INNOVATION APPROACHES TO TEACHING IN PARALLEL WITH SOCIETAL CHANGES AND EDUCATIONAL TECHNOLOGICAL INNOVATIONS: A PARADIGM SHIFT

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ABSTRACT

In today's world, the conventional method of teaching is not adequate to meet the learning needs of students. To enhance the learning experience of students and their employability after graduation, several innovative methods are discussed here, namely, research based learning and teaching, case study approach and the adoption of technology. Teaching methods must continue to evolve in parallel with societal changes and technological innovations.

Keywords: Pedagogical Advances, Educational Technology, Research Informed Learning Research Informed Teaching, Case Study Method, Graduates Employability

INTRODUCTION

The purpose of education is not just making students literate by imparting knowledge but to capacitate them with competencies and skills to become responsible and productive members of society. Towards this end, teachers must continually develop and be innovative. The conventional way of teaching is dispensing information using standardized lessons and examinations. However, education has fundamentally changed and the educational environment has extended beyond the classroom to the global community. Information is readily available and students have become active participants in their learning.

This led to a new concept of teaching where the primary role of teachers as purveyors of knowledge has extended to multiple roles as facilitators, motivators, co-learners, and educational guides. Students are encouraged to think outside the box - be creators of knowledge and not just consumers of knowledge.This paradigm shift is made possible by the availability of resources for both teachers and students. Before, teachers rely on books for instructions and information but today, the world abounds with information from multimedia and the internet. Students can obtain the information themselves which gives teachers the freedom to focus more on developing the competencies of students for critical thinking, problem solving and decision making. This is supported by the findings of Choy and Chea (2009) where one of the respondents said:

> *"If students came prepared for the lesson by doing prior reading, they would find it enjoyable. They would be more apt to want to think critically especially when they understand the lesson."*

The desired outcome of the innovations in teaching is to produce better educated citizens. According to 2013 Economic Analysis and Research Network (EARN) report by Noah Berger and Peter Fisher entitled A Well-Educated Workforce is Key to State Prosperity, states that increase the level of education of their workforce see greater productivity. On an individual level, this is substantiated by Buchanan (2017) who said that becoming better-

educated will benefit a person through higher income and better job opportunities. An important aspect of innovative teaching is technology which played a crucial role in the re-shaping and transformation of what should be taught and how it should be taught. Education technology is a developing field that when applied correctly can streamline teaching processes like reporting, record-keeping and communicating with students, administrators and others in the academe.

Teaching is dynamic as such it is an ongoing task of educators to think of better and more effective ways to impart knowledge and improve competencies of students. Teaching innovations does not come without challenges. There are still teachers who prefer the traditional standardized method and might resist the adoption of new ways of teaching. This can be overcome by providing training and motivation to teachers. Lack of support from the policy makers and those in the leadership positions in the academe can present a problem that needs to be hurdled. This is more difficult since any innovation in the academe will need resources coming from the leadership. One way to counter this is to present the benefits of the innovation not only to the students but to the institution as a whole.

INNOVATIVE APPROACHES TO TEACHING

Research Informed Teaching and Research Informed Learning (RIT & RIL)

Research Informed Teaching and Research Informed Learning (RIT & RIL). This practice aims to bring teaching and research closer to enhance the learning experience of students. Research informed teaching and research informed learning RIT & RIL are keys to ensure that students are taught in an engaging and challenging manner; that their subject knowledge is kept up-to-date; and their research and evaluation skills are developed to better equip them for the challenges of their future careers. (Guide 9A - Guide to Research Informed Teaching and Research Informed Learning, 2010).

The emphasis here is on inquiry-based learning with emphasis on research content, processes and problems. The gap between teacher and learner is reduced. There is dialogue and open discussion of the topic. One approach would be to form groups in the classroom with each group presenting the findings of a research on particular topic/discussion. This results to students interpreting the context of the study with deeper understanding with the teacher acting as the moderator. This is supported by Elton (2001) who concluded that the nature of the research and teaching link no longer depend on the research excellence of teachers, but rather on their ability to encourage and facilitate in their students a problematic approach to learning. The focus has been shifted from the excellence of the teacher to the excellence of the learning experience. On the other hand, RIL focus is on active engagement of students in their learning and pursuing opportunities to gain knowledge. Research becomes meaningful because they understand its relevance personally, socially, practically, professionally and intellectually. Research teaches students on how to collaborate with their peers, lecturers, institutes and the community. They become familiar with the research tools and resources and how to put them into effective use. This challenges them mentally and they are able to think out of the box

While it is true that integration of research and academic practice vary among educators from different disciplines, the same outcome is expected – to ensure that the learning experiences of students are enhanced by research.

