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Exploring Digital Test Bank Usability and Acceptability with Productivity Tools: Evidence from the Philippines

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ABSTRACT

The increasing integration of digital technologies in education has created new opportunities and challenges for teaching, learning, and assessment. In response, this exploratory study investigated the capability for digital assessment in a Philippine school through the development of digital test banks using commonly available productivity tools. The project aimed to a) design digital test banks aligned with existing curricular standards, b) evaluate their content validity, c) evaluate their usability among teachers and d) evaluate students' acceptability of digital assessments. Results obtained from the validation and surveys revealed that a) digital test banks may be developed using commonly available productivity tools, b) the developed digital test banks are well-designed and capable of providing accurate and fair assessment of student learning as shown by the validation results; c) the usability of the developed digital test banks is very high as shown by the very high ratings across all usability indicators; and d) the acceptability of digital assessments among students is high as evidenced by the high ratings for acceptability among students. These findings suggest that productivity tools can serve as practical platforms for digital assessment and highlight a growing readiness among Filipino teachers and students for digitally enhanced instructional practices. Future efforts may build on the insights found in the study to further promote digital assessments and technology-enhanced education in Philippine schools.

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INTRODUCTION

Recent developments in technologies have revolutionized educational practices, including novel ways to teach, learn, and assess. Digital tools and resources have allowed for classrooms to become interactive, engaging, and data-driven. For instance, learning management systems, online delivery of courses, and technology-enhanced assessment have made teaching and learning more accessible and personalized. Google Classroom, for example, allow teachers to organize course materials, assign coursework, and communicate with students more efficiently. It provides students with ready access to educational resources, discussion channels, grades, and feedback which enhances their learning experience through accessible support and monitoring (Means et al., 2014). Online delivery of courses, including blended learning modalities, in schools and universities, has afforded wider access to learning opportunities beyond traditional classrooms. They offer flexibility of learning time and space which in turn enables students to equally engage in learning (Graham, 2018; Greenhow & Lewin, 2019). This flexibility further supports personalization of learning experiences where students can learn at their own pace and revisit educational resources whenever necessary. Technology-enhanced assessments, involving quizzes and interactive assignments, provide immediate feedback to students that supports them in understanding their strengths and points for improvement (McClarty & Gaertner, 2015; Shute & Rahimi, 2017).

The Philippine Development Plan 2023-2028 (NEDA, 2023) has recognized the essential role of digitalization for the Philippine education sector. In its policy document (NEDA, 2023), it has underscored the importance of technology integration in education to improve access, support equity, and further advance the quality of education. NEDA's report highlights key points for improvement that include technological infrastructure development, capacitating of teaching, and the enhancement of curriculum. NEDA advocates for the further expansion of internet connectivity and the provision of digital tools and devices to ensure that teachers and students can participate in digital learning environments. Moreover, the development of digital literacy among teachers and students was stressed by NEDA to maximize the benefits of technology in education.

The United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2018) has introduced a framework that outlines important competencies teachers need to possess to effectively integrate technology into their practice. The UNESCO ICT Competency Framework for Teachers (ICT-CFT) is organized into six (6) domains: a) Understanding ICT in Education, b) Curriculum and Assessment, c) Pedagogy, d) Application of Digital Skills, e) Organization and Administration, and f) Teacher Professional Learning. In the specific context of educational assessment, ICT-CFT emphasizes the use of ICT to develop and administer assessments that are fair, valid, reliable, and aligned with learning outcomes. Furthermore, assessment strategies should cover the use of digital tools for both formative and summative assessment.

Starting in 2021, the Digital Test Bank Project School (DTBPS) *(a pseudonym)* has implemented an enhanced curriculum that features new learning areas to better prepare their students for the future. While the curriculum remains fully compliant with the Philippine Department of Education's K to 12 Basic Education Curriculum, it has added subjects that address contemporary issues and skills. These additional subjects focus on environmental science, digital technology, and applied arts, aligning the curriculum with global demands and trends. This enhancement is geared towards equipping students with a broader range of competencies to prepare them in meeting challenges and opportunities of the modern world (DTBPS, 2021).

With the enhancement of the curriculum, it is crucial to develop supporting materials, such as textbooks and digital resources, for the additional subjects. This also includes assessment materials that can accurately measure student understanding and attainment of competencies in the new learning areas. The creation of assessment tools is essential as they will help ensure that students are truly learning concepts in the new learning areas. These assessment materials need to be aligned with the enhanced curriculum's competencies to be able to provide meaningful feedback to teachers and students.

