

The Preference on Types of Assignment in Online Assessment: Pre-Service Teachers' Perception

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Abstract: This study examines the opinions of pre-service preferred the use of multiple-choice questions and open-ended questions in online assessments. The study examines which pre-service teachers preferred between multiple-choice and open-ended questions and what their perceptions on both multiple-choice and open-ended assignments. A survey design was employed for the data collection of this study and semi-structured interviews were undertaken with forty pre-service teachers. The participants were all from the same semester of education teacher and training faculty. The results confirm that the pre-service teachers employed multiple-choice questions to retrieve and monitor acquired knowledge, in order to promote students' understanding in a variety of subjects. They also put questions to students in a multiple-choice format (which requires pupils to recall knowledge from pervious lessons), as this is considered to enhance the sustainability of knowledge.

Keywords: *online assessment, multiple-choice, open-ended question*

INTRODUCTION

A large number of universities, colleges, and schools across developed countries are transitioning from traditional face-to-face classes to blended learning, web-based facilities courses, and online learning, also known as learning in the classroom without walls. Online learning is partly necessary to make the class more accessible. In addition, online learning offers new strategies and methodologies to create breathtaking opportunities to expand the learning environment as well as an online assessment.

Online learning has been observed by many researchers over the past decade, as well as the development of the number of online learning courses and programs. Keengwe and Kidd (2010) reviewed much of the literature on online learning but in the recent study they focused on the higher education. They argued that online learning is not only focused on the online contexts, but also includes a full range of computer-based learning platforms and delivery methods, genres, formats and multimedia, educational programing, simulations, games and the use of media on fixed and mobile platforms across all discipline areas. In addition, the highlight barrier to online learning is the way to assess students' performance in online environment. McCracken, Sharif, Wilson, and Miller (2012) proposed the demand for online learning environments by investigating the principal assessment strategy design for online courses and programs. Therefore, they proposed six principles to assist the design in the development of online assessment strategies; technology affordances, alignment of objectives with assessment, discipline-specific practices and approaches, meaningful and timely feedback, authenticity and transferability, and the last is transparency of assessment criteria.

Dealing with the assessment in online learning, there is Kim, J. Smith, and Maeng (2008) who conducted the research using comparison design entitled 'Assessment in Online

Distance Education'. This study revealed the assessment in an online learning in three online programs in a university (SCS, SOE, SOB). The purpose of that study was to investigate whether or not the principles of assessment in online education are reflected in the assessment activities used by the developers and administrators of three programs in universities as actual online distance course. Therefore, the result of the study said that the courses analyzed from these three programs are not following the advice from the literature regarding assessment in online distance education courses.

In another more recent studies stated that formative feedback is able to encourage student engagement, lead to improved academic achievement, and bolster student enthusiasm to learn. The findings from online formative assessment are associated with gains in students' achievement scores. In addition, the formative assessment in this study indicated that the students' gain promotes the development of complex cognitive processes like self-regulation. Those studies concluded that students who repeatedly engaged in the reflecting, practising and revising process by participating in online formative assessment generally observed more gainful prompt feedback, identified and corrected misconceptions that they might have held in a particular subject area (Wang, 2010; Havnes, Smith, Dysthe & Ludvigsen, 2012; McLaughlin & Yan, 2017; McCarthy, 2017). The study also found significant differences in the way students and teachers perceived feedback practices. Teachers were found to lack systematic strategies required to implement feedback given to students. In this regard, the current study examined student perceptions of various assessment tools used in online education to help guide instructors' use of systematic strategies in assessment of online courses. Understanding student perception of different forms of formative assessment used in online courses is critical in helping teachers to utilise tools that

students perceive positively. This can reduce biases that students might have towards a particular form of formative assessment.

