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AGRICULTURE AND FISHERY ARTS WORKTEXT IN DEVELOPING STUDENTS' ENGAGEMENT AND OUTCOMES ALIGNED IN MATATAG CURRICULUM TLE 7

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ABSTRACT

The main purpose of the study is to determine the effect of AFA Worktext on learner's engagement and performance in Agriculture and Fishery Arts. This study aims to assess the level of AFA worktext relative to its components and characteristics. Also, to find out the level of students' engagement and outcomes were measured. The research explores the relationship between the AFA Worktext and the students' engagement and students' outcomes. The study employed experimental research to assess the relation and effect of the AFA worktext on students' engagement and outcomes. The study was conducted at Calendola National High School, San Pedro City, Laguna. The respondents came from Grade 7 students for a total of sixty (60) respondents and they were selected using purposive sampling. It employed the quantitative research, and the pertinent data were obtained through survey questionnaire. Descriptive and inferential statistics, including weighted mean, standard deviation, Pearson-r Coefficient and Regression Analysis is used in this study. The objectives, content, assessment, reflection, usefulness, clarity, appropriateness and clarity as components and characteristics of the AFA worktext are remarked as very high by the respondents. Furthermore, the level of students' engagement in terms of participation, task completion and motivation were also remarked as very high. Meanwhile, the level of students' outcomes in terms of written test are remarked as proficient based on the result of the written test conducted. A significant relationship is found between using a worktext and students' engagement resulting to rejection of the null hypothesis. A significant effect is also found between worktext component and students' outcomes only in terms of content, assessment and reflection but not in objectives. While no significant effect in all the indicators of worktext's characteristics. The study revealed a significant relationship between the AFA worktext and student engagement, leading to the rejection of the null hypothesis. This indicates that using the AFA worktext into instruction enhances student interest and participation. Additionally, specific components of the worktext namely content, assessment, and reflection significantly influenced student performance in written tests. However, other elements such as the characteristics of the worktext did not show a significant effect on outcomes, resulting in a partial acceptance of the null hypothesis. Therefore, enhancing the characteristics of the worktext may further improve student achievement. Recommendations include the strengthening of encouragement to develop and integrate worktexts into the teachers' lesson plan, conducting training and workshops for the effective development on student engagement and learning outcomes. These findings provide valuable insights for educators, policymakers, and stakeholders to enhance the use of worktext for a more engaging and enriching learning experience.

KEYWORDS— *Worktext, Agriculture and Fishery Arts, Engagement, Outcomes, MATATAG Curriculum*

I. INTRODUCTION

The teaching of Agriculture and Fishery arts does form part of the Technology and Livelihood Education (TLE) curriculum in preparing the students to deal with practical agricultural and aquaculture challenges. It aims to impart practical knowledge and skills on farming, fishing and resource management aimed at promoting sustainability and economic development. It is important that agriculture and fishery arts combine in the curriculum by allowing students to directly apply what they learn to food production, environmental stewardship, and rural livelihoods that are indispensable in founding a self-reliant and literate community (Bituin A.S., et. al 2022). This subject also furthers moisture and enforces general agricultural crafts, yielding a continuous supply of trained personnel in agriculture and fisheries in the country.

Worktexts in the TLE 7 MATATAG curriculum are therefore very important. They react to the students' needs and levels of learning by providing a more customized approach to the teaching of subjects, such as Agriculture and Fishery Arts, which could otherwise appear excessively complicated. This means that teachers can work with local agricultural practices, resources, and problems, which will make the course much more relevant and enjoyable for students (Cruz, 2024). These worktexts can also work in sync with the competencies set in the curriculum to conceptualize the knowledge while additionally allowing the development of critical thinking and problem-solving skills necessary for future careers in agriculture and fisheries (Dela Cruz, 2019).

In fact, teaching with the worktexts provided in Agriculture and Fishery Arts under the TLE 7 MATATAG curriculum is a pedagogical advantage to teachers. The resources equip teachers with the ability to contextualize the learning experiences according to national educational goals. Furthermore, worktexts promote an active learning process that encourages students to make learning relevant to

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themselves and engage with local content. This kind of engagement affords students an opportunity to deepen their understanding of agricultural and fishery concepts and instill in them skills that will enable them to meaningfully contribute to their communities and the agricultural sector (EPP , Department of Education, 2023)

In view of these, the researcher was motivated to discuss the effectiveness of using worktext in Agriculture and Fishery Arts in developing students' engagement and outcomes. The accomplishment of this study aims students' interest, making learning more enjoyable and rewarding.

1.1 Statement of the Problem

Problem/s which were addressed by the research

The primary aim of the study is to determine the effectiveness of worktext in TLE 7 aligned with MATATAG Curriculum.

This sought to answer the following questions:

1. What is the level of assessment on AFA worktext components as perceived by the students in terms of:
   1.1 objectives;
   1.2 content;
   1.3 assessment; and
   1.4 reflection?
2. What is the level of assessment on AFA worktext characteristics as perceived by the students in terms of
   2.1 usefulness;
   2.2 clarity;
   2.3 appropriateness; and
   2.4 complexity?
3. What is the level of students' engagement in the AFA worktext in terms of:
   3.1 participation;
   3.2 task completion; and
   3.3 motivation?
4. What is the level of students' outcomes in the AFA worktext in terms of written test?
5. Does the use of AFA worktext have significant relationship on students' engagement?
6. Does the use of AFA worktext have significant effect on student's outcomes?

II. METHODOLOGY

The study was conducted at Calendola National High School, San Pedro City, Laguna. The respondents came from Grade 7 students for a total of sixty (60) respondents and they were selected using purposive sampling. It employed the quantitative research, and the pertinent data were obtained through survey questionnaire. Descriptive and inferential statistics, including weighted mean, standard deviation, Pearson-r Coefficient and Regression Analysis is used in this study.

III. RESULTS AND DISCUSSION

This section outlines the various outcomes and analyzes the findings obtained from the data collected in this study. Subsequent tables and discussions delved deeper into understanding the effectiveness of worktext in agriculture and fishery arts in developing students' engagement and outcomes.

In this study, the assessment of worktext components was described in terms of objectives, content, assessment and reflection and was determined by the mean and standard deviation.

Table 1 presents the evaluation of the AFA worktext components in terms of objectives. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

Respondents Strongly Agree that the learning objectives were clearly stated at the beginning of the lesson (M=4.98, SD=0.13). The learning objectives helped me focus on what was most important to learn (M=4.98, SD=0.13). On the other hand, the respondents Strongly Agree that after the end of the lesson, they felt that they met the learning objectives (M=4.82, SD=0.39). Moreover, learning objectives were relevant to my needs and interests (M=4.78, SD=0.45). Lastly, learning objectives were achievable within the given time frame (M=4.77, SD=0.42).

The weighted mean score of 4.87 indicates that the level of the assessment in the components of worktext in terms of objectives was Very High. This means that giving specific objectives to students with detailed instructions helps them carry out specific tasks smoothly and creates better means to attain the predicted learning outcomes.

Table 1
Level of Assessment on AFA Worktext Components as perceived by the students in terms of Objectives

STATEMENT	Mean	SD	Remarks
The learning objectives were clearly stated at the beginning of the lesson.	4.98	0.13	Strongly Agree
The learning objectives were relevant to my needs and interests.	4.78	0.45	Strongly Agree
The learning objectives were achievable within the given time frame.	4.77	0.42	Strongly Agree
The learning objectives helped me focus on what was most important to learn.	4.98	0.13	Strongly Agree
By the end of the lesson, I felt I had met the learning objectives.	4.82	0.39	Strongly Agree
Grand Mean	4.87		
SD	0.35		
Verbal Interpretation	Very High		

Similarly to Swanson (2017), clear learning objectives serve as performance expectations for both teachers and students. This approach increases student engagement, promotes deeper

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comprehension, and assists students in connecting activities to desired outcomes, ultimately leading to effective learning and improved academic success.

Table 2 presents the evaluation of the AFA Worktext components in terms of content. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

In table 2, Respondents Strongly Agree that the lesson content was interesting and engaging (M=4.97, SD=0.18). The lesson content was presented in a clear and organized manner (M=4.95, SD=0.22). In addition, the lesson content provided enough examples and explanations to support learning (M=4.87, SD=0.34). Moreover, the lesson content was easy to understand and follow (M=4.78, SD=0.41). Furthermore, the lesson content

Table 2
Level of assessment on AFA Worktext Components as perceived by the students in terms of Content

STATEMENT	Mean	SD	Remarks
The lesson content was presented in a clear and organized manner.	4.95	0.22	Strongly Agree
The lesson content was interesting and engaging.	4.97	0.18	Strongly Agree
The lesson content was relevant to my goals and needs.	4.67	0.51	Strongly Agree
The lesson content was easy to understand and follow.	4.78	0.41	Strongly Agree
The lesson content provided enough examples and explanations to support learning.	4.87	0.34	Strongly Agree
Grand Mean	4.85		
SD	0.37		
Verbal Interpretation	Very High		

The level of the components of worktext in terms of content attained a weighted mean of score of 4.85 and a standard deviation of 0.37 and was Very High among the respondents. The content was easily understood and comprehended by the students, indicating that it effectively focuses on what learners need to grasp.

In connection to the study of Joy et al. (2017), the teachers are responsible for the development or preparation of instructional materials that are appropriate for specific groups of students in their class, regardless of whether the instruction is intended for the entire class or a specific student. To prevent students from becoming confused, the lesson's content must be meticulously and thoughtfully crafted. This signifies the weight of the importance of the content in making an instructional material.

Table 3
Level of assessment of the AFA Worktext Components in terms of Assessment

STATEMENT	Mean	SD	Remarks
The instructions for the assessments were clear and easy to understand.	4.93	0.25	Strongly Agree
The assessments were aligned with what was taught in the lesson.	4.92	0.28	Strongly Agree
The assessments accurately measured my understanding of the material.	4.88	0.32	Strongly Agree
The difficulty level of the assessments was appropriate for my skills.	4.73	0.48	Strongly Agree
I received useful feedback on my performance in the Assessments.	4.67	0.47	Strongly Agree
	Grand Mean	4.83	
	SD	0.39	
	Verbal Interpretation	Very High	

Table 3 presents the evaluation of the AFA Worktext components in terms of assessment. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

Table 3 shows that based on the respondents, they Strongly Agree that the instructions for the assessments were clear and easy to understand (M=4.93, SD=0.25). The assessments were aligned with that was taught in the lesson (M=4.92, SD=0.28). In addition, the assessments accurately measured my understanding of the material (M=4.88, SD=0.32).

The level of worktext in terms of assessment attained a weighted mean score of 4.83 and a standard deviation of 0.39 and was Very High among the respondents. This means that the assessments used in measuring students understanding is very evident. Also, assessments provides a clear illustration of how the lesson is being taught by the teacher and being grasp by the learners.

Given the findings, Senen, et. al (2021) asserts that reading is useful for gaining understanding, knowledge, and information. The results showed that the use of photo comics media has a significant positive effect on reading interest and student learning outcomes. This was evidenced after a positive change in asking students to read after being treated with photo comics media. In addition, student learning outcomes are satisfactory after integrating photo comic media in learning activities.

Table 4 presents the evaluation of the AFA Worktext components in terms of reflection. The responses were measured using a Likert scale, and the results are expressed in

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terms of mean scores, standard deviations (SD), and verbal interpretations.

Table 4 illustrates the level of assessment of worktext components in terms of reflection. Based on the respondents, they Strongly Agree that the lesson helped them gain new knowledge or skills (M=4.95, SD=0.22). Likewise, they can see that the lesson connects to real-life situations or to their future learning (M=4.95, SD=0.22). On the other hand, they feel more confident about the topic after the lesson (M=4.83, SD=0.37).

Table 4
Level of assessment on AFA Worktext Components in terms of Reflection

STATEMENT	Mean	SD	Remarks
I clearly understood the main ideas and concepts of the lesson.	4.63	0.52	Strongly Agree
The lesson helped me gain new knowledge or skills.	4.95	0.22	Strongly Agree
I can explain what I learned to someone else.	4.60	0.49	Strongly Agree
I feel more confident about the topic after the lesson.	4.83	0.37	Strongly Agree
I can see how this lesson connects to real-life situations or future learning.	4.95	0.22	Strongly Agree
Grand	Mean	4.79	
SD		0.41	
Verbal Interpretation		Very High	

The level of worktext in terms of reflection attained a weighted mean of 4.79 and s standard deviation of 0.41 and was Very High among the respondents. This means that the worktext in agriculture and fishery helped the students in reflecting on their learnings through the entire quarter. This also helps them in practicing their comprehension skills and making generalizations.

a) Supported by the study of Alber-Morgan, et. al (2023), one of the most important goals for students with intensive academic learning needs is transferring skills they learned in the classroom to different settings/situations, other behaviors, and across time. This provides teachers with strategies they can use to program for generalization and maintenance of academic skills. To increase the likelihood that students with intensive learning needs will be successful with independent task completion outside the instructional setting.

b) Level of assessment on AFA Worktext Characteristics

In this study, the effectiveness of the worktext characteristics was described in terms of usefulness, clarity, appropriateness and complexity and was determined by the mean and standard deviation.

Table 5 presents the evaluation of the AFA Worktext characteristics in terms of usefulness. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

Based on the Respondents, they Strongly Agree that the layout and design of the worktext made it easy to use (M=4.88, SD=0.32). Likewise, the instructions for the activities in the worktext were clear and simple (M=4.88, SD=0.37). In addition to this, the overall structure of the worktext supported their learning experience (M=4.83, SD=0.37).

Table 5
Level of assessment on AFA Worktext Characteristics in terms of Usefulness

STATEMENT	Mean	SD	Remarks
The worktext was easy to navigate and find the information I needed.	4.77	0.42	Strongly Agree
The layout and design of the worktext made it easy to use.	4.88	0.32	Strongly Agree
The instructions for the activities in the worktext were clear and simple.	4.88	0.37	Strongly Agree
The worktext allowed me to complete tasks without unnecessary confusion.	4.73	0.44	Strongly Agree
The overall structure of the worktext supported my learning experience.	4.83	0.37	Strongly Agree
Grand	Mean	4.82	
SD		0.39	
Verbal Interpretation		Very High	

Based on the Respondents, they Strongly Agree that the layout and design of the worktext made it easy to use (M=4.88, SD=0.32). Likewise, the instructions for the activities in the worktext were clear and simple (M=4.88, SD=0.37). In addition to this, the overall structure of the worktext supported their learning experience (M=4.83, SD=0.37).

The level of assessment of worktext characteristics in terms of usefulness gained a weighted mean of 4.82 and a standard deviation of 0.39 with verbal interpretation of Very High among the respondents. This means that the content as well as the objectives of the worktext were useful to the learners in gaining more knowledge about the lesson. This also emphasized that teachers should design learning materials that are useful to the learners and they will enjoy in doing it so.

Hence, a study showed that the most common gamification elements used in e-learning and have a powerful effect on the students are points, leaderboards, badge, and level. This study is thought to contribute significantly to studies on the use of gamification applications in online education. It reinforces

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previous studies and identifies many useful study topics that can be explored to advance the field. From these results, suggestions on gamification applications in e-learning for further research are given (Saleem, et. al 2022).

Table 6 presents the evaluation of the AFA Worktext characteristics in terms of clarity. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

The table shows that respondents Strongly Agree that the worktext materials provide useful information that helps them understand the subject better (M=4.90, SD0.30). Meanwhile, the respondents find the content of the worktext to be relevant and useful for their learning in the subject (M=4.85, SD=0.36). Furthermore, the context in the worktext material is helpful and improves their comprehension of the subject (M=4.82, SD=0.39).

The level of assessment of the worktext characteristics in terms of clarity gained a weighted mean of 4.79 and a standard deviation of 0.44 and was Very High according to the respondents. This emphasized that the instructions in the worktext learning materials was very clear among the learners. This also highlights that clarity in instructions helps the learners in doing the activities by their own without asking for the help of their teacher.

Table 6
Level of assessment on AFA Worktext Characteristics in terms of Clarity

STATEMENT	Mean	SD	Remarks
The worktext materials provide useful information that helps me understand the subject better.	4.90	0.30	Strongly Agree
The exercises in the work text are practical and help me apply what I have learned.	4.75	0.50	Strongly Agree
I find the content of the worktext to be relevant and useful for my learning in this subject.	4.85	0.36	Strongly Agree
pThe worktext materials offer valuable insights that enhance my understanding of the subject.	4.63	0.55	Strongly Agree
The context in the worktext material is helpful and improves my comprehension of the subject.	4.82	0.39	Strongly Agree
Grand Mean	4.79		
SD	0.44		
Verbal Interpretation	Very High		

Additionally, Riapina (2021) added that the relationships between historically prominent teacher communicative behaviors – clarity and immediacy – and student communication satisfaction in technology-mediated learning in Russia. She analyzed the information technology elements and visual cues contributing to teacher clarity and immediacy in technology-mediated communication and, consequently, leading to student communication satisfaction. It was found that such IT elements and visual cues as presentations, screen sharing, web-based media, and documents uploaded onto a web platform intensified teacher clarity, whereas communication in online classes with web cameras on made the educational process more immediate. The combination of visual cues was especially appreciated. Learning implications for the connections between teacher clarity and immediacy and student communication satisfaction are discussed.

Table 7 presents the evaluation of the AFA Worktext characteristics in terms of appropriateness. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

Table 7 presents the evaluation of the AFA Worktext characteristics in terms of usefulness. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

In this table it demonstrates the level of assessment of the worktext characteristics in terms of appropriateness. According to the respondents, they Strongly Agree that the worktext content is relevant to the subject objectives and learning goals (M=4.90, SD=0.30). Also, the worktext supports independent learning and encourages critical thinking (M=4.87, SD=0.34). Moreover, the language and explanations in the worktext are clear and appropriate for the target learners (M=4.82, SD=0.39).

The level of effectiveness of the worktext characteristics in terms of appropriateness gained a weighted mean of 4.79 and a standard deviation of 0.41 and was Very High. This indicates that the content, language and explanations used in the worktext learning materials are appropriate in the level of students' cognitive knowledge.

Table 7
Level of assessment on AFA Worktext Characteristics in terms of Appropriateness

STATEMENT	Mean	SD	Remarks
The worktext content is relevant to the subject objectives and learning goals.	4.90	0.30	Strongly Agree
The language and explanations in the worktext are clear and appropriate for the target	4.82	0.39	Strongly Agree

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learners.			
The work text includes exercises and activities that effectively reinforce key concepts.	4.73	0.44	Strongly Agree
The layout and design of the work text are visually appealing and easy to navigate.	4.65	0.51	Strongly Agree
The worktext supports independent learning and encourages critical thinking.	4.87	0.34	Strongly Agree
	Grand Mean	4.79	
	SD	0.41	
	Verbal Interpretation	Very High	

This supports Çer (2016) stating that in order to improve learning results, it is crucial to adapt educational content to the relevant age group in both situations. Age-appropriate content, whether in interactive worktext greatly increases efficacy by matching learning objectives and developmental needs, they emphasize. Furthermore, according to both the result and the supporting account, this kind of customized information promotes greater engagement and a stronger passion for learning, which aids in the advancement of education overall.

Table 8 presents the evaluation of the AFA Worktext characteristics in terms of complexity. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

Table 8
Level of assessment of AFA Worktext Characteristics in terms of Complexity

STATEMENT	Mean	SD	Remarks
The concepts presented in the worktext are appropriate for the intended skill level of the learners.	4.90	0.30	Strongly Agree
The worktext provides sufficient background information for understanding complex topics.	4.75	0.47	Strongly Agree
The difficulty of the exercises in the worktext gradually increases to match learners' progress.	4.75	0.43	Strongly Agree
The instructions for tasks and exercises are clear and easy to follow.	4.73	0.44	Strongly Agree
The worktext challenges me as without overwhelming.	4.95	0.22	Strongly Agree
	Grand Mean	4.82	
	SD	0.40	
	Verbal Interpretation	Very High	

Respondents Strongly Agree that the worktext challenges the learners as without overwhelming (M=4.95, SD=0.22). Meanwhile, the concepts presented in the worktext are appropriate for the intended skill of the learners (M=4.90, SD=0.30). On the other hand, the worktext provides sufficient background information for understanding complex topics (M=4.75, SD=0.47). Likewise, the difficulty of the exercises in the worktext gradually increases to match learners' progress (M=4.75, SD=0.43).

The level of assessment of the worktext characteristics in terms of complexity attained a weighted mean of 4.82 and a standard deviation of 0.40 and was Very High among the respondents. This implies that the concepts presented in the worktext learning materials are appropriate to the skill level of students. It also helps the students in coping up challenges that they faced in answering the worktext learning materials.

c) In line with the study Sagitari, et. al (2021) aims to conduct a needs analysis survey from various research and development stages to develop and validate products and determine appropriate teaching materials. The stages of research and development are applied from the learning process, analysis of targeted learning outcomes, and analysis of students and their needs. Based on the findings and discussion, the LKS recommended by researchers is the exposition LKS with a scientific plus approach. Students can practice it and find accurate information for the exposition text with this worksheet. On the other hand, teachers can also unite and facilitate students to construct their knowledge of the text.

d) Level of Students' Engagement

In this study, students' engagement was described in terms participation, task completion and motivation and was determined by the mean and standard deviation.

Table 9 presents the evaluation of the students' engagement in terms of participation. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

Respondents Strongly Agree that active participation in class discussions helps the learners understand the lessons more effectively (M=4.98, SD=0.13). On the other hand, engaging in class activities allows learners to apply what I have learned

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and gain deeper insights into the subject (M=4.93, SD=0.25). Finally, students believe that regular participation in class positively impacts the overall academic success (M=4.90, SD=0.30).

Table 9
Level of Students' Engagement in terms of Participation

STATEMENT	Mean	SD	Remarks
Active participation in class discussions helps me understand the lessons more effectively.	4.98	0.13	Strongly Agree
My involvement in group activities and class participation improves my learning and performance.	4.78	0.41	Strongly Agree
I believe regular participation in class positively impacts my overall academic success.	4.90	0.30	Strongly Agree
Engaging in class activities allows me to apply what I have learned and gain deeper insights into the subject.	4.93	0.25	Strongly Agree
I know that student participation is essential for enhancing collaboration and developing communication skills that contribute to my learning outcomes.	4.88	0.32	Strongly Agree
Grand Mean		4.90	
SD		0.30	
Verbal Interpretation		Very High	

The level of students' engagement in terms of participation gained a weighted mean of 4.90 and a standard deviation of 0.30 and was Very High among the respondents. This underscores that active participation in class helps the students to understand their lessons more effectively. Also, engaging students in activities allow students to gain deeper understanding about the lesson.

In connection, Solvik & Glenna (2021) said that teachers worldwide are challenged to adjust their teaching to meet students' needs for deeper learning. The lack of mutual understanding among researchers, policymakers and teachers tends to blur the discussion on how to enhance deeper learning through teaching, which further challenges teachers in making changes in their classroom practices. The findings indicate how teachers' facilitation of a supportive learning environment is essential to actively involve students in the classroom interactions and dialogue needed to promote deeper content understanding and metacognitive reflection. They explore the potential for deeper learning within whole-class teaching and argue that such potential arises when teachers facilitate collective, reciprocal, supportive, cumulative and purposeful classroom interactions.

Table 10 presents the evaluation of the students' engagement in terms of task completion. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

Table 10 shows that respondents Strongly Agree that the worktext tasks encourage the students to explore and engage with the material independently (M=4.90, SD=0.30). Meanwhile, the complete assigned tasks in the worktext within the allotted time (M=4.87, SD=0.34). Moreover, students demonstrate interest and focus while working through tasks in the worktext (M=4.82, SD=0.39).

Table 10
Level of Students' Engagement in terms of Task Completion

STATEMENT	Mean	SD	Remarks
I complete assigned tasks in the worktext within the allotted time.	4.87	0.34	Strongly Agree
I demonstrate interest and focus while working through tasks in the worktext.	4.82	0.39	Strongly Agree
The tasks in the worktext keep me motivated to finish them.	4.80	0.40	Strongly Agree
I actively participate in discussions and activities related to the worktext tasks.	4.75	0.43	Strongly Agree
The worktext tasks encourage me to explore and engage with the material independently.	4.90	0.30	Strongly Agree
Grand Mean	4.83		
SD	0.38		
Verbal Interpretation	Very High		

The level of students' engagement in terms of task completion attained a weighted mean of 4.83 and a standard deviation of 0.38 and was Very High among the respondents. This shows that the students are very much encourage to explore and engage with the different learning activities that are appropriate to their learning abilities. This also demonstrates that there is enough focus and interest in the subject area.

Supported by the study, Lombardi, et. al (2021) synthesized a working definition of active learning that operates within an elaborative framework, which we call the construction-of-understanding ecosystem. A cornerstone of this framework is that undergraduate learners should be active agents during instruction and that the social construction of meaning plays an important role for many learners, above and beyond their individual cognitive construction of knowledge. The proposed framework offers a coherent and actionable concept of active learning with the aim of advancing future research and practice in undergraduate STEM education.

Table 11 presents the evaluation of the students' engagement in terms of motivation. The responses were measured using a Likert scale, and the results are expressed in terms of mean scores, standard deviations (SD), and verbal interpretations.

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The respondents Strongly Agree that they have an eager to learn about the topics covered in the subject (M=4.93, SD=0.25). Meanwhile, students feel excited when they understand a difficult concept (M=4.92, SD=0.28). Furthermore, they are interested in the topics taught in the subject (M=4.88, SD=0.32).

Table 11
Level of Students' Engagement in terms of Motivation

STATEMENT	*Mean*	*SD*	*Remarks*
I enjoy learning new things in my classes.	4.87	0.34	Strongly Agree
I feel motivated to complete my schoolwork on time.	4.80	0.40	Strongly Agree
I am interested in the topics taught in the subject.	4.88	0.32	Strongly Agree
I am eager to learn about the topics covered in my subject.	4.93	0.25	Strongly Agree
I feel excited when I understand a difficult concept.	4.92	0.28	Strongly Agree
Grand Mean	4.88		
SD	0.32		
Verbal Interpretation	Very High		

The level of students' engagement in terms of motivation gained a weighted mean of 4.88 and a standard deviation of 0.32 and was Very High according to the respondents. This implies that learners are more likely to be motivated to participate and comply with the requirements needed in the subject.

Based on the findings of the study Schmid & Garrels (2021), the students acknowledged different forms of parental involvement as a major explanation for their success in school. Five themes were identified by the analysis: social psychological support, supervision of schoolwork, practical support, high expectations and aspirations, and obligation and gratitude towards parents. The students' narratives reveal different kinds of parental involvement practices that are not restricted to parents who hold higher levels of education or who are familiar with the educational system. In addition, their narratives also reflected their need for encouragement and motivation, their need for practical support in everyday school life, and their appreciation of clearly expressed expectations regarding education.

e) Level of Students' Outcomes

In this study, students' outcome in a worktext was described in terms of written test wand was determined by frequency, percentage, mean score and standard deviation.

Table 12 evaluates students' outcomes in AFA Woktext based on their written test scores. The interpretation considers frequency, percentage distribution, mean score, standard deviation (SD), and descriptive value.

Table 12
Level of Students' Outcomes in AFA Worktext in terms of Written Test

Score	Frequency	Percentage	Descriptive Value
41 – 50	7	12%	Outstanding
31 – 40	31	51%	Very Satisfactory
21 – 30	19	32%	Satisfactory
11 – 20	3	5%	Fairly Satisfactory
0- 10	0	0%	Needs Improvement
Mean Score		32.47	
SD	6.80		
Descriptive Value	Very Satisfactory		

Out of total number of sixty respondents "21-30" received the highest frequency of nineteen (19) or 32% of the total population with descriptive equivalent of Approaching Proficiency. While the scores "11-20" received the lowest frequency of three (3) or 5% of the total population with descriptive equivalent of Developing. This means that while most participants met a basic level of achievement, relatively few exceeded this level, highlighting potential areas for improvement in the learning process or assessment methods.

In connection, Vamanu & Zak (2022) found that content accuracy in written tests guarantees that students are scored using reliable and trustworthy material that reflects their true understanding of the subject. It stresses well-supported answers, preparing students to think critically and be information literate. The removal of false material from the answer teaches students to distinguish between sources of information and offer accurate information to society in order to foster informed thinking.

f) Significant Relationship of using AFA worktext to Students' Engagement

To test the relationship of Worktext's to students' engagement data were treated statistically in Minitab 14 using Pearsons R. The major findings were presented in the following table. Presented in table 13 is the Relationship of
Worktext to the Students' Engagement. The results include Pearson correlation coefficients (r-values), p-values, and sample size (N=60) for each relationship.

The results show a significant positive relationship of worktext to students' engagement in terms of objectives, content, assessment, reflection, usefulness, clarity, appropriateness and complexity to students' engagