to instruct someone is to teach him to participate in the process that makes possible the establishment of knowledge. Constructivists suggest that learning is an active process whereby learners construct new ideas or concepts based upon their present knowledge. Inquiry-based learning is also an interactive method of learning by which students learn from asking their own questions and generating solutions (Kwon, Ryu & Shin, 2004; Koch & Appleton, 2007). Such methods enable students to master the knowledge outcomes of their course and also help them to use the critical thinking and inquiry techniques needed to be

good researchers and writers of academic analyses.

Yet, Weimer (2003) maintains that students are still the passive recipients of education rather than active agents in control of their own learning processes. Barr and Tagg (1995) have stated that we now see that our mission is not instruction but rather that of producing learning with every student by whatever means works best. Moreover modern instructors have a wide range of technological innovations at their disposal. Most students are very familiar with these technological developments and their use increases the interest and helps with the engagement of the students.

As an example of interactive learning, Bakke, Faley and Steinburg (2007) describe a unique student-centred curriculum for introducing students to information systems courses. They claim that the students enjoyed the experience, had greater control over the learning process and mastered more difficult material. Another approach with positive results has been described by Law (2007) in Guan; Newby and Nguyen (2007) in California and the United Kingdom, and Seyed-Abbassi, King and Wiseman (2007) in Florida who have provided opportunities to connect classroom learning with practical work experience. Enjoying one's studies and experiencing learning that relates to one's interests is likely to encourage students to make it a lifelong process. Lifelong learning is more likely to take place with people who have had the experience of being involved with their own learning.

METHODOLOGY

The writer, aware of the thesis that interactive learning supposedly heightens the interest of students and increases their learning ability, carried out a series of tutorials designed to actively engage the students. The students were then surveyed by a questionnaire in which they were asked to express their opinions about the teaching methods used. These findings together with the writer's own observations were used to formulate ideas about the success or otherwise of

greater student participation in the conduct of the tutorials.

An experiment was carried out with a class of postgraduate students in the course of "Information Systems Management". It was an ethnically diverse tutorial of 25 international students from 6 different countries. In an effort to know the students better, the writer made a composite collection of the student photographs on a single page and kept it on the lectern. This was in order to get to know the students quickly. Students respond better when they feel the tutor takes enough interest in them to get to know their names (Leong 2005).

Students often seem to retain little of what they study in class and often show little response. Previously the way of conducting tutorials was predominantly textbook-based with the course followed chapter by chapter in the textbook. Previous response by the students had been half-hearted as they played the more passive role of listening to the lecturer's instruction with only occasionally any interaction except for the occasional directed question. A complicating factor in such a multilingual class was that the majority of the students use English as their second or third language. It is not easy for most people to respond orally when they have to do it in a language with which they are not very familiar. In such a situation many students lose faith in their own ability to respond and, though they may have difficulties, they are uncertain about their ability to raise their problems without exposing their faulty language skills. Little wonder they are often seen as passive learners.

The teaching methods used were not necessarily amazingly new to Australian students, but to international students, who are usually only familiar with teacher dominated classes, they came as a surprise. Of course it takes some degree of imagination and creativity for a lecturer to work with innovative presentations. Weimer (2003) has said that although students must do the hard, hands-on work, it is the teacher who has to work the hardest, especially in class. For example, the tutor needs to plan the whole term in advance, not only in terms of content, but also in terms of presentation. It takes time for students to adapt to new methods, but gradually their degree of enjoyment and participation grows. Students must also see that each activity has a basically serious purpose. Meantime in class the lecturer has often to deal with a varied range of questions and be able to help different students with different problems. His responses tend to be more spontaneous as students may come up with unexpected questions.