Assessment practices in many Philippine schools remain predominantly paper-based, despite efforts to enhance curricula and instruction deliveries through technology integration. While the integration of learning management systems (e.g., Google Classroom) has gained traction during the COVID-19 pandemic (Alvarez, 2020; Satparam, 2023), the shift toward digital assessment practices remains limited. Teachers continue to heavily rely on these traditional formats primarily due to technological access constraints, limited digital literacy, and accustomed pedagogical routines. This underpins the necessity in advocating for a wider adoption of digital assessment practices to better align with global policy directions, and to better harness the advantages of technology integration in educational assessment, e.g., real-time learning analytics, efficient grading, and timely and personalized feedback (Alruwais et al., 2018). Embracing digital assessment practices will allow teachers to be more efficient and focus on maximizing the pedagogical value of assessment over test administration.

In integrating technology into teaching and learning, it is crucial to anchor decisions on key theoretical frameworks that underpin technology adoption and effective teaching practices. Among these theoretical frameworks are Technology Acceptance Model (TAM), Technological Pedagogical Content Knowledge (TPACK), and the Diffusion of Innovations Theory. The Technology Acceptance Model (TAM) (Davis, 1989) explains how users come to accept and eventually use technology. It theorizes that two key factors determine technology adoption: a) perceived usefulness, and b) perceived ease of use. TAM has been extensively adapted in educational technology where it helps understand teachers' and students' acceptance of particular digital tools (Scherer et al., 2019). The TPACK or Technological Pedagogical Content Knowledge (Mishra & Koeler, 2006) is a framework that emphasizes the intersection of three knowledge domains: a) content knowledge (CK), b) pedagogical knowledge (PK), and c) technological knowledge (TK). The complex relationships between these knowledge domains determine effective teaching with technology. On the other hand, The Diffusion of Innovations Theory (Rogers et al., 2014) describes how innovations are adopted within a social system over time. According to Rogers, the adoption process is influenced by communication channels used to spread information about the innovation, the nature of the social system, and the extent of change agents' promotion efforts. The theory helps explain how new digital tools and practices spread among educators and institutions and what factors might help to accelerate or hinder their adoption.

Building on these opportunities, there is a clear need for initiating and promoting digital assessment practices in Digital Test Bank Project School. Specifically, there is a clear need for the initial development and evaluation of digital test banks. A digital test bank, in this study's context, is a repository of multiple-choice assessment questions that can be easily accessed, managed, and converted into digital assessments using simple utility and productivity tools. Digital test banks can provide a useful repository of assessment items that can be easily accessed and utilized by teachers in different learning areas. These initiatives need to be grounded on established frameworks focusing on the intersections of content, pedagogy, and technology, as well as on the factors that influence technology acceptance, to further promote and disseminate them. The development and evaluation of digital test banks represent a significant step forward in the digitalization of teaching practices in Digital Test Bank Project School.

OBJECTIVES OF THE STUDY

The study was an attempt to contribute to the development and evaluation of digital test banks as a significant step in the digitalization of teaching practices in DTBPS. Specifically, the study aimed to achieve the following specific objectives:

a. Develop digital test banks in the different learning areas
b. Validate content of the developed digital test banks
c. Evaluate the usability of the digital test banks with teachers
d. Evaluate the acceptability of digital assessments with students

MATERIALS AND METHODS

Research Design

The study adopted the ADDIE Model and underwent its five phases – analysis, design, development, implementation, and evaluation. In the Analysis phase, the specific needs and requirements for the digital test banks were identified. The Design phase included specifying question formats, developing the structure of the test bank, and deciding on the software for ease of access and use by teachers and students. The Development phase involved the actual creation of the test banks content and the digital platform. The Implementation phase was when the digital test banks were deployed to teachers by demonstrating how to use digital test banks effectively and how to integrate with existing educational technologies in the institution. Lastly, the Evaluation phase consisted of collecting feedback from teachers and students to inform future improvements.

Locale of the Study

The locale of the study is the Digital Test Bank Project School. It caters to secondary education and serves as laboratory for practicum and research activities for teacher education programs. In 2024, it has a total enrolment of 450 covering both junior and senior high schools. The target learning areas for the development of digital test banks are digital technology, applied arts, and environmental science.

