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Enhancing Learning Activity Sheet (LAS) In English 5: A Quasi Experimental Study

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ABSTRACT: This study re-assesses the effectiveness of Learning Activity Sheets (LAS) in enhancing student engagement and academic performance among Grade 5 learners at RC AKIC-Science Laboratory School in Marawi City. The utility of LAS as a dynamic educational tool aimed at fostering greater involvement in learning activities. Employing a quasi-experimental design, the research involved experimental and control group: one group used non-modified LAS and the other utilizing the modified LAS. Data were collected through interview to selected twelve (12) grade five students; English teacher in Grade 5 was also interviewed regarding her perception on the modified Learning Activity Sheets (LAS) used by the researchers during the intervention. The interview has two phases: pre-interview and post-interview focusing on the impact of modified Learning Activity Sheets (LAS) on student learning. Further, there were also structured observation-checklist in which guided the researchers during the intervention. Student assessments and rubric were also utilized to corroborate data. LAS was modified by adding game-based activities, enhanced cognitive, affective, and psychomotor domains of learning, and the assessment procedures. Findings indicated that while both LAS formats had their respective strengths, the implementation of modified LAS correlated with increased student participation and improved academic performance. This revealed that the experimental group and control group showed no significant difference. However, the experimental group, which used the modified Learning Activity Sheet (LAS), achieved a higher mean score of 3.7134 compared to the mean score of control group, which used the non-modified LAS. Thus, the results suggest that modifications to the LAS positively impact student quiz scores, potentially due to enhanced engagement or clarity in assessment methods.

KEYWORDS: re-assessment, effectiveness, modified Learning Activity Sheet (LAS), student engagement, and academic performance.

INTRODUCTION

The pursuit of effective educational strategies to enhance student engagement and academic performance is a crucial concern in the field of elementary education. Traditional textbooks, while foundational resources, often fail to engage young learners, leading to increased disengagement and suboptimal academic outcomes. This action research study re-assesses the use of Learning Activity Sheets (LAS) as an alternative to textbooks in teaching English in Grade 5 students of RC – Al Khwarizmi International College Foundation – Science Laboratory School, Inc. The primary objective is to assess the impact of LAS on student engagement and academic performance.

To systematically re-assess the effectiveness of LAS in enhancing student engagement and academic performance, this study employed an experimental design involving two classrooms at RC – AKIC. In Classroom A, a designated student-observer has taught an English lesson using the original LAS, while other observers assessed student engagement through structured observations. Students' quiz scores were also analyzed to measure their academic performance. Conversely, in Classroom B, another student-observer delivered the English lesson using a modified version of LAS. Similar observational methods and quiz assessments were employed to evaluate engagement and performance. By examining these two instructional approaches, this research aims to provide valuable insights into innovative teaching practices that can effectively address the challenges faced by educators and students in resource-limited environments. Ultimately, addressing these challenges is essential for creating engaging and effective learning experiences in elementary education.

METHODOLOGY

This study aims to reassess whether using Learning Activity Sheets (LAS) positively impacts student engagement and academic performance. This research employed a quasi- experimental design with one- group pre-test and post-test. According to Appino (2023), to investigate the effects of intervention or treatments and to examine links between variables in real life context quasi-experimental design is used.

The respondents of this action research were grade 5 students of RC- AKIC Science Laboratory School. The students were the recipients of the intervention while the researchers were responsible for implementing the non-modified and modified Learning Activity Sheets (LAS) in the control and experimental group.

Prior to the conduct of this study, researchers first sent a letter to the school principal to formally request permission to conduct the study at their school. After being approved, researchers asked permission from the adviser of control and experimental group to conduct the study. Also, the English teacher was also present in every intervention conducted. Researchers then conducted a pre-intervention interview with the English teacher, did observations and used checklist, and document analysis of student records. A rubric for Modified LAS, and student assessment was also utilized in analyzing the data. Post-intervention interview and document analysis helped you compare pre and post-intervention data. Analyzed quantitative data statistically and qualitative data thematically, triangulating both for a comprehensive understanding. This was conducted in 4 days to see the improvement of Learning Activity Sheets to student engagement and academic performance.

RESULTS

This action research comprises the analysis, presentation and interpretation of the findings resulting from this study. The analysis and interpretation of data is carried out in five (7) phases. The first part, which is based on the pre-interview given to the selected twelve (12) grade 5 students, six were from the controlled group and the other six were from the experimental group; Part two is the pre-interview given on the English 5 teacher about her perspective on the non-modified LAS (refers to LAS that was not enhanced); Part three was the post-interview given to the same participant about her perspective on the modified LAS (LAS that was enhanced from lesson objectives, to activities, to assessment part) and its impact to the students' engagement, and academic performance; Part four was the checklist on the modified LAS conducted and checked by the researchers during the intervention; Part five was the results of the quizzes given to experimental and control group during assessment; Part six was the teacher's rating on the modified LAS; and the last part was the significant difference between the modified and non-modified LAS.

Interview for selecting a subject area for modifying its LAS.

Question: What subject would you prefer to be integrated with fun activities that are collaborative and engaging. And why?

P1: "English, because our teacher is kind and i can understand her discussion well."

P2: "English, because I like the way our teacher teaches us."

P3: "English, kasi na para mas sabutn akn ago mas enjoy kapag may games." (English, because I understand it better and enjoy it more when there are games.)

P4: "Math, because I think it will be easier to understand and it will be fun. Also, I'll get to participate more because I like games and activities"

P5: "Science, kasi science is sometimes mahirap and I think kapag may games or other activities kaming gagawin na it will be more understandable." (Science, because science is sometimes difficult and I think when we do games or other activities it will be more understandable.)