Within a term, no method was used more than once. Discussions were used but there are various ways of introducing discussion so that one can increase the student input. Students must always feel that discussions are relevant to their study. One example of a different teaching method is the use of advertisements. One topic students had to study was the changing role of information systems (IS) managers. Once, the IS manger only needed technical skills. Nowadays, an IS manager needs multiple skills. "The responsibilities of the head of the IS now go far beyond operating highly efficient 'production programming shops'" (McNurlin & Sprague, 2006, p. 50). IS managers must understand the goals of the enterprise and work in partnership with line managers to deploy IT to attain the organization's goals. They do need technical skills, but there are many other skills they need as well. One tutorial was designed to enable students to understand what skills they need to develop in order to qualify as suitable applicants for jobs as IS managers. In preparation for the tutorial, students were asked to search for advertisements for IS managers and bring them to class. Several students were asked to present the advertisements they had brought to the tutorial and highlight the skills required in the advertisements. Listing the required skills from various advertisements enabled the students to see the skills that they would need. Such skills could indeed be related to sections of the textbook. This method allowed students to see something of the real world in which IS managers work. It confirmed what the textbook was saying.

On another occasion, students were asked to take part in a mock job interview, working from 5 or 6 job advertisements for IS professionals. The writer enabled the students to carry out mock job interviews. This was done on a group basis in which one member of the group acted as an observer and later reported to the class an assessment of how the interview went.

Another method was the use of informal debating on a topic related to their study. This required some time to introduce students to the idea of debating, although the writer used a modified form of debating to include most of the students in the debate.

Video and audio clips available on the Internet were used as starting points to foster discussion on particular topics. Animated pictures which illustrated concepts within their studies were also used to present fresh insight. The Internet is a great source of up-to-date information though it often takes time to find what one wants and to

sift through the vast amount of material for that which is relevant. Students were asked to use the Internet for discussion purposes. Another advantage of using the Internet is that the students usually find the language used on the Internet is more accessible than that in the textbook. The writer, in the past, had experimented with student presentations but had found that this activity is not usually successful with international as it usually ends up as a very formal affair and many students are hesitant in their speaking because of language difficulties. In the more formal use of language with different international students speaking in different accents, comprehension by the rest of the students often becomes difficult.

RESULTS

According to the writer's perception, the students found such methods of presentation not only more enjoyable but more profitable. Their interest appeared to increase and most of them became much more active and alert during the tutorials. Attendance rates ceased to be a problem. There may always be some, usually a small minority, who feel threatened by these more active methods. Students who are acutely shy often find it difficult to speak in front of others. However, as they become more used to this more active tutorial environment, they usually learn to overcome their inhibitions about

participating. Language use is easier when it is conversational or consists of short spoken statements rather than the longer lecture which is usually used in student presentations. This helps the students to grow in confidence. In the writer's experience, many students who began the term as mere observers gradually began to enter into the activities and became more much participative. As their participation increased, so did their interest.

The writer gave each student a questionnaire to gauge their response to the way the tutorials had been conducted. When asked, on a scale of 1-10, how they would rate their interest in the course, there were 6 students who gave it 10, seven who gave it 9, 2 who gave 8, 6 who gave 7 and 4 who gave it 6. Unfortunately, the writer has no figures to compare this against, but he considered the rating higher than he would have gained in tutorials conducted in the traditional way. Another class whom the tutor taught in the following term showed a similar apparent increase of interest and active participation. When students were asked to state their preference for the way of conducting the tutorial, that is, making a choice between a tutorial where the tutor talks most of the time and one in which the students take an active part, 21 out of the 25 voted for the tutorial with student activity, and 4 did not pass an opinion.

Some comments the students made were as follows. Any incorrect language is because this is the actual language that the respondents used.

