PANTAO
The International Journal of the Humanities and Social Sciences
Volume 4, Issue 3
ISSN 3028-0877 | doi 10.69651/2022PIJHSS

The localized Weekly Learning Activity Sheets (WLAS) as a digitized resource material in teaching Health Education

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ABSTRACT

Education resources are essential for teaching and learning. It also improves classroom instruction, boosting students' academic performance and engagement. This study was conducted at Basag National High School, East District III, Butuan City. It examined the effectiveness of the localized weekly learning activity sheets (WLAS) as a digitized resource material in Health Education. It utilized a quasi-experimental research design to determine the effect of utilizing the localized weekly learning activity sheets (WLAS) as a digitized learning resource material and its significant association with research variables. Control and experimental groups were created to implement the material. The outcomes of the pretest in both groups indicated scores below 30, which were categorized as not meeting expectations. With the use of the developed weekly learning activity sheets in health education, posttest revealed in both control and experimental groups that their performance improved. The posttest scores of learners in both groups showed p-value of.006 in the t-test analysis. The posttest findings for the two groups differ statistically, as its p-value is below 0.05 which rejected the null hypothesis. The posttest scores of both groups' students also differed. Those taught utilizing WLAS had higher gain scores than the other group. The WLAS appeared to have improved health education students' performance. Lastly, recommendations on the improvement of the developed WLAS included the indicators in readability and appeal.

Keywords: digitized and localized instructional material, Health Education, Weekly Learning Activity Sheets (WLAS)

Date Submitted: June 22, 2025
Date Accepted: July 27, 2025
Date Published: August 12, 2025

DOI: http://doi.org/10.69651/PIJHSS0403406

Recommended citation:
Peliño, G. P. (2025). The localized Weekly Learning Activity Sheets (WLAS) as a digitized resource material in teaching Health Education. *Pantao (The International Journal of the Humanities and Social Sciences)* 4 (3), 4368-4377. http://doi.org/10.69651/PIJHSS0403406

INTRODUCTION

Educational resources are fundamental in facilitating the teaching and learning process, serving as crucial tools to enhance instructional strategies and promote student achievement. When appropriately utilized, instructional materials such as workbooks, modules, and worktexts foster engagement and cater to learners' diverse backgrounds, skills, and learning styles (Aguinaldo & Domingo, 2021). The Philippine education system, through the introduction of the K to 12 Curriculum, reinforced the need to contextualize and localize learning materials to make instruction more relevant and efficient. As articulated in DepEd Order No. 35 series of 2016, linking new knowledge to learners' lived experiences fosters deeper understanding. Localization thus emerged as a key component of K to 12, encouraging the development of materials that reflect local realities and contexts across subject areas to strengthen meaningful learning.

This vision of making education more responsive and globally competitive has been further advanced through the MATATAG curriculum. The curriculum emphasizes producing job-ready, responsible, and active citizens while accelerating the delivery of essential services by crafting resources that integrate local contexts. By embedding familiar experiences into content, students are provided with clearer and more accessible pathways to understanding. Despite this national directive, however, many teachers continue to rely on traditional materials and lecture-based methods, hindering efforts to maximize student learning outcomes. Particularly in MAPEH subjects, teachers face challenges due to the breadth of competencies, resulting in certain domains, such as Health Education, receiving less focus. The lack of localized instructional materials in this area contributes to persistent difficulties in ensuring that students grasp essential health concepts.

These gaps motivated the present study, which sought to address the scarcity of contextualized resources by developing localized Weekly Learning Activity Sheets (WLAS) in Health Education. Beyond simply creating instructional materials, the study aimed to evaluate their effectiveness, usability, and impact on student learning. By doing so, it responds directly to the Department of Education's call for localized instructional resources while addressing an urgent classroom need. This initiative also highlights the importance of innovation in instructional design, ensuring that learning resources not only reflect curricular demands but also resonate with students' contexts and capacities.