P6: "English, so I can better understand the English language and also to make it more interactive"

P7: "English, because I can understand it well when our teacher is discussing it and I believe it will be much better if we may mga activities kami na gagawin kasi hindi din magiging boring yung class naming. Tapos na malo kami pka-exercise." ("English, because I can understand it well when our teacher is discussing it, and I believe it will be much better if we have activities to do because our class will not be boring either. We can also exercise our body."

P8: "GMRC, kasi na para diyako ron bukln." (GMRC, so that the discussion won't bore me.)

P9: "English, because it is my favorite subject."

P10: "English, because the way our teacher discusses I find it interesting and understandable."

P11: "English, because I really want to learn English fluently and I think if may mga games kaming gagawin during our time na mas maiintindihan ko yung lesson naming kasi na mapa-practice namin. Tapos masaya din kasi mag magiging enjoy yung class namin." (English, because I really want to learn English fluently and I think if we do some games during our time, I will understand our lesson better because we can practice it. Then it's also fun because our class will enjoy it.)

P12: "Math, because mahirap yung Math and kapag mag-game and activities kami na baka mas madali ko siyang maintidihan. Tapos na happy pn basta adna games ago activities ron, di kami turatodn" (Math, because Math is difficult and when we do games and activities, I might be able to understand more easily on what the teacher is teaching, and we will be happy because there are games and activities; we won't be sleepy)

Table 1. Participants' Subject Preferences for Collaborative and Engaging Activities

Theme	Significant Statement	Frequency (N=1)	Theme Description
Preference for English with Collaborative and Engaging Activities	"…because our teacher is kind and I can understand her discussion well." (P1) "…because I like the way our teacher teaches us." (P2) "…because I understand it better and enjoy it more when there are games." (P3) "…so I can better understand the English language and also to make it more interactive." (P6) "…it will be much better if we have activities to do because our class will not be boring either. We can also be exercised." (P7) "…because it is my favorite subject." (P9) "…because the way our teacher discusses I find it interesting and understandable." (P10) "…if we do some games during our time I will understand our lesson better because we can practice it. Then it's also fun because our class will enjoy it." (P11)	8	This theme reflects a strong preference among students for integrating fun and collaborative activities into English classes.

Theme 1: Preference for English with Collaborative Engaging Activities

The responses indicate that students find English engaging when their teachers create an interactive learning environment, particularly through games and activities. This suggests that incorporating playful elements into English instruction could enhance understanding and enjoyment, making the subject more appealing. The effectiveness of Learning Activity Sheets (LAS) in enhancing student engagement and academic performance is supported by various studies. Ricafort (2023) found that elementary students using developed LAS showed significant improvements in English scores, aligning with students' preferences for interactive and engaging activities in the classroom. Similarly, Ta-oy (2021) demonstrated that LAS improved reading comprehension among Grade 6 students, highlighting the benefits of structured, activity-focused instruction in maintaining interest and facilitating understanding. These findings reinforce the importance of integrating interactive materials in lessons, as they not only fulfill academic requirements but also cater to students' emotional and social needs for an engaging learning environment.

Table 2. Participants' Subject Preferences for Collaborative and Engaging Activities

Theme	Significant Statement	Frequency (N=1)	Theme Description
Preference for Math with collaborative and Engaging Activities	"Math, because I think it will be easier to understand and it will be fun. Also, I'll get to participate more because I like games and activities." (P4) "Math, because Math is difficult and when we do games and activities I might be able to understand more easily what the teacher is teaching, and we will be happy because there are games and activities; we won't be sleepy." (P12)	2	This theme highlights an interest in integrating engaging activities into Math classes.

Theme 1: Preference for Math with Collaborative Engaging Activities

This table shows that the participants express a desire for games and collaborative tasks to make Math more enjoyable and easier to understand. Incorporating interactive elements could help demystify challenging content in Math while fostering a positive learning atmosphere. Two of the participants express a strong preference for engaging activities in Math, as reflected in studies that highlight the effectiveness of Learning Activity Sheets (LAS). For instance, Hofileña et al. (2023) found that Grade 7 students using Reconstructed LAS showed improved performance compared to those using standard materials, demonstrating how tailored resources can enhance understanding and enjoyment of challenging subjects like Math. Similarly, Okit et al. (2023) showed that

electronic LAS significantly boosted student engagement and attitudes towards learning in Grade 10 Science, reinforcing the notion that interactive and gamified educational tools foster a positive learning environment and facilitate deeper comprehension.

Table 3. Participants' Subject Preferences for Collaborative and Engaging Activities

Theme	Significant Statement	Frequency (N=1)	Theme Description
Preference for Science with collaborative and Engaging Activities	"Science, because science is sometimes difficult and I think when we do games or other activities it will be more understandable." (P5)	1	This theme captures students' interest in integrating engaging activities into Science classes.

Theme 1: Preference for Science with Collaborative and Engaging Activities

The participants believe that games and collaborative tasks could make Science more enjoyable and easier to grasp. This indicates an opportunity to enhance student comprehension in Science through interactive learning experiences. The participant's preference for engaging activities in Science resonates with research showing that Learning Activity Sheets (LAS) can enhance learning outcomes. Gaňa (2022) demonstrated that Contextualized LAS improved both performance and understanding of complex concepts in Grade 9 Science, indicating that structured, hands-on tasks foster active learning. Similarly, Okit et al. (2023) found that electronic Learning Activity Sheets (e-LAS) significantly boosted engagement and academic performance among Grade 10 Science students, highlighting the potential of interactive activities to make challenging subjects more enjoyable and comprehensible.

Table 4. Participants' Subject Preferences for Collaborative and Engaging Activities

Theme	Significant Statement	Frequency (N=1)	Theme Description
Preference for GMRC with collaborative Engaging Activities	"GMRC, so that the discussion won't bore me." (P8)	1	This theme captures a unique interest in integrating fun activities into GMRC (Good Manners and Right Conduct).

