

Utilization of Authentic Assessment Tools During Flexible Online Learning in Higher Education

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Abstract: - This study examined faculty members' utilization of authentic assessment tools, their competence in using online assessment strategies, and the level of institutional support provided for flexible online learning in higher education. Using a survey research design, data were gathered from 60 faculty members teaching in flexible or online environments in the School of Advanced Studies at Pangasinan State University. Findings revealed that faculty members often used authentic assessment tools, particularly digital portfolios and performance-based tasks, while reflective journals and project-based assessments were used less frequently. Case-based and simulation-based assessments were rarely utilized. Results also showed that faculty members were competent in aligning assessments with learning objectives, developing rubrics, and using digital platforms. However, they needed further support in addressing academic dishonesty, assessing group work, and designing real-life assessment tasks. Institutional support was adequate in technology but limited in training, policies, and advanced assessment tools.

Key-Words: - authentic assessment tool, faculty competence, online learning, blended learning, flexible learning, online assessment.

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1 Introduction

In higher education institutions around the world, including here in the Philippines, new models of teaching and assessing student learning have been institutionalized. In graduate studies, for instance, the common paper and pen exam administered within a fixed time frame given to test students for their knowledge on a given subject has been replaced by a more realistic application of what the student learned from class to real-life situations or challenges. These assessments are designed to help students show evidence of what they can do with what they learned from their studies. In many graduate studies programs today, for instance, students are expected to design and manage projects, develop and maintain an electronic portfolio of their work, complete performance tasks, among other types of real assessment, [1], [2].

With the shift to flexible learning models across higher education around the world during and after the global health crisis, the use of assessment tools in online learning of higher education students today needs to evolve and become as flexible as learning models currently in place in institutions. Most of the higher education assessment tools today are not flexible enough, as they are designed for traditional

face-to-face learning environments; therefore, there is a need for this study on the utilization of authentic assessment tools in online learning of higher education students today.

On the other hand, several studies support the notion that the evaluation of learning or students' progress must focus on the achievement of specific learning outcomes. In other words, in order to measure students' learning for deeper understanding, critical thinking, and application of knowledge, assessment or evaluation must be used to determine how individuals can apply what they have learned in real-life situations through concrete and meaningful tasks. In line with this, student's learning is promoted through their autonomy as they create their own knowledge using various alternative and innovative technologies to express their learning in diverse mediums such as creating and managing electronic portfolios, completing simulations, analyzing case studies, creating digital stories, engaging in group projects, and other alternative assessments, [3], [4].

Real-life assessment or authentic assessment has promising applications in the Philippine educational setting. The Philippine Open High School assessment study found that using real-life tasks or

scenarios in learning made students more engaged and led to better learning. However, teachers who used real-life assessment tasks lacked training on how to use these tasks, and the technology to support their use is not yet ready for implementation. These challenges to use real life assessment in learning are not unique to the Philippine setting but are experienced by teachers all over the world. Teachers in graduate school are not yet ready to use technology for assessment and need resources and support for assessment in learning, [5].

However, the use of authentic assessment tools in online graduate studies is a yet-to-be-explored area of research. Thus, this study attempts to answer four critical questions: (1) How often are authentic assessment tools utilized in online graduate studies? (2) How competent are faculty members in utilizing authentic assessment tools for online graduate students? (3) What do students perceive about the assessments used in online graduate studies? (4) How do institutions support the use of authentic assessment tools for online graduate students? This study aimed at describing the utilization of authentic assessment tools in online graduate programs, identifying what works and what does not in online graduate studies, and pinpointing the gaps and weaknesses in the use of authentic assessment tools in online graduate studies with a view to proffering solutions to make online learning more effective and meaningful for graduate students.

2 Methodology

This study examined the following issues: 1) the use of authentic assessments; 2) the use of real assessment tools by teachers; and 3) school support for teachers who utilize online learning for their students. In this study, targeted assessments were given to graduate students who were enrolled in online classes taught by faculty members of graduate programs in schools. Therefore, the information generated by this study is descriptions of the current practices of schools and their classrooms where graduate students learn in an online setting.

The study was held at the School of Advanced Studies of the Pangasinan State University, which is one of the institutions that have graduate programs that are being implemented under flexible learning delivery modes as mandated by the Commission on Higher Education or CHED. The participants to this study were the graduate faculty members from different departments within the school and the graduate students who are currently taking online

flexible delivery courses in the school. There were a total of three hundred (300) participants in the study, sixty (60) of them were graduate faculty members and two hundred forty (240) of them were graduate students from different graduate programs within the school. The graduate faculty members from all graduate programs were included in the study, while the graduate students were randomly selected from all the graduate programs within the school.

