Malaysian Public University Lecturers' Perceptions and Practices of Formative and Alternative Assessments

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Abstract. Successful teaching and learning are highly dependent on assessment as it provides necessary information for making informed decisions in a higher education program. University lecturers should be equipped with skills and knowledge on different methods of evaluation to assess their students effectively. Only few researchers have investigated the assessment methods employed by lecturers in universities in Malaysia. Traditional class-based assessments are the most common mode of assessment although this form of assessment fails to measure students' learning adequately. This qualitative study aims to determine the level of lecturers' awareness of the different kinds of assessments at the University Puta Malaysia (UPM). The study sampled 48 lecturers from various faculties at UPM. They responded to a self-reporting questionnaire that required them to indicate their perceived competence in alternative and formative assessments. The result of the thematic analysis revealed that lecturers were utterly aware of formative assessment practices. However, despite the significance of alternative assessments in the learning process, some lecturers were not aware of alternative assessment practices. The implication is that the literacy level of lecturers in alternative assessment methods should be improved.

Keywords: alternative assessments; formative assessment; lecturers' practices

1. Introduction

Educators conduct assessment to obtain information to determine the degree to which learners have reached the desired goals of the program. University lecturers should be encouraged to emphasise assessment practices that support students' learning (Yan & Cheng, 2015). Assessment is the process of acquiring information about students' learning. Students' assessment in higher education has been extensively debated by educators and educational (Ibarra-Sáiz & Rodríguez-Gómez, 2015). They discuss whether the current assessment practices enhance students' lifelong learning and which assessment practices are appropriate for learning enhancement, and how giving feedback can improve students' learning (To & Carless, 2016; Kitula, Kireti, & Wambiya, 2018). It is through the use of assessment results, informed decisions about teaching and learning processes can be reached (Stears & Gopal, 2018).

Therefore, assessment is an essential part of the teaching-learning as it provides evidence of learning. Formative and summative assessments are popular in educational contexts. Formative assessment is conducted periodically during instructions to give constructive feedback to both learners and educators about learning success and failures (Kitula et al., 2018). Instructors use the results of formative assessment to monitor the learning process during instruction to improve the learning process (Kitula & Ogoti, 2018). However, summative assessment comes at the end of a given course to enhance the degree of instructional goals and to evaluate both students and the teaching process (Khairil & Mokshein, 2018).

These two forms of (formative and summative) assessment play two significant roles in education. The first role is to determine the level of learning (assessment of knowledge), and the second is to use an assessment to improve the process of learning (assessment for learning). Generally, formative assessment is more concerned with the assessment of learning whereby instructors identify learning difficulties and take corrective measures (Kaur, Singh, Of & Scaffolding, 2017). Therefore, in assessment for learning, lecturers give constructive feedback to learners to achieve learning outcomes. While summative evaluation is concerned with the assessment of learning aiming at determining the level at which learning objectives have been realised (Kitula & Ogoti, 2018).

On the other hand, alternative or authentic or comprehensive assessment refers to the measurement of students' ability and skills in accomplishing complex tasks which lead to intended learning outcomes. In an alternative assessment, students are engaged to perform some tasks in which they typically imitate real-life situations. If teachers apply alternative assessments, they will be able to examine students' strengths and skills, and they can use the information to design their teaching approaches appropriately. Hence, alternative assessment refers to a process-oriented evaluation in which lecturers emphasise on the students' progress and growth (Ghaffar, Yusop, Enhancement & Enhancement, 2018).

The Malaysia Education Blueprint 2015- 2025 realised the skills that students are required to master in a globally competitive environment. Hence, Malaysia Education Blueprint and the National Higher Education Strategic Plan 2013-2025 put a lot of emphasis on using assessment to encourage active student learning. Consequently, all universities in Malaysia must integrate two crucial components, namely clear and measurable learning outcomes and well-designed quality assessment in harmony with the intended results. There is a close relationship between these two components since learning outcomes are a basis of guidance and practice for assessment among university academicians (Badariah & Ahmad, 2015). To achieve this requirement, academicians should refer to primary sources (a) Quality Assurance Division in the Malaysian Ministry of Higher Education, and (b) the Malaysia Education Blueprint 2015-2025. Having implemented these critical components into programs, the public universities guide their academic staff regarding classroom assessment practices through holding workshops to raise their awareness of classroom assessment practices.