Moreover, another research investigated the assessment as an online formative test that conducted in the experimental studies (Hwang and Chang, 2011; Gikandi, Morrow & Davis, 2011; Lawton et al., 2012; Lin & Lai, 2013; Klinkenberg, 2017), found that formative assessment-based mobile learning approach had a significant effect on student learning interest as well as their learning achievement towards learning materials and future learning. In other words, effective online formative assessment can help achieve learner-centeredness in online courses and enhance student engagement in the course to realise meaningful learning experiences. While, in blended learning settings formative assessment is also shown to predict student course outcome. These findings are important to give a clear understanding that the use of formative assessment significantly effective to motivate learners' interest in an online course as well as improve students learning outcomes. Additionally, an online learning platform allows instructors to engage the students in informal instructional dialogues as a form of formative assessment conversation (Ruiz-Primo, 2011).

Another study found that technologies can be used in the classroom to impact the effectiveness and quality of teaching and learning in a way that improves cognitive-metacognitive skills, skills learning and instruction, and also technology-based assessment has been integrated into a working system designed to assess a large population of students. (Michael & Mayende, 2014; Csapo & Mornas, 2019). The study describes the main functions of software system and discusses how it supports item writing, constructing tests, online test delivery, automated scoring, data processing, scaling, and the provision of feedback both for students and teachers. It shows how diagnostic assessments

can be implemented in school practice to facilitate differentiated instruction through regular measurements and to provide instruments for teachers to make formative assessments.

Dealing with the pre-service teachers' perception on the online students' assessment (Chitpin, 2010; Hamdan, 2013; Oz, 2014) revealed that pre-service English teachers' perceptions of online-based assessment tend to took in an English teacher training program in order to able to using online assessment. There was a greater importance attached by the pre-service teachers to assessment for classroom management, student motivation, and social justice purposes, than to support learning. Meanwhile, Oz (2014) stated that although the participants did not seem to fully appreciate the use of web-based assessment and showed some lack of interest to use this form of assessment in their future classes, they displayed a positive computer attitude and positive perception towards ease of use of web-based testing for their course. They did not favour a shift to a fully web-based form of assessment, but more students preferred a web-based assessment in combination with paper-based assessment than having only paper-based tests.

Despite the growing body of research on assessment, studies examining pre-service teachers' perceptions of online assessment—particularly their preferences between multiple-choice and open-ended assignments—remain limited and often focus on traditional assessment concepts without clearly distinguishing formative and summative purposes. This study addresses this gap by investigating pre-service teachers' conceptions of online assessment in an Education program in Tulungagung, with a focus on their preferences and perceptions of multiple-choice and open-ended assignment types. By exploring which assessment format is preferred and how each is perceived in terms of usefulness and effectiveness, this research contributes to a more

nuanced understanding of how pre-service teachers view online assessment and offers implications for teacher education programs and future classroom practice.

METHODS

This study employed a survey design to examine pre-service teachers' perceptions and preferences regarding online assessment types in Tulungagung, involving 40 volunteer students enrolled in an education program as part of their internship requirement. Data were collected through a questionnaire exploring attitudes toward multiple-choice and open-ended assignments, including their perceived advantages, disadvantages, preferences, and reasons, and were complemented by informal discussions to enrich the findings. The questionnaire was administered in the final week of classes, followed by descriptive statistical analysis and qualitative thematic analysis of responses, interview excerpts, and field notes to address the research questions.

RESULTS

The four research questions are used as a basis to present the results of this study. The first research question concerns to which of the two types of assignment (multiple-choice or open-ended question) was preferred by the pre-service teachers. There were six questions in the first part. The students had to answer the questions by choosing the options "Yes" or "No." Space was provided for them to write the reasons for their answers, if they thought it was necessary. The pre-service teachers' answers to the six questions are shown in the following:

Table 1. Pre-service teachers' perceptions on the kinds of assignments

No	Questions	'Yes'		'No'	
		N	%	N	%

1.	Do you prefer to use <i>multiple-choice</i> in online assessments?	24	60	16	40
2.	Did the process in the <i>multiple-choice</i> making help you in developing your knowledge?	22	55	18	45
3.	Was the process of scoring the <i>multiple-choice</i> assignment easy and quick?	39	97,5	1	2,5
4.	Do you prefer to use <i>open-ended questions</i> in online assessments?	16	40	24	60
5	Did the process in the <i>open-ended question</i> making help you in developing your knowledge?	21	52,5	19	47,5
6.	Was the process of scoring the <i>open-ended</i> assignment easy and quick?	20	50	20	50

Pre-service teachers' preferences between multiple-choice and open-ended question assessment types

The participants preferred the multiple-choice over the open-ended questions based on their assessment of the advantages and disadvantages of the two assignments. The result stated that 60% of the students (24 students) preferred the multiple-choice assignment, while 40% or 16 students preferred the open-ended question assignment.