The same approach was utilized in determining the instrument's internal consistency by calculating the Cronbach's alpha for all the subscales of the questionnaire as well as for the entire instrument. The results of the calculation revealed that all the aspects of the instrument have high internal consistency with Cronbach's alpha values of .89 for the aspect on the utilization of authentic assessment tools, .91 for the aspect on the faculty competence, .87 for the aspect on the institutional support, and .92 for the entire instrument. The use of a 5-point Likert scale type with very specific descriptions for each point was also taken into consideration. The calculation of the mean and the standard deviation for each aspect was also done in order to determine the central tendency and variability of the data gathered by the researcher in this study.

The data from the study were analyzed using weighted mean and standard deviation to determine the extent of the use of the assessment tools by the faculty members as well as the students' perception of the utilization of the tools. The use of weighted mean and standard deviation instead of mean provided a more accurate representation of the data gathered from the respondents. The use of standard deviation addresses the concern of relying too much on the mean value of the data, which may not provide a true picture of the situation.

3 Results and Discussion

The results of this study will be contrasted with the results of similar studies on the use of real assessment tools, teachers' ability to utilize online assessment tools, the level of support schools give to real assessment, and students' perceptions of real assessment in online learning for graduate students. The findings from this study will also be contrasted with and/or added to the body of knowledge on the use of real assessment for graduate school.

There is evidence from the findings in Table 1 that assessment tools are being utilized in the classroom by faculty members. On average, the faculty members are utilizing the assessment tools at a level of 3.49 out of 5.

Table 1. Extent of Utilization of Authentic Assessment Tools

Authentic Assessment Tools	Mean (AWM)	SD	Descriptive Equivalent
Performance-based tasks	4.21	0.62	Very High
Project-based assessments	3.55	0.74	High
Digital portfolios	4.25	0.58	Very High
Case-based assessments	2.55	0.81	Low
Reflective journals	3.88	0.69	High
Simulation-based assessments	2.50	0.85	Low
Overall Weighted Mean	3.49	0.72	High

Source: created by the author

There are two assessment tools that are being utilized by faculty members in the classroom at very high levels. The two tools are digital portfolios and performance-based tasks. Both of these tools of assessment are utilized by faculty members at an average score of 4.25 and 4.21, respectively.

Thus, there is strong evidence that faculty members are using assessment in the classroom that focuses on having students apply what they have learned in the classroom to real-life situations or scenarios. These types of assessment enable students to display their skills by using a variety of methods. These approaches to assessment go beyond mere testing of students' knowledge in the classroom.

For moderately to highly used assessments, such as those found in Table 1 for reflective journals ($M = 3.88$, $SD = 0.69$) and project-based ($M = 3.55$, $SD = 0.74$) assessments, graduate learning elements, including those of reflective practice and sustained longer-term learning and/or inquiry, are valued by faculty members. There are two types of authentic online assessments in Table 1, where the mean scores of faculty members' utilization indicate very low levels of use ($M = 2.50$, $SD = 0.85$ and $M = 2.55$, $SD = 0.81$). These two types of authentic assessments are well recognized for their application and use in simulation to test students' performance. The two assessments include case-based ($M = 2.55$, $SD = 0.81$) and simulation-based ($M = 2.50$, $SD = 0.85$) assessments. The very low levels of use by faculty members of these two assessments for measuring graduate students' learning are most likely the result of several structural or system barriers to their use, such as technological requirements, lack of teacher training and expertise to implement these assessments, and the higher

costs associated with these types of assessments when compared to other types of assessment tools.

However, considerable variation was recorded in terms of means within Table 1. Whilst performance-based tasks and the use of digital portfolios proved the most favored in terms of facilitating ease of use and flexibility, case-based assessment and simulation-based assessment have yet to command the same level of support. This lack of support could be due to a number of factors, for example, a lack of resources or the required expertise in using such tools for effective assessment.

The tool that received the highest average score from the listed assessment tools was digital portfolios. This was with an $M = 4.25$, $SD = 0.58$ rating that indicated "very high" faculty use of digital portfolios. These are used for assessing graduate competencies in a cumulative fashion. The faculty's use of digital portfolios suggests that the school of business is utilizing an assessment strategy that promotes graduate students' professional development and sustains their learning. Various studies have found the use of electronic portfolios to foster students' reflective practices and their professional growth and to provide evidence-based assessment, [1], [6]. The tool of digital portfolios is sustainable for assessing and supporting long-term learning after students complete their courses. For the online learning environment in which the school of business is operating, the use of digital portfolios for assessment is easy and is supported by the Learning Management Systems, [7], [8].

A major segment of assessment that has been greatly loved by teachers and utilized in learning situations all over the world is Performance-based assessment or tasks where students are required to apply what they have learned to real-life situations. As has been said before by this writer, such a variety of assessments is very effective as students apply what they have learned in the classroom to real life. This form of assessment focuses on what students can do after they have completed a course of study and not what they have learned while completing the course of study. The teacher assesses student performance based on predetermined criteria. The use of such performance-based assessment in online learning situations has averaged a rating of 4.21 out of 5 by teachers in this study. Many teachers are anxious to use more such assessment situations in their online teaching, [4], [9].