Theme 1: Preference for GMRC with Collaborative and Engaging Activities

The response suggests that students seek to make discussions in this subject more engaging to avoid boredom. This indicates an opportunity to enhance student interest across various subjects by incorporating interactive elements. The partcipant's preference for engaging activities in GMRC reflects a broader educational trend emphasizing interactive tools for enhanced learning. Dela Cruz and Santos (2023) found that Learning Activity Sheets (LAS) significantly improved comprehension in Probability and Statistics, illustrating how structured materials can make discussions more engaging. Moreover, Azevedo et al. (2023) demonstrated that educational interventions with interactive elements enhance student engagement across emotional, behavioral, and cognitive dimensions. By incorporating fun activities into GMRC discussions, educators can not only reduce classroom monotony but also boost overall student interest and motivation, benefiting various subjects.

The collected data indicates a notable preference among the majority of respondents for English as a subject, particularly when it incorporates engaging activities. Out of 12 responses, eight students expressed a strong affinity for English, citing reasons such as the kindness of their teacher, clarity of discussion, and the enjoyment derived from interactive elements like games. This overwhelming preference suggests that students are more inclined to participate and understand the material better in a dynamic, interactive learning environment. Additionally, their statements reflect a desire for lessons that are both enjoyable and informative, emphasizing the potential benefits of incorporating engaging activities into English instruction.

In comparison, only two students preferred Math, and one expressed a preference for Science, both highlighting the importance of engaging activities to make these subjects more approachable. The limited interest in these subjects suggests that while students recognize their value, their enjoyment and understanding could be further enhanced through interactive methods. Since a significant number of respondents favored English and indicated that engaging activities enhance their learning experience, the researchers chose to focus on this subject for their action research. This decision aligns with the students' preferences and the potential for improving academic engagement and comprehension in English through interactive learning strategies.

PRE-INTERVIEW

This section presents findings from interviews conducted with the English teacher in Grade 5 regarding the current Learning Activity Sheets (LAS) used in the classroom. The discussions focus on teachers' primary concerns, observations on the effectiveness of the LAS, and suggestions for improvement.

Question 1: What were your primary concerns on the LAS that you are currently using?

Key informant: "Maybe the orders of the topic or the syllabus, sometimes their past topic doesn't have any connection regarding their new topic that's why it is also hard to connect the two topics."

Table 5. Primary Concerns Regarding the Current Learning Activity Sheets (LAS)

Theme	Significant Statement	Frequency (N=1)	Theme Description
Lack of Coherence in Topics	"Maybe the orders of the topic or the syllabus, sometimes their past topic doesn't have any connection regarding their new topic that's why it is also hard to connect the two topics."	1	This theme highlights a primary concern regarding the Learning Activity Sheets (LAS) currently in use, specifically the lack of coherence and connection between topics in the syllabus.

Theme: Coherence in Topics

This theme points out that when past topics do not relate to new ones, it creates challenges for students in making connections and understanding the material. This suggests a need for a more integrated and cohesive curriculum design to enhance student comprehension and engagement.

The concern regarding the lack of coherence in Learning Activity Sheets (LAS) is a recognized challenge in education, highlighting the necessity for interconnected curriculum design. Research, such as that by Okit, Montalbo, and Dela Cruz (2023), indicates that electronic LAS (e-LAS) enhances student engagement and academic performance by fostering connections between previously learned concepts and new material. This coherence facilitates deeper comprehension and retention of knowledge.

Further support comes from studies like Ta-oy (2021) and Juvy C.D. (2023), which demonstrate that structured instructional materials can significantly improve student comprehension and performance across subjects. Ta-oy's research shows that LAS enhance critical thinking and engagement in English, while Juvy C.D. emphasizes the utility of LAS in mastering complex concepts in Chemistry. Together, these findings underscore the importance of refining LAS to create more integrated learning experiences, thereby addressing the identified challenges in connecting past and present topics effectively.

Question 2: What aspects of the current LAS (made by teacher in AKIC) were least effective?

Key informant: the topics were not connected (syllabus)

Table 6. Least Effective Aspects of the Current LAS

Theme	Significant Statement	Frequency (N=1)	Theme Description
Lack of Connection Between Topics	"The topics were not connected (syllabus)."	1	This theme identifies a significant concern regarding the current Learning Activity Sheets (LAS) created by the teacher at AKIC.

Theme: Lack of Connection Between Topics

This theme highlights that the lack of connection between topics in the syllabus makes it challenging for students to relate new content to previous lessons, potentially hindering their overall understanding and learning experience. This suggests a need for a more cohesive curriculum design that facilitates connections between different topics to enhance student comprehension and engagement. The observation about the lack of connection between topics in the Learning Activity Sheets (LAS) highlights a critical issue in curriculum design that can hinder student learning. Research shows that well-structured materials that create thematic connections enhance student engagement and academic performance. For example, Okit, Montalbo, and Dela Cruz (2023) found that electronic LAS significantly improved student engagement and outcomes, emphasizing the importance of cohesive content.

Studies like Ta-oy (2021) further support this by showing that LAS enhance reading comprehension by allowing students to relate new information to prior knowledge. Similarly, Gaňa (2022) demonstrated that contextualized LAS actively engage

students and improve their understanding of complex topics. These findings underscore the need for more coherent LAS to facilitate better connections between topics and enhance overall educational outcomes.

Question 3: What are your suggestions for improving the English LAS?

Key informant: "If it is possible, for example to have a one-day discussion, one-day quiz so that I can easily identify the students who were struggling and then I can teach them again or discuss it to them again. Because we only have 1 hour per subject and sometimes, we still need more time to teach students because the learners have different learning strategies.