Grounded in the constructivist theory of Piaget, this research recognizes that knowledge is best acquired through active engagement, reflection, and the integration of personal and cultural experiences. Constructivism emphasizes the process of learning over its products, urging teachers to design experiences that allow students to construct knowledge meaningfully (Brau, 2020; Merve, 2019). This framework provides the theoretical basis for evaluating the localized and digitized materials developed in this study. It underscores the principle that learners, as active agents, must be given opportunities to connect new knowledge with prior experiences, thereby fostering lifelong learning.

Complementing the constructivist perspective, the study also employed the ADDIE model as its instructional design framework. This systematic approach ensured that the development of materials followed a structured process of analysis, design, development, implementation, and evaluation. The analysis stage identified the least mastered competencies in Grade 8 Health Education, which became the basis for the design and development of the

WLAS. Through expert validation and iterative revisions, the materials were refined before being implemented with learners. The effectiveness of the localized activity sheets was then assessed through pretest and posttest comparisons, supported by statistical analysis to measure gains in student performance. Ultimately, this dual framework—constructivism as the pedagogical lens and ADDIE as the design process—ensured that the study produced instructional materials that are both theoretically sound and practically effective.

Statement of the problem

This study focused on the effectiveness of the localized Weekly Learning Activity Sheets (WLAS) as a digitized resource material in teaching Health Education. Specifically, it sought to answer the following sub-problems:

1. What is the pretest performance of the group of learners taught using the WLAS and those taught without the WLAS?
2. What is the posttest performance of the group of learners taught using the WLAS and those taught without the WLAS?
3. What is the level of gain scores of the group of learners taught using the WLAS and those taught without the WLAS?
4. Is there a significant difference between the posttest scores of the group of learners taught using the WLAS and those taught without the WLAS?
5. How do learners assess the localized WLAS in terms of readability and appeal?
6. Based on the results, what enhancement may be proposed to the localized WLAS?

METHODOLOGY

This study employed a quasi-experimental research design to determine the effectiveness of localized Weekly Learning Activity Sheets (WLAS) as digitized learning resource materials in teaching Health Education. The design was deemed appropriate since it allows the establishment of a relationship between an intervention and its outcomes while using both control and experimental groups. Unlike true experimental designs, quasi-experiments lack randomization but still employ structured approaches to demonstrate causality (Rogers, 2020). In this investigation, the control group received traditional instruction, whereas the experimental group was exposed to the localized WLAS, thereby enabling the researcher to evaluate the impact of the intervention on learners' performance.

The study was conducted at Basag National High School in East Butuan District III, Division of Butuan City. The school, located in Barangay Basag, serves as the geographical center of three surrounding barangays. As a relatively new institution, it has a modest student population, including learners from Indigenous communities such as the Manobo tribe. Its location reflects the integration of cultural and contextual realities into the educational environment, making it an appropriate setting for the development and implementation of localized instructional materials.

The respondents were Grade 8 students enrolled in two heterogeneous sections, Bonifacio and Rizal, with a total of fifty-five participants. Section Bonifacio comprised twenty males and

nine females, while Section Rizal included twelve males and fourteen females. Both groups represented intact classes and were chosen through intact sampling, a non-probability method in which complete groups serve as representative samples. This approach was considered appropriate as it allowed the researcher to utilize existing classroom groups, designating Section Bonifacio as the control group and Section Rizal as the experimental group. The diverse composition of the respondents also provided an inclusive basis for examining the effectiveness of the intervention.

To gather data, the study utilized several instruments, including a diagnostic test, pretest and posttest questionnaires, and validation tools for assessing the readability and appeal of the materials. The 50-item diagnostic test, based on first-quarter competencies, identified the least learned skills of the participants and served as the basis for developing the localized and digitized WLAS. The pretest and posttest, constructed using competencies from the Department of Education's Grade 8 Health Education Teacher's Guidebook, were designed to measure the impact of the intervention. Additionally, the study employed validation instruments from the Learning Resource Management and Development System (LRMDS) portal to determine the materials' readability and appeal as evaluated by learners. These instruments were reviewed and validated by expert evaluators, including master teachers, education supervisors, and higher education instructors, to ensure content accuracy and alignment with curriculum standards.

