International Journal of Multidisciplinary Education and Research– IJMER
Volume 1 : Issue 2
Publication Date : 30 September, 2014

Perceptions towards the Usage of Collaborative Learning in Teaching and Learning Processes at Malaysia Polytechnic.

Sharifah Nadiyah Razali[1], Faaizah Shahbodin [2], Norasiken Bakar[2], Hanipah Hussin[2], Mohd Hafiez Ahmad[3]

***Abstract* — It is difficult for a graduate to get employed, due to fierce competition within today's career market. Most employers are primarily looking for good soft skills over academic achievements as selection criteria for selecting new employees. This paper shares the preliminary findings on the perceptions of students and lecturers on the use of Collaborative Learning in teaching and learning processes at Malaysia Polytechnic. In this study, two sets of questionnaires were distributed to 145 lecturers and 356 diploma students from Politeknik Ibrahim Sultan, Politeknik Merlimau, Politeknik Tuanku Syed Sirajuddin, Politeknik Kota Kinabalu, and Politeknik Sultan Idris Shah. All collected data was analysed using SPPS 19 software. The results show that even though lecturers used the collaborative learning method in their teaching and learning processes, the evaluation was only on the output product. The students felt that it was unfair for all members to get the same marks, and that the lecturers should award marks based only on the student's contribution. Therefore, the development of soft skills will not happen if active collaboration does not occur.**

Keywords* — *Collaborative Learning (CL), Employability, Soft skills

I. Introduction

Soft skills are particular abilities that can improve employment performance and career prospects. Soft skills are defined by [1] as 'skills, abilities and traits associated with personality, attitude and behaviour, and different from skills in the form of formal or technical knowledge'. Meanwhile, Hurrel [2] defines soft skills as 'involving interpersonal and intrapersonal abilities to facilitate the performance of control in certain contexts'. Harvey et.al [3] and Ahmad et.al [4] propose that employability assets consist of knowledge, skills, and attitudes. Most employers are primarily looking for good soft skills over academic achievements as selection criteria for selecting new employees. Twenty-first century learning skills require collaboration, communication, problem solving, and critical thinking skills that need to be controlled by HEIs graduates.

Sharifah Nadiyah Razali[1],
Faaizah Shahbodin[2], Norasiken Bakar[2], Hanipah Hussin[2],
Universiti Teknikal Malaysia Melaka (UTeM), Malaysia.

Mohd Hafiez Ahmad[3],
Kolej Komuniti Masjid Tanah (KKMT), Malaysia.

Polytechnic Education Malaysia offers technical and vocational courses for school leavers and certificate holders from polytechnics and community colleges. Polytechnics produce semi-skilled workers in service, engineering, and commerce sectors, to meet the demands of public and private sectors. The number of applicants to polytechnics, as evidenced by the growing number of Certificate of Education (SPM) graduates, is increasing annually. However, according to the findings of a Graduate Tracer Study in 2012, obtained from the Department of Polytechnics, shows that only 46.42% of former students are employed, while the remaining 53.58% continue to be unemployed. For employed graduates, only 18.39% obtained jobs relative to their respective fields, 15.71% obtained jobs not relative to their respective fields, 7.85% were waiting for job placement, 3.07% were continuing their studies to the next level, and 1.40% graduates became entrepreneurs (Refer **Error! Reference source not found.**).

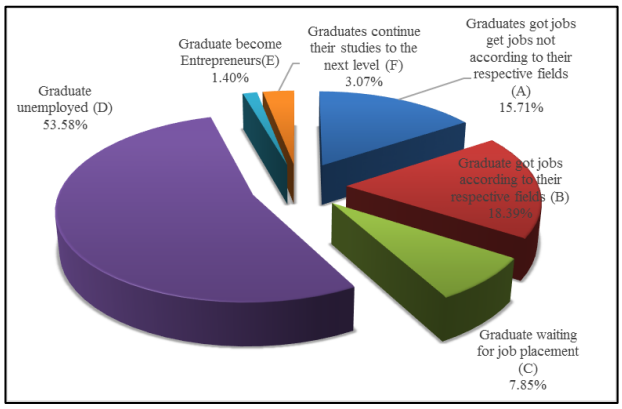

Figure 1: Malaysian Polytechnic Graduates Employability data (Source: Graduate Tracer Study, 2012)

Unemployed graduates have become a cause for concern in Malaysia. Research by [5] to collect feedback from industries, shows that Malaysia polytechnic students do not meet the levels of competency and working attitudes expected by them. Several interview sessions were made with program heads from Politeknik Ibrahim Sultan, Politeknik Merlimau, Politeknik Tuanku Syed Sirajuddin, Politeknik Kota Kinabalu, and Politeknik Sultan Idris Shah, to view the main factors of unemployed graduates. Responses received were as follows:

"Personally, I see the importance of soft skills in complementing academic excellence today. But students who have great soft skills will surely find employment, although not getting good academic results."

(Lecturer 1)

"Soft skills factor"

(Lecturer 2)

"Soft skill and individual factors themself"

(Lecturer 3)

All respondents agreed that 'soft skills' was the main factor for why graduates were unemployed.

Having excellent academic skills still does not guarantee that a graduate gets a job, due to the fierce competition in the career market today. Academic achievements are not the primary criteria for getting a job, because most employers are looking for good soft skills in order to select new employees. Public opinion often refers the failure of graduates getting employment to them not having the soft skills required by employers. Soft skills are deemed as being highly attractive skills in industry. Therefore, the role of Higher Education Institutions (HEIs) is to provide training to students with soft skills being in accordance with job demands.

Interest in collaborative learning has become the latest trend in education towards active learning; where students actively engage in building their knowledge through discovery, discussions, and expert guidance. Collaborative learning is a learning approach, which leads to the theory of constructivism [6], has been used as a learning strategy practiced worldwide for many years [7]. According to [8], learning tends to be most effective when students are in the position to work collaboratively in expressing their thoughts, discussing and challenging ideas with others, and working together towards a group solution to a given problem. Research has shown that undergraduates improve their academic performance by interacting with their peers [9].

Today, the benefits of collaborative learning are widely acknowledged. However, as previously discussed, graduates still lack the soft skills that are demanded by employers. Therefore, this study aims to gather information on the perceptions of students and lecturers, on the use of Collaborative Learning in Malaysia Polytechnics.

II. Materials and Methods

In this study, two sets of questionnaires (for students and lecturers) were carried. According to Cohen and Manion in [10], surveys are utilized to obtain data at a certain time, often using questionnaires. Therefore, the researchers chose to distribute two sets of questionnaires to each respondent, in order to obtain feedback more easily. Lecturer's questionnaire contained 23 questions, and student's questionnaires contained 19 questions. The questionnaires were constructed and modified based on questionnaires used by [11], [12]**.** The questionnaires were distributed personally to 145 lecturers and 356 diploma students from Politeknik Ibrahim Sultan, Politeknik Merlimau, Politeknik Tuanku Syed Sirajuddin, Politeknik Kota Kinabalu, and Politeknik Sultan Idris Shah. Respondents were randomly selected, in order to collect information for this research. SPSS 19.0 software was used to analyse all of the collected data.

III. Findings

This section presents the findings, based on the focus of this study, which is to gather information about the use of collaborative learning in teaching and learning processes at Malaysia Polytechnics. Therefore, only relevant items are included. In this study, a reliability test was performed and Cronbach's α values of 0.653 for students and 0.870 for lecturer's questionnaires were obtained. Ghaffar [10] and Nunnally [13] indicated that questionnaires have a high reliability, if the Cronbach's alpha value is above 0.80. However, [13] indicated that 0.6 is an acceptable reliability coefficient for preliminary analysis. It can therefore be concluded that an internal consistency of data was achieved.

A. Lecturer's Questionnaire

Table I clearly shows that 78.6% of lecturers implemented collaborative learning strategies in their classes and 62.8% of lecturers preferred using a project/assignment based strategy in their collaborative learning process, compared to other Collaborative Learning strategies available (Table II).

TABLE I. IMPLEMENT COLLABORATIVE STRATEGY IN CLASS

Valid	Frequency	Percentage
Yes	114	78.6
No	31	21.4
Total	145	100

TABLE II. COLLABORATIVE LEARNING STRATEGY

Valid	Frequency	Percent
Round robin	21	14.5
Jigsaw	13	9
Think pair share	17	11.7
Project/assignment base	91	62.8

Table III shows that 65.5% of lecturers evaluated their collaborative activity. However, only 31% of lecturers assessed their students' projects based on output and student contribution. Meanwhile, 35.9% of lecturers only measured output and 33.1% did not measure anything at all (Table IV).

TABLE III. EVALUATE CL PROCESS

Valid	Frequency	Percent
Yes	95	65.5
No	50	34.5
Total	145	100

TABLE IV. MEASURING STRATEGY

Valid	Frequency	Percent
Did not assess anything	48	33.1
Only assessed end product	52	35.9
Assess both product and student contribution	45	31
Total	145	100

B. Student's Questionnaire

The student's questionnaire results show that 62.9% of the respondents agreed and 10.4% of the respondents strongly agreed with the statement that lecturers only evaluated output and that respondents will get equal marks in their group (refer to Table V). Table VI shows that 47.5% of the respondents strongly agreed and 39.9% of the respondents agreed with the statement "It is unfair for all members to get the same marks."

Table V: Lecturers only evaluated output

Valid	Frequent	Percent
Strongly disagree	20	5.6
Disagree	75	21.1
Agree	224	62.9
Strongly agree	37	10.4
Total	356	100

Table VI: It is unfair for all members to get the same marks

Valid	Frequent	Percent
Strongly disagree	21	5.9
Disagree	24	6.7
Agree	142	39.9
Strongly agree	169	47.5
Total	356	100

IV. Discussion and Conclusion

Research proves that collaborative learning promotes the development of soft skills. The results show that most lecturer respondents implemented collaborative learning strategies in their teaching and learning processes and most preferred a project/assignment based strategy. A project based collaborative learning strategy is an instructional method that provides students with complex tasks based on challenging questions or problems [14]. It involves the students' problem solving, decision-making, investigative skills, and reflection; which includes educator facilitation, but not direction. Through project based collaborative learning, students learn from experience, which they take into account and apply to the real world; outside of the classroom. It helps students to learn key academic content and practice 21st Century Learning Skills (such as collaboration, communication, problem solving, and critical thinking).

According to [15], to establish and maintain active collaboration is a challenging task, due to the lack (or low participation) of other group members to participate actively in their group work. Educators cannot assume that each member makes an equal contribution to a group work and thus give equal marks to all members [16]. In the student's questionnaire, most students agreed that lecturers only evaluated the output product and gave the same marks to every member of the group. Most strongly agreed that it was unfair for all members to get the same marks and that lecturers should give marks based on student's individual contribution, to encourage students to participate actively within their group's work activity [17]. Previous education research has provided the same evidence on how to increase willingness to work collaboratively [18]; whereby lecturers had to apply certain instruments to record and monitor student discussions and assess student contributions from these discussions.

Most educational institutions currently adopt Learning Management Systems (LMS), such as from open sources, like Moodle and Sakai, or from commercial sources, like Blackboard, in order to centralize content, learning, and assessment activities, in one learning environment [19], [20]. LMS provide educators and students with a facility to improve and manage both teaching and learning processes [21]. They also provide a web platform, where many pedagogical activities can be performed. Students can use LMS features, such as discussion boards or forums, to facilitate communication and collaborative work, in this learning environment. However, the communication features of LMS are poorly utilized in most institutions, and are primarily being used for course content features, such as lecture notes and presentation slides.

Marijana et al., [22] report that the frequency of using the LMS provided by the educational institution is very low and has become unpopular among educators. In research conducted by [23] on Malaysia HEIs, the authors reported that the reason why HEIs still using LMS in teaching is because of the course content facilities. The samples in the study included Ungku Omar Polytechnic, Johor Bahru Polytechnic, and Shah Alam Polytechnic. The results show that the communication feature is the most unused feature and lecturers prefer to employ Social Network Sites to facilitate communication.

Due to the incapability and limitations of LMS, such as in networking and communications [24], lecturers used other applications as a replacement for a built-in discussion forum in LMS [25]. However, several studies showed that Social Network Sites (SNS) enable interaction, collaboration, resource sharing, active participation, and critical thinking in educational activities [9], [26]–[28], but simply cannot be successful in meeting the needs of the students. They can only be used as a supplement in teaching and learning processes. For that reason, the authors propose using the Learning Management System (LMS) as a tool to record and monitor student discussions and evaluate their contributions. Malaysia Polytechnics use a Moodle platform called CIDOS as their LMS. Incorporating Cidos with Social Network Sites, in order to facilitate Project Based Collaborative Learning, is recommended for future research.

Acknowledgement

This study was sponsored by Higher Education Sector, Ministry of Education, Malaysia. The author wishes to express her gratitude to her supervisors, Assoc. Prof. Dr Faaizah Shahbodin, Dr. Norasiken binti Bakar, and Associate Professor Dr. Hanipah binti Hussin, who were abundantly helpful and offered invaluable assistance, support and guidance. The author would also like to thank the management, lecturers, and students of the various polytechnics for their involvement, cooperation, and support in this study. Last but not least, the author would like to express an infinite love to her beloved husband, family, and

colleagues for giving much support and encouragement. This research was done by a PhD candidate from UTeM.

References

[1] P. Moss and C. Tilly, *Stories Employers Tell. Race, SKills and Hiring in America*. New York: Russel Sage Foundation, 2001.

[2] S. A. Hurrell, "Soft skills deficits in Scotland : their patterns, determinants and employer responses," 2009.

[3] L. Harvey, W. Locke, and A. Morey, "Enhancing employability, recognising diversity," 2004.

[4] S. Ahmad, N. Ali, and M. F. Hamzah, "Kebolehpasaran Graduan UKM: Satu Kajian Perbandingan Antara Graduan Disiplin Sains dengan Bukan Sains," *J. Pers. Pelajar*, vol. 14, pp. 81–90, 2011.

[5] J. W. Y. Juen, V. Pang, and J. W. Vitales, "OBE Curriculum Implementation Process in Politeknik Kota Kinabalu: A Possible Evaluation Framework," in *Prosiding Seminar Transformasi Pendidikan Teknikal*, 2010, pp. 172–181.

[6] L. S. Vygotsky, *Mind in Society*. Cambridge (Massachusetts): Harvard University Press, 1978.

[7] S. Ashton-Hay, "Constructivism and powerful learning environments: create your own!," in *9th International English Language Teaching Convention*, 2006.

[8] R. T. Johnson, D.W., & Johnson, *Cooperation and competition: Theory and research.* Edina, MN: Interaction Book Company., 1989.

[9] Y. Chen, "Learning styles and adopting Facebook technology," in *Technology Management in the Energy Smart World (PICMET)*, 2011, pp. 1–9.

[10] M. N. A. Ghaffar, *Penyelidikan Pendidikan.* Skudai: Penerbit Universiti Teknologi Malaysia., 1999.

[11] M. A. Embi, "e-learning in Malaysian Higher Education : Status, Trends and Challeges," Department of Higher Education Ministry of Higher Education 2011, 2011.

[12] D. Marijana, M. Aleksandar, B. Zorica, B. Dušan, and S. Krčo, "Providing Adaptivity in Moodle LMS Courses Adaptive e-learning systems," *Educ. Technol. Soc.*, vol. 15, pp. 326–338, 2012.

[13] J. C. Nunnally, "Psychometric theory," *New York McGraw-Hill*, 1978.

[14] J. W. Thomas, J. R. Mergendoller, and A. Michaelson, *Project Based Learning: A handbook for middle and high school teachers*. Novato, CA: The Buck institute for Education., 1999.

[15] R. Chiong and J. Jovanovic, "Collaborative Learning in Online Study Groups: An Evolutionary Game Theory Perspective," *J. Inf. Technol. Educ. …*, vol. 11, pp. 81–101, 2012.

[16] Q. Wang, "Using online shared workspaces to support group collaborative learning," *Comput. Educ.*, vol. 55, no. 3, pp. 1270–1276, Nov. 2010.

[17] K. Swan, J. Shen, and S. Hiltz, "Assessment and collaboration in online learning," *J. Asynchronous Learn. Networks*, vol. 10, no. 1, pp. 45–62, 2006.

[18] C. Li, Z. Dong, R. Untch, M. Chasteen, and N. Reale, "Peerspace-an online collaborative learning environment for computer science students," in *2011 11th IEEE International Conference on Advanced Learning Technologies (ICALT)*, 2011, pp. 409–411.

[19] A.-H. Carlos, B.-L. Miguel L., G.-S. Eduardo, A.-P. Juan I., E.-G. Guillermo, and R.-C. Adolfo, "Enhancing Learning Environments by Integrating External Applications," *Bull. IEEE Tech. Comm. Learn. Technol.*, vol. 15, no. 1, pp. 21–24, 2013.

[20] G. Coates, H., James, R. and Baldwin, "A critical examination of the effects of learning management systems on university teaching and learning," *Tert. Educ. Manag. 11(1)19-36, 2005.*, vol. 11, no. 1, pp. 19–36, 2005.

[21] García-Peñalvo, F. J., M. Á. Conde, M. Alier, and M. J. Casany, "Opening learning management systems to personal learning environments," *J. Univers. Comput. Sci.*, vol. 17, no. 9, pp. 1222–1240, 2011.

[22] D.-Z. Marijana, B. L. Aleksandra, and R. M. Aleksandar, "Fostering engineering e-learning courses with social network services," in *19th IEEE Telecommunications Forum (TELFOR)*, 2011, pp. 122–125.

[23] H. Afendi, E. Mohamed Amin, and S. Abdul Halim, "Learning Management Systems in Malaysian Higher Education Institutions," 2011.

[24] A. Ishan Sudeera and C. Y. Tham, "Implementation of Facebook Study Groups as Supplements for Learning Management Systems (LMS) in Adult ODL Environments," *Asian Assoc. Open Univ. Journal,*, vol. 7, no. 1, pp. 1–11, 2011.

[25] R. Hern'ndez, H. R. Amado-Salvatierra, C. Guetl, and M. Smadi, "Facebook for CSCL, Latin-American Experience for Professors," in *2012 IEEE 12th International Conference on Advanced Learning Technologies*, 2012, pp. 327–328.

[26] R. Ajjan, H., Hartshorne, *Investigating faculty decisions to adopt Web 2.0 technologies: theory and empirical tests.* 2008, pp. 71–80.

[27] N. Selwyn, "' Screw Blackboard ... do it on Facebook !': an investigation of students ' educational use of Facebook," in *Poke 1.0 - Facebook social research symposium'*, 2007, no. November, pp. 1–23.

[28] R. Mason, "Learning technologies for adult continuing education," *Stud. Contin. Educ.*, vol. 28, no. 2, pp. 121–133, Jul. 2006.

About Author (s):

Sharifah Nadiyah Razali was a Senior Lecturer in Computer Systems and Support Program, Masjid Tanah Community College. Currently, she is working towards a PhD in IT degree at Universiti Teknikal Malaysia Melaka (UTeM). Her research interest are e-learning, Collaborative Learning and Networking System.

Faaizah Shahbodin is an Associate Professor at Faculty of Information and Communication Technology, Universiti Teknikal Malaysia Melaka (UTeM). She received her Degree in Computer Science in 1994 from Universiti Utara Malaysia (UUM), and Master in Computer Science in 1997 from Queensland University of Technology (QUT), Brisbane, Australia. She completed her Ph.D in Multimedia Education Systems at University Kebangsaan Malaysia (UKM).Her research interests are primarily on Problem Based Learning, multimedia applications, Creative Contents and User Interface Design. Currently, she is a Deputy Dean (Academic) for the Faculty of Information and Communication Technology, UTeM, Melaka.

Norasiken Bakar is a senior lecturer at Faculty of Information and Communication Technology, Technical University of Malaysia Malacca (UteM) from 2001 to date. In addition to teaching, she also has held several administrative positions, among them as Diploma Coordinator in 2001 to 2004 and as Deputy Director of the Centre for Teaching and Learning, Technical University of Malaysia (UTeM) from 2009 to present.

Hanipah Hussin currently is Associate Professor at Universiti Teknikal Malaysia Melaka (UTeM). She has various of expertise's on pedagogy skills such as Micro Teaching, Reflective thinking, Reflective writing, Leadership in Teaching in Higher Education, Teaching Portfolio, Action Research in Teacher's Professionalism, Pedagogical Content Knowledge**,** 7 pillars of *soft-Skills*, Supervision, Mentoring and Coaching in Teaching and Learning, Psychology at Work Place and some issues in Education. She's becomes a practitioner of Outcome Based Education (OBE) and Curriculum Designer.

Mohd Hafiez Ahmad currently is a senior lecturer in Electrical Technology Program, Masjid Tanah Community College. He is a former officer of multimedia in this college and his patient is in development e-larning system.