Pre-service teachers' critical perceptions of multiple-choice assignments in online assessment contexts

The findings demonstrate that pre-service teachers generally perceived multiple-choice questions in online assessments as pedagogically valuable, particularly for supporting knowledge retrieval, monitoring, and reinforcement. Rather than viewing multiple-choice items as merely testing surface-level recall, participants emphasized their potential to promote understanding when questions are

carefully designed. This suggests that multiple-choice assessments can function as cognitively meaningful tools, especially in subjects where structured reasoning and conceptual clarity are required, provided that item construction moves beyond guesswork-oriented formats.

At the same time, participants critically acknowledged that the effectiveness of multiple-choice questions is highly contingent on their linguistic clarity and structural design. Poorly constructed items, especially those with overly complex language, were seen as shifting the assessment focus from content mastery to reading comprehension, thereby undermining validity. This concern highlights an important tension in high-stakes or advanced assessments, where attempts to increase difficulty through language manipulation may inadvertently disadvantage students and distort the measurement of actual subject knowledge.

Overall, while the majority of pre-service teachers recognized the benefits of multiple-choice questions in facilitating learning and assessment—particularly for activating prior knowledge—these advantages were accompanied by practical and methodological challenges. The process of designing high-quality multiple-choice items was widely regarded as time-consuming and demanding, requiring careful alignment between learning objectives, cognitive demand, and language use. Thus, the findings suggest that multiple-choice questions should not be viewed as inherently simple or inferior, but rather as assessment tools whose educational value depends on deliberate, theory-informed construction and purposeful classroom integration.

Pre-service teachers' perceptions of open-ended assignments and their cognitive and literacy demands

The findings indicate that the majority of pre-service teachers perceived open-ended questions as an effective tool for assessing students' depth of understanding in online

assessment contexts. Open-ended questions were not viewed merely as a means of checking factual recall, but as a way to examine how well students comprehend, interpret, and synthesize knowledge. One participant noted that open-ended questions are “challenging” because they require students to demonstrate a deep understanding of the text and allow teachers to access students’ ideas through their written responses. This suggests that open-ended formats are valued for their capacity to reveal students’ thinking processes rather than only their final answers.

In addition, several participants emphasized the complementary role of open-ended questions alongside multiple-choice questions. While multiple-choice items were perceived as effective for establishing core or foundational knowledge, open-ended questions were considered more appropriate for summarizing learning and integrating concepts. As one participant explained, “multiple-choice questions are a really effective way of establishing core knowledge, and open-ended questions are much more effective for summarizing and bringing things together and exploring understanding within a subject.” This distinction reflects an understanding among pre-service teachers that different assessment types serve different cognitive purposes within the learning process.

Moreover, open-ended questions were strongly associated with higher-order thinking skills and deeper cognitive engagement. Participants indicated that such questions provide students with opportunities to recall knowledge, evaluate ideas, and articulate their understanding in a meaningful way. One participant stated that open-ended questions “allow the students to develop higher-order thinking skills,” while another emphasized that they allow students to “demonstrate a greater understanding” compared to selected-response formats. Overall, these findings suggest that pre-service teachers view open-ended questions as a

critical assessment strategy for capturing the depth and quality of student learning, particularly when the instructional focus is on analysis, evaluation, and interpretation.