Table 7. Suggestions for improving the English LAS

Theme	Significant Statement	Frequency (N=1)	Theme Description
Need for Structured Assessment	"If it is possible, for example to have a one-day discussion, one-day quiz so that I can easily identify the students who were struggling and then I can teach them again or discuss it to them again…"	1	This theme highlights the key informant's suggestion for improving the English Learning Activity Sheets (LAS) by implementing structured assessments, such as one-day discussions followed by quizzes.

Theme: Need for Structured Assessment

This table emphasizes the importance of identifying struggling students to provide targeted support, particularly given the limited time available for instruction. This indicates a need for adaptive teaching strategies that consider the diverse learning needs and paces of students.

To improve the English Learning Activity Sheets (LAS), it is suggested to implement structured assessments, such as one-day discussions followed by quizzes, to identify struggling students. This approach allows for targeted support and aligns with differentiated instruction, acknowledging varying learning styles (Tomlinson, 2014). Research shows that regular formative assessments enhance student engagement and success by providing timely feedback (Black & Wiliam, 1998). By incorporating these assessments, teachers can tailor their instruction to better meet individual needs, fostering a more effective learning environment.

POST INTERVIEW

This section presents findings from post-interview discussions focusing on the impact of modified Learning Activity Sheets (LAS) on student learning. It is divided into two main parts: A) Impact on student engagement and academic performance, which explores changes in student engagement, performance in English, and participation and collaboration since the implementation of the modified LAS; and B) Strengths and Weaknesses of the Modified LAS, which examines the perceived strengths, weaknesses, and suggestions for further enhancement of the LAS. Collectively, these insights provide a comprehensive understanding of how the modified LAS affects student engagement, academic performance, and overall classroom dynamics.

A. Impact on Student Engagement and Academic Performance

Question 1: Have you observed any changes in student engagement since the implementation of the modified LAS?

Key informant: "Yes, there were students who don't participate and then after I have observed the implementation of modified LAS I saw many students who were participating."

Table 8. Respondents' observation on changes in student's engagement during the implementation of the modified LAS.

Theme	Significant Statement	Frequency (N=1)	Theme Description
Increased Student Participation	"Yes, there were students who don't participate and then after I have observed the implementation of modified LAS I saw many students who were participating."	1	This theme highlights the positive change in student engagement following the implementation of the modified LAS.

Theme: Increased Student Participation

The finding indicates a shift from low participation to increased involvement, suggesting the effectiveness of the new approach in encouraging more active student participation in class activities. The observed increase in student engagement after implementing modified Learning Activity Sheets (LAS) supports existing research on their effectiveness in enhancing academic outcomes. For instance, Reyes et al. (2020) found that modified LAS significantly improved English language skills among elementary students,

leading to higher post-test scores in reading comprehension and vocabulary. This suggests that structured materials like LAS foster a more interactive learning environment, encouraging active participation.

Additionally, Dela Cruz and Santos (2023) demonstrated that LAS improved problem-solving skills in Probability and Statistics, highlighting their role in creating an active learning atmosphere. These findings emphasize that LAS not only boost academic performance but also enhance student engagement and motivation in the learning process.

Question 2: What were your observations regarding student engagement and performance in English using the modified LAS?

Key informant: "It is not that broad, only the discussion and then the quiz of the students were there. In terms of their engagement, they are participative but they sometimes joke around about answering the questions. My students are average learners, that's why it is not that engaging. Some of my students were slow in English sub and understanding English. They also have difficulties in spelling and in reading.

Table 9. Observations regarding student engagement and performance in English using the modified LAS

Theme	Significant Statement	Frequency (N=1)	Theme Description
Mixed Student Engagement and Performance	"It is not that broad, only the discussion and then the quiz of the students were there. In terms of their engagement, they are participative but they sometimes joke around about answering the questions. My students are average learners, that's why it is not that engaging. Some of my students were slow in English sub and understanding English. They also have difficulties in spelling and in reading."	1	This theme reflects a complex picture of student engagement and performance with the modified LAS in English classes.

Theme: Mixed Student Engagement and Performance

This table shows that while there is some participation, it's limited in scope and depth. Students show a mix of engagement (participating and joking) and struggles (difficulties with understanding, spelling, and reading), indicating that the modified LAS may not fully address the needs of average or struggling learners in English.

Observations about student engagement with modified Learning Activity Sheets (LAS) indicate mixed results. While students participate in discussions and quizzes, their engagement often lacks depth, as they occasionally joke around. This is concerning, especially for average learners who struggle with reading and spelling, which may affect their overall performance in English. Supporting this, Ricafort (2023) found significant improvements in English scores among elementary students using tailored LAS, and Ta-oy (2021) showed that LAS enhanced reading comprehension in Grade 6 students. These studies highlight the effectiveness of well-designed LAS in promoting engagement and academic performance, suggesting that further customization might be needed to address the needs of students struggling with literacy skills.

Question 3: Have you observed any changes in student academic performance in English since the implementation of the modified LAS?

Key informant: "Yes, they've improved, in terms of their quiz, many of them got a perfect score. There were slow learners who answered the questions of the demonstrators."

Table 10. Changes in Student Academic Performance in English Following the Implementation of Modified Learning Activity Sheets (LAS)

Theme	Significant Statement	Frequency (N=1)	Theme Description
Improved Academic Performance	"Yes, they've improved, in terms of their quiz, many of them got a perfect score. There were slow learners who answered the questions of the demonstrators."	1	This theme highlights a positive change in students' academic performance following the implementation of the modified LAS.

Theme: Improved Academic Performance

The result indicates improvement across different student levels, with many achieving perfect quiz scores and even slow learners demonstrating increased participation and ability to answer questions. This suggests that the modified LAS may be effective in enhancing student understanding and performance in English.