Instruments

In gathering the data, the researcher employed the following: a) Validation Rubric for the content validation of the digital test bank items, b) Usability Survey (Technology Acceptance Model-based Survey for Teachers), and c) Acceptability Survey (Technology Acceptance Model-based Survey for Students). To validate the content of the developed digital test banks, a validation rubric was utilized. The rubric was designed to ensure that the test items meet standards of educational quality and relevance. Three key individuals for each digital test bank were engaged: the teacher handling the subject for the purpose of self-evaluation and two subject matter experts with knowledge in both the learning area and educational assessment.

A survey instrument, grounded in the Technology Acceptance Model (TAM), was developed to evaluate the usability of digital test banks with teachers. It is composed of Likert-type scale items encompassing perceived usefulness, perceived ease of use, attitudes towards using, behavioral intention, and perceived social influence. Likewise, a survey instrument, grounded in the Technology Acceptance Model (TAM), was developed to evaluate the acceptability of digital assessments with students. It encompasses important dimensions of acceptability that include perceived usefulness, perceived ease of use, attitudes towards use, behavioral intention, and perceived social influence. All students across the three grade levels in which the additional subjects were developed for (i.e., Grade 7, Grade 8, and Grade 9, n=112) completed the survey questionnaire.

All instruments contained demographic and open-ended questions, and were subjected to peer review and pilot testing to identify and correct errors and to apply improvements before the actual gathering of data.

Data Analysis

The content validation entailed the use of descriptive statistics for the scores collected from the teacher and subject matter experts. Descriptive statistics, specifically median, was determined to summarize the overall ratings for each of the digital test banks developed. Additionally, open-ended feedback from the evaluators was analyzed to identify common strengths, weaknesses, and suggestions for improvement.

The surveys on usability of the developed digital test banks and acceptability of digital assessments employed descriptive statistics and qualitative analysis. The Likert-type responses from the usability survey were analyzed using descriptive statistics (i.e., means, standard deviations) to summarize the perceived usefulness, ease of use, attitudes towards use, behavioral intention, and perceived social influence. Moreover, responses to open-ended questions were analyzed to identify insights regarding usability, challenges, and advantages.

In interpreting the weighted means calculated from the usability and acceptability evaluations, the ranges below were employed (Alkharusi, 2022):

Range	*Interpretation*	*Meaning*
4.21-5.00	Very High	Users have exceptionally positive perceptions with usability and acceptability. Users find it highly intuitive, efficient, and enjoyable to use.
3.41-4.20	High	Users perceive the product/process positively in terms of usability and acceptability. Users find it easy to use, functional, generally satisfactory.
2.61-3.40	Moderate	Users find the product/process generally acceptable but may encounter occasional usability issues or challenges.
1.81-2.60	Low	Users have generally negative perceptions. There are notable usability challenges or acceptability issues that need attention.
1.00-1.80	Very Low	Users have extremely negative perceptions regarding usability and acceptability. Users find it to likely face significant usability issues, causing frustration and dissatisfaction.

RESULTS AND DISCUSSION

The Development of Digital Test Banks

The analysis phase primarily involved the understanding of the curriculum. Pertinent documents, i.e., approved enhanced curriculum for DTBPS, learning area plans for the different subjects, and copies of previously administered tests in the different subjects, were requested from the subject teachers to inform the curriculum analysis and gathering of initial requirements and expectations. The design and development phases involved the conceptualization and actual creation of the test banks' content and the digital structure. Questions were written, reviewed and entered into the digital test banks. Teachers handling the subjects provided available questions from previously administered tests. These questions were found to cover a range of difficulty levels and question types, although most of the questions are in the multiple-choice format. Provided questions were then subjected to initial review process of the researcher, insights formulated to which were used to improve the questions, addressing any ambiguities or biases. The researchers then entered the questions into the digital test banks, categorized by quarter and topic. MS Excel, MS Word, Google Sheets, and Google Docs were chosen as the digital platforms for the development of the digital test banks. Moreover, Form Builder for Docs and Form Builder for Sheets were the browser plugins used to retrieve and convert questions from digital test bank to digital assessment forms. Tables 1 and 2 outline the steps in creating test banks including the steps in the questions retrieval and digital forms conversion. Figures 1 and 2, on the other hand, show screen captures of the actual digital test banks for digital technology in word processing software and spreadsheet system, respectively.