DISCUSSION

This study has been situated in the context of online assessment in ELT, more particularly in the pre-service teachers' perception. The results of the analysis are highlighted in reference to the three research questions. To answer the first and second research question the researcher can conclude that the majority of pre-service teachers expressed a positive view of multiple-choice questions, with twenty four out of the forty participants agreeing that multiple-choice questions assisted the learning process by recalling and promoting students' acquired knowledge. These findings are similar to those of previous research Simkin and Kuechler (2005) concluded that: "different multiple-choice questions test different levels of student understanding". This enables teachers to obtain feedback concerning the teaching-learning process. Therefore, the findings demonstrate that teachers view the use of multiple-choice questions as significant for establishing the level of students' acquired knowledge and for reminding students of their knowledge, as well as receiving feedback in order to promote knowledge within the process of teaching and learning.

On the other hand, the findings of the current study also revealed that the preparation of multiple-choice questions is time-consuming and requires considerable effort. The findings of the current study therefore, agree with the literature that, despite the marking of multiple-choice questions being quicker and easier than open-ended questions, a considerable amount of time is required for the process of compiling multiple-choice questions in online assessments. Sixteen students in the study were aware that

multiple-choice questions were not necessarily a good indication of actual knowledge. In addition, the participants felt that a high mark was not necessarily an accurate reflection of a student's knowledge if the prewritten answers in examinations were easy to know or to guess. They regarded examinations as being fair if they were capable of distinguishing whether or not a student had good knowledge of a subject. The results of this current study correspond with those of Simkin and Kuechler (2005), i.e. that it is challenging to create multiple-choice questions capable of measuring the highest level of knowledge, thus leading to the students' perception that multiple-choice questions are incapable of assessing actual knowledge.

Related to the third research question, the pre-service teachers considered open-ended questions as capable of revealing the depth of knowledge required by students, i.e. high-level cognitive skills, including comprehension, interpretation and complex decision-making. Similarly, Simkin and Kuechler (2005) highlighted the fact that open-ended questions give students an opportunity to organize, synthesize, and argue coherently to express knowledge in a personal manner. However, Bacon (2003) found that multiple-choice questions possess an "equivalent reliability and validity" to open-ended questions, in particular in their ability to examine complex cognitive skills. Nevertheless, despite the participants viewing the use of open-ended questions as beneficial for revealing complex skills, they may also lead to the potential for misconceptions when it comes to designing teaching materials and strategies, as well as assessment strategies, as multiple-choice items are also capable of assessing high level cognitive skills.

Furthermore, the pre-service teachers highlighted that open-ended questions can sometimes prove inappropriate; when, determining the literacy and cognitive levels of students, as well as the format being inappropriate for

assessing some subjects. The finding of this study thus concurs with Hudson and Treagust (2013), who demonstrated that open-ended questions require students to employ solution-based methodology to arrive at an answer, whereas multiple-choice questions give no indication as to how a student arrived at the answer. Therefore, it may be concluded that, despite open-ended questions being effective in enhancing high-level cognitive skills, the secondary school teachers considered they may have a disruptive influence on students with weaker skills in writing or spelling.

The students in this study were aware that open-ended questions require a deeper understanding of subjects, as well as recalling knowledge, along with establishing an ability to reflect on the acquired knowledge. In addition, Hudson and Treagust (2013) found that the mean performance was higher with open-ended questions than with multiple-choice questions. They explained that students' higher level performance in response to open-ended versions is because "the student would be more able to obtain full credit for his or her effort". Thus, a correctly formulated open-ended question may prove more effective in reflecting a deep understanding of a subject than a multiple-choice question, and it may also improve the construct validity of the test.

CONCLUSION

This study concludes that pre-service teachers perceive multiple-choice and open-ended questions as complementary assessment formats in online assessment contexts. Multiple-choice questions are valued for their effectiveness in retrieving and monitoring prior knowledge, their practicality despite requiring careful and time-consuming design, and their potential to address higher-order cognitive skills when well-constructed. In contrast, open-ended questions are viewed as more cognitively demanding and strongly influenced by students' literacy and expressive abilities, as they require

reflection, interpretation, and accurate articulation of ideas, leading pre-service teachers to pragmatically select assessment types based on instructional goals and student capabilities.

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