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Sing Ong Yu,

Southern University College, Malaysia

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Using students' feedback to evaluate teachers' effectiveness

Uso de la retroalimentación de los estudiantes para evaluar la eficacia de los docentes

Sing Ong Yu, Southern University College, Malaysia ysong@sc.edu.my

Abstract

This paper aims to explore the effectiveness of students' feedback as a teacher evaluation tool. An effective teacher evaluation system should incorporate multiple measures of teachers' performance. Currently, all students evaluate lecturers teaching at both the diploma and degree levels using the same set of questionnaires. As the entry requirements for the two classes of students are different, the feedback results do not fully reflect the teaching efficiency of teachers. Students' assessment of teachers must support valid inferences of teachers' effectiveness and is one of the many tools of teacher evaluation. The author also argues that for a teacher evaluation model to be effective, the university needs to look at other measures such as student achievement, content knowledge, instructional planning and delivery, and classroom management.

Resumen

Este artículo tiene como objetivo explorar la eficacia de la retroalimentación de los estudiantes como una herramienta de evaluación de los maestros. Un sistema eficaz de evaluación docente debe incorporar múltiples medidas de desempeño de los maestros. En la actualidad, todos los estudiantes evalúan los profesores que enseñan tanto a nivel de diplomatura como de grado utilizando el mismo conjunto de cuestionarios. A medida que los requisitos de entrada para las dos clases de los estudiantes son diferentes, los resultados de retroalimentación no reflejan totalmente la enseñanza eficiente de los maestros. La evaluación estudiantil de los maestros debe ser apoyada con inferencias válidas de la eficacia de los profesores y ser una de las muchas herramientas de evaluación de los maestros. El autor también sostiene que para un modelo de evaluación de los maestros sea eficaz, la universidad tiene que mirar a otras medidas como el rendimiento de los estudiantes, el conocimiento del contenido, la planificación de la instrucción y la distribución, y la gestión del aula.

Keywords

Teacher evaluation; Student's feedback, Classroom management; Teaching effectiveness; Achievement.

Palabras Clave

Evaluación del professor; Retroalimentación del estudiante; Gestión del aula; Eficacia de la enseñanza; Éxito.



1. Introduction

The effectiveness of the evaluation process depends largely on the proper design and assessment of the evaluation criteria. Successful feedback mechanisms demands attention to identifying competencies of actors such as lecturers as well as developing evaluation criteria specific to different groups of respondents such as students. Lecturers often expressed frustrations about the mechanisms of the teacher evaluation process by students. The timing of the feedback process in the first half of the semester did not give sufficient time for both lecturers and students to know each other well. Lecturers need time to engage the students fully to understand their learning needs and capabilities while students require time to adapt to the teaching styles of lecturers. Feedback has to be given as soon as possible when the learning task is completed to allow lecturers to internalise the feedback findings and make any changes to their teaching styles. The current system of not revealing the various component scores of the feedback process to the lecturers is counter-productive as lecturers do not know which aspects of their teaching need to be improved and which aspects are appreciated by students. For the feedback process to be effective, lecturers need to receive timely and substantive information about their performance. The absence in providing these outcomes will result in concerns among lecturers that the appraisal process is just an administrative exercise which does not fully reflect their competencies.

Human resources policies need to be adjusted to give considerable attention to sound procedures to assess performance against certain standards. The evaluation process has to be both measurable and reliable. The current lecturer evaluation process is unreliable as it does not take into account the differences in academic standing between diploma and degree level students. The entry requirements into a diploma programme are lower than a degree program. Students entering into a degree level program have two additional years of high school education as compared to those enrolling in a diploma level program.

Table 1. Entry requirements

Diploma	Equivalent of 3 "O Level" subjects
Degree	Equivalent of "A Level" or Diploma

This paper proposes a conceptual framework which integrates formative assessment and summative assessment. The formative assessment methods that lecturers use to conduct evaluations of students' comprehension and academic progress help to validate the summative assessment of teaching which are recorded as feedback scores of teachers. Combining both student improvement and accountability functions into a comprehensive lecturer evaluation process requires an adjustment in human resource policies.

The traditional approach to teacher evaluation process is formative in nature. The formative assessment monitors student learning to provide ongoing feedback that can be used by lecturers to improve their teaching and by students to improve their learning. Summative assessment evaluates student learning at the end of an instructional unit through exam or a final project. Our framework combines an element of summative assessment of lecturers by students through the use of student evaluation questionnaire (Fig 1).