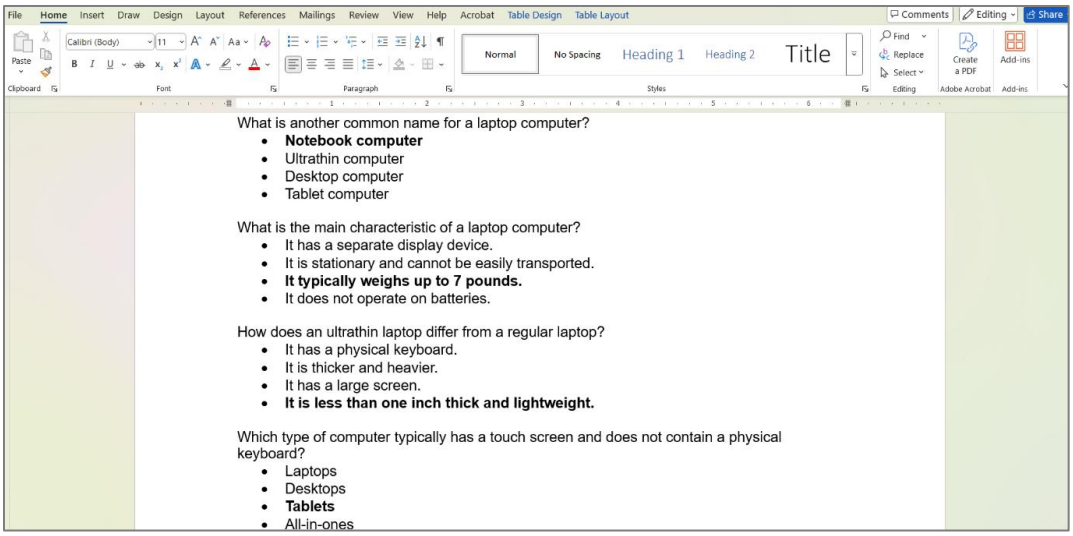

Fig. 1. A developed digital test bank in MS Word.

Table 1. Steps in Digital Test Bank Creation using MS Word or Google Docs

Step	Description
Open Document	Create a new MS Word or Google Docs file. Title it appropriately (e.g., *'Grade 7 Digital Technology Test Bank'*).
Structure Questions	Type each question on a new line. Do NOT number the questions. e.g., *What is another common name for a laptop computer?*
Add Options	Use bullet points for answer choices. Each choice should be on a separate line. e.g., • Notebook computer • Ultrathin computer • Desktop computer • Tablet computer
Indicate Correct Answer	Use bold formatting for the correct answer. Form Builder will recognize this during conversion. e.g., • **Notebook computer** • Ultrathin computer • Desktop computer • Tablet computer
Group by Topic (Optional)	Use headings to group questions by topic or subject area.
Formatting Review	Double-check formatting: unnumbered questions, bulleted options, bolded correct answer.
Install Plugin	In Google Docs, install Form Builder for Docs from the Workspace Marketplace.
Run Form Builder	Launch the plugin, map the document elements (questions, options), and import.
Verify Output	Review the Google Forms to ensure all questions are correctly formatted and the correct answers are properly set.

