

STUDENTS PEER-EVALUATION PROCESS: A CASE STUDY IN MALAYSIA

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Accepted date: 21 May 2018

Published date: 11 July 2018

To cite this document: Rahadi, R. A., Tampubolon, M. N., & Hasanah, E. N. (2018). Students Peer-Evaluation Process: A Case Study in Malaysia. *International Journal of Education, Psychology and Counseling*, 3(15), 7-16.

Abstract: *In this study, the authors performed peer-evaluation analysis towards students who have completed their group assignment as part of their overall grades at the end of 2016. The objective of this data collection is to understand each of their respective performance and their ability to grade their fellow students. A hidden purpose of this study is to measure the behavior of each of the students, to value their partnership with their friends, in correlation with their works. For this study, the authors employ nine questions in the peer evaluation forms, with four level of values, ranging from the value of one (strongly disagree) to the value of four (strongly agree). The objects of this study are 202 students from two parallel classes in the same teaching subject. From this study, we can see that the score that the students provided are varying high, above 30, from the possible maximum score of 36. One unique phenomenon that we found is that the students tend to give moderate to higher score towards their teammates while giving themselves a slightly lower score. In conclusion, some unique traits can be uncovered from this preliminary study about the peer-evaluation process for students in Malaysia. The base findings on this study can be replicated in the other Southeast Asian country, such as Indonesia or Thailand, to understand more about whether culture, habits, loyalty, and belief systems affect the student's' performance during their education time.*

Keywords: *Peer-Evaluation, Education, Performance, Culture, Malaysia, Loyalty*

Introduction

To evaluate student's knowledge about one subject, besides assessing their respective individual ability via quiz, midterm, and final exams, lecturers can also analyze their capacity to work in a group. It is one of the students' activities to develop their soft-skills particularly for their interaction among communities. According to facultyfocus.com (2017), there are five benefits that a student can obtain by learning in group: to look for the information for themselves rather

than the teacher tells what they need to know (self-learn); to gain more in-depth analysis after discussion with their team member; to learn about responsibility on their own task; to learn in group on process to find the right answer; and to learn about how to work together.

Previous studies suggest that by working in a group, students can increase their performance (Zahid, 2013 & Nadya, 2017) while also enhance their motivation (Putriana, 2013). Hence, group collaboration is one of the essential class activities to build the student characteristics and soft-skills.

Almost all of universities courses assign the group assignment project like one of the assessment components. Some college courses used the evaluation performance parts which consist of 30% midterm exam, 30% final exam, and 40% assignments that can be divided into individual and group homework projects.

Usually, the group assignment project consists of two or more students depend on the type of the task. On the easy assignment, it only needs two or three students, while for a more challenging task or big projects; it would require more students in a group.

Not all group assignment presents a positive impact on the student. Some of them could give the negative consequences which explain in wisestep.com (2017) such as some student will work hard for the task, but others not so much work; different ideas among students can produce conflicts between team member; it might take much time to make group decision; and sometimes everyone in the team might avoid working. Based on the advantages and disadvantages of group assignment, every team member should evaluate themselves and other team members.

Based on the study performed by Barone (2002) on Malaysian students' behavior shows their respective response towards the value of respects and fairness in terms on the relationship between students and with their lecturers. In group assignments, most literature such as Eder (1981) mention about the issues arise when the students with a less conducive social context for learning were assigned group assignment. They produce different results compared with the other students. In 1993, Mello stated that the challenge of management education is how to make group experience as relevant and rewarding as possible for the students.

This preliminary study aims to analyze the process of evaluation performed by students in one of the largest public universities in Malaysia, to understand about the motivation and reasoning for each of the students when performing group assignment. By collecting data based on peer evaluation form, this study will present the findings on the student performance and their attitudes toward the peer-evaluation system. A larger scale of study will follow this study's results; by comparing the findings of this study will similar studies performed in different universities in Indonesia.

In the end, it is expected that this research will become the pioneer study to understand the motivation for students in Malaysia and Southeast Asia in general when conducting peer-evaluation grading. The results will be beneficial for all stakeholders involved in the higher education industry to improve their teaching and learning quality, to produce better graduates.

