



An Assessment Strategy Using Visual Basic Application in PowerPoint: A Free Interactive Quiz Application for ICT Class

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ABSTRACT

Assessment of learning is one vital phase in the teaching-learning process inside the classroom. Assessment has been improving since there are various ways how to conduct the assessment. Here the purpose of this study was to demonstrate an assessment strategy using a visual basic application in PowerPoint. It can be classified as a free interactive quiz application for the ICT class. The findings revealed that the assessment tool was a valid and acceptable evaluation tool since it is evaluated as very much acceptable by the teachers. The assessment strategy using Visual Basic Application was a valid and acceptable evaluation tool by the teachers in terms of instruction, discussions, pictures used, and activities. The study recommends that learners be exposed to assessment strategies using the Visual Basic Application for a fast, convenient consolidation of their scores and evidence of true assessment.

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1. INTRODUCTION

Assessment of learning is one vital phase in the teaching-learning process inside the classroom (Ninomiya, 2016). Assessment has been improving since there are various ways how to conduct the assessment. Also, assessments were integrated with different games to make assessments inviting and sensible to the learners inside the classroom. Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program in the Philippines which said that Classroom evaluation is a crucial component of the curriculum implementation (Tamir, 2004). It enables the teacher to monitor and assess students' progress and modify instruction as necessary. Students' progress is monitored in class, and their parents and guardians are also informed.

Various assessments are gamified today, arising in educational institutions primarily through online applications and software that helped learners through assessments and the like (Nieto-Escamez & Roldan-Tapian, 2021). However, these applications and software are under solutions that need to pay every time it needs or is used within a specific time. These solutions are really costly and sometimes do not fit the needs of the class. The application has its own included lessons but could not be manipulated without a steady internet connection or even a local area network. It means that lessons contained by the applications could not be manipulated, seen, and answered by the learners. Some reports showed innovation in education. It discussed what works, what does not, and what to do about it. It accentuated and discussed the classification of innovations, discusses the hurdles in innovation in education, and offers a way to increase the scale and rate of innovation-based transformations in the education system. His study clearly stated that raising the quality and scale of innovations in education will positively affect education and benefit society, but it is undoubtedly costly.

According to Ninomiya (2016), in different assessments, the parent's feedback matters. These are the reasons why shreds of evidence should be made for them to be updated for the assessments. So, they can monitor children's progress inside the school through assessments. However, unfortunately, some of the applications do not provide certificates or evidence that the learner underwent an assessment.

With the various legal bases and literature reviews that strengthen the aim of the researcher to conduct this research, they are eager to create a program that will aid the costly usage of the application software used by the public elementary and secondary teachers to assess the learners. In this study, we made material. The payments for the software application service will be avoided, and teachers' intent in making assessments will be easily made according to the competency-based standards. Also, teachers and students could make use even without the internet, and parents can see the pupils' actual scores during formative or summative assessments (Aquino & Ahillon, 2018).

Creating an interactive quiz is the turning on of the Visual Basic Application in PowerPoint Presentation. In making an assessment, the learner should obtain scores depending on the correct and mistakes (Ninomiya, 2016). As an intervention, teachers can modify the quiz, scores, and information to be put. Action buttons were put in to collect responses, and a developer tool in the PowerPoint presentation was activated to calculate scores. For strategy, since the school has enough laptops and computers combined, it was used in Information and Communications Technology Class as an assessment strategy that does not need LAN/WLAN even if it produced or exported pdf after the learner took the quiz.

In this study, the following research questions were formulated: (i) What is the level of acceptability of the developed evaluation tool in terms of the following: instruction,

discussion, pictures used, activities, and modifiability? (ii) What is the extent of the developed evaluation tool in the assessment concerning the teacher's assessment and parent's information? and (iii) How reliable is the developed assessment strategy in using Visual Basic Application in PowerPoint?

2. METHOD

The study's primary objective was to determine the reliability of the developed Assessment Strategy Using Visual Basic Application in Powerpoint. This study was conducted in Tadalak Elementary School during the School Year 2019 – 2020. This study used random sampling, so every student has an equal chance to undergo and experience the computer-based assessment experiment.

After the researchers used the researchers made materials, it was used by other teachers so they could use the researchers – made material which has the evidence for the parents since the developed assessment tool provides a certificate including the scores obtained by the students who undergo assessment.

The teachers who use the developed assessment strategy were content validated by the teachers according to instructions, discussions, pictures used, activities, and modifiability. To see the importance of the developed assessment strategy, teachers validated it according to the teacher's assessment and parents.

3. RESULTS

Table 1 shows that the teachers find the developed assessment strategy very acceptable in terms of its instructions, with an average mean value of 4.95. All were verbally interpreted as very much acceptable.