The process of data gathering involved multiple stages. First, the diagnostic test was administered to identify learning gaps, after which the researcher developed the WLAS following the ADDIE instructional design model, encompassing analysis, design, development, implementation, and evaluation. The localized materials underwent evaluation and refinement through consultations with expert validators and subject specialists. Once finalized, a pretest was administered to both sections before implementing the WLAS in the experimental group. A posttest followed the intervention to measure learning gains. Data from the pretest and posttest were collected, tallied, and analyzed to determine improvements in student performance. Alongside quantitative results, student feedback was also gathered to provide insights into the usability, accessibility, and appeal of the digitized materials, ensuring that both objective outcomes and learner experiences were considered.

In adherence to ethical considerations, the researcher secured formal approval from the school principal and the Division Superintendent prior to data collection. Respondents were informed of the study's objectives, and consent was obtained to ensure voluntary participation. Confidentiality of responses was maintained throughout the research process.

The analysis of data involved both descriptive and inferential statistics. Frequency counts and percentages were used to identify the least learned competencies and to determine the number of learners who improved following the intervention. Weighted means were computed to measure how learners assessed the materials in terms of readability and appeal. To test the effectiveness of the WLAS, a paired t-test was employed to compare the pretest and posttest scores of the respondents, allowing the researcher to determine whether significant differences existed between the performances of the control and experimental groups. Additionally, Likert-type scales adapted from Hipolito (2023) were applied to evaluate the acceptability of the materials. These analyses provided a comprehensive understanding of the intervention's impact, highlighting areas of success and those requiring further refinement.

RESULTS AND DISCUSSION

This chapter presents the results and discussion of the study, focusing on the performance of the learners in both the control and experimental groups, their gain scores, the results of the t-test analysis on posttest performance, the learners' assessment of the Weekly Learning Activity Sheets (WLAS) in terms of readability and appeal, and the proposed enhancements to the developed material. A total of fifty-five Grade 8 students from Basag National High School participated in the study, with twenty-nine in the control group (Section Bonifacio) and twenty-six in the experimental group (Section Rizal). The research followed a quasi-experimental design using intact classes as groups. Both sections were given a diagnostic test, a pretest, and a posttest, with the experimental group exposed to the localized and digitized WLAS while the control group continued using traditional instructional strategies.

The pretest performance of both groups revealed that all learners scored below 30, which carried the descriptive rating of "Did not meet expectations." Specifically, all twenty-nine students in the control group and all twenty-six students in the experimental group fell into this range, representing 100 percent of their respective groups. This result demonstrates that, prior to the intervention, the students had limited or no mastery of the competencies being measured. The uniformity of low scores across groups establishes a valid baseline, ensuring that subsequent performance differences could be attributed to the intervention itself.

The posttest results showed clear distinctions between the two groups. Among learners taught without the WLAS, only 3.4 percent reached the "Outstanding" category, compared to 23.1 percent of those who used the WLAS. Similarly, 3.4 percent of learners in the control group achieved a "Very Satisfactory" rating, while 15.4 percent of the experimental group reached this level. In the "Satisfactory" range, 6.9 percent of the control group fell within the 32–33 score bracket, while 23.1 percent of the experimental group attained the same. In contrast, 69.1 percent of students without WLAS still scored below 30, compared to only 26.9 percent of students with WLAS. These findings strongly suggest that the use of localized learning activity sheets contributed significantly to improved learner outcomes, as more students in the experimental group shifted to higher performance categories compared to those who continued with traditional methods.