Literature Review

Peer-assessment or peer-evaluation among students has developed primarily around the world as a grading method that suggests contribution among the students. A study in Europe has shown its positive impact on student behavior and attitudes toward group assignment (Topping, 1998). In a peer-evaluation system, students were asked to give evaluation and assessment of their peer's performance in projects or team assignments while exercise their judgment and criteria that relevant to the working process, also compare their performance toward their peers. Peer-evaluation is a system, which allows students to value their fellow students' performance that has similar status and work together in creating some outcomes (Topping, 1998).

Some concerns came up in reliability and validity of peer-evaluation results regarding the way of the students deciding criteria and standard in evaluating their performance and their peers. This result might also be affected by local culture and behavior. Thus, in some instances, limitations and instructions from tutor or lecturer still needed to minimize inappropriate criteria or over-subjectivity in evaluating peers.

Regarding above issue, Falchikov (2000) and Şahin (2008) found out that students' assessment has similarities with the results of the evaluation that given by the tutor or lecturer. There is no significant difference between student peer-assessment result and appraisal result provided by the teacher or instructor. Further, Falchikov (2000) also found out that referring to the assessment result given by instructor or lecturer, students in the senior year tend to give better judgment and more accurate than students in the early year.

David (2011) tried to review the quality of peer-evaluation in higher education students. In the study which there is no specific experiment conducted, cannot be concluded excellently whether there is individual self-interest affect the quality of peer-evaluation or is it more to the qualitative problem in peer-evaluation method. David (2011) then suggests using a control group in this particular study to get better comprehension on the peer-evaluation.

Many aspects can affect peer-evaluation. Topping (1998) argued 17 elements could change peer-evaluation, which are: The existence of peer-evaluation in curriculum includes:

- Goals of the project
- The focus of the peer-evaluation in quantitative or qualitative way
- Peer-evaluation result expected
- Supplementary or the only component of final grading
- Percentage of final grade
- One-way or two-way evaluation system
- Anonymity
- Distance in giving the evaluation
- Same year student or different in seniority
- Similar skill and ability among student
- Formation of the reviewer
- Structure of reviewed
- Conducted out or in the classroom
- Performed in the formal or informal course schedule
- Compulsory or not
- Reward in participating

With many aspects above, it is hard to give a general conclusion of the benefit of peer evaluation (Topping, 1998). However, Mendoca and Johnson (1994) argue that peer review proofed to be

useful concerning providing feedback for the lecturers. Rieber (2006) argue that some of the benefits of peer review are the improvement of student work. Yang (2010) proposed that peer review help students reflect on their current works, and enabled them to monitor, evaluate, and adjust their work to improve their overall skills.

Topping (1998) also explained that in assessing their peer, students would exercise their reflective learning by analyzing, comparing, and then communicate the result in the form of scoring. Moreover, peer-evaluation could help the lecturer or tutor in evaluating students and reduce working time (Sadler, 2006).

Sadler (2006) study the pattern of scoring happen in peer-evaluation. In the study, Sadler (2006) found out that there is a tendency that students give a fewer score to the best performance student, compare to what the lecturer or tutor give. On the contrary, low-performance students tend to give a higher score for themselves, to increase their overall score. Same arguments also proposed by Liu et al. (2001); Langan (2008) and Lunstrom & Baker (2009) who explained that there is a significant difference in the range of score students will give to their peers compare to themselves.

Research Methodology

To evaluate the student peer-evaluation process, we have distributed rubric evaluation form to the students during Semester I in 2017. The research target of this study is the bachelor students in the School of Maritime Business and Management, Universiti Malaysia Terengganu, Terengganu, Malaysia. The goal of the study is to find the motivation and reasoning for each of the students when performing group assignment.

Quantitative analysis is being performed using rubric evaluation forms that were administered to two parallel classes, which consisted of two different undergraduate programs at a local Malaysian university: marketing program and tourism program. For this research convenience, we will address the marketing program as program A, and the tourism program as program B.