More importantly, research studies have shown that gains in student achievement are also attributed to other factors such as school environment, school culture and individual student needs and motivation (Yu, 2016).



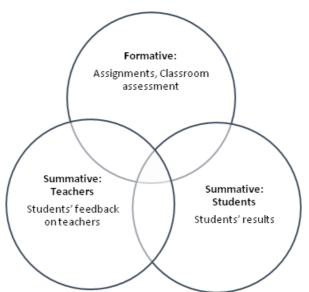


Fig 1. General Conceptual Framework

2. Significance of this study

This study recognises that lecturers' evaluation by students is part of the overall assessment of lecturers' performance. Universities often use questionnaires as a student feedback tool. However, universities failed to differentiate the academic standing of the classes of students responding to the questionnaires. This paper stresses that the differences in feedback responses by diploma and degree students are due to the different academic standings of the two classes of students. Universities' administrators should re-examine the feedback processes for the different classes of respondents in relation to its effectiveness in improving the teaching and learning outcomes of both lecturers and students.

3. Literature review

Students' feedback is one of the most common tool which influences learning and achievement. Research by Natriello (1987) and Crooks (1988) have found that substantial learning gains can be achieved when teachers introduced formative assessment into their classroom practice. Formative assessment relates to assessment to generate feedback on performance to improve and accelerate learning (Sadler, 1998). Black and William (1998) noted that students' feedback produced significant benefits in learning and achievement across all content areas, knowledge and levels of education.

Feedback can only be effective if it is understood and internalised by students before it can be used to make improvements. Very often, students do not understand the importance of the feedback given by teachers and therefore not able to fully comprehend the intentions of teachers and the effects they would like to produce (Chanock, 2000). To overcome this situation, teachers should engage in constant dialogue with students to develop their understanding of expectations and standards. Butler (1987) noted that grading students' performance has less effect than giving feedbacks as students tend to compare their grades with their peers rather than focusing on the ways to improve their tasks.

Good feedback helps teachers to improve their performance (Yorke, 2003). Teachers need good information about how their students are progressing so that they can refine their teaching accordingly. An effective feedback mechanism facilitates the development of self-assessment (reflection) in learning as well as encourages positive motivational beliefs and self-esteem (Nicol and Macfarlane-Dick, 2006). Tram and Williamson (2009) noted two approaches in the



evaluation of teaching: teaching-focused and learning-focused. Teaching-focused evaluation emphasizes on the course content, activities and teaching techniques as well as the characteristics of teachers. Learning-focused evaluation, on the other hand, focused on the effectiveness of the teachers to improve student learning. It measures students' expectations, their perceptions of the learning environment and the appropriateness of the learning activities. Hajdin and Pazur (2012) concluded that teacher and teaching effectiveness should be evaluated separately.

Studies by Hattie and Timperley (2007) noted that quality feedback has significant impact on student learning achievements. Most improvements in student learning were recorded when students receive feedback about how to do a task effectively. They also found that learning achievement is low when feedback focussed on "praise, rewards and punishments". It is most effective when the goals are measurable and achievable. Universities should focus on how appraisal and feedback systems improve students' performance. Measures should be developed to assess the effectiveness of the feedback process and this include informing lecturers of the benchmarks against which performance is assessed. Yu (2016) noted that universities need to reculture to remain sustainable and that positive culture will facilitate staff and student learning.

Establishing a classroom environment that facilitates learning requires special skills from teachers. Swartz et al., (1990) assessed teachers' performance on five functions: instructional presentations, instructional monitoring, instructional feedback, management of time and management of students' behaviour. Yu (2016) concluded that students' achievement has a strong effect on teachers' motivation. The higher the student achievement, the more motivated are the teachers. Teachers are motivated when they felt that their contribution will be appreciated (Yu, 2012).

Developing a comprehensive teacher evaluation tool is challenging. Isore (2009) noted that there are costs involved at every stage of the process, from consultations with relevant stakeholders to reaching agreements. Danielson (1996, 2007) stressed the high costs and time of training evaluators. Heneman et al., (2006) indicated the unwillingness of teachers and evaluators to take on additional workload unless other workloads and responsibilities are reduced.

