

Conception of Innovative Teaching Methodologies among Lecturers at Selected Polytechnics in Malaysia

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Abstract

Innovative teaching, regardless of the discipline, brings about interest and motivation to learners, which eventually leads to learning. Thus, the role of educators is to ensure that they continuously innovate their teaching methodologies so that students' learning is enhanced. This paper presents an investigation of selected Malaysian polytechnic lecturers' understanding and perception towards innovation in teaching. Data were collected from 39 lecturers from selected polytechnics in Malaysia. Open-ended questions were given among the respondents and the data obtained were then analysed. The findings showed that lecturers' definitions of innovation are varied and because of that, they found that it was challenging for them to innovate teaching methodologies. Nevertheless, the lecturers were actually interested in coming out with innovative teaching ideas provided that they are guided to begin. Overall, the findings of this study are significant in understanding the factors that hinder some of the Malaysian polytechnic lecturers in coming out with innovative teaching methodologies, thus, providing insight information for the Department of Polytechnic Education in taking proactive efforts to facilitate and encourage innovations in teaching among Malaysian polytechnic lecturers.

Keywords

Innovation in Teaching and Learning, Teaching Methodologies, Education 4.0, Polytechnic, Perceptions

1. Introduction

Education is a very powerful instrument for social change and transformation and innovative teaching practice is the only way to enhance the quality of education (Nicolaidis, 2012). Hence, academics are required to be innovative as they teach new skills as well as to equip students to be able to face the global challenges of the 21st century (Bawuro, 2018). The life challenges in today's world require varieties of complex alternatives and solutions (Abu Yazid, 2016); thus, being innovative is crucial. In order to be innovative, there are a number of traits required which include humility, courage, impartiality, open-mindedness, empathy, enthusiasm, judgement and imagination (Hare, 1993; cited in Wickramasinghe & Upeksha, 2016).

In the field of education, teaching methodologies and innovative ideas are seen as two sides of a coin. Effective teaching methodologies depend on students' needs and adequacy of the content. While innovative is defined as behaviour that can be described as a process in which new ideas are generated, created, developed, applied, promoted, realised, and modified by employees to benefit role performance (Kheng & Mahmood, 2013; Hammond et al., 2011; Thurlings et al., 2015). Zhang Shuguo (2012) pointed out that education must be innovative teaching ideas and teaching methods of innovation, reform the traditional teaching model, and build a new innovation-oriented education in order to achieve the objective.

A teaching method comprises the principles and methods used by teachers to enable student learning. These strategies are determined partly on subject matter to be taught and partly by the nature of the learner. Some of the innovative teaching methods are the use of media or digital content (e.g. Yunus, Salehi, & Embi, 2012), Computer-assisted Instruction (CAI) (e.g. Hashim & Yunus, 2010; Hashim & Yunus, 2012; Yunus et al., 2010), and other non-traditional instructional strategies (e.g. Yunus et al., 2011). For a particular teaching method to be appropriate and efficient it has to be in relation to the characteristic of the learner and the type of learning it is supposed to bring about. The methods and tools used most by teachers included demonstrations, discussions, laboratories, projects, contests, using real objects and supervised experience. Apparently, teacher-centred teaching methods are obsolete and students prefer learner-centred teaching methods (Wickramasinghe & Upeksha, 2016).

Many interactive technologies including web-based or Internet-based learning and teaching are among the main features of learner-centred teaching. Teacher characteristics may also influence the use of selected teaching methods focusing on teaching and learning, length of teaching contract, school location, school size, academic background and gender (Shinn, 1997). Unfortunately, many lecturers have adopted conventional method of teaching and learning (Nicolaidis, 2012). Some teachers are also still abiding to the old-fashioned methods on drilling method where students jot down the information into books and just focusing on memorizing (Azman et al., 2018). Teaching techniques are outdated

and theoretical knowledge is still disseminated through the technique of chalk and talk. The obvious problem in conventional approach is when an instructor needs to teach a group of students. It is potentially limiting the support from instructor to monitor, focus and assess student individually (Osman et al., 2013). Based on Cachia et al. (2010), many academics nowadays are not clear how innovation and creativity should be defined and how they should be treated in learning and assessment. Furthermore, curricula are often overloaded with content, which reduces the possibilities of creative and innovative learning approaches in practice.

