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HOW INTERACTIVE CAN A LECTURE BECOME?

Mehran KOOHGILANI
Faculty of Science & Technology, Bournemouth University

ABSTRACT
The uses of technology have been well documented and many people have tried to use the available technology. A pilot study has been implemented in order to facilitate the use of social media, portable devices, forums and the good old chalk and talk technique to bring the big lectures back to life. Improve the student experience and the learning by engaging everyone. The dynamic environment of the lectures would be enhanced by allowing interaction on all levels from delivery of the unit to questions and answers to setting and sitting examinations and assignments. Even the feedback mechanism would need to change. The research would require a huge shift in the way everything is done and the cultural consequences of the change may be more of effect towards the academics, especially ones with longer teaching experience.

Keywords: Social media, interactivity, digital media, teaching methodology

1 INTRODUCTION

It has been clear for a long time that the gap between schools (A Levels) and the university education is relatively large and sometimes it takes a lot of effort and support mechanisms in every institution to help student retention and progression, the so called added value. The issue of retention has been especially studied and researched by many colleagues in their respective universities. According to Meloni [1] it isn't a stretch to say that the definitions of "teaching online" and "teaching with technology" vary, even from instructor to instructor. "Teaching with technology" can mean using PowerPoint in a lecture, or the distribution of course materials via email, or customized course blogs enabling user-generated content, or the integration of wikified student-edited syllabi. Similarly, "teaching online" may mean an experience in which instructor and students communicate from disparate locations solely through a learning-management system such Blackboard or Moodle; a course in which the bulk of the content is delivered online but instructor and students occasionally meet face to face; or a regular face-to-face classroom experience supplemented by online discussion and accessible writing such as in student blogs. Whatever the level of technology, and regardless of our comfort level with it, remember that for all that educational technology can offer through new communication methods and the ability to reach a wider range of students, it is no panacea. An instructor must still deliver relevant material, enable students to achieve course goals, and assess their work. Students must still learn the material, use assignments and discussion opportunities to achieve course goals, and, ultimately, produce work to be assessed. However, if the student does not read, digest, analyse and interact with the lecture and the notes given, then the whole process will be wasted. Gow & Kember [2] attempted to discover whether parallel conceptions of teaching can be identified and, if so, whether they are related to student learning outcomes. Initial investigation was through semi-structured interviews with lecturers at a polytechnic. Constructs identified from the interview transcript were transformed into scales for a questionnaire. Different sets of polytechnic lecturers responded to trial and final versions of the questionnaire. Analysis of the final version of the questionnaire identified two main orientations to teaching — learning facilitation and knowledge transmission — made up of five and four subscales respectively. According to Mathias [3] Previous teaching models in the learning theory community have been batch models. That is, in these models the teacher has generated a single set of helpful examples to present to the learner. Hurson and Kavi [4] discuss the constant increase in the cost of higher education; recent market demands for computer specialists; lack of expertise in offering technology-oriented courses; and a new class of non-traditional adult students, combined with the constant pressure to maintain small class sizes call for new teaching practices. Furthermore, it has been proven than people's learning styles differ; most

students absorb and retain visual material more readily than other types of material, but the world is full of ear-learners and those who learn by physical practice. The average learner retains about 20% of what is heard, 40% of what is seen and heard, and 75% of what is seen, heard, and experienced. A traditional classroom setting mainly offers seeing and hearing practices; print- or video-based distance study breaks the classroom boundary but offers the same teaching practices. Recent marriage between computation and communication technologies offers a natural solution to these issues: Advances in computer technology allow information to be presented in many different ways (multimedia); hence, interactive computer courses offer all three modes of learning. Advances in communication technology allow the information to be available anytime and anywhere. The marriage between the two allows a higher degree of accessibility and offers various learning modes beyond the traditional time and space limitations. Their paper addresses their effort and experience in developing a computer organization course using multimedia technology. The interactive nature of the lecture environment and the fluency of the data presented must be embraced by the student.