The key informant's observation of improved academic performance among students following the implementation of modified Learning Activity Sheets (LAS) is supported by various studies. The report of many students achieving perfect quiz scores, including slow learners, emphasizes the positive impact of LAS on diverse learners' understanding and engagement in English. Moreover, research conducted by Reyes et al. (2020) found significant improvements in English language skills among elementary students using modified LAS, indicating their effectiveness in enhancing reading comprehension, vocabulary, and grammar. Similarly, Ricafort (2023) demonstrated that the use of developed LAS significantly improved English scores, reflecting the potential of these instructional tools to aid student learning. These findings suggest that modified LAS not only boost academic performance but also encourage participation among students with varying learning abilities.

Question 4: Can you compare changes in student participation and collaboration since the implementation of the modified LAS in terms of their behavioral, emotional, and social impact?

Key informant: “First thing I observed was socialization. Many of the students were introverted and didn't like to talk at all, but during the implementation of the modified LAS I saw them socializing with their classmates, talking, asking questions and all.”

Table 11. Changes in Student Participation and Collaboration Following the Implementation of Modified Learning Activity Sheets (LAS)

Theme	Significant Statement	Frequency (N=1)	Theme Description
Enhanced Social Interaction and Participation	"First thing I observed was socialization. Many of the students were introverted and didn't like to talk at all, but during the implementation of the modified LAS I saw them socializing with their classmates, talking, asking questions and all."	1	This theme emphasizes a significant improvement in students' social behavior and classroom participation following the implementation of the modified LAS.

Theme: Enhanced Social Interaction and Participation

This finding highlights a transformation from introverted, non-communicative behavior to active engagement, characterized by increased socialization, peer interaction, and willingness to ask questions. This suggests that the modified LAS has positively impacted on students' social and emotional comfort in the learning environment, fostering a more collaborative and interactive classroom atmosphere.

The key informant's observation of increased socialization and participation among students using modified Learning Activity Sheets (LAS) aligns with research indicating significant social and emotional benefits from structured instructional materials. Azevedo et al. (2023) found that educational interventions can enhance students' behavioral and emotional engagement, promoting active participation in the classroom. Similarly, Okit et al. (2023) reported that students using electronic LAS experienced greater engagement and positive attitudes toward learning. These findings suggest that LAS not only improves academic outcomes but also foster essential social interactions, transforming the learning environment into a more collaborative space for all students.

B. Strengths and Weaknesses of the modified LAS:

Question 1: What are the strengths of the modified LAS? What aspects have been most effective?

Key informant: “It has motivation, and enrichment activity and will get the attention of the students.”

Table 12. Strengths of the Modified LAS

Theme	Significant Statement	Frequency (N=1)	Theme Description
Enhanced Student Engagement and Motivation	"It has motivation, and enrichment activity and will get the attention of the students."	1	This theme highlights the key strengths of the modified LAS, emphasizing its ability to motivate students and capture their attention.

Theme: Enhanced Student Engagement and Motivation

This theme suggests that the modified approach is effective in creating a more engaging learning environment, potentially leading to increased student participation and interest in the subject matter.

The strengths of modified Learning Activity Sheets (LAS), as indicated by the key informant, include their ability to motivate students and foster engagement through enriched activities. This aligns with existing research highlighting the effectiveness of LAS as instructional tools that enhance student interest and academic performance. For instance, a study by Dela Cruz and Santos (2023) demonstrated that Grade 11 students utilizing LAS showed significant improvements in problem-solving skills, suggesting that these materials not only enhance comprehension but also maintain student attention and curiosity in complex subjects.

Moreover, Okit et al. (2023) found that electronic LAS (e-LAS) resulted in substantial gains in both student engagement and academic attitudes among Grade 10 students. This supports the idea that well-designed LAS can create interactive learning environments that stimulate participation and enthusiasm for learning, addressing various educational needs and promoting a positive classroom atmosphere. These findings underscore the potential of modified LAS as effective tools for enhancing educational outcomes while simultaneously boosting student motivation.

Question 2: What are the weaknesses of the modified LAS? What aspects could be improved?

Key informant: “For me, none. Because I saw the students’ improvement.

Table 13. Weakness of the Modified LAS

Theme	Significant Statement	Frequency (N=1)	Theme Description
Perceived Absence of Weaknesses	"For me, none. Because I saw the students' improvement."	1	This theme reflects the key informant's positive perception of the modified LAS, indicating a high level of satisfaction with its effectiveness.

Theme: Perceived Absence of Weaknesses

The respondent does not identify any weaknesses, basing this assessment on observed improvements in student performance. This suggests that from the informant's perspective, the modified LAS is meeting its intended goals without notable drawbacks.

The key informant's assertion that there are no weaknesses in the modified Learning Activity Sheets (LAS) highlights a strong satisfaction with their effectiveness, especially in light of observed student improvements. Research supports this view, with studies by Dela Cruz and Santos (2023) and Okit et al. (2023) showing significant gains in academic performance and engagement among students using LAS.

However, despite the positive outcomes, some studies emphasize the need for continuous evaluation of LAS. For instance, Cantonjos and Janer (2022) noted that while LAS can enhance performance, refining their design could better address diverse learning needs. Ricafort (2023) echoed this sentiment, suggesting that even successful materials should be regularly assessed and improved to maximize their effectiveness across various subjects. This indicates that ongoing adaptation is essential, even for tools that are perceived as successful.

Question 3: What suggestions do you have for further improving the modified LAS?

Key informant: “Maybe the content. I know it is the same with the non-modified, and I think it should be contextualized to the learners”

Table 14. Suggestions do you have for further improving the modified LAS

Theme	Significant Statement	Frequency (N=1)	Theme Description
Content Contextualization	"Maybe the content. I know it is the same with the non-modified, and I think it should be contextualized to the learners"	1	This theme highlights the need for tailoring the content of the modified LAS to better suit the specific context and needs of the learners.