The findings revealed that the highest rating is mainly gained in the topics, enabling pupils to deal with the lessons squarely and enhancing pupils' interest with a mean value of both 5.00 and verbally interpreted as Very Much Acceptable. The findings imply that the experts very much accepted the developed assessment strategy. The topics discussed enabled the pupils to deal with the lessons squarely and enhanced their interests are one of the reasons why the developed assessment strategy is very much acceptable concerning its instructions.

Table 1. Level of Acceptability of the Developed Assessment Strategy by Teachers Concerning Instructions.

Instructions in The Developed Assessment Strategy	Mean	Verbal Interpretation
1. contain clear and specific directions	4.93	Very Much Acceptable
2. present attainable tasks	4.93	Very Much Acceptable
3. furnish comprehensive sets of procedures	4.97	Very Much Acceptable
4. enable pupils to deal with the lessons squarely	5.00	Very Much Acceptable
5. enhance the interest of pupils	5.00	Very Much Acceptable
6. suit the learning abilities of pupils	4.97	Very Much Acceptable
7. encourage the pupils to follow the given procedures	4.93	Very Much Acceptable
8. motivate pupils to continue reading the lessons because of the precise specifications	4.93	Very Much Acceptable
9. reflect definite purpose throughout the activities	4.93	Very Much Acceptable
10. drive students to learn	4.87	Very Much Acceptable
Average	4.95	Very Much Acceptable

As depicted in **Table 2**, teachers say that the discussion of the developed assessment strategy is very much acceptable, having a total mean value of 4.90. It denotes that the pupil

respondents easily understand the discussions of the developed material suites the taste and. The findings reveal that the developed evaluation tool is seen to be well discussed.

This implies that all of the topics revealed to be much acceptable except the topics presents hierarchy illustrations that provide a big picture, but one that is conveniently broken into categories and provides graphic organizers with enough spaces and margins. The topics illustrations used, which are downloaded, are adequately documented and cited, give a clear picture of the topic introduced, and clear information through the illustration presented to be moderately acceptable.

Table 2. Level of acceptability of the developed assessment strategy as evaluated by teachers concerning discussions.

Discussion Regarding the Developed Assessment Strategy	Mean	Verbal Interpretation
1. present lessons that are arranged in a logical order	4.97	Very Much Acceptable
2. motivate the learning interest of the pupils	4.87	Very Much Acceptable
3. make forms that are congruent to the aims and objectives of the subject	4.90	Very Much Acceptable
4. explain and discusses topics that are easy to understand	4.90	Very Much Acceptable
5. provide clear explanations that module users can understand	4.93	Very Much Acceptable
6. support explanations with realistic examples	4.83	Very Much Acceptable
7. help connect new and old learning to knowledge	4.93	Very Much Acceptable
8. establish a connection between what the pupils are learning and what they will learn	4.93	Very Much Acceptable
9. contain objectives that sustain pupils' interest in the topic continuously	4.93	Very Much Acceptable
10. provide pupils with the competitive learning task	4.83	Very Much Acceptable
Average	4.90	Very Much Acceptable

The findings in **Table 3** depict that the developed assessment strategy in terms of the picture used is very much acceptable. The pictured use revealed an average mean of 4.95 denoted to be very much acceptable.

The findings revealed that it outstands on the presented hierarchy illustration provides a big picture, but one that is conveniently broken into categories, and provides graphic organizers with enough spaces and margins with an average mean of 5.00 in the overall mean score value. In terms of illustrations used, which downloaded are appropriately documented and cited, a clear picture of the topic introduced, and clear information through the illustration presented is moderately acceptable.

The findings imply that using the developed assessment strategy in terms of its pictures is seen for it got an overall average mean of 4.95.

The developed evaluation tool is acceptable concerning its activities, with a total mean value of 4.96. The teacher respondents see it to be very much acceptable. The topics guide pupils to the principles and concepts of the subject, adapt to any size of learning groups and learning time, apply to varying attitudes and abilities of pupils, and lead pupils' further interest in the field revealing a mean value of 5.00 in the overall mean score. Teacher respondents revealed a mean value of 100.0 particularly in the topics that guide pupils to the principles and concepts of the subject, adapt to any size of learning groups and learning time, apply to varying attitudes and abilities of pupils, and lead pupils' further interest in the field revealed to be very much acceptable.

The findings imply that the developed assessment strategy is very acceptable concerning its activities as evaluated by the experts.

Table 3. Level of acceptability of the developed assessment strategy as evaluated by teachers concerning pictures used.