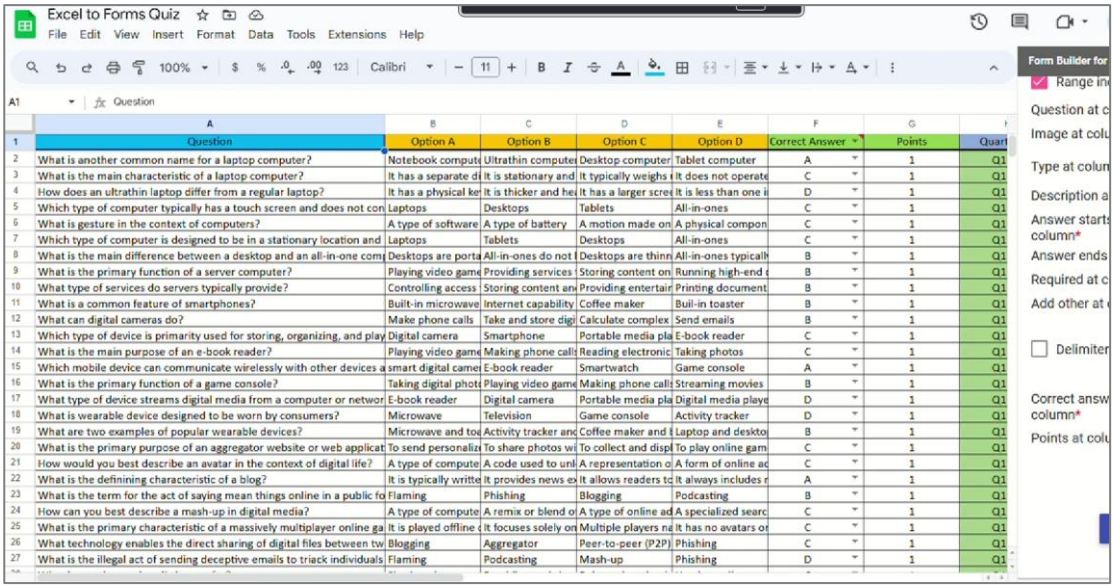

Fig. 2. A developed digital test bank in Google Sheets

Table 2. Steps in Digital Test Bank Creation using MS Excel or Google Sheets

Step	Description
Open Spreadsheet	Create a new Microsoft Excel or Google Sheets file. Title it appropriately (e.g., *'Grade 7 Digital Technology Test Bank'*).
Create Headers	Add columns in Row 1: Question, Option A, Option B, Option C, Option D, Correct Answer, Points, Quarter, Unit
Encode Questions	Each row represents one item. Fill in the question and the four options under the corresponding columns.
Identify Correct Answer	Enter the correct choice (e.g., "B") in the 'Correct Answer' column.
Assign Points	Input the number of points for each question in the 'Points' column.
Categorize by Quarter, Unit	Use the 'Quarter' and 'Unit' columns to tag each question.
Add Drop-Down Menus (Optional)	Use Data Validation to add drop-down menus for columns like Correct Answer, Points, Quarter, or Unit for easier encoding.
Use Filters	Enable filters to sort and retrieve questions by Topic, Points, or Correct Answer.
Install Plugin	In Google Sheets, install Form Builder for Sheets from the Workspace Marketplace.
Generate Form	Run the plugin, map the question and answer columns, and import.
Review Output	Verify that questions and correct answers are accurately reflected in the Google Forms.

A significant majority of DTBPS teachers indicated a high level of familiarity and convenience with MS Excel and MS Word. This familiarity lessens cognitive load in learning and would allow for a smoother adoption of digital test banks (Davis, 1989; Rogers et al., 2014). Teachers are already using these tools for various instructional-related tasks, making them an intuitive choice for the development of digital test banks. The choice of MS Excel, MS Word, Google Sheets, and Google Docs as digital platforms for the digital test banks, therefore, is well-founded, drawing on the high familiarity of teachers with both of these tools. Factors such as familiarity and user-friendliness significantly influence teachers' decision to adopt and integrate technologies (Buabeng-Andoh, 2012). Since these productivity tools are used widely, this indicates that teachers are more likely to accept and utilize these platforms. Moreover, teachers' notions about technologies significantly influence their eventual use (Tondeur et al., 2017). Familiar tools such as MS Excel and MS Word are more readily integrated into teacher teaching practices. Professional development programs focusing on such tools, therefore, can effectively enhance teachers' capability to teach with technology (Kafyulilo et al., 2015).

Validation of the Developed Digital Test Banks

Table 3 outlines the summary of the validation results for the content of the developed digital test banks covering six (6) learning areas.

Table 3. Summary of Validation Results for the Developed Digital Test Banks

Criteria	Digital Test Banks						Median	Interpretation
	A	B	C	D	E	F		
Alignment with Key Competencies	4	4	4	4	3	3	4	Excellent
Clarity and Relevance of Test Items	4	4	4	4	4	4	4	Excellent
Validity of Distractors	3	3	3	4	4	3	3	Good
Bias and Fairness	4	4	4	4	4	4	4	Excellent
Integration of Themes	3	3	3	4	4	2	3	Good
Overall Result	4	4	4	4	4	3	4	Excellent

Legend: *4 – Excellent, 3 – Good, 2 – Fair, 1 – Poor*

The validation of the developed digital test banks across six learning areas yielded excellent or good results for i) alignment with key competencies, clarity and relevance of test items, validity of distractors, and bias and fairness. Additionally, all six but one learning area received an excellent or good rating for the integration of themes.

Alignment with key competencies. The excellent or good validation results for alignment with key competencies indicate that the test items effectively measure the intended learning objectives and educational standards. This alignment is critical for ensuring that these items and any tests generated from the test banks accurately reflect the curriculum and the competencies that students are expected to acquire. Students are more likely to achieve the desired learning outcomes when test items are well-aligned with key competencies. Alignment ensures that students are being assessed on relevant content aimed at mastery of the subject matter – a fundamental aspect for effective instruction (Biggs, 2003). The recorded excellent or good alignment in this study supports the coherence of curriculum and assessment seen as beneficial for students' learning.

Clarity and relevance of test items. The results from the validation indicate that the test items are clear and relevant suggesting that students can easily understand what is asked, and that the items are aligned to the content of the learning area. Clear and relevant test items help students avoid confusion and enable them to demonstrate their learning more effectively. This contributes to a more accurate assessment of student learning. Moreover, test items' clarity and relevance reflect the instructional design quality. Well-written tests items enhance the validity of assessments by accurately measuring what is needed to be measured (Haladyna & Rodriguez, 2013).

Validity of distractors. The favorable ratings along this parameter indicate the plausibility of the options and the capability of discriminating students who understand the content from those who do not. This parameter is about the power of the items to provide diagnostic information that would enable teachers to correct students' misconceptions. Also, establishing the validity of the distractors is contributory to the establishment of validity and reliability of an assessment to ensure that results from tests would accurately reflect what students know (Rodriguez et al., 2014).

Bias and fairness. The excellent or good ratings for this parameter suggest that the developed digital test banks are equitable for all students. This signals that the test items have been reviewed, eliminating elements that could impact students unfairly (e.g. factors related to gender, race, socio-economic status, and cultural background). Equitable assessment practices support inclusivity in learning by reducing barriers to achievement (Kettler et al., 2018). Fair assessments are critical for deeper learning and higher-order thinking skills to be promoted as students can engage meaningfully with the content without unfair advantages or disadvantages (Glaser et al., 2001).

Integration of Themes. All but one learning area received an excellent or good rating for the integration of themes. This is indicative of the effective incorporation of key themes in the developed digital test banks. However, this also suggests that there may be areas for improvement in one subject in aligning the test items with the overarching themes of the curriculum. Targeted revisions may be employed to better integrate key themes. Professional development opportunities for teachers may be considered to help them craft items that effectively integrate themes. Drake and Reid (2018) maintain that properly integrated themes in test items promote a holistic understanding of content and encourages students to connect ideas and applicability of them between different concepts.

The Usability of the Digital Test Banks

The usability of tools plays a crucial role in their effective integration into teaching practices. Usability encompasses how teachers can seamlessly and efficiently navigate, utilize and benefit from these tools. A high usability would ensure that teachers allocate time on instructional delivery instead of struggling with technicalities. The results of the usability evaluation, as detailed in Table 4, indicate that all indicators – perceived usefulness, perceived ease of use, attitudes towards use, behavioral intention, and perceived social influence – received very high ratings. These very high ratings suggest positive perceptions of high usability among teachers about the digital test banks in their teaching contexts.

Table 4. Summary of Evaluation Results for the Usability of the Digital Test Banks (Teachers n=19)

Dimensions	Mean	SD	Interpretation
Perceived Usefulness	4.89	0.34	Very High
Perceived Ease of Use	4.89	0.31	Very High
Attitudes Towards Use	4.59	0.75	Very High
Behavioral Intention	4.67	0.59	Very High
Perceived Social Influence	4.36	0.92	Very High
Overall Result	4.68	0.66	Very High

The very high usability perceptions among the teachers suggest key implications: a) enhanced teaching effectiveness, b) improved efficiency and user satisfaction, c) the promotion of collaboration among teachers, d) the continued use and sustainability of the tools, and e) institutional support and professional development. High perceived usefulness indicate that teachers thought of the digital test banks as valuable tools that can aid them in crafting effective digital assessments based on curricular standards. Perceived usefulness is a crucial factor that may influence the acceptance and the eventual adoption of a technology in educational contexts (Davis, 1989). Meanwhile, the high ratings for the perceived ease of use are indicative of teachers finding the tools intuitive

and user-friendly, contributing to improved efficiency that would allow more focus on instructional implementation. Perceived ease of use influences the attitudes towards tools that can allow higher satisfaction and eventual acceptance (Venkatesh et al., 2003).