University lecturers also need to assess their students' learning and provide evidence on the mastery of skills, knowledge, and competencies and determine challenges associated with the learning process. Therefore, they also need to be equipped with skills in assessment since the quality of any assessment technique used, and its consequences depend on lecturers' competence and knowledge in educational assessment (Xu & Brown, 2016). Lack of proper procedures in assessment results in poor learning outcomes as one of the challenges facing higher education in Malaysia and failure in enhancing learners' thinking ability (Ibarra-Sáiz & Rodríguez-Gómez, 2015). In Malaysia, university education has been expanding from year to year due to the increased number of students enrolling in different universities in the country. High enrolment rates of students go hand in hand with a demand for more lecturers. These lecturers need to have skills and knowledge on educational assessment for them to be in the right positions of making informed decisions about teaching and learning in universities.

In most universities in Malaysia, lecturers conduct both continuous assessment and final examinations with more weight given to the final exams (Lyamtane & Ogoti, 2018). However, scores obtained in the continuous assessment tasks contribute to the final score a student gets at the end of the course. Lecturers decide on the type and the number of assessment tasks to be given, the frequency of assessing, the weightage of each assessment task, and the administration of the assessment tasks. Therefore, it is essential to evaluate the level of assessment literacy among university lecturers in a public university in Malaysia to determine if they are competent enough to assess their students thoroughly.

2. Statement of the Problem

Traditional assessment is the primary method of assessment that could undesirably influence students' learning results in Malaysian higher education. This study aimed to address this problem (Badariah & Ahmad, 2015). Even

though several workshops held for lecturers to implement alternative assessment practices in higher education, many academics still have been relying on pen and paper exams to gauge students' learning (Flores, Veiga, Barros & Pereira, 2014). Hence, it seems that lecturers have limited awareness of alternative assessment practices.

Few researches have investigated lecturers' perceptions of formative and alternative assessment practices in a Malaysian higher education institution. As mentioned before, in the teaching and learning process, assessment is an important aspect, and the whole process of formative evaluation in universities is all left in the hands of lecturers (John, 2015). University lecturers, therefore, need to be well equipped with skills and knowledge on different assessment techniques to assess their students effectively. Malaysian higher education expects universities to conduct credible exams at the end of each semester, which includes setting examinations according to the course outline, moderating before they are administered, ensuring proper administration, marking objectively, and giving out realistic results.

Along with other factors, practical assessment depends on knowledge of lectures in the field of the evaluation. Some studies conducted in Malaysia; however, revealed lecturers were sufficiently familiar with continuous assessments and alternative assessment practices (Nor Hasnida, 2016). Other studies, on the contrary, indicated that lecturers do perceive themselves as being more or less competent in the field (Abidin, 2015). This ambiguity, therefore, led to the current study to determine the perceived competence of university lecturers in conducting assessment practices in a public university, where little research has been done. The objective of the study was to identify Malaysian public university lecturers' perception with regards to assessment, specifically about formative assessment, alternative assessment and modes of alternative assessment.

3. Literature Review

Academicians have frequently been using the traditional form of assessments in higher education (Streff, 2016). Many proficient experts in all fields have been utilising conventional assessments in the certifying process because instructor's bias is more likely to reduce in objective scoring and the results provide detailed information about learners' common errors (Marín-García, Bonavia & Losilla, 2011). Some scholars indicated that students could cheat easily in traditional assessments. This form of assessment cannot measure in-depth understanding, students' problem-solving and critical thinking skills (Streff, 2016). Besides, recent studies in literature, described that traditional evaluations might not be a valid indicator of learning outcomes if learners face some problems such as fear of tests or biases throughout the assessment (Klusmann, Richter & Ludtke, 2016). Secondly, traditional examinations fail to measure students' learning over the whole course (Zhan, 2015; Sambell, 2016). Due to academic and student concerns on traditional assessment in higher education, lecturers need to discover alternative assessment practices.