Theme: Content Contextualization

This suggests that while the modified LAS has shown improvements, its content remains similar to the non-modified version and could benefit from further adaptation to the students' context.

The key informant's suggestion to contextualize the content of modified Learning Activity Sheets (LAS) reflects a growing recognition in educational literature that materials must be tailored to meet the specific needs of learners. Studies have shown that contextualized teaching significantly enhances student engagement and understanding. For example, Gaňa (2022) demonstrated that using contextualized LAS in Grade 9 Science not only improved academic performance but also facilitated deeper comprehension of challenging concepts. The findings suggest that integrating relevant contexts into educational materials can foster more active participation and meaningful learning experiences for students.

Further supporting this idea, the work of Ricafort (2023) highlights the effectiveness of LAS in improving student performance while also noting the importance of adapting these materials to fit the learners' backgrounds and interests. This study emphasizes that while LAS can yield positive results, customizing their design to reflect local contexts and students' lived experiences can enhance their effectiveness in meeting diverse educational needs. By focusing on content contextualization, educators can better engage students and amplify the benefits of LAS in academic settings.

IMPACT ON STUDENT ENGAGEMENT

The results in Table 15 show how students engaged in different areas over four sessions. Emotional Engagement had the highest total score of 35, showing that students were most interested and motivated, especially on sessions 1 and 3, where they scored 10 out of 12 (83.3%). Attention and Focus improved on session 2 with a score of 9 (75.0%) but stayed at 7 (58.3%) on the other days. Participation was also stronger on sessions 2 and 3 with scores of 8 (66.7%) but dropped slightly to 7 (58.3%) on session 4. Behavioral Engagement started well with a score of 8 (66.7%) on session 1 and peaked at 9 (75.0%) on session 2, but it fell to 5 (41.7%) by session 4. Social Engagement was inconsistent: it improved on session 2 with a score of 10 (83.3%), dropped to 4 (33.3%) on session 3, and then recovered to 9 (75.0%) on session 4.

Moreover, the result of this study was supported by Vygotsky et al. (1920) Activity theory which implies that learning activity sheets facilitates learning by mediating cognitive processes, promoting active engagement, and fostering meaningful interactions. Similarly, the Activity theory (Vygotsky et al., 19920), encourages educators to adapt instruction to contextual needs, promoting expansive learning and learner development with engaging and interactive activities both individual, peers, and groups. Overall, this shows that students were most consistent in their emotional involvement but had ups and downs in focus, participation, behavior, and social interaction. To keep students consistently engaged, teachers could use more interactive activities, group work, and breaks to help them stay focused and involved throughout all days.

IMPACT OF MODIFIED LAS ON THE ACADEMIC PERFORMANCE

The performances of students across four sessions of assessment were the following: Feedback Reception had the highest total score of 26, showing consistent improvement over time, starting at 5 out of 12 (41.7%) on sessions 1 and 2, then increasing to 7 (58.3%) on session 3, and peaking at 9 (75.0%) on session 4. This indicates that students gradually became more receptive to teacher feedback. Assessment Performance scored a total of 19, showing fluctuations throughout the days. It started at 5 (41.7%) on session 1, dropped to 2 (16.7%) on session 2, and then improved significantly to 5 (41.7%) on session 3 and 7 (58.3%) on session 4. This suggests that students were able to recover their performance after initial challenges. Understanding of Materials showed moderate progress, with a total score of 17. Students started at 4 (33.3%) in sessions 1 and 2, dropped slightly to 3 (25.0%) on session 3, but improved to 6 (50.0%) on session 4. This implies that comprehension of the materials improved with continued instruction and support. Lastly, Quality of Work had the lowest total score of 13, indicating struggles in maintaining high-quality outputs. Scores started at 5 (41.7%) on session 1 but declined overtime, with 4 (33.3%) on session 2 and 2 (16.7%) on both sessions 3 and 4. This highlights a need for interventions to improve the students' ability to produce better-quality work consistently.

Moreover, this fundings was supported by Piaget's (1964) Constructivist theory which implies learners create mental frameworks, or schemas, to organize knowledge, and through assimilation and accommodation, they integrate new information into existing schemas. Additionally, this is similar to Reyes et al.'s (2020) study which showed that students using modified LAS scored higher in English Language skills.

Overall, the findings suggest that students showed significant improvement in feedback reception and assessment performance over time, while their understanding of materials required additional reinforcement. However, the declining quality of work emphasizes the need for strategies to enhance focus, effort, and skill development.

Further, using the rubric and checklist, he total score for each LAS, based on these five criteria, is 24 out of a possible 24, suggesting that the LAS were highly effective in terms of their design and ability to meet the criteria set by the researchers. The average score for all the LASs is 96, reflecting a consistently strong performance across all evaluated aspects. In the study conducted by Ricafort (2023) entitled "Effectiveness of developed Learning Activity Sheets (LASs) in improving the performance

of Elementary students in English". In this study, the results showed that the students who used the developed LAS made significant improvements in their English scores. This suggests that LAS were effective in helping students learn.

Descriptive Analysis of the Quizzes during the Assessment

Table 15. Quiz Results on the 1st Session of Intervention

	Quiz Score on the 1st Session				
Groups	Standard Deviation	Mean	Maximum	Minimum	Missing
Control Group	1.38	4.00	5	1	14
Experimental Group	1.78	2.75	5	0	1

The quiz scores on session 1 show a notable difference in performance between the two sections. The control group, which used the non-modified Learning Activity Sheet (LAS), achieved a higher mean score of 4.00 compared to the experimental group's mean score of 2.75, which utilized the modified LAS. The standard deviation for the control group (1.38) indicates that their scores were relatively more consistent compared to Section Zirconium, which had a standard deviation of 1.78. The maximum score of 5 was achieved by both sections, but the experimental group had a minimum score of 0, suggesting a wider range of performance. Additionally, there were more missing scores in control group (14) than in experimental group (1). A study by Gaňa (2022) entitled "Relative Effectiveness of Contextualized Learning Activity Sheets (LAS) in Grade 9 Science Instruction" aimed to investigate how well Grade 9 Science students' academic performance and engagement could be improved by using Contextualized Learning Activity Sheets (LAS). The study highlights how LAS may enhance the educational process and shows how well it works to promote student engagement and academic achievement.