The noted positive attitudes towards use and the perceived social influence mark the probability of these tools to foster collaboration among DTBPS teachers. The shared use and positive colleagues' influence can drive broader adoption within the school. Social influence, as Rogers et al. (2014) noted, play a role in the adoption and actual utilization of new tools in educational contexts. The high ratings for behavioral intention finally suggest that teachers are likely to continue the utilization of the tools in their assessment practices. This speaks well for the sustainability of integrating these tools in assessment practices of DTBPS teachers over the long term. One teacher shared,

> *"I believe that MS tools are invaluable tools for creating and managing digital test banks. Both will be very handy to the teachers and pre-service teachers who want the process of creating forms much easier and time-saving. It will become very useful inside and outside the classroom, so if I were to recommend these, I would gladly do it."*

Fishbein and Ajzen (1977) propose that behavioral intention predicts actual behavior, indicating that positive intentions to use technology are likely to translate into continued use and integration. In turn, institutions can leverage these positive perceptions of teachers towards the digital test banks to provide targeted support and professional development opportunities. Training sessions and ongoing support can further enhance teachers' skills and confidence in using the tools effectively, as these kinds of support from institutions are crucial factors in advancing the successful integration of technology in education (Ertmer, 1999).

Feedback from the open-ended questions on the usability of the digital test banks revolved around MS Word being the preferred tool by the majority for the digital test banks, although there are a significant number of those who preferred utilizing both MS Word and MS Excel. A teacher who preferred MS Word argued that *"MS Word is much easier to use and I am more comfortable in using MS Word when generating questions"* suggesting the tool's familiarity and user-friendliness. Another teacher shared,

> *"In my assessment experience, Microsoft Word is the preferred method for creating question banks because of its simple interface and its familiarity. It simplifies the task of formulating questions for easy conversion to Google Forms. This makes it a more suitable choice for me over Microsoft Excel, which is more complex for assessment-crafting tasks."*

A couple of teachers mentioned that both tools may be maximized. One shared,

> *"MS Word is highly regarded for its text manipulation capabilities while MS Excel excels in organizing and managing data. I find that combining the strengths of both tools offers a good strategy to creating and managing digital test banks."*

while another noted that

> *"MS Word and MS Excel are both useful in creating digital test banks. MS Word can be easily used for test formatting and Excel is excellent for data management and automation. We can leverage both by using MS Excel for managing and randomizing questions then export it to Word for final formatting."*

Teachers were able to identify challenges in the use of digital test banks that include *"adding images and diagrams especially if the exam needs diagrams for specific questions"*, and the apparent challenge of creating and managing a test bank for those who are not digitally competent. A teacher acknowledged this by saying that

"it might be challenging to use for those who are not comfortable with technology use especially those who are in their senior years." Nevertheless, the high ratings across all usability indicators reflect positive perceptions among teachers regarding their usefulness, ease of use, attitudes towards using, behavioral intention, and perceived social influence. Continued research and evaluation will further refine these tools to better meet the evolving needs of teachers and learners.

The Acceptability of Digital Assessments

The acceptability of technologies, especially in education, is an important factor that affects how well they are used and how effective they are. Acceptability means how willing students are to use digital assessments as a normal part of their learning. When acceptability is high, the technology is not only used more but also becomes a useful part of learning, which helps increase student satisfaction. The results of the acceptability evaluation are detailed in Table 5. Overall, the acceptability evaluation yields a high rating. This high rating indicates positive perceptions and a high level of acceptability of digital assessments among students.