In recent studies, some lecturers are interested in implementing an alternative assessment due to the limitations and shortcomings of traditional assessment practices (Streff, 2016; Nederland, Sluijsmans, Zuyd & Jochems, 2010). Having integrated alternative assessments, lecturers provide more definitive evidence of learning in higher education (van Gog, Sluijsmans, Brinke & Prins, 2010). In alternative assessments, a lecturer might ask students to find a solution to a problem, produce work, or demonstrate a skill. Portfolios and instructor observation are examples of alternative assessment forms. Alternative assessments usually assess higher-order skills of Bloom's Taxonomy; analysis, synthesis, and evaluation (Margulies & Ghent, 2013). To implement HOTS, teachers need to have sound knowledge, skills and positive attitudes towards alternative assessments (Sulaiman, Ibrahim, Abdul Rahim, Hakim & Omar, 2019).

There are three types of alternative assessments; performance-based, authentic, and constructivist assessments (Dikli, 2006). In performance-based evaluation, lecturers observe students' ability to use higher-order thinking skills while doing the tasks and applying the skills they learned from a course. Authentic assessments refer to the evaluations in which students are assigned "real world" tasks. In constructivist assessments, lecturers assign students to accomplish some tasks or work, and they examine their mastery of the skill; moreover, students play a part in evaluating their work (Matovu & Madziah Zubairi, 2014).

Current studies suggested that alternative assessments are used as delivery mechanisms, learning strategies, or triangulation instruments in addition to being used as methods of measuring student learning (Avalos, 2011). The finding of another study revealed that if the alternative assessment is used as a triangulation instrument, it would lead to different outcomes, ranged from no association to a strong association of increased learning (Yan & Zhang, 2017). However, other studies found that alternative assessments were learning strategies instead of assessments (Mohammadi & Golaghaei, 2018). Nevertheless, other researchers employed alternative assessments to identify perceptions of students instead of learning.

Nezakatgoo (2011) reported that some portfolio assessments suffer from design limitations and create some issues with validity and reliability (Nezakatgoo, 2011). Moreover, another study by Kramer et al. (2018) examined the effectiveness of group assessment in which a group cooperated on evaluation, and all members of the group received the similar grades, the suggestion was not robust enough to influence stakeholders (Kramer, Olson & Walker, 2018). Furthermore, some studies reported that learning objectives and the content of an alternative assessment were not thoroughly investigated (Sarrico, et al., 2010). Overall, the current literature suggests that formative and summative assessments do not necessarily give a suitable measure of student learning (Kaur et al., 2017). Some studies provided evidence, that alternative assessments gauge student learning more precisely than traditional assessment; however, much of the available research on alternative assessments reflected some flaws in different modes of alternative assessment in terms of measuring learning.

On the other hand, Gavin (2012) reported that lecturers' perceptions of assessing students play a crucial role in the improvement of student learning (Gavin, 2012). Some studies reported that lecturers raise the issue of poor assessment methods, and some of the lecturers lack satisfactory competencies in assessing students (Matovu & Madziah Zubairi, 2014).

Lecturers' assessment practices play a significant role in determining student learning (Schafer, 1991). The lecturers' assessment competencies and practices are inconsistent at various levels of education (Alkharusi, 2008). Other studies reported that lecturers' knowledge and practices in the assessment are much dependent on their experience (Postareff et al., 2007). However, based on the current literature in Malaysian higher education, there are few studies conducted to investigate assessment practices and competencies (Khairani, 2017). It was reported that the most frequently used assessment is the traditional assessment in Malaysian public universities. Currently, there is more tendency for alternative assessments in the majority of Malaysian universities (Kaur et al., 2017). To date, there is a need to address the lecturers' self-perception of assessment practices in Malaysian universities to ensure they implement different assessments to measure the specified learning outcomes (Mohamad Uri & Abd Aziz, 2017).

4. Methodology

A qualitative approach was adopted for this study as it was deemed suitable to achieve the aim of this study, which was to identify the lectures' perception and assessment practices in a Malaysian public university. A qualitative research methodology allowed the participants to openly explain their related perceptions and experiences that supported the researcher to have an in-depth understanding of their practices (Creswell, 2013). The study made use of a purposive sampling technique. This type of sampling involves a selection of participants with specific characteristics that can provide relevant and rich information to achieve the purpose of the study (Patton, 2001). The participants of the study were 48 lecturers from different faculties in a Malaysian public university who were willing to take part in the study. A written open-ended questionnaire (Appendix 1) was employed to collect data from the participants. The responses were then analysed and coded to identify relevant themes.