Pictures Used for developed assessment strategy	Mean	Verbal Interpretation
1. make illustrations used that are downloaded, appropriately documented, and cited	4.90	Very Much Acceptable
2. provide clear and descriptive illustrations	4.97	Very Much Acceptable
3. give a clear picture of the topic introduced	4.90	Very Much Acceptable
4. clears information through the illustration presented	4.90	Very Much Acceptable
5. show consistent picture presentation that adds color to the discussion	4.93	Very Much Acceptable
6. present hierarchy illustration provides a big picture, but one that is conveniently broken into categories	5.00	Very Much Acceptable
7. present simultaneously all information needed to explain a topic or perform a task	4.97	Very Much Acceptable
8. use lines, boxes, arrows, space, color, typefaces, and the relative distance between elements to communicate information about the relationships of those elements	4.97	Very Much Acceptable
9. provide graphic organizers with enough spaces and margins	5.00	Very Much Acceptable
10. generate associated mental images for abstract information	4.93	Very Much Acceptable
Average	4.95	Very Much Acceptable

As can be gleaned from the **Table 4**, the developed assessment strategy using Visual Basic Application in PowerPoint got the mean of 4.88, which is verbally interpreted as Very Much Acceptable. The developed assessment strategy in ICT Class shows that it was developed to cater to the needs of the pupils and teachers in times of assessment.

Table 4. Level of acceptability of the developed evaluation tool as evaluated by teachers concerning modifiability.

Modifiability	Mean	Verbal Interpretation
The developed assessment strategy...		
1. Give exercises and activities can be changed easily	4.93	Very Much Acceptable
2. Make use of authentic assessment	4.90	Very Much Acceptable
3. Develop the learner's responsibility for learning	4.86	Very Much Acceptable
4. Use multiple-choice and short-answer-test to gauge the understanding of pupils, which could be modified	4.93	Very Much Acceptable
5. Modify with the learner's information	4.97	Very Much Acceptable
6. Collect evidence showing the attainment of the objectives	4.97	Very Much Acceptable
7. Monitor the progress for the actual use of the assessment	4.83	Very Much Acceptable
8. Give an appropriate diagnosis in the objective	4.56	Very Much Acceptable
9. Allow the teacher to modify the content of the certificate to be generated	4.93	Very Much Acceptable
10. Allow the teacher to assign scores in all givens	4.97	Very Much Acceptable
Average	4.88	Very Much Acceptable

It was shown in **Table 5** that the level of acceptability of the developed material in terms of instructions, discussions, pictures used, activities, and modifiability obtained the average mean of 4.93, which is verbally interpreted as Very Much Acceptable.

Table 6 presents the Extent of the developed assessment strategy concerning parents and teachers. **Table 7** presents the reliability of the developed assessment strategy using visual application in PowerPoint as revealed in the level of acceptability.

Table 5. Composite table of the level of acceptability of the developed assessment strategy using the visual basic application in PowerPoint.

Level of Acceptability	Mean	Verbal Interpretation
Instruction	4.95	Very Much Acceptable
Discussion	4.96	Very Much Acceptable
Picture Used	4.88	Very Much Acceptable
Activities	4.95	Very Much Acceptable
Modifiability	4.90	Very Much Acceptable
Average	4.93	Very Much Acceptable

Table 6. The extent of the developed assessment strategy concerning teachers and parents.

The Assessment Strategy The Parents/Teachers Can...	Mean	Verbal Interpretation
1. see scores got by the learner through a document	4.90	Very Much Acceptable
2. make a breakdown of the scores of the learner	4.90	Very Much Acceptable
3. attest that the learner underwent assessment through signing	4.90	Very Much Acceptable
4. see where the assessment happened	4.90	Very Much Acceptable
5. see when the assessment happened	4.93	Very Much Acceptable
6. identify who facilitated the assessment	4.83	Very Much Acceptable
7. provide compiled evidence of assessments	4.93	Very Much Acceptable
8. hand in certification of assessment	4.90	Very Much Acceptable
9. hold printed copies of the breakdown of scores and certificate of assessments combined	4.90	Very Much Acceptable
10. provide the learner's information like name and section	4.90	Very Much Acceptable
Average	4.90	Very Much Acceptable

Table 7. Reliability of the developed assessment strategy using visual basic application in PowerPoint as revealed in level of acceptability.

Level of Acceptability	Cronbach's Alpha	Internal Consistency
Instructions	0.90	Excellent
Discussions		
Picture Used		
Activities		
Modifiability		

As shown in **Table 7**, the reliability of the researcher-made assessment material combined with its acceptability, namely: instructions, discussions, pictures used, activities, and modifiability, got the alpha of 0.90, which means the internal consistency of the developed material has excellent content. This means that the developed material is reliable to use as an assessment strategy as an assessment tool in assessing the learners' knowledge as it gives automated scores, printed certificates, and evidence that the learner underwent true assessment.