Cachia et al. (2010) conducted a project which aimed to provide a better understanding of how innovation and creativity are framed in the national and regional education objectives and applied in educational practice at primary and secondary school level. In comparison to Malaysia, education has experienced a reform to achieve Vision 2020 in order to produce individuals who can compete in the international arena (Daud et al., 2012). Thus, innovation and creativity are clearly highlighted in the Malaysia Education Blueprint 2015-2025 which is to facilitate the development of innovation ecosystems in selected strategic areas that are critical to the nation's economic growth. These ecosystems will support both university-driven and demand-driven research, development, and commercialisation models, with significant improvements on a wide range of research measures.

Innovation is required not only in the business process to aid in more efficient ways of conducting the business, but also in the teaching and learning method (Yahya et al., 2011). At Malaysian polytechnics, innovative teaching methodologies are also encouraged among the lecturers. This is proven by the requirement of the promotion where lecturers are required to have at least two innovations (within three years) done in teaching and learning. However, many of the lecturers at polytechnic are still struggling in coming out with innovative teaching ideas. Lecturers do use different teaching methods but depending on the nature of the courses they are teaching, the number of students, and the facilities available in the classroom. Among the various common methods used by the lecturers are lecture, group discussion, individual presentation and role play.

Another method is the integration of modern and traditional teaching strategy also known as blended learning (Razali et al., 2016). Some of the lecturers also opt for interactive technology teaching method including web-based or internet-based learning. Yet, there are still many lecturers who are actually puzzling of what innovation should be done in terms of teaching methodologies. In terms of innovative thinking, educational institutions are the carrier of innovative education (Yu et al., 2014). Cultural environment is also the main factor that affects the process of innovation. Among other factors that influence innovative and creative teaching are personal efforts, teaching beliefs, teaching commitment and personal knowledge (Hamed, Preece, & Hashim, 2016). Nevertheless, there are many other factors that hinder the lecturers from being innovative. Thus, this paper aims to investigate selected Malaysian polytechnic lecturers' under-

standing and perception of innovation in teaching.

2. Methodology

In this study, qualitative research design was employed where data were collected based on convenience sampling. Convenience sampling was used in this study as subjects were selected because of their convenient accessibility and proximity to the researchers. 39 lecturers of various academic disciplines (Social Science, Engineering and IT) from different polytechnics in Malaysia were involved in collecting the data. Open-ended questions were distributed among the participants. In the open-ended questions, the lecturers were asked about their own definition of innovation and their understanding of the overall idea of innovation including the importance and the frequency of innovation that should be done by an academician. They were also asked on the challenges that could be the factors that hinder them from coming out with innovative teaching ideas. Data were then analysed using text analytic software where inductive coding was applied.

3. Results and Discussion

This section presents the findings of the data obtained from the open-ended questions. The findings are divided into two sub-headings related to the lecturers' understanding of the definition of innovation and their perceptions towards the importance of innovation for academics, as well as the frequency of innovation that they believed need to be done.

3.1. Understanding of "Innovation"

When asked about their understanding of the definition of innovation, majority of the lecturers (27 out of 39) answered that innovation is "*creating new product*" and "*creating new approach*". This shows that, for the lecturers, innovation has to be something that is totally new invention. However, there are a few of them (11 out of 39) who answered that innovation is an "*improvement of existing products*". This means, innovation does not mean inventing new products only, but also upgrading existing products/approaches or improving the existing products. Out of 39 lecturers, only one lecturer answered "*translating any ideas to become products that have values*". This shows that the lecturers' understanding of the definition of innovation is rather limited. One element that they have overlooked is "values". In other words, innovation is not just creating something new, but also has value(s) and impacts. This is in line with Cachia et al. (2010) who stated that many academics nowadays are not clear how innovation and creativity should be defined and how they should be treated in learning and assessment.

From the findings, it could be seen that the lecturers' understanding of the definition of innovation is varied. This could hinder the lecturers' effort in implanting innovation due to lack of understanding of the definition. Since major-

ity of them understood that innovation is creating something new, they felt that it is impossible for them to come out with a totally fresh and innovative idea in teaching methodologies. They have mistakenly confused between “innovation” and “invention”. For them, in order to invent, they need a longer duration and more members in their team. They also believed that a new invention could not be done in a short duration. Based on the definition given by Thurlings et al. (2015) (as discussed earlier), innovation is a behaviour that can be described as a process in which new ideas are generated, created, developed, applied, promoted, realized, and modified by employees to benefit role performance. Therefore, innovation can also be defined as modifying an existing idea in order to benefit a target group and also impactful.