The survey instrument included nine Likert-scale questions on the rubric. Additional data of student's name, ID, program, and date also presented. The Likert-scale question is four points Likert-scale with number 1 suggest disagreement strongly, and number 4 suggest substantial agreement. Even Likert-scale points were administered, to avoid middle selection and to prevent safe selection (Dhar and Simonson, 2003).

The peer-evaluation practice was part of a group assignment process for Management Information System classes that the author taught. Each of the group consisted of 4-5 members. For program A, the total students are 78, while for program B; the total students involved are 124. With total respondents of 202, it represents around 95 percent confidence level with the precision of 7-10 percent (Israel, 1992), as the population of Malaysian higher education students are reaching more than one million students (Study Malaysia, 2015).

The participation was compulsory. However, during the peer-evaluation form distribution, as some of the students did not attend the class, their data are not recorded in the study. Besides evaluating their peer, they also required to evaluate themselves. The responses to the survey questions were anonymous, as the results of each of the responses could not be linked to any particularly involved students.

Analysis

In overall all the students manage to obtain their grades, although not all of the students during the data collection were present. For program A, there are 3 out of 78 students did not present during the process (96.15 percent of attendance), while for the program B, all 124 students were present.

The nine questions for the questionnaire were derived from the standard peer evaluation form that can be found on the Internet. Some of the examples of the form can be downloaded via Daily Teaching Tools Website (2017), Template Zet (2017), and Course Hero (2017). The reason we choose this template is that the questions were typical and did cover the whole aspects of peer evaluation process for group assignment.

The nine questions were presented below:

1. Was dependable in attending group meetings.
2. Willingly accepted assigned tasks.
3. Contributed positively to group discussions.
4. Completed work on time.
5. Helped others with their work when needed.
6. Did work accurately and comprehensively.
7. Contribute a fair share of the assignments.
8. Worked well with other group members.
9. Overall was a valuable member of the team.