The data were analysed through the manual method.   The researchers became familiar with the data, then they compiled and organized data by breaking data into smaller categories through colour-coding each category or categories, at this point, the researchers had developed the categories scheme based on the individuals' responses to questions (Yin, 2016). The researchers went through the responses, and they searched for common patterns to create categories. The relationship between emerging patterns and themes resulted in creating new concepts and codes within the categories. The researchers took into account the words that participants often used to convey a similar meaning or idea. These recurrent ideas developed into themes. Table 1 illustrates the themes and sub-themes that emerged from the data related to formative assessment.

Table 1: Themes and sub-themes outlined concerning the formative assessment

Theme	Sub-theme
To examine the effectiveness of teaching and learning	Continuous basis, evaluation, systematic way, checking mechanism, learning objective
Providing feedback	Constructive feedback, learning outcomes, modifying instruction, modifying content

In what follows, five themes were developed based on the lecturers' responses to alternative assessment practices. Table 2 illustrates the themes and sub-themes that emerged from alternative assessments.

Table 2: Themes and sub-themes outlined about alternative assessment

Theme	Sub-theme
Other than traditional assessment	Non-traditional assessment, assessing skills
The Alternative assessment reconnects formative assessment to instruction	Connecting formative assessment to instruction, matching with students' learning styles, to compensate limitation of formative assessment
Alternative assessments improve learning and soft skills	Enhancement of soft skills, problem-solving, team working, interpersonal and intrapersonal management
lack of lecturers' awareness of alternative assessment modes	Frequent repetition of written papers, observation, group assessment, presentation, project work, debate
The alternative assessment is suitable for small class and time-consuming to assess	Alternative assessments, small class size, challenging to develop, time-consuming to assess and grade

5. Findings

This section discusses the findings which were summarised into themes. The finding is related to the purpose of the study, that is, teachers' perspectives of formative and alternative assessment.

5.1 Formative Assessment
Theme 1: To Examine the Effectiveness of Teaching and Learning Process
The results of the analysis revealed that all lectures were aware of the concept of formative assessment and its practice. They usually conduct formative assessments throughout the course continuously. They maintained that this assessment examines the effectiveness of a teaching and learning process. Some lecturers defined the formative assessment as "*a systematic way to evaluate whether learning outcomes have achieved and to examine whether the teaching was effective*" (L-1). Another lecturer referred to the formative assessment as: "*A checking mechanism to identify if the learning objectives are achieved*" (L-3).

Most lecturers defined the formative assessment as a method to check whether "learning objectives" have been met. The findings indicated that lecturers administered the formative assessment continuously during the course, which is consistent with other studies (Bahati, Tedre, Fors & Mukama, 2016). Moreover, this finding is in line with Kitula and Ogoti's research that formative assessment was used to monitor the learning process during instruction to improve the learning process (Kitula & Ogoti, 2018). Also, the formative assessment provides lecturers with a more precise representation of student knowledge and skills by utilising different strategies throughout the instructional process (Khairil & Mokshein, 2018).

Theme 2: Providing Feedback in Formative Assessment
The second common theme that emerged from the formative assessment was providing feedback. The majority of lecturers reported that formative assessment is an efficient assessment tool to find students' weaknesses and to provide constructive feedback to enhance learning outcomes.

One of the lecturers with twenty years of teaching experience maintain that:
> "*Formative assessment is employed to monitor how well students are grasping instruction throughout the course. It provides useful information for not only lecturers on how to modify ongoing lesson and to meet students' needs, but also for students on how to improve their work*" (L-10).

Another lecturer defined formative assessment as:
> "*A way of gauging the level comprehension, competency and mastery of certain knowledge and skills and formative assessment leads to constructive feedback*" (L-21).

The finding of this study support previous research that supportive feedback from the different formative assessments can improve learners' (Sambell, 2013). Students' and teacher's active participation is required to achieve the desired outcomes in formative assessment (Jacoby, Heugh, Bax & Branford-White, 2014). Therefore, the feedback provided in the formative assessment can enhance students' achievement, engagement, and motivation to learn (Bennett, 2011). Through these engagements and interactions between lecturers, students, and tasks, knowledge is developed based on the social constructivist learning theory (Janeth, 2019). Due to its importance to learning, formative evaluation is known as assessment for learning (Gikandi, Morrow & Davis, 2011).