Internationalization of Curriculum

"The world is getting smaller every day" is true. With the technological advances in travel, communication and the worldwide web, far-away places can be reached physically in a

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matter of hours and virtually in seconds. Citizenship is not limited to one's country but to the world as well. Global citizenship is not just a concept but a reality. Thus, one of the goals of education is to produce global citizens. One way to accomplish is by internationalization of the curriculum.

This involves providing students with global perspectives of their discipline and giving them a broader knowledge base for their future careers (Internationalizing the Curriculum, 2014). As global citizens, students must learn to operate in diverse cultural environments, nationally and internationally. They must acquire competencies that would allow them to communicate and compete in the global workforce.

The two most important benefits identified by higher education institutions on the internationalization of the curricula are more internationally oriented staff/students and improved academic quality. The three least-important benefits according to these same institutions are national and international citizenship, revenue generation, and brain gain (Knight 2015). The pool of faculty and staff familiar and conversant in international issues becomes larger. Students who are exposed to faculty members with overseas knowledge and experience get more interested in world affairs. This exposure increases the awareness of in the academe about diversity issues and opens the opportunity to new ideas, research, and colleagues overseas.

Internalization of the curriculum must first consider what its impact on the disciplinary level. Discuss with students the content structure of the courses based on the different cultures. Students belong to different background, upbringing and culture so their input is worthy of consideration. Discuss with peers from the academe inside and outside the country of origin ethical issues taken in the global context. Engaging with professionals of the same discipline from other countries will provide a forum for discussion and will ultimately contribute to internationalizing the curriculum of one's subject area. One such group is Centre for Curriculum Internationalisation (CCI). CCI is a group of researchers and educators committed to research, cross-institutional dialogue and policy change within four key areas of: internationalizing the curriculum for all; critical clarification and problematization of the complex concepts of internationalization and global citizenship; the embedding of responsible and ethical engagement with social and environmental issues in the graduate attribute of global citizenship; and developing a research community that shares and develops good practice ("CCI - Centre for Curriculum Internationalisation - OCSLD - Oxford Brookes University", 2017). This network of professionals will be a good resource and membership is free

Case Study Approach

Case studies relevant to the field of specialization of the students can provide them a knowledge base to draw upon. It provides them with experiential experience in the real or hypothetical situations of these case studies. Per observation, majority of students rationalize inductively than deductively. They learn more from examples than from the process of deduction from basic principles which make the case study approach effective as a teaching strategy. As they analyze case studies, students are introduced and get familiar with the new scenario as they are described which can include diverse culture, mindsets and practices.

The case study approach is a robust technique for teaching business courses (Dunn and Brooks, 2004). However, many educators are using this approach to other disciplines as well such as psychology, law and medicine. This method allows students to analyze real-life problems and develops their analytical skills. Studying the problems in a historical context

gives students the opportunity to apply the theories they learned in a classroom setting. They "bridge the gap between theory and practice and between the academy and the workplace" (Barkley, Cross, and Major 2005, p.182). With the teacher's guidance, the students experience the thought processes of being in the situation. It is cognitive learning that goes beyond memorizing facts and knowledge recall.

Role playing can improve the participation of the students in the case study. This gives students a deeper understanding of the perspectives of the characters and a clearer visualization of the case scenario. Case studies have the elements of a story – a plot, a conflict, a theme, a point of view or perspective. The students can then provide the conclusion.

Development of Graduates Attributes

Graduate attributes are defined differently from one higher education institution to another. In general, they are the qualities, skills and attitude students should posses when they graduate. McCabe (2010), a University of Edinburgh Employability Consultancy, states that "graduate attributes are not remedial or bolt-on skills; they are skills, abilities and dispositions that transform and enable higher education knowledge and learning and must be translated into a discipline context in order to make full sense." These graduate attributes must be viewed in terms of work and career or their employability. Employability as defined by Yorke (2004) is a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy. The aim is to make sure that graduates will be sought after for employment.

The findings of a study by Alan Sixsmith and Andrew Litchfield (2010) on improving graduate attributes, support should focus on two key components:

1. Contextualising learning activities for each profession and discipline, and
2. Integrating and embedding work-ready learning into the existing curriculum.

They also came up with a list of the key indicators of graduate attributes that increase employability are: 1. Communication; 2. Ethics and Professionalism; 3. Global and Local Perspectives; 4. Information Literacy and Management; 5. Initiative, Enterprise and Creativity; 6. Planning and Organizing; 7. Problem Solving and Critical Thinking; 8. Research 9. Self-Management and Life-Long Learning; 10. Teamwork and Leadership; 11. Technology Literacy.

Based on the above, various activities related to the field of study of students can be conducted such as industry visits, seminars and workshop.. These activities go beyond academics. An industry will provide students a meaningful experience on the current practices of their chosen discipline. The realities of the industry are opened to the students. Seminars and workshops provide a venue for students to gather in groups to discuss details of their specialization. The brainstorming and back and forth of ideas prepare them in problem solving and decision making.

Information Technology as a Teaching Tool

Much as the industrial revolution transformed society so does technological revolution. In general, the advancement of technology has a positive impact in our society but if misused, it will do more harm than good. The key is to use technology in responsibly that would be beneficial to society as a whole. It is wrong to say that computers are the future. Computers are the present and when harnessed properly, society can reap its benefits including those in

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the academe. To embrace technology will provide educators with a valuable instrument to connect with students on a deeper level.

Majority, if not all students, are computer literate and own a smartphone, computer or a tablet. Teachers can take advantage of this to engage students in their learning and use technology as a tool to enhance learning. However, teachers must use this tool in a meaningful way to maximize its effectiveness. They have to make sure that the technology being used best fit the learning needs of students. There are a number of ways that technology will resonate with students' learning.

Using computer applications to increase student engagement

One software application that is easy and intuitive is Padlet. It is a free online "bulletin board" software where participants can post their ideas, questions, and opinions. Students can install Padlet on their phones, computers or tablets. Teachers can encourage students to use the application during lectures as this will give interactive feedback to capture the comments of the students and allows real time access to student responses. In her 2014 publication entitled "The Writing is on the Wall: Using Padlet for Whole-Class Engagement", Fuchs came to the conclusion that using Padlet when teaching provides non-threatening medium for the collection and curation of collaborative classroom work. All students have the ability to contribute and learn from one another.

The Socrative app is another tool to increase student participation. It is a cloud-based student response system developed in 2010 by Boston-based graduate school students. It allows teachers to create simple quizzes that students can take quickly on laptops – or, more often, via classroom tablet computers or their own smartphones. WhatsApp is another smartphone application for instant messaging that has found its way in the classroom. In a study conducted by Dan Bouhnik and Mor Deshen of Bar-Ilan University in Ramat Gan, Israel they found out that WhatsApp is used communicating with students; nurturing the social atmosphere; creating dialogue and encouraging sharing among students; and as a learning platform. Because of the low cost associated with it, WhatsApp is gaining popularity for classroom use. Additionally, it has a simple interface, efficient and use natural language which makes it more acceptable to both teachers and students. Digital correspondence through emails, instant messaging and video chat helps teachers assist their students in a timely manner. The educational experience is not limited to face to face sessions anymore but is also migrating to online meets as well.

Blogging is another way of online engagement. It serves as a forum for the teachers to share their thoughts and for students to have a voice. Throwing social media into the mix will widen the audience and connect more people. Blogging is a medium of publishing but in a simpler way. Publishing one's work involves a lot of work and guidelines that can constrain someone who just wants to share his/her ideas. The primary purpose of blogging is social engagement by sharing one's perspective. Encouraging students to blog has several benefits.

First it is an opportunity for them to reflect on what they have learned and learn from the other students as well. Second, it improves their literacy. To share their ideas, they have to express themselves in a cohesive and easy to understand manner. Third, the content of the student blog will help teacher know their students in the truest sense of the word – the things they are passionate about, their interests and their unmet needs relative to learning. This will allow teachers to innovate their teaching methods to meet the needs of students.

All these collaborative tools will enhance not only the learning experience of students but the experience of teachers as well. Taking advantage of technology's possibilities will bring education to a higher level.

Educational Technology

According to the Association for Educational Communications and Technology (AECT), educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources. In the academe, there are time-consuming processes that constrain educators from effectively performing their primary role as teachers. Some of these are advanced scheduling, assessment tracking, course management, curriculum mapping, instructional dashboard, progress reports, report cards and static & dynamic student grouping. This is where the benefit of educational technology can be valuable.Computer programmers or software developers can create the solution to automate these instructional practices for teachers.

CONCLUSIONS

Teachers know that mentorship comes in different forms, thus, they teach using various techniques to make sure that students are engaged and actively participating. A lot of teachers are still following the traditional way of teaching where there is a source of knowledge delivered in a variety of ways. It cannot be denied that curriculum dictates what content needs to be covered in a course and conventional teaching can help accomplish this. However, it must be augmented by innovation to make it effective.

Research remains an important aspect of teaching much more so now that the world is awash with information that is readily available. Students must be taught how to use this information to achieve their learning goals. The case study approach has proved to be instrumental in developing the critical analysis skills of students plus their problem solving and decision making skills.

Students know they are part of a greater world so this predicates a curriculum that expands the horizon of students from local to global. Any innovation must tie in with local and global experiences.

Teaching skills aimed at improving the graduate attribute of students to increase their employability has also become an important aspect of education. But the greatest driver of teaching innovation is information technology. It is changing the world including how students, teachers, administrators and policy makers learn and work. Gone are the days when teachers stand in front of the class lecturing with a chalk and eraser while students take notes.

In today's world of smartphones, computers and tablets, information technology provides students with easy access to collaborative education. They can exchange ideas not only with people in their immediate vicinity but with other teachers and students in other parts of the world. Their inquiry learning habits also when they search for information online.

On the other hand, teachers make use of technology to guide the student on how to use the information they obtained online and to provide timely assistance to students electronically. It also provides them a medium to present teaching materials in a more engaging way to avoid boredom among students. They can also give instructions and provide advance materials for students. This means students are more prepared during face to face sessions and can actively participate in the discussion.

While technology has enhanced the teaching and learning experiences in the academe, the diversity of available technology and its rapid advances are challenges that need to be

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addressed. Teachers and students must arrive at a consensus on what software application to use and guidelines must be set up for successful utilization. While all these teaching innovations are student-centered, they do not lessen the importance of the teachers in the classroom but rather shift their role of from a lecturer to a facilitator and a coach.

Educational technology will unburden some of the repetitive processes and reports from the teachers providing them with more time to devote to personal development and teaching. Innovation while challenging can help educators in achieving development goals through increased efficiency and improved accessibility.

REFERENCES

[1] Barkley, E. F, Cross, K. P., & Major, C. H. (2005). *Collaborative learning techniques: A handbook for college faculty*. San-Francisco: Author.

[2] Berger, N., & Fisher, P. (2013). *A well-educated workforce is key to state prosperity*. Retrieved from http://www.epi.org/publication/states-education-productivity-growth-foundations.

[3] Bouhnik, D., & Deshen, M. (2014). WhatsApp goes to school: Mobile instant messaging between teachers and students. *Journal of Information Technology Education: Research*, *13*, 217-231.

[4] Buchanan, N. (2017). *An educated population is essential to a nation's prosperity, yet some politicians are demonizing our educational system for political advantage*. Retrieved from https://verdict.justia.com/2012/03/29/an-educated-population-is-essential-to-a-nations-prosperity-yet-some-politicians-are-demonizing-our-educational-system-for-political-advantage.

[5] Choy, S., & Cheah, P. (2009). Teacher perceptions of critical thinking among students and its influence on higher education. *International Journal of Teaching and Learning in Higher Education*, *20*(2), 198-206.

[6] CCI - Centre for Curriculum Internationalisation - OCSLD - Oxford Brookes University. (2017). Brookes.ac.uk. Retrieved 30 July 2017, from http://www.brookes.ac.uk/services/cci/

[7] Dunne, D., & Brooks, K. (2004). *Teaching with cases*. Halifax, NS: Society for Teaching and Learning in Higher Education.

[8] Elton, L. (2001). Research and teaching: Conditions for a positive link. *Teaching in Higher Education, 6* (1), 43-56.

[9] Fuchs, B. (2014). The writing is on the wall: Using padlet for whole-class engagement. *LOEX Quarterly, 40* (4), 4.

[10] Guide (2010). *9A - Guide to Research Informed Teaching and Research Informed Learning*. (p. 2). Luton, England. Retrieved from https://www.beds.ac.uk

[11] Knight, J. (2015). Internationalization brings important benefits as well as risks. *International Higher Education, 46*.

[12] McCabe, G. (2010). *Graduate attributes and employability*. Edinburgh: TLA Centre for Teaching.

[13] Richey, R. C., Silber, K. H., & Ely, D. P. (2008). Reflections on the 2008 AECT definitions of the field. *TechTrends, 52*(1), 24-25.

[14] Sixsmith, A., & Litchfield, A. (2010). *Improving the learning of graduate attributes in the curriculum: A case study in IT management*. Retrieved from http://crpit.com/confpapers/CRPITV103Sixsmith.pdf.

[15] Yorke, M. (2004). *Employability in higher education: What it is, what it is not*. Retrieved from https://www.researchgate.net/publication/225083582_Employability_in_Higher_EducationWhatItIsWhatItIsNot.

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