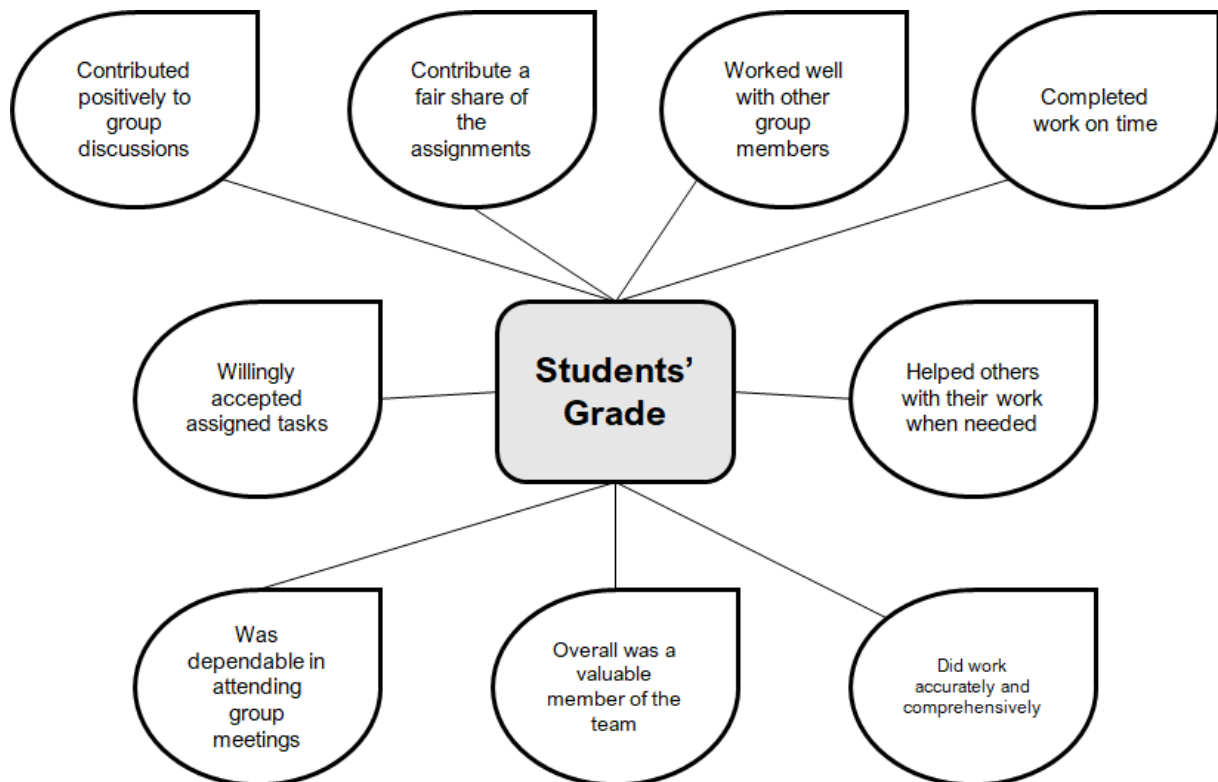


Figure 1. Theoretical Framework of the Study (Author's Analysis)

As we assigned Likert-scale value of 1 to 4, with score 1 reflecting strong disagreement and score 4 indicating strong agreement, for all nine questions, the minimum score that any students

can receive is 9, if they answer all of the questions with the score of 1 (strongly disagree) and the maximum score that any students can receive is 36, if they answer all of the questions with the score of 4 (strongly agree).

From the results, we can see that the average rating for program A is 34.27, while the average score for program B is 35.68. For students' evaluations for themselves (self-evaluation), the average score for program A is 34.14, while the average score for program B is 35.63. For students' evaluation of their peers (peer-evaluation), the average score for program A is 34.31, while the average score for program B is 35.70.

Table 1. Research Findings: Average Scores

Average Scores		Criteria
Program B	Program A	
35.63	34.14	Self-Evaluation
35.70	34.41	Peer-Evaluation
35.68	34.27	Total Score

Table 2 and 3 represents the scores for self-evaluation and peer evaluation results for each of the programs. In program A, the highest score for self-evaluation is 36, while the lowest score for self-evaluation is 25. In program B, the highest score for self-evaluation is 36, while the lowest score for self-evaluation is 24.

Table 2. Research Findings: Scores for Self-Evaluation and Peer-Evaluation (Program A)

%	Peer-Evaluation	%	Self-Evaluation	Scores
41.98%	110	39.74%	31	36
9.16%	24	5.13%	4	35
22.52%	59	23.08%	18	34
3.44%	9	8.97%	7	33
16.03%	42	20.51%	16	32
2.67%	7	0.00%	0	31
2.67%	7	0.00%	0	30
1.53%	4	0.00%	0	29
0.00%	0	0.00%	0	28
0.00%	0	1.28%	1	27
0.00%	0	0.00%	0	26
0.00%	0	1.28%	1	25
0.00%	0	0.00%	0	24
0.00%	0	0.00%	0	23

0.00%	0	0.00%	0	22
0.00%	0	0.00%	0	21
0.00%	0	0.00%	0	20
100.00%	262	100.00%	78	Total

For peer-evaluation, in program A, the highest score is 36, while the lowest score is 29. In program B the highest score is 36, while the lowest score is 33.

Table 3. Research Findings: Scores for Self-Evaluation and Peer-Evaluation (Program B)

%	Peer-Evaluation	%	Self-Evaluation	Scores
88.12%	408	83.06%	103	36
6.48%	30	8.87%	11	35
4.54%	21	5.65%	7	34
0.86%	4	0.00%	0	33
0.00%	0	0.81%	1	32
0.00%	0	0.81%	1	31
0.00%	0	0.00%	0	30
0.00%	0	0.00%	0	29
0.00%	0	0.00%	0	28
0.00%	0	0.00%	0	27
0.00%	0	0.00%	0	26
0.00%	0	0.00%	0	25
0.00%	0	0.81%	1	24
0.00%	0	0.00%	0	23
0.00%	0	0.00%	0	22
0.00%	0	0.00%	0	21
0.00%	0	0.00%	0	20
100.00%	463	100.00%	124	Total

Discussions

Several interesting findings can be uncovered from this preliminary study on developing, implementing, and evaluating peer-evaluation form rubric from students.

The first finding is that with the highest score of 36, and the lowest score of 9, all of the students manage to give themselves and their colleagues score of a respectable 34.27 for program A, and 35.68 for program B. This finding is entirely understandable, given the fact that most of the

students understand that this peer-evaluation process is significant for their overall grade, as it would influence around 10 percent of their total final score for the subject. It is also in line with the study performed by Salder & Good (2006), and Machado et al. (2008) that suggested that during the peer-evaluation process, students tend to give high grades towards themselves and their peers.

However, in this study, as we can see in Table 2 and 3, that there are some students who value themselves quite low, with scores of 25 and 24 respectively in program A and B, although for their peers, they do not give lower scores than 29 for program A, and 33 for program B.

This finding leads to our second findings. Based on the data presented in Table 1, we can see that the students tend to value themselves lower, compared when they evaluate their peers. In program A, the average score for self-evaluation is 34.14, compared with their peer-evaluation score of 34.41 and the overall score of 34.27. In program B, the average score for self-evaluation is 35.63, compared with their peer-evaluation score of 35.70 and an overall score of 35.68. This finding is interesting because, in previous studies, such as performed by Salder & Good (2006), we can see that students tend to value themselves higher compared with their peers. Whether it is just a glitch in the study or does it represent a cultural thing in Malaysia or Southeast countries, a further study can be performed to uncover more findings on this behavior.

The third finding in this study is presented in Table 1. The average total score for self-evaluation, peer evaluation, and total score for program A is lower compared with program B. We should also note that program A has the lowest peer-evaluation score of 29, compared with program B (33). Based on the teaching process and experience that the author performed in both classes, we can conclude that the students from program A are more diligent, focused, and have more concentration towards the materials, compared with the students from program B. The students in program B are more brave, vocal, creative, and noisy, compared with their fellow students from program A. Incidentally, the overall study results of the students from program A are better compared with students from program B. It remains to be seen, whether the behavior of the students in class are influencing their evaluation process.

It is also in line with the findings of the study performed by Salder & Good (2006) that stated that students with a tendency of lower grades to value themselves and their peer higher during the peer-evaluation process, compared with students that score higher grades.

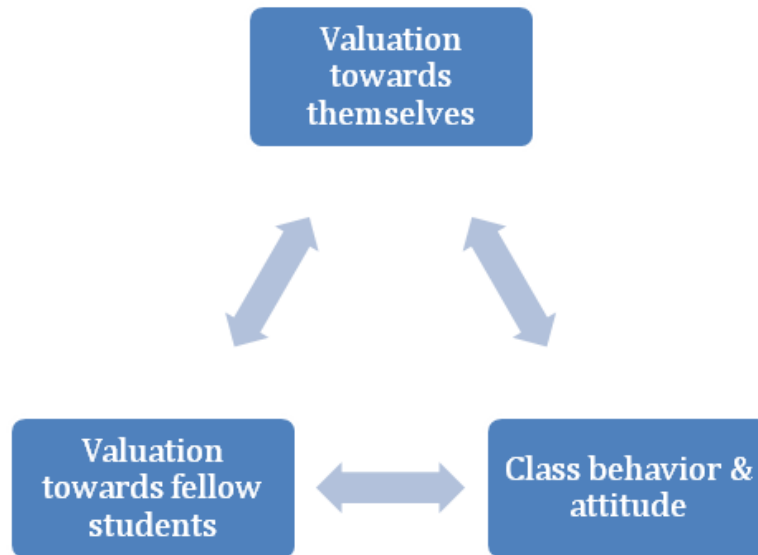


Figure 2. Theoretical Framework of the Study (Author's Analysis)

Conclusions and Future Researches

With limited analysis and data, this preliminary study has successfully uncovered three findings that could be useful for future studies on a peer-evaluation process, particularly in Malaysia and in other Southeast Asian countries. With similar culture, environment, and resources, the study should be able to be replicated trans-nationally, to produce better insights on how peer-evaluation process can help the students and lecturer understand each other better, which in the long run would be beneficial for the higher education system in Malaysia and its surrounding countries.

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