Table 16. Quiz Results on the 2nd Session of Intervention

	Quiz Score on the 2nd session				
Groups	Standard Deviation	Mean	Maximum	Minimum	Missing
Control Group	2.13	3.74	5	0	0
Experimental Group	1.16	4.54	5	0	0

The quiz scores on session 2, reveal a shift in performance between the two sections. The experimental group, which used the modified Learning Activity Sheet (LAS), achieved a higher mean score of 4.54 compared to the control group's mean score of 3.74, which used the non-modified LAS. The standard deviation for the experimental group (1.16) indicates that their scores were more consistent, while the control group had a higher standard deviation of 2.13, reflecting greater variability in their scores. Both sections achieved the maximum score of 5, and neither had any missing scores. This outcome supports the findings from studies of Cantonjos and Janer (2022) and Ricafort (2023), both of them stating that well-designed or adjusted LAS greatly enhances students' comprehension and performance across a range of courses. The higher mean score for the experimental group suggests that the modifications made to the LAS were effective in enhancing comprehension and retention of material.

Table 17. Quiz Results on the 3rd Session of Intervention

	Quiz Score on the 3rd Session				
Groups	Standard Deviation	Mean	Maximum	Minimum	Missing
Control Group	1.37	3.56	5	1	6
Experimental Group	3.54	5.41	10	0	0

The quiz scores on session 3, show a significant difference between the two sections in terms of performance and variability. The Experimental Group, which utilized the modified Learning Activity Sheet (LAS), achieved a notably higher mean score of 5.41 compared to control group's mean score of 3.56. Furthermore, the experimental group had a wider range of scores, with a maximum score of 10 and a minimum score of 0, and a large standard deviation of 3.54, indicating a broader distribution of performance levels. In contrast, Section Plutonium had a more consistent performance, as evidenced by its lower standard

deviation of 1.37, but also a narrower score range, with a maximum of 5 and a minimum of 1. Notably, the control group recorded 6 missing scores, while the experimental group had no missing data.

In the study conducted by Geist and Soehren (2018), they concluded that frequent quizzing had a beneficial and significant influence on student performance. They further found that the positive effects on performance increased as the number of quizzes increased. Thus, they concluded that quizzes do matter for academic performance and teaching had an influential autonomous effect on learning.

Table 18. Quiz Results on the 4th Session Intervention

	Quiz Score on the 4th Session				
Groups	Standard Deviation	Mean	Maximum	Minimum	Missing
Control Group	1.00	4.74	5	1	7
Experimental Group	2.17	2.28	5	0	1

The quiz scores on session 4, reveal contrasting performance trends between the two sections. The control group, which used the non-modified Learning Activity Sheet (LAS), achieved a higher mean score of 4.74, close to the maximum possible score of 5, and a lower standard deviation of 1.00, indicating more consistent performance among students. However, the control group also had 7 missing scores, suggesting a notable level of disengagement or absenteeism.

From sessions 1 to 4, the quiz scores of Grade 5 students in Sections Plutonium and Zirconium revealed notable differences in performance and engagement. Section Plutonium, which used the non-modified Learning Activity Sheet (LAS), exhibited consistent performance with mean scores gradually improving from 4.00 to 4.74. However, engagement appeared to be an issue, as evidenced by a higher number of missing scores, particularly on session 1 (14 missing) and session 4 (7 missing). This suggests that while the non-modified LAS was effective for students who participated, it struggled to maintain the interest of all learners. On the other hand, Section Zirconium, which used the modified LAS, demonstrated greater variability in performance. The mean scores improved significantly on session 2 (4.54) and session 3 (5.41), indicating a potential boost in engagement and understanding. However, the scores dropped notably on session 4 (2.28), reflecting possible challenges with the material or student fatigue. The standard deviation for Zirconium's scores was consistently higher, highlighting a broader range of performance levels among students. Despite this, the modified LAS encouraged better participation, with fewer missing scores compared to Plutonium.

Overall, the findings suggest that the modified LAS positively influenced engagement, as seen in the lower number of absences, but its complexity may have hindered consistent performance across all students. Meanwhile, the non-modified LAS produced steadier results but failed to captivate all learners. These results underscore the need to balance engaging and accessible content. Refining the modified LAS to address its challenges, such as managing difficulty levels and ensuring clarity, could enhance both academic performance and sustained student engagement. In a study conducted by Juvy C.D (2023) entitled "Effectiveness of Developed Learning Activity Sheets (LAS) In Improving the Performance of Students in Grade 9 Chemistry" has established how well created learning activity sheets (LAS) work to raise the chemistry academic proficiency of ninth-grade students.

Table 19. Average Quiz Scores of the Respondents

	Average Quiz Score				
Groups	Standard Deviation	Mean	Maximum	Minimum	Missing
Control group	1.33	3.28	5.00	0.00	0
Experimental group	1.29	3.71	6.00	1.00	0

The average quiz scores of the students from the control group and experimental group, covering the assessments from Session 1 to Session 4, show some notable trends in performance. The experimental group, which used the modified Learning Activity Sheet (LAS), achieved an average score of 3.71, while the control group, which used the non-modified LAS, had an average score of 3.28. Although the difference is not huge, it suggests that the modified LAS had a positive effect on student performance. The experimental group also had a slightly higher maximum score (6.00) compared to the control group's maximum score (5.00), which further supports the idea that the modifications in the LAS helped students perform better. Both sections had comparable levels of variation, with standard deviations of 1.33 for control group and 1.29 for the experimental group, indicating that the performance spread was fairly similar in both groups.