<i>"This style of tutorial gave a chance to the student to feel he knows something and the tutor to understand the student's standard of thinking or grasp of the course".</i>
<i>"Each student comes up with different views, ideas, and criticisms that will give others a chance to participate and put their views along with the tutor's knowledge".</i>
<i>"It helps students to gain more knowledge of the subject by having more confidence in speaking individually or in groups".</i>
<i>"Unless a student takes part and expresses his point of view, he does not know whether he is right or not, and if he is wrong, he can be corrected and gain more confidence".</i>
<i>"It broadens the way students think". "Feedback helps the tutor to know the level of knowledge that the student has. If students take an active part, it builds the confidence".</i>
<i>"I feel I am important to the tutorial. And if the tutor talks all the time, I may feel sleepy".</i>
<i>It helps to develop our communication skills and confidence".</i>
<i>"Interactive tutorials help the student to grab better notions of concepts and help them relate the knowledge to real life".</i>

No one wrote any critical comments.

The most popular methods used were: organized debates, video and audio clips, general discussion, and mock job interviews. There may have been specific reasons for these choices. Debates always seem to raise a certain level of competition as contrary opinions tend to encourage the participants to take sides. Video and audio clips, if carefully selected, introduces

the students to a topic in the kind of media with which they are very familiar. General discussion arouses a sense of informality that lessens the students' sense of insecurity once they have become engaged in the topic.

The most common threat that students said they felt was having to give student presentations of the kind not used in this series of lessons. When asked if they had any particular problem with

tutorials in which they were asked to participate, very few raised any problems. The most common one was the problem of language. Some students had difficulty with group discussion because of their distrust of their English skills while others found it difficult to understand other students especially those who spoke with a heavy accent.

DISCUSSION

The writer's overall impression was positive. Certain things need to be reviewed to further improve this approach to tutorials. The reluctant student is a problem, but such students seem to form a minority group. Perhaps such students need more positive encouragement and advice on how to formulate their ideas. Encouragement, especially on an individual basis simply needs a word or two given informally. Once students begin to feel that their own ideas are accepted as serious and they find that others have actually understood what they have said, they begin to grow in confidence. Students who feel that they are weak in English often find themselves insecure. In Kolb's (1984) words, a student whose native language is not English have a natural orientation to an assimilation-learning style where thinking and watching is preferred. Tatar (2005) in writing about teaching Turkish students found that some students were unfamiliar with discussion as a learning and teaching method. Lee and Carrasquillo (2006) also found that in Korea students expected the teacher to control the classroom, and open-ended discussions, or exploratory learning exercises were likely to be met with bewilderment. This does not mean that students do not necessarily learn from listening, but for deeper learning they need to demonstrate that they have come to terms with what they have heard. There is such a thing as active listening. The writer's experience is that non-native English speaking students, as they become more used to the more interactive methods, gradually change their attitude and become more participative.

Further investigation needed

It is difficult to assess objectively the results of conducting tutorials in this way. In the real world, most students are concerned about completing the course satisfactorily. With this particular group, there were only two who failed to do that. However, one would need to look at the results over a number of years and compare them with earlier years. This might not be a totally objective case as there could be other variables. For example, the degree of difficulty of the exam might vary from year to year. The natural ability of the student might also vary. A general trend of improved results would appear

to indicate that the students profited from the course.

It would be interesting to see if from being actively participative in these tutorials, students continued to be similarly active in further classes and in other courses. Whether or not participation in such tutorials had an ultimate effect on their later lives, especially in their professions would also be interesting to know but very difficult to organize.

Several students subsequent to their time of study wrote to inform that they had been successful not only in further study but in actually gaining positions of employment. They commented on the interest and confidence that the series of tutorials raised.

CONCLUSION

The writer is convinced that in Australia at least, with increasingly large numbers of overseas students in university classes, much more attention has to be given to the varying needs of individual students including special attention to those with language deficiencies and to the education of lecturers and tutors in pedagogical methods. This requires not only special ability but special training to develop these skills to the full. There will also be a need for a greater degree of flexibility in the way in which students are both taught and assessed. It has been the writer's experience that more interactive classes produce greater interest among students and helps them to grow in confidence as well as to learn more deeply. Such classroom experience is more likely to make them become interested in lifelong learning and more able to adjust to the actual workplace.

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