Research by Shin *et al.* (2006) comparing the critical thinking ability of undergraduate nursing students provided evidence that bachelor degree students scored higher on critical thinking than associate degree and diploma students. The study concluded that the length and content of the educational program is important to encourage students to develop their critical thinking abilities earlier

Slavin et al. (1995) identified characteristics associated with effective teachers. He described "commitment" and "drive for improvement" as examples. Ashton and Webb (1986) termed "self-efficacy" as an important characteristic related to teacher effectiveness. Medley (1982) linked teacher competence and teacher performance with teaching effectiveness. The degree to which a teacher is effective is dependent on the goals pursued by the teacher (Porter and Brophy, 1988).

4. Research question

We began with several key questions:

- 1. Are there differences in feedback scores of Diploma and Degree level students?
- 2. What could possibly be the main reason for the differences, if any?



5. Methodology

The main goal of the research was to highlight the differences in the response rate between diploma and degree level students. The research study was conducted on students of the Faculty of Business over a two semester period. The sample included 30 lecturers who are teaching at both diploma and degree levels. A total of 30 different diploma and 30 degree subjects per semester were chosen. There were 1,100 student participants in the survey. The class size per level ranges from 10 to 80 students per class. The research was based on one online survey exercise per semester in the form of a questionnaire administered by the Registry department.

A typical 4-point ordinal Likert scale was used by the respondent to rate the degree of teaching effectiveness. Both the diploma and degree level students were given the same set of questionnaire to measure the attitudes or opinions under investigation.

The students were asked to fill up an online survey form which consisted of 25 questions (Appendix 1). Survey respondents were asked to give their views on how much they agree with the statements relating to delivery of curriculum, student support, classroom management and utilization of e-learning. No incentives were provided for the participants and their participation were compulsory. The responses to the questionnaires were compiled by the Registry office and an overall feedback score was tabulated for each lecturer. The feedback scores were analysed using the IBM SPSS statistical software package.

The one-way analysis of variance (ANOVA) was used to determine Research Question 1 on whether there are any significant differences between the mean scores of the two classes of students. Research Question 2 is descriptive in nature and relates to the entry requirements of the Diploma and Degree students.

6. Results and discussion

Table 2. Descriptives

			Std.		95% Confidence Interval for Mean			
	Ν	Mean	Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
1	60	78.8757	7.76433	1.00237	76.8699	80.8814	51.75	91.50
2	60	81.8780	6.44937	.83261	80.2120	83.5440	51.00	97.00
Total	120	80.3768	7.26526	.66322	79.0636	81.6901	51.00	97.00

Table 2 shows the differences in the mean for the two groups of students. The Diploma class is denoted by "1" while the Degree class is denoted by "2" The mean score of respondents in Diploma programs (78.87) is lower than those in Degree programs (81.87). We use a 95% confidence interval for the dependent variable "score". The differences in the mean scores are most likely due to the different academic standing of the two classes of respondents. Students who have not met the entry requirements for the Degree program are enrolled in Diploma programs. Degree level students are those who have either met the entry requirements or have graduated from a Diploma level program. In general, degree level students have two additional years of high school education.



Table 3. Anova

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	270.420	1	270.420	5.309	.023
Within Groups	6010.869	118	50.940		
Total	6281.289	119			

The output of the ANOVA analysis showed a significance level of 0.023 (p=0.023). This is below the 0.05 significance level and, therefore, we can conclude that there is a statistically significant difference in the mean score between the two classes of students.

Students' performance measures such as test scores and assessments form an important parameter of our framework. It occurs at the summative evaluation stage which is normally during the mid-term and final term exam period. It can be used as a diagnostic tool to assess students' learning and this has implications on teaching efficiency. The above findings gave evidence of the importance of promoting "Critical Thinking" as a compulsory subject rather than as an elective subject currently. It is essential for universities to define the objectives that encourages students' critical thinking abilities and to develop curriculum and teaching methodologies to meet these objectives.

The evaluation of teaching activities is important as it ensures the quality of teaching and student learning. Different procedures are carried out to evaluate the training objectives and competencies of lecturers in delivering teaching activities to students. While the key elements in the evaluation model may be applicable to both diploma and degree level students, the quantitative evaluation in the form of feedback score needs to be adjusted for those lecturers teaching Diploma level courses.

Students' feedback is only one component of evaluating teachers' teaching effectiveness. Other measures such as student achievement, content knowledge, instructional planning and delivery, and classroom management are equally important (Figure 2).