Faculty members were also assessed on the various indicators of their competence to use

authentic online assessments. As shown in Table 2, the ratings ranged from $M = 3.42$ for ensuring academic integrity in online tasks to $M = 4.18$ for designing authentic online assessments that are aligned with the program outcomes. For instance, faculty members received high ratings for creating valid rubrics for online tasks ($M = 4.10$), using digital platforms for online assessment ($M = 4.02$), and providing meaningful feedback ($M = 3.90$). Furthermore, faculty members perceived that they give space for a number of facets of learning, including their own professional growth, as evident from their ratings for using reflective journals ($M = 3.88$) and project-based learning ($M = 3.55$). This is not surprising given the fact that these types of assessments facilitate higher-order thinking and enable graduate students to develop their independent inquiry skills through project-based learning, [10], [11]. However, the mean score for project-based learning received lower ratings because these types of assessments are often longer in duration and have more complex rubrics for designing and implementing them.

Case studies as well as problem- and project-centered learning can promote more complex processes of learning in students. Assessments that use simulations, for example, role-plays and games, can assess students' applied competence, foster their confidence in their skills and enable them to integrate theory into practice. The school's low ratings on the use of case studies as well as problem- and project- centered learning, therefore, most likely are due to two main barriers: the school lacks the necessary technology to support such assessments, and teachers lack the training and experience needed to implement such approaches. This, however, could also indicate that although schools recognize the value of using more real-world, grounded, and practical approaches to assessment, schools are deterred from using these assessments due to increased complexity and higher cost of their implementation, [12], [13], [14].

The results indicate that there are many assessment methods that can be easily implemented by teachers with little training or support. Two examples of authentic assessment methods that are currently used by teachers are digital portfolios and project-based assessments. On the other hand, there are also many assessment methods that require more expertise and some technological support. The two examples of less commonly used assessment methods are case-based assessments and simulation-based assessments. However, there is some evidence to suggest that teachers are beginning to implement more authentic methods of assessment, and this is

likely due to the acceptance of constructivist models of learning and the implementation of outcomes-based education.

Using real-life situations to assess the skills and knowledge of graduate students is critical for quality graduate education. This study aimed to find out the ways and extent to which the School of Graduate Studies is using for assessment. The results showed that the School of Graduate Studies is predominantly using reflection-based assessment approaches, followed by performance-based assessment strategies. The study further showed that there is a need for increased use of case studies and simulations to assess the skills of graduate students. The teachers would require training and better digital tools for such assessment. The study would also contribute to academic assessment by providing a model of using real-life situations in assessment for graduate education, especially in an online environment. The school is on the right track and needs to improve in assessment methodologies to equip students with the required skills and knowledge to face the challenges of their careers.

Table 2. Level of Faculty Competence in Authentic Online Assessment

Faculty Competence Indicators	Mean (AWM)	SD	Descriptive Equivalent
Design authentic assessments aligned with outcomes	4.18	0.60	High
Create valid rubrics for online tasks	4.10	0.63	High
Use digital platforms for assessment	4.02	0.65	High
Ensure academic integrity in online tasks	3.42	0.78	High
Provide meaningful feedback	3.90	0.67	High
Assess higher-order thinking skills	3.88	0.66	High
Evaluate collaborative online projects	3.42	0.80	High
Integrate real-world relevance	3.44	0.75	High
Overall Weighted Mean	3.79	0.69	High

Source: created by the author

Table 2 reveals the results obtained by the teachers in terms of their faculty competence in implementing the authentic online assessment in terms of average weighted mean (AWM), standard deviation (SD), and descriptive statistics. The results

generally indicate that the teachers have a high level of competence in implementing the authentic online assessment with an overall average weight mean of 3.79 and a standard deviation of 0.69. The highest average weight mean was obtained from the first indicator of designing assessment that is authentic and aligned with intended learning outcomes, with an average weight mean of 4.18 and a standard deviation of 0.60. This was followed by creating valid rubrics for online tasks with an average weight mean of 4.10 and a standard deviation of 0.63. Creating valid rubrics for online tasks indicates teachers' assessment literacy. Assessment literacy is critical for improving scoring reliability. Rubric is a tool that clearly spells out the performance expectations for students' work. Thus, teachers need to be equipped with the skills and knowledge on how to design and use quality rubrics in order to improve their assessment practices, [15], [16], [17].