3.2. Perceptions towards the Importance of Innovation

Apart from the definition, the lecturers were also asked regarding the importance of innovation for lecturers. From the responses given by the lecturers, it could be seen that they have positive perceptions towards its importance. They believed that there is no limitation to innovation. One of the respondents answered that innovation is very imperative especially in the field of education. In fact, one of the lecturers responded, “*It's very important as education changes day by day*”. This is also supported by another respondent where she answered, “*Innovation in teaching and learning is vital in education to prepare a better learning environment for the students*”. This is in line with Nicolaides (2012) that education is a very powerful instrument for social change and transformation and innovative teaching practice is the only way to enhance the quality of education. From the answers given, it could be seen that they have a positive perception towards the importance of innovation for the lecturers. When asked how frequent the lecturers think an innovation should be done in a year, majority of them (31 out of 39) agreed that it should be done at least once a year.

3.3. Challenges in Coming Out with Innovative Teaching Ideas

As far as the challenges are concerned, many of the lecturers mentioned that the structure and curricula of the courses that they are teaching limits their chances and opportunity to practice innovative teaching methodologies. One of them stated, “*too many topics to cover*”. Cachia et al. (2010) did mention about this challenge where curricula are often overloaded with content, which reduces the possibilities of creative and innovative learning approaches in practice.

Apart from that, lecturers also raised issues related to guidance and support by the institution. Among the answers given were, “*lack of support and guidance*” (16 out of 39) and “*lack of training related to innovations for teaching and learning*” (13 out of 39). They believed that they were not given proper guidance in coming out with an innovation. This limits their effort where they always felt uncertain when coming out with innovative ideas for teaching. It could be seen that among the factors that hinder the lecturers from being innovative are the

little knowledge that they have related to the process of innovation. In addition, it is also the lecturers' own effort to reflect their teaching methodologies whether the teaching suits the demands and the needs of the students. This is supported by Hamed et al. (2016) who mentioned about the factors that influence innovative and creative teaching which are personal efforts, teaching beliefs, teaching commitment and personal knowledge.

4. Conclusion and Implications

Innovative teaching methodologies are vital in meeting the needs of the current generation of students in preparing the students for the global challenges of the 21st century. It is clear that innovative teaching methodologies do provide students with greater experience in learning. As a conclusion, the findings of this study have significant implications on the following:

- 1) There is a need in changing concepts of education at the level of institutions where more methodologies need to be explored;
- 2) The lecturers should be given autonomy in creating a free and active academic environment they believed suitable to the content of the course that they are teaching;
- 3) Institutions must be proactive in optimizing and managing the innovations implemented by the lecturers;
- 4) Efforts need to be done in strengthening practical teaching innovation as to prepare a platform for lecturers to bring forward the innovative ideas or to share in a community of practice.

Overall, a lot of efforts need to be done and strategized in order to transform the method used by the lecturers in delivering their materials. At the same time, lecturers need to increase both the effectiveness and efficiency of the innovation process. To begin, the lecturers themselves need to be given a clear definition of what innovation is. Most importantly, lecturers need to perceive that their institution is willing to invest the time and money necessary to support innovation and implementation.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Abu Yazid, A. B. (2016). "Digital Classroom": An Innovative Teaching and Learning Technique for Gifted Learners Using ICT. *Creative Education*, 7, 55-61.
<https://doi.org/10.4236/ce.2016.71006>
- Azman, M. N. B., Shuraimi, F. B. M., & Yunus, M. M. (2018). Enhancing English Lan-