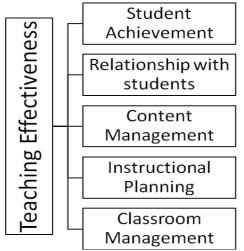


Figure 2. Components of Teaching Effectiveness

7. Recommendations

Universities need to re-compute the overall feedback score of Diploma level lecturers through an upward reweighting of the overall score. From the results of our analysis, the mean differences range from 1.8% to 5.9% taking into consideration the standard deviations of both



means. Conservatively, we would recommend a 3% reweighting upwards in the feedback scores of lectures teaching Diploma level subjects to make them more comparable to those teaching Degree level courses. The Adjusted Feedback Scores (AFS) is represented by the equation below:

Adjusted Feedback Scores (AFS) of Diploma level lecturers = 1.03 x initial feedback score. The multiplier of 1.03 takes into account the different academic standings of the two classes of students and ensures more parity in the teacher evaluation processes between Diploma and Degree level lecturers.

Another alternative is to design different sets of questionnaires for the two classes of students. The Diploma level students will be given one set of questionnaire which is different from those to be completed by Degree level students. This may involve reweighting the different components of the questionnaire. Human Resource policies need to change to take into consideration the two classes of excellent teachers rather than aggregating them into one indistinct class.

The ongoing process of improving professional teaching is essential for ensuring student learning success and this has to be the main focus of the evaluation process. Our proposed framework recommends that the university incorporates the following elements in a new lecturer appraisal and feedback system (Fig. 3). These include:

- 1) Student Performance
- 2) Student assessment of lecturers
- 3) Peer observation of classroom teaching
- 4) Peer collaboration
- 5) Self-assessment, reflection and planning
- 6) Introducing Critical Thinking as a compulsory subject at Diploma level
- 7) The feedback exercise to be held in the second half of the semester



Fig 3. Proposed conceptual framework for differentiated teacher evaluation



The purpose of lecturer evaluation needs to be conveyed clearly to students. Both lecturers and students need to know what aspects of lecturer evaluation are monitored. At the same time, the outcomes objectives, performance indicators and reference standards should be make known by the human resource department to the lecturers. Specific goals are more meaningful than general ones as they help to focus on students' achievements and feedback. They also assist to reduce the gap between actual and desired levels of performance.

Lecturers' professional profiles, including specialised knowledge and skills should be listed clearly and measured against reference standards which are made known to lecturers. The accountability function of lecturer evaluation holds lecturers accountable for their performance. The outcome of a good feedback should result in some form of recognition and reward for it to be effective. Conversely, a poor feedback may result in some kind of sanctions against the lecturer. This policy has to be transparent to lecturers to avoid any feeling of demotivation or disgruntlement. University leaders have the ability to motivate teachers and must create an environment that promotes change (Yu, 2009). They should encourage the use of the feedback process as a legitimate tool for lecturer development and avoid any unnecessary bureaucratic procedures associated with the reward mechanism.

Our proposed conceptual framework includes "Critical Thinking" as compulsory subject rather than an elective subject to develop the critical thinking skills of all students. For the evaluation feedback to be effective, the timing of the feedback exercise should be moved to the second half of the semester to enable students to adapt to the teaching styles of lecturers. The present system of not revealing to the lecturers the components of the feedback scores needs to be changed as lecturers are unaware of which aspects of their teaching need improvement. Only through a comprehensive understanding of their teaching capabilities and inadequacies can they improve their performance.

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APPENDIX 1

TECHER EVALUATION

Subject:				
Lecturer:				
	Strongly Diasgree	Disagree	Agree	Strongly Agree
The objectives and syllabus is clear to me				
The course achieved its learning objectives				
The knowledge gained from the course has benefitted me				
The teaching covers all topics in the syllabus				
Any change in teaching schedule has been communicated effective	ly			
The lecturer is well prepared for class				
The appearance of the lecturer is professional				
The lecturer is good at explaining things				
The lecturer is helpful and approachable				
The lecturer is enthusiastic about teaching				
The lecturer encourages students involvement in learning through $\ensuremath{Q\&A}$				
The lecturer is punctual for class				
The lecturer possesses good classroom management skills				
The lecturer gives extra guidance after class				
I am aware of the assessment requirements and marking criteria				
Assessment arrangements and marking process have been fair				
I have received detailed comments on my work				
The assessment feedback is communicated within a reasonable time frame				
The assessments were relevant to the course learning objectives				
The learning material were useful				
The library resources recommended by the lecturer are good				
The prescribed reference books are relevant				
Lecturer has utilized E-Learning				
I am satisfied with this course				