Teachers at the university provide sufficient feedback to students regarding their academic performance. On a scale where 5 is the highest, teachers provided comments on students' work averaging 3.90 out of 5. This type of feedback is crucial to the academic success of students as long as it is delivered on time and in sufficient detail. Research indicated that when teachers provide quality feedback to students on their academic performance, students are able to achieve better academic grades. As mentioned previously, teachers at the university assess their students' higher-order thinking skills. On a scale of 5, where 5 is the highest, teachers averaged 3.88 out of 5 in assessing students' critical thinking skills. This is in line with the principles of the Revised Bloom's Taxonomy, which emphasizes the assessment of advanced material through analysis, synthesis, and evaluation of information by students, [18], [19]. Thus, teachers at the university are able to ensure that their students gain a deeper understanding of the subject matter through the assessment of their higher-order thinking skills, [4].

Some challenges for teachers when dealing with online learning were revealed in the various aspects where they needed more support. These were particularly obvious in relation to online academic integrity of tasks ($M = 3.42$; $SD = 0.78$; T). Because of the online nature of teaching, it was difficult for teachers to monitor their students for cheating during online tasks. As a result, they required new strategies to tackle academic integrity. Another challenge in online learning, which was typical for group work in the classroom, was that not all students contributed equally to a project online. Therefore, the teachers required systems that

guaranteed every student was held accountable for the individual parts of work they completed as part of a group. The final aspect, where teachers required support when dealing with online learning, was incorporating real-world application in their lessons ($M = 3.44$; $SD = 0.75$; T). In the traditional classroom, teachers were used to making the application of lessons students were learning very visible, and as a result, students were able to easily apply them to real-life situations. When teaching online, however, this required more creative thinking on the part of teachers. However, teachers were able to deal with the situation by improving online learning.

The results from the other set of indicators assessing the degree to which teachers are supported by their institutions in their assessment efforts are shown in Table 3. Here, it is clear that teachers are assessed as competent in applying their assessment skills as long as they are given support to do so in other settings. Therefore, indicators of assessment of teachers' skills such as those of assessing students working in teams, or those of ensuring academic integrity of students when they complete school work online, vary greatly among teachers and in general teachers are found to be proficient in basic aspects of assessment and would benefit from support and from training in other aspects of assessment that are challenging for them to implement in an online environment.

Table 3. Level of Institutional Support

Institutional Support Indicators	Mean (AWM)	SD	Descriptive Equivalent
Availability of LMS and digital platforms	3.50	0.70	High
Training on authentic online assessments	3.00	0.82	Moderately High
Technical support services	3.80	0.64	High
Assessment policy guidelines	2.90	0.85	Moderately High
Access to simulation tools/software	2.80	0.88	Moderately High
Workload adjustments for assessment design	2.90	0.83	Moderately High
Overall Weighted Mean	3.15	0.79	Moderately High

Source: created by the author

Overall average AWM for all indicators is 3.15 with an SD of 0.79, indicating Moderately High institutional support for authentic online assessment. Results for technical support services for online

assessment had a high average of 3.80 with an SD of 0.64. Also, the indicator for the availability of LMS and digital platforms for online assessment had a high average of 3.50, with an SD of 0.70. These two indicators are sufficient to support online assessment, as indicated above. Therefore, although there is a positive indication of the right direction on support for online assessment, some support systems for faculty need improvement to effectively assess students online.

Some of the support indicators for online assessment were given high averages, namely, training on real online assessment, assessment policy, teachers' workload, and use of simulation tools. These averaged from 2.8 to 3.0 or were described as "moderately high". Their extremely high averages could be brought about by support systems that are comprehensive and are consistently supported. This would mean that long-term commitment from the institutions would be required in support systems that teachers need, and the said indicators have.

Each of the support indicators mentioned above would have a different perception on the part of teachers. On training for online assessment, assessment policy guidelines, tools for work, and other support for teaching, teachers would have varying average scores, possibly due to their respective experiences, programs, and departments within the institution where they teach.

These scores are lower, possibly because teachers are not adequately trained to assess in online environments. The lack of guidelines on how to implement quality assessments and the time it takes to do them effectively is also another reason. Lastly, the few simulation tools available for practical, skills-based assessment methods are not enough to be effectively implemented in most classes. However, research has proved that these methods increase student learning.

While there are areas that support teachers, such as providing them with training and effective assessment policies, there are many more that need to be enhanced, such as how teachers' workloads are managed and the tools they use to assess students' learning in online flexible environments to ensure that teachers are able to use the most effective assessment practices that can support students' academic development in these environments.

4 Conclusion

There are many teachers using authentic online assessments like student demonstrations, student products, and student exhibitions in their online

classes. The teachers are able to use these online assessments as effectively as they use them in face-to-face classes. School support for teachers using online assessments is good, but there is room for improvement, especially in terms of assessment policies, training, and workload. Online assessments are effective because they enable students to show what they know best and are assessed in ways that are relevant to them. The more teachers become proficient in using online assessments, the more they will use them in greater depth.

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