5.2 Alternative Assessment
Theme 1: Other than Traditional Assessment
The majority of lecturers were familiar with the concept of the alternative assessment as most of them defined it as "*other than traditional assessment*" (L-3, L-7, L-15, L-33). This is a common theme which emerged from the description of alternative assessment by lecturers. This definition is consistent with Oosterhof and Todorov (2008) definition of the alternative assessment which collects data in a non-traditional method, for instance, peer-review, self-assessment, portfolio,

problem-solving, and projects. Moreover, most lecturers mentioned that "*alternative assessment aims to assess students' skills, not their knowledge.*" (L-7, L-11, L-20). The alternative assessment measures students' ability and skills in accomplishing real-life tasks which lead to intended learning outcomes.

The findings showcased all participants in this study agreed with the effectiveness of an alternative mode of assessments. They also were aware of the effect of alternative assessments on students' learning; nevertheless, these lecturers were still applying traditional assessments, since these assessments are much easier to create and measure than those of alternative assessments (Wright, 2016).

Theme 2: It reconnects Formative Assessment to Instruction
The participants shared their experiences as they asked about alternative assessments. L-5 and L-3 maintained that "*alternative assessments are great strategies to complement formative assessment and to connect assessment to instruction*". They highlighted that alternative assessments and formative assessments together can match students' learning styles. L-7 clarified that "*alternative assessments enhance students' comprehension by assisting students in applying what they have learnt*".

Furthermore, L-4 stated that formative assessment had several limitations. "*It fails to gauge higher-order skills*" (L-4). Moreover, the formative assessment fails to gauge students' learning over the entire course. Therefore, academicians need to implement alternative methods of assessment practices in higher education.

Theme 3: The Alternative Assessment Improves Learning and the Soft Skills
The majority of lecturers mentioned that the alternative assessment aims to measure students' soft skills, for instance, problem-solving, team working, interpersonal and intrapersonal management**.** This is consistent with the definition of the alternative assessment which requires students to solve a problem, to answer an open-ended question, to carry out a skill, to produce work such as instructor observation and portfolios (Conijn, Franz, Emons, de Beurs & Carlier, 2019).

Theme 4: Lecturers' Limited knowledge of Alternative Assessment Modes
Concerning the type of alternative assessments, fifty percent of lecturers only were aware of some types of alternative assessments. Assessment choice differs based on instructors' teaching methodology and learning theories.   In terms of the types of alternative assessments, some lecturers mentioned written papers, observation, group assessment, a presentation, project work, and debate. This finding is supported by Rawlusyk (2016) who found instructors frequently employed group projects, written papers, and personal projects. Lepp (2010) also reported that lecturers widely asked students to make a presentation group or individual projects. These three modes of assessments were explained as an authentic assessment, that is to say, they are relevant to the real world and prepare students for the future (To & Carless, 2016).

Furthermore, lecturers who have more teaching experience in the faculty of education and medicine used more alternative assessment modes compared with other lecturers in other faculties.   They mostly used observation, individual, and group projects. The findings indicated that academics with less than three years of teaching experience, usually implement formative assessments to assess students. This finding is consistent with Rawlusk's (2016) result in which Nursing lecturers used more learner-centered methods of teaching and alternative modes of assessments than other lecturers in other programs. Lecturers used alternative assessments such as performance assessment, practicums, observations, self-assessment, interviews/conferences, written papers, debates, and journals.

Moreover, lecturers mainly employed group projects, written papers, and individual projects as the most frequently implemented modes of alternative assessment. It worth mentioning that self-assessment, peer assessment, and portfolio were not common practices by lecturers. This result is consistent with another study by Rawlusyk (2016) that only a few lecturers used peer assessment and self-assessment to assess students in tertiary education. In the same vein, other studies also found restricted use of portfolios by lectures (To & Carless, 2016). Rieg and Wilson (2009) researched to rank various assessment techniques used by lecturers. They described that self-assessment ranked as the ninth and peer-assessment as the 14th.