The findings imply that the use of a modified LAS in Section Zirconium might have contributed to a small but measurable improvement in student performance, as reflected by the higher average score. However, the modest difference in the average scores between the two sections suggests that while the modified LAS provided some benefits, there is still room for further refinement. The results highlight the importance of continuously improving teaching materials, such as LAS, to ensure they are effectively enhancing student engagement and academic performance. It also emphasizes the potential for tailoring educational resources to better meet the needs of students, leading to more significant academic gains. Supporting this conclusion, Reyes et al. (2020) demonstrated that modified learning activity sheets (MLAS) significantly enhanced English language skills among Grade 5 students, reinforcing the idea that ongoing improvement of teaching materials is crucial for maximizing their effectiveness. In summary, while the modified LAS has shown promise in improving student performance, it is essential to continue refining these resources to better address the diverse needs of students and foster greater academic achievement.

Test of Significance difference between Modified and Non-Modified LAS

Table 20. Significant difference between modified and Non-modified LAS Group Statistics

Groups		N	Mean	Std. Deviation	Std. Error Mean
Average Quiz Score	Control Group	38	3.2829	1.32564	.21505
	Experimental Group	38	3.7134	1.28642	.20091

The significant difference between modified and non-modified LAS, reveal contrasting performance trends between the two sections. The control group achieved higher standard deviation, while control group achieved lower standard deviation. Furthermore, the experimental group achieved a lower standard error compared to the higher standard error mean of the control group. This revealed that the experimental group and control group showed no significant difference. However, the experimental group, which used the modified Learning Activity Sheet (LAS), achieved a higher mean score of 3.7134 compared to the mean score of control group, which used the non-modified LAS. Thus, the results suggest that modifications to the LAS positively impact student quiz scores, potentially due to enhanced engagement or clarity in assessment methods.

Table 21. Independent Sample Test

t-test for Equality of Means						
					95% Confidence Interval of the Difference	
t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
-1.465	77	.147	-.43052	.29395	-1.01586	.15482

Based on the results of the independent samples t-test, the t-value is -1.465, with 77 degrees of freedom, and the p-value (Sig. 2-tailed) is 0.147. This p-value is greater than the commonly used significance level of 0.05, which indicates that there is no statistically significant difference in the quiz scores between students using the modified LAS (Section Zirconium) and the non-modified LAS (Section Plutonium).

The mean difference between the two groups is -0.43052, which means that, on average, the students in Section Plutonium (non-modified LAS) scored 0.43 points higher than the students in Section Zirconium (modified LAS). However, because the p-value is greater than 0.05, this difference is not statistically significant, suggesting that the modification to the LAS did not have a significant impact on student performance based on this data.

The 95% confidence interval for the mean difference ranges from -1.01586 to 0.15482, meaning that the true mean difference could be anywhere within this range. Since this interval includes zero, it further supports the conclusion that there is no significant difference between the two groups.

The study aimed to assess the impact of modified and non-modified Learning Activity Sheets (LAS) on Grade 5 students' engagement and academic performance in English. Based on the results from the four-day assessment, it was found that the students using the non-modified LAS (Section Plutonium) scored slightly higher, on average, compared to those using the modified LAS (Section Zirconium). However, the independent t-test analysis showed no statistically significant difference between the two groups, with a p-value of 0.147, which is greater than the commonly accepted significance level of 0.05. This indicates that the modification to the LAS did not result in a significant improvement in student performance.

According to the study of Hofileña, Eliafie & Bearneza, Francis Jose. (2023) the reconstructed LAS incorporating interleaved practice had a positive impact on the students' performance. Overall, while there were minor differences in scores, the

modifications made to the LAS did not appear to have a substantial impact on enhancing academic performance or engagement within the timeframe of the study. Other factors, such as teaching methods, classroom environment, or student readiness, may have influenced the results.

DISCUSSION

Based on the result of the study in which the researchers reassessed the effectiveness of modified Learning Activity Sheets (LAS) in improving student engagement and academic performance among Grade 5 students at RC-Al Khwarizmi International College Foundation. The findings revealed that students using modified LAS demonstrated significant improvements in their English language skills, including reading comprehension and vocabulary.

However, the study also noted that not all students were equally engaged, indicating a need for further refinement of the LAS to cater to diverse learning needs. At first, the researchers aim to evaluate three main objectives: the impact of modified LAS on student engagement, the enhancement of academic performance in English, and the comparison of scores between students using modified LAS and those using traditional methods. Utilizing an experimental design, the study involved two classrooms where one used original LAS and the other used modified LAS. Data was collected through the use of instruments such as checklists, rubrics, interviews and quizzes of the students along with structured observations to assess engagement levels. As Reyes, et. al. (2020) stated on his study that the significant improvements showed that students using modified LAS scored higher in English language skills such as in reading comprehension, vocabulary and grammar. The study concluded that modified learning activity sheets are effective in enhancing English language skills.

CONCLUSION

Study highlights the effectiveness of modified LAS as a tool for enhancing student engagement and academic performance, while also emphasizing the importance of continuous adaptation of instructional materials to meet the varied needs of learners. While the control group (using traditional methods) did not surpass the academic performance of the experimental group (using modified LAS), the findings revealed that the control group showed significant improvements. This suggests that the modified LAS had a positive impact on both groups, helping the control group to achieve performance levels comparable to those using the modified LAS. The study serves as a valuable resource for educators seeking innovative strategies to foster a more engaging and effective learning environment in elementary education.

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