As shown in **Table 8**, the reliability of the developed assessment strategy Using Visual Basic Application in PowerPoint for parents and teachers showed Cronbach's Alpha level of 0.84, which means the internal consistency of the developed material is good. Both the parents and the teachers agreed that the developed material allows them to monitor the learner's progress and development in a specific subject or topic.

Table 8. Reliability of the developed assessment strategy using visual basic application in PowerPoint as revealed to its extent.

Extent	Cronbach's Alpha	Internal Consistency
Parents Teachers	0.84	Good

4. DISCUSSION

The first research objective investigates the level of acceptability of the developed evaluation tool in terms of the following: instruction, discussion, pictures used, activities, and modifiability. These were answered in **Tables 1-5**. The results suggest that the experts accepted the developed assessment strategy in full. The subjects covered allowed the students to engage with the teachings directly and improved. One of the reasons the established assessment approach is highly acceptable concerning its directions is because of their interests. Attained since the developed assessment strategy contains clear instructions that are historically proven to be promoting interest among learners in the experimental group that is proven after they got higher achievements than the control group. Next, this suggests that all of the themes are far more acceptable than previously thought, except for the topics that provide a hierarchy. The drawings offer a broad view that is conveniently divided into sections and offers ample room and margin for graphic organizers. The downloadable topic illustrations provide a clear picture of the subject matter and provide information that is sufficiently clarified through the illustration. acceptable to a degree. This is parallel with [Gibson \(1981\)](#), which defined engagement as student-faculty interaction, peer-to-peer collaboration, and active learning. It has been positively related to the quality of the learning experience. The findings imply that using the developed assessment strategy in terms of its pictures is seen for it got an overall average mean of 4.95. He stated that the illustrations could attract attention, aid retention, enhance understanding, or create context. As can be gleaned from the above results and its modifiability, the developed assessment strategy using Visual Basic Application in Powerpoint got the mean of 4.88, which is verbally interpreted as Very Much Acceptable. The developed assessment strategy in ICT Class shows that it was developed to cater to the needs of the pupils and teachers in times of assessment. All created materials for assessment should be modifiable in the sense that once the teacher wants to add something that is needed in the assessment, the teacher could easily change and altered it.

The second question which is the extent of the developed evaluation tool in the assessment concerning the teacher's assessment and parent's information was answered in **Table 6**. The results reported that the extent of the developed Assessment Strategy Using the Visual Basic Application in Powerpoint Presentation obtained the mean of 4.90, which is verbally interpreted as Very Much Acceptable. In this, parents could have a black and white paper containing their child's scores in the conducted assessment. In which, they can attest that their child underwent assessment through signing. Parents should have a copy of the scores obtained by their children to monitor their progress and level of achievement in a specific topic and subject. It will also strengthen the connection between parents and teachers in looking at the child's growth in a specific topic/subject.

Lastly, in the third question, the reliability of the developed assessment strategy in using Visual Basic Application in PowerPoint is answered in **Tables 7 and 8**. This found that the reliability of the researcher-made assessment material combined with its acceptability, namely: instructions, discussions, pictures used, activities, and modifiability, got the alpha of

0.90, which means the internal consistency of the developed material has excellent content. This means that the developed material is reliable to use as an assessment strategy as an assessment tool in assessing the learners' knowledge as it gives automated scores, printed certificates, and evidence that the learner underwent true assessment. As shown above, the reliability of the developed assessment strategy Using Visual Basic Application in PowerPoint for parents and teachers showed Cronbach's Alpha level of 0.84, which means the internal consistency of the developed material is good. Both the parents and the teachers agreed that the developed material allows them to monitor the learner's progress and development in a specific subject or topic. [Aquino and Ahillon \(2018\)](#) said that assessment tools should have the ability to communicate with parents about all the scores obtained by the learner, and teachers should record the following scores. Also, he said that assessments are really good to see learners understanding ([Aquino, 2018](#)).

5. CONCLUSION

Based on the findings, conclusions were made such as: Using the Visual Basic Application in PowerPoint can create interactive assessments, Assessments can be done offline with the use of Visual Basic Application in PowerPoint, Evidence-based Learning can be done with the use of Visual Basic Application free of charge, Local Area Network and Wireless Local Area Network is not needed with Visual Basic Application. The study recommended that dissemination of results and findings of this study may help schools that do not have a local area network (LAN) or internet, use a Visual Basic Application in other Microsoft Office Applications in creating interactive materials for the learners, and allow this to use in online classes for the pupils with no enough load for assessment.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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