An examination of the gain scores further reinforced this trend. The mean gain score of the control group was 12.21, with a minimum score of 5 and a maximum of 19. Meanwhile, the experimental group achieved a higher mean gain score of 13.65, with scores ranging from 8 to 19. Moreover, the scores of learners without WLAS showed greater dispersion from the mean, indicating variability in performance. In contrast, the experimental group's scores clustered more closely around the mean, signifying a more consistent improvement among students exposed to the localized WLAS. This consistency indicates that the intervention was effective in not only raising overall performance but also reducing performance disparities among learners. These results align with earlier findings, such as those of Gaña (2021), who emphasized that contextualized and localized learning activity sheets improve student achievement across subject areas.

The statistical treatment confirmed these results. A t-test comparing the posttest scores of the two groups yielded a t-value of 2.863 with a p-value of .006, which is significant at the 0.05

level. Consequently, the null hypothesis was rejected, confirming that there was a statistically significant difference between the performance of the control and experimental groups. Learners who used the localized WLAS showed significantly better mastery of competencies in Health Education. These results support the conclusion that the integration of localized instructional materials can contribute to improved learning outcomes. Comparable studies, such as those by Gaña (2021) and Abad (2022), likewise highlighted the effectiveness of contextualized materials in enhancing student competence across different disciplines.

Learners' evaluation of the WLAS also revealed highly positive results, particularly in terms of readability. Respondents strongly agreed that the text in the WLAS was readable and easily understood, giving it a mean score of 4.88 with a standard deviation of 0.326. They also found the font and layout appropriate, with a mean rating of 4.73, and noted that examples were readily comprehensible in their locality, with a score of 4.81. Although the lowest rating was given to the indicator "The texts are written in simple English and can be understood at my level," it still received a mean score of 4.58, falling under the "Strongly Agree" category. The overall weighted mean of 4.77 with a standard deviation of 0.361 shows that learners regarded the WLAS as highly satisfactory in terms of readability, underscoring the material's accessibility to learners of diverse backgrounds.

In terms of appeal, the assessment results were equally positive. The highest rating was given to the indicator "Examples provided are related to the texts of the WLAS," which earned a mean score of 4.96 with a standard deviation of 0.196, described as "Strongly Agree" and interpreted as "Very Satisfactory." Learners also noted that the materials were neatly printed and well-organized (4.92) and that the images and layout were clear, visually appealing, and non-distracting (both 4.81). The lowest score, at 4.73, was given to the indicator that examples were objects comprehensible within their locality, suggesting that some activities or examples could benefit from deeper contextual integration. Overall, the weighted mean of 4.85 with a standard deviation of 0.242 indicates a very high level of satisfaction, with learners affirming that the WLAS was visually attractive and engaging.

Taken together, the results on readability and appeal confirm that the WLAS possesses the essential qualities of effective instructional material. The high ratings reflect its potential as a sustainable teaching aid in Health Education. However, two areas for improvement were identified. First, some learners perceived that the texts were not written in simple enough English, suggesting that revisions should focus on simplifying terminology and phrasing. Second, some examples were not sufficiently tied to learners' immediate local context, pointing to the need for further localization to ensure that activities directly reflect community experiences and realities. These recommendations can guide future enhancements to the WLAS, ensuring that the material becomes even more responsive to learners' linguistic levels and cultural backgrounds.

In summary, the findings of this study clearly demonstrate that the use of localized and digitized Weekly Learning Activity Sheets significantly improved the performance of learners in Health Education. The intervention not only resulted in higher posttest scores and greater gain scores but also proved to be both readable and appealing to learners, as evidenced by their overwhelmingly positive feedback. These outcomes affirm the importance of localized instructional materials in making education more meaningful and effective, while also pointing to avenues for further refinement to maximize their potential.

CONCLUSION

This study was conducted to evaluate the effectiveness of localized Weekly Learning Activity Sheets (WLAS) as digitized instructional materials in teaching Health Education 8. Grounded on Piaget's constructivist theory, the research was anchored on the principle that knowledge is best acquired through reflection and active participation, with teachers expected to create learning experiences that nurture students' logical and conceptual development. The study likewise followed the ADDIE model of instructional design, ensuring a systematic process of analysis, design, development, implementation, and evaluation in the preparation of the materials. A total of fifty-five Grade 8 learners from Basag National High School in Butuan City served as participants, distributed into two intact sections: twenty-nine in the control group and twenty-six in the experimental group. Both groups took a diagnostic test, followed by pretests and posttests, to measure their mastery of competencies and to assess the impact of using localized, digitized learning activity sheets.