Theme 5: The Alternative Assessment is Suitable for a Small Class and Time-Consuming to assess
The majority of lecturers explained that alternative assessment practices are more suitable for small class sizes. They explained that, for larger class sizes, formative assessment is more appropriate since this kind of assessment has rubrics, and scoring and marking would be more convenient. L-9 stated that *"smaller class easier for me to conduct the assessment in the class"*. Moreover, participants revealed that creating alternative assessments needs a lot of time and is time-consuming to assess them. L-2 described that,

>   *"I consider alternative assessments for some of my lessons, but some lessons are not easy to mold into alternative strategies."* (L-2)

>   L-7 stated that "*students tend to have alternative assessments in my class such as projects, presentations, open book, etc. However, it takes much longer to grade*" (L-7).

5.3 Best Modes of Alternative Assessment
When the lecturers were asked about the best mode of assessment, different types of assessments were reported such as group assessment, observation, group presentation, debate, writing a paper, peer assessment, project work, and discussion. Lecturers with more than ten years of teaching experience explained that observation is the best mode of alternative assessment. Lecturers, with five years of teaching experience, found group presentation as the best alternative mode of assessment.

6. Discussion

Lecturers typically utilise assessments to make crucial decisions on the students learning (Matovu & Madziah Zubairi, 2014). Assessments play key roles in learning, and due to this reason, lecturers have to implement appropriate assessments to ensure learning outcomes were achieved throughout the course (Sambell, 2016). However, some lecturers stated that exams fail to measure higher-order thinking skills. Hence, they mentioned that they use alternative assessments along with the formative assessment. They reported that alternative assessments are great strategies to complement formative assessment and to connect assessment to instruction. However, the majority of lecturers explained that alternative assessment practices are more suitable for small class sizes. They described that for larger class sizes, the formative assessment is more appropriate since this kind of assessment has rubrics, and scoring would be more convenient.

In terms of implementing alternative assessments, most lectures relied on presentation, individual projects, written papers, and group work. Other modes of alternative assessments, for example, portfolios, journals, workbooks, and practicums, have not frequently implemented. Lectures just rely on merely three out of the thirteen methods recorded as an alternative assessment to produce a course grade. Furthermore, responses from lecturers indicated that they rarely implement these techniques. The reason why some lecturers fail to apply alternative assessments may be related to a lack of lecturers' awareness of alternative assessment practices. Furthermore, lecturers who have more than teaching experience in the faculty of education and medicine used more alternative assessment modes compared with other lecturers in other faculties. These findings showcased lecturers have different assessment competencies and practices, which implied that the more experienced lecturers applied more appropriate assessment practices.

Lectures mostly used observation, individual, and group projects. The findings indicated that academics with less than three years of teaching experience, usually implement a formative assessment to assess students. One possible implication of this study is that that higher education should provide more continuous professional development in alternative (authentic) assessments to raise lecturers' awareness of assessment practices in higher education (Postareff, Virtanen, Katajavuori & Lindblom-Ylänne, 2012) (Martín, 2016). Moreover, training would help lecturers transform from their traditional assessments mode to more authentic assessments which involve students in learning skills (Martin & Mahat, 2017). Another implication for this study is that lecturers should be provided with professional development sessions to raise their awareness of various authentic assessment methods.

7. Conclusion

The findings of the study indicate that the participants generally view alternative assessments as any type of assessments other than the traditional paper-pencil based assessments. They also view alternative assessments as connecting formative assessments with instructions. Alternative assessments are also seen as ways to improve students' learning and soft skills. Some of the lecturers view alternative assessments as mainly suitable for small classes. However, in general, lecturers seemed to have limited knowledge of various types of alternative assessment modes. Moreover, they found them to be time-consuming. As for formative assessments, the lecturers were of the opinion that information from formative assessment helps them gauge the effectiveness of the teaching and learning processes. Formative assessments also provide feedback to students about their learning. The findings also indicated that the majority of academics use formative assessments for grading purposes. Hence, university lecturers need professional development to enhance their knowledge about formative and summative assessments, which will improve their assessment practices.

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Appendix 1

Open ended questions
Answer all questions.

University:
Faculty:
Years of teaching experience:

What is assessment? Explain
What is formative assessment? Explain
What is alternative assessment and give examples of alternative assessment modes? Explain