Stephenson [5] has looked at the developing understanding of approaches to online teaching and the emergence of pedagogies that will ensure online teaching and learning materials are effective. According to Ironside [6] the need to prepare students for a rapidly changing health care system sustains teachers' interest in developing students' thinking abilities at all levels of nursing education. Although significant effort has been directed toward developing efficient and effective strategies to teach thinking, this study explores the underlying assumptions embedded in any approach to teaching and learning and how these assumptions influence students' thinking. This study, using Heideggerian hermeneutics, explored how teachers and students experience enacting a new pedagogy, Narrative Pedagogy, and this article explains how enacting this pedagogy offers new possibilities for teaching and learning thinking. Two themes emerged from this analysis and are discussed: Thinking as Questioning: Preserving Perspectival Openness and Practicing Thinking: Preserving Fallibility and Uncertainty. According to Bronack et al [7] as the use of 3D immersive virtual worlds in higher education expands, it is important to examine which pedagogical approaches are most likely to bring about success. AET Zone, a 3D immersive virtual world in use for more than seven years, is one embodiment of pedagogical innovation that capitalizes on what virtual worlds have to offer to social aspects of teaching and learning. The authors have characterized this approach as Presence Pedagogy (P2), a way of teaching and learning that is grounded in social constructivist theory. In it, the concepts of presence, building a true community of practice, and constructing an online environment which fosters collaboration for reflective learning are paramount. Unlike learning communities that might emerge from a particular course taught under more traditional circumstances, students engaged in a P2 learning environment become members of a broader community of practice in which everyone in the community is a potential instructor, peer, expert, and novice—all of whom learn with and from one another. The student behaviour and expectations are rapidly changing, so much so that it has become very difficult to map or even cater for. A very long time was spent thinking and researching about various methods of learning and teaching. However, none really works. This maybe a dogmatic and cold hearted response but nonetheless is true. Academics including the author as well as psychologist have erred on the side of caution as well as the positive side of the teaching and engagement theory. It was decided to think outside the box and a completely blank canvas. The attitude needed to be bold and it was also necessary to observe and experiment. Any lecture could be bland and dry or become as fun and engaging as any by simply creating that rapport between the lecturer, students and topic. This paper aims to describe the somewhat novel and successful processes used in order to facilitate this through modern interactive tools, multitasking, as well as nurturing creative and analytical approaches. It has been built upon the technologies and processes that the students are already familiar with through their school years and taking it to the next level. It has allowed the students to influence the delivery and their interaction with it. Encouragement, technology and nurturing have been the main key indicators and the route to success. With the increasing fees and the changing landscape and climate of higher education, it has become difficult to fill the courses at universities. Therefore it has become even more imperative to make sure that once the students are enrolled onto the relevant courses, maximum student retention is maintained. Of course it must be emphasized that every course has a magic number of drop outs. It is assumed that the readers of this article also know that even in the days of free education and plentiful number of applicants, the reduction of wastage rates were always our duty and of great concern especially if it seemed to peak at any time. However, it has become more of an issue and concern nowadays with the advent of concept of student experience and

student satisfaction surveys as well as the considerably increased fees. Numerous studies have been conducted over long periods on processes and circumstances by which student retention could be improved. This has prompted a review paper by the author of the studies of student retention techniques to be published in autumn. Suffice it to say that many articles and essays on the topic have been studied. Many of the models and suggestions have been implemented in the past with varying success. For Example Tinto [8] states that the dimensions and consequences of college student attrition and features of institutional action to deal with attrition are discussed. Patterns of student departure from individual colleges as opposed to permanent college withdrawal are addressed. After synthesizing the research on multiple causes of student leaving, a theory of student departure from college is presented based on the work of Emile Durkheim and Arnold Van Gennep. The theory proposes that student departure may serve as a barometer of the social and intellectual health of college life as much as of the students' experiences at the college. The quality of faculty-student interaction and the student's integration into the school are central factors in student attrition. Attention is directed to features of retention programs, including the time of college actions and variations in policy necessary for different types of students and colleges. It is suggested that effective retention lies in the college's commitment to students. The content, structure, and evaluation methods for assessment of student retention and departure are considered, along with the use of assessment information for developing effective retention programs. According to Cabrera and Nora and Castañeda [9] several theories have been advanced to explain the college persistence process but only two theories have provided a comprehensive framework on college departure decisions. These two theoretical frameworks are Tinto's [8, 10] Student Integration Model and Bean's [11, 12, 13, 14, 15, 16] Student Attrition Model. Cabrera et al [9] have validated Tinto's model across different types of institutions with differing student populations. In turn, the Student Attrition Model has also been proven to be valid in explaining student persistence behaviour at traditional institutions while modifications to the model have been incorporated to explain the persistence process among non-traditional students. Insofar as the two theories have attempted to explain the same phenomenon, no efforts have been made to examine the extent to which the two models can be merged to enhance our understanding of the process that affects students' decisions to remain in college. However, Cabrera, Castaineda, Nora, and Hengstler [17] have provided evidence that there is considerable overlap between the two theoretical frameworks. Taking these findings one step further, this study attempts to document the extent to which these two theories can be merged in explaining students' persistence decisions by simultaneously testing all non-overlapping propositions underlying both conceptual frameworks. Student retention has become a challenging problem for the academic community: therefore, effective measures for student retention must be implemented in order to increase the retention of qualified students at institutions of higher learning. Lau [18] suggests that institutional administrators, faculty and students play a vital role in improving student retention. For instance, institutional administrators can help students stay in school by providing them with the appropriate funding, academic support services and the availability of physical facilities, in addition to the effective management of multiculturalism and diversity on campus. Faculty members can help to maintain a positive teaming environment for students by using multimedia technology and innovative instructional techniques such as cooperative and collaborative learning in the classroom. Ultimately, the success of college retention depends on the students themselves. Therefore, students must be motivated to participate actively in their own learning process. Lenning [19] tried clarifying the various concepts of retention and attrition within a unifying conceptual framework, Co synthesize the research on retention and attrition, and examine the implications of the research for postsecondary administrators and researchers. Retention and attrition research pertains to both the percentages of students who complete programs and the reasons for completion or attrition. Practical considerations concerning attrition and retention that administrators should consider were briefly addressed. After clarifying terms, (including persisted activities, stopout, dropout, retention, and attrition), that appear to affect attrition and retention are described, and activities and strategies that may help reduce attrition rates are recommended. Theoretical and empirical literature was reviewed, as were attempts to classify retention. A new structure for classifying retention has been proposed, and indicators and measures for attrition and retention have been described. According to Wild and Ebbers [20] student retention is critical to the community college environment. They elucidate that in order to understand student retention issues in community colleges, it is necessary to identify the retention goal of the institution, the criteria, definitions, and data needed to monitor progress toward the retention goal. Only then can a retention

program be designed and implemented. A plan to establish a college-wide retention program is included. They also provide an overview of past and present research pertaining to student retention. Reasons [21] has reviewed recent research related to the study of college student retention, specifically examining research related to individual student demographic characteristics. The increasing diversity of undergraduate college students requires a new, thorough examination of those student variables previously understood to predict retention. The retention literature focuses on research conducted after1990 and emphasizes the changing demographics in higher education. Research related to a relatively new variable—the merit-index—also was reviewed, revealing potentially promising, but currently mixed results. Here the aim was to wipe the slate clean and start with a fresh canvas. The authors wanted to think to use the jargon, outside the box.

2 METHODOLOY

After some soul searching, retrospective thinking and observations, it was decided to level the playing field, some might say move the goal post, and some might even say take our level to the student's level. The simple fact is that the new generation of students, whether supplied through student support or personally bought, are mainly reliant on tablets and smart phone. The technology has already been widely embraced by the student. The next step was have role models, course champions, someone whom then students could look up and warm to. Hence the PAL (Peer Assisted Learning) Project was resurrected. Mature students and higher level students were encouraged to nurture the weaker lower level students. Team working was widely and vehemently promoted. Regular meetings gathering were set up with links on the social media and forums. Live projects have run as competitions between the first and second year students. Cross framework design and engineering collaboration and competitions have been encouraged. BA students have been given the opportunities to contribute to BSc students and vice versa. Even the new BEng cohort were encouraged to contribute. Students have a studio days in which they are given a brief at 9 am and they need to come up with solutions and manufacturing plans by 5 pm. The sessions were initially run strictly through the project tutors but gradually they were put in charge up to the point where the academics acted as arbitrators. Sometime projects were resurrected in order to achieve optimization. Sometimes different levels and design groups where mixed. Guest clients from other courses within the school were used. The aim was to simulate the real world and promote growth and developments as well as time keeping and the professional etiquette. Ex-students in industry and students on placements have been called upon to help the freshers ride the initial turbulent tides of higher education. All this has to been done in the light of the balanced work load which to be honest is the most difficult challenge.

3 DISCUSSION

This is the generation student experience, and student surveys as well as the National Student Survey (NSS). This is a generation which has for major part has grown up being told what they need to pass the exam. This is the generation of student forums and the complaint culture. This is the generation of tell me what to read, give me enough notes; do not ask me to do any extra work as part of my learning if it is not assessed. This is the generation that would rather keep typing words into Google in search of the solution to a question set in the lecture. This is the generation that prefers not to read book unless it is full of glossy pictures and displayed on a high resolution screen. This is the generation who thinks of a library as this building full of old books but may have a nice trendy coffee shop just outside it. The authors appreciate that is an over generalization and as mentioned earlier there are exceptions to the rule. These comments and observations have not been made likely. Many hours of observations have given credence to these. A typical lecture theatre with a capacity for 250 students would at best be housing 100 to 110 students. These students would be scattered all over the hall. There will be pockets of student sitting together, some more densely packed than others. There are always the loners as well as many empty seats. The dense pockets usually tend to be at the back of theatre and the loners sitting at the edges on the front. The rest scattered all over the place. The salient fact is that there are many empty seats in between. This is still not a problem on its own, since students could be asked to move to front seats; however, the simple task of rearranging the class is time consuming and is more reasons for the students to not be satisfied. The issue becomes a problem when you realize the reason why they have chosen to stay away from lecturer, is simply because they want to enjoy using their smart devices for other activities other than the lecture. The other side of the argument is that at least they have made the effort of turning up to the lecture, the fact that they have chosen not to engage

whilst they are in the lecture theatre is of prime concern to any lecturer especially if they enjoy their work. Students have been observed to even bypass the calculators on their mobile devices and have tried to use Google as a calculator. All these observations reinforced the need for the interactive teaching and utilization of the technology familiar to the current generation. In order to achieve what was set up, the system had to work seamlessly but the student body is many things but seamless. In many cases, it takes real courage and dedication on the part of the academics involved, to be complementary and encouraging. As academics, you understand the importance of this and hence it is done. Another challenge has always been that of how do you persuade industry to want to be involved with live projects. It is understandable that a company would look at the time involved and would ask the question what is in it for me? In these cases this barrier was traversed by selling the idea to the companies with argument that where else, would they have the opportunity to tap into so many young, vibrant, fresh and untapped minds? They could reap the benefits of new ideas and designs and concepts generated especially if they would set the design briefs. The incentives for the students came in the form of assessments, prizes and possibility of placement not to mention the opportunity of seeing their designs becoming commercial realities. Students could develop, test and submit their ideas and concepts online. Students were encouraged to twit about their ideas and then discuss their concepts on Facebook. Ultimately a Who Wants to be a Millionaire theme competition was run.

4 CONCLUSIONS

It is clear that the combinations of increased fees, the school mentality and the near addiction to their smart devices are all responsible for how the current student generation treats higher education. For many the work load and the expectations of the academics is far more than what they are prepared for or want to be committed to. It is interesting that even overseas students who may have had a more regimental schooling or have already been through an undergraduate course and are studying for masters degrees are no different. It would be interesting to know if they are affected by their classmates or is it simply that they are also addicted and distracted by their devices. The interactive process has proved successful and the full implication will become apparent once one full cohort has gone through. We are optimistic and all signs are positive. The approach proved to be a success for all parties involved from the student engagement and satisfaction to fulfilment of the company requirements. Above all also it has improved the student retention considerably. Of course it must be noted that many other factor have also contributed to the retention rates, namely correct screening of applicants in the first place during the open days and interviews. The dedication of the academics and admin has played a big role in the retention rate.

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