- guage Learning and Teaching via Qgram (Telegram and Quizlet) Innovation. *International Journal of Academic Research in Progressive Education and Development*, 7, 435-446.
- Bawuro, F. A. (2018). Factors Influencing Innovative Behaviour of Teachers in Secondary Schools in the North East of Nigeria. *Path of Science*, 4, 1007-1017.
<https://doi.org/10.22178/pos.32-9>
- Cachia, R., Ferrari, A., Ala-Mutka, K., & Punie, Y. (2010). *Creative Learning and Innovative Teaching*. Final Report on the Study on Creativity and Innovation in Education in the EU Member States.
- Daud, A. M., Omar, J., Turiman, P., & Osman, K. (2012). Creativity in Science Education. *Procedia-Social and Behavioral Sciences*, 59, 467-474.
<https://doi.org/10.1016/j.sbspro.2012.09.302>
- Hamed, P. K., Preece, A. S., & Hashim, C. N. (2016). Factors Influencing Creative Teaching among Teachers in Islamic Private Schools in Kuala Lumpur. *Proceedings of the International Conference on Education towards Global Peace, Kulliyah of Education, International Islamic Education Malaysia*, 30 November-1 December 2016, 1-10.
- Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of Individual-Level Innovation at Work: A Meta-Analysis. *Psychology of Aesthetics, Creativity, and the Arts*, 5, 90-105. <https://doi.org/10.1037/a0018556>
- Hare, W. (1993). *Open-Mindedness and Education*. McGill-Queen's Press-MQUP.
- Hashim, H., & Yunus, M. M. (2010). Learning via ICT: "TELL ME MORE". *International Journal of Learning*, 17, 211-224.
- Hashim, H., & Yunus, M. M. (2012). Using Courseware for Teaching and Learning English: Effective or Useless? *International Journal of Learning*, 18, 193-202.
<https://doi.org/10.18848/1447-9494/CGP/v18i04/47506>
- Kheng, Y., & Mahmood, R. (2013). The Relationship between Pro-Innovation Organizational Climate, Leader-Member Exchange and Innovative Work Behavior: A Study among the Knowledge Workers of the Knowledge Intensive Business Services in Malaysia. *Business Management Dynamics*, 2, 15-30.
- Nicolaidis, A. (2012). Innovative Teaching and Learning Methodologies for Higher Education Institutions. *Educational Research*, 3, 620-626.
- Osman, S., Zin, N. A. M., Ramli, R. Z., Awang, N., & Yusoff, S. R. M. (2013). Development and Evaluation of Model for Teaching and Learning Traditional Craft Courseware. *Journal of Theoretical & Applied Information Technology*, 47, 952-959.
- Razali, N., Othman, H., Zainuri, N. A., Hamzah, F. M., Asshaari, I., Ariff, F. H. M., & Nopiah, Z. M. (2016). Modern or Traditional Teaching Strategy in Learning Engineering Mathematics Course. *Journal of Engineering Science and Technology*, 11, 13-20.
- Shinn, Y. H. (1997). *Teaching Strategies, Their Use and Effectiveness as Perceived by Teachers of Agriculture: A National Study*. Retrospective Theses and Dissertations, 12244.
- Thurlings, M., Evers, A. T., & Vermeulen, M. (2015). Toward a Model of Explaining Teachers' Innovative Behavior: A Literature Review. *Review of Educational Research*, 85, 430-471. <https://doi.org/10.3102/0034654314557949>
- Wickramasinghe, S., & Upeksha, G. N. (2016). Innovative and Interactive Teaching Methods for Improving Learning Quality in Higher Education. *2nd International Conference on Education and Distance Learning*, Colombo, Sri Lanka, 1 July 2016, 1-11.
- Yahya, Y., Nielsen, D. N., & Mukhtar, M. (2011). Innovation in Teaching and Learning Using Service-Oriented Approach. *Proceedings of the 2011 International Conference*

on *Electrical Engineering and Informatics*, Bandung, Indonesia, 17-19 July 2011, 1-4.
<https://doi.org/10.1109/ICEEI.2011.6021663>

- Yu, Z., Zhou, S., & Li, Y. (2014). An Analysis of Influencing Factors of Innovative Education and Development Proposals. In *International Conference on Education Reform and Modern Management (ERMM 2014)* (pp. 57-61). Paris: Atlantis Press.
<https://doi.org/10.2991/ermm-14.2014.17>
- Yunus, M. M., Hashim, H., Embi, M. A., & Lubis, M. A. (2010). The Utilization of ICT in the Teaching and Learning of English: "Tell Me More". *Procedia-Social and Behavioral Sciences*, 9, 685-691. <https://doi.org/10.1016/j.sbspro.2010.12.218>
- Yunus, M. M., Salehi, H., & Embi, M. A. (2012). Effects of Using Digital Comics to Improve ESL Writing. *Research Journal of Applied Sciences, Engineering and Technology*, 4, 3462-3469.
- Yunus, M. M., Salehi, H., Sun, C. H., Yen, J. Y. P., & Li, L. K. S. (2011). Using Facebook Groups in Teaching ESL Writing. *Recent Researches in Chemistry, Biology, Environment and Culture*, 75, 75-80.
- Zhang, S. G. (2012). Higher Education Research and Practice of College Students' Innovative Exploration. *Hudson Normal University (Humanities and Social Sciences)*, 1, 168-170.