The results revealed that both groups scored below 30 in the pretest, with 100 percent of the learners in both sections categorized as "Did not meet expectations." This indicates that none of the participants demonstrated prior mastery of the competencies under investigation. However, after the intervention, significant improvements were observed. While both groups showed higher posttest scores, the experimental group exposed to the WLAS demonstrated more substantial gains. Learners taught using the WLAS achieved higher performance levels across categories such as "Outstanding," "Very Satisfactory," and "Satisfactory," while the control group remained heavily concentrated in the "Did not meet expectations" category. The mean gain scores further confirmed these results, with the experimental group attaining an average of 13.65 compared to 12.21 for the control group. Notably, the scores of learners without WLAS were more dispersed, while those with WLAS clustered more consistently around the mean, suggesting that the use of the material not only improved performance but also provided a more uniform learning effect.

The paired t-test analysis yielded a t-value of 2.863 and a p-value of .006, which was significant at the 0.05 level. This statistical evidence affirmed that there was a meaningful difference between the posttest performances of the two groups, with the experimental group achieving significantly higher results. The findings reinforce that localized and digitized WLAS had a positive impact on learners' mastery of Health Education concepts. These outcomes are consistent with previous studies, such as those of Gaña (2021) and Abad (2022), which highlighted the effectiveness of contextualized materials in enhancing academic performance across various subject areas.

Beyond academic scores, learners provided highly favorable assessments of the WLAS in terms of readability and appeal. In terms of readability, the materials were described as easy to understand, with indicators such as "The text in WLAS is readable and easily understood" earning a weighted mean of 4.88, interpreted as "Strongly Agree" and "Very Satisfactory." The lowest-rated item, "The texts are written in simple English and can be understood at my level," still received a high rating of 4.58, suggesting that while generally accessible, some texts could be simplified further. For appeal, the WLAS also received excellent evaluations, with the highest

score of 4.96 given to the statement "Examples provided are related to the texts of the WLAS." The lowest, though still high at 4.73, was "Examples provided in WLAS were objects or things that are readily comprehensible and can be found in my locality." This indicated that while the material was visually appealing and well-organized, there remained room for improvement in embedding more localized examples and contexts.

In light of these findings, it can be concluded that the localized and digitized Weekly Learning Activity Sheets were effective in enhancing learner performance, providing materials that were both academically impactful and positively received by students. The WLAS improved comprehension, raised mastery levels, and engaged learners through accessible and appealing design. However, areas for refinement remain, particularly in simplifying certain terminologies and integrating more localized content that resonates with students' immediate environment. These enhancements would further strengthen the instructional value of the WLAS, ensuring that they are not only pedagogically sound but also contextually relevant.

The results of the study point to several implications for practice and policy. School leaders are encouraged to promote the development and use of localized and digitized instructional materials to strengthen student learning outcomes. Teachers can use this study as a reference in replicating or developing similar teaching aids, while learners should be encouraged to provide feedback that supports the improvement of such materials. Parents and community stakeholders also play an important role by supporting the integration of these resources into the learning process. Finally, local government units and other partners may collaborate with schools to provide funding, training, and technical support to ensure the sustainability of initiatives promoting localized and digitized learning. Future researchers are encouraged to conduct similar studies in other subject areas or educational contexts to broaden the evidence base for the use of contextualized instructional materials.

Overall, the study affirms that contextualized and digitized Weekly Learning Activity Sheets are a powerful tool in advancing teaching and learning in Health Education. By enhancing academic performance and receiving high levels of approval from learners in terms of readability and appeal, WLAS contribute meaningfully to improving educational delivery. With further refinement and stronger support for localization, these materials hold the potential to transform classroom instruction into more relevant, engaging, and effective learning experiences.

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