Table 5. Summary of Evaluation Results for the Acceptability of Digital Assessments (Students n=112)

Dimensions	Mean	SD	Interpretation
Perceived Usefulness	3.99	0.90	High
Perceived Ease of Use	4.20	0.90	High
Attitudes Towards Use	3.48	1.10	High
Behavioral Intention	3.40	1.00	Moderate
Perceived Social Influence	3.26	1.00	Moderate
Overall Result	3.67	1.05	High

The high acceptability among students has some important implications. The high rating for perceived usefulness in the survey shows that students believe digital assessments help improve their learning. This supports the findings of Lai and Hong (2015), who stated that digital tools increase student engagement and understanding, leading to better academic performance. The high ratings for perceived ease of use suggest that students find digital assessments simple and easy to use. This is important because it allows students to focus on showing what they know instead of dealing with complicated technology during the assessment. In previous research, Baczek et al. (2021) also found that ease of use is a key factor that affects students' satisfaction and engagement with digital learning tools. The high positive attitudes toward using digital assessments in the survey show that students are generally comfortable with and supportive of the technology, which is important for continued use and successful integration. As Teo (2009) emphasized, positive attitudes towards educational technology are strongly correlated with continues use and acceptance. As one student shared, *"I find it quite useful to take digital exams because it is a really convenient way to take exams. It allows you to review and change your answer before submission and is helpful in organizing test content clearly"*, saying that those two qualities stand out. Furthermore, one student shared that *"It's also easy to use too. Digital exams allow you to input your answers in a tap of a button and it also allows you to effortlessly change your answers, which makes test taking easier."*

The moderate rating for behavioral intention implies that while students recognize the benefits of digital assessment, they may not be fully committed to using them activity in practice. This could stem from uncertainties about the fairness and security of digital assessments compared to traditional examinations. Research has shown that students may perceive digital assessments as more prone to cheating because of the easier access to external resources or collaboration facilitated by online tools (Noorbehbahani et al., 2022). Such concerns about maintaining test integrity could influence their willingness to engage fully with digital assessment tools. Open-ended feedback from students highlight that *"Cheating is most likely practiced by most students whenever they take examinations online."* Others, on the other hand, raised technical issues that

apparently influence behavioral intention. One student said *that "it contains lots of problems like internet connection, [cheating], and difficulty navigating them especially when using phones."*

The moderate rating for perceived social influence indicates that students may feel they have little control over the decisions to adopt and use digital assessments. In schools, such decisions are usually made by teachers and administrators. This lack of control might affect students' attitudes and motivation to use digital assessment tools (Venkatesh et al., 2003). Social influence plays an important role in the adoption of educational technologies, meaning that a supportive environment can improve technology acceptance (Cheung & Vogel, 2013). This shows that DTBPS has an important role in promoting the use of digital assessments in teaching. To encourage greater acceptance and effective use, it is important to address students' concerns. Clear communication about academic integrity and steps to ensure fairness and security can help reduce worries about cheating. Also, involving students in planning and decision-making can increase their sense of involvement and willingness to use digital tools.

Overall, even though students showed only moderate levels of behavioral intention and perceived social influence, the high ratings for perceived usefulness, ease of use, and positive attitudes toward digital assessments highlight the strong potential for these tools to be widely accepted and integrated. By building on these strengths and addressing student concerns, DTBPS teachers can create a supportive environment where digital assessments help improve learning and better prepare students for a technology-driven future.

CONCLUSION AND RECOMMENDATION

Digital test banks can provide a useful repository of assessment items that can be easily accessed and utilized by teachers. This study was an attempt to develop digital test banks that would leverage the use of technology in line with the recent developments revolutionizing educational practices, particularly digital assessments. Four key conclusions were drawn from the conduct of this study: a) digital test banks may be built using commonly available productivity tools (i.e. MS Word, MS Excel, and Form Builder for Docs and Sheets browser extensions); b) the developed digital test banks are well-designed and capable of providing accurate and fair assessment of student learning as shown by the validation results; c) the high ratings across all usability indicators in the evaluation of the developed digital test banks reflect positive perceptions among teachers; and d) the high ratings for acceptability among students underscore the potential for widespread acceptance and integration of these technologies.

The findings of this study underscore the potential of productivity tools as practical and accessible platforms for implementing digital assessments in the Philippines and similar educational contexts. By demonstrating how commonly available tools like MS Word and MS Excel, together with browser utility plugins, can support the development and utilization of digital test banks, the study offers a replicable model for enhancing assessment practices by leveraging available technological infrastructure. The positive results from the usability and acceptability surveys signal an increasing capability among Filipino educators and learners to adopt technologically enhanced instructional strategies. This capability and the feasibility of using commonly available tools highlight an opportunity to mainstream digital assessments as part of the broader movement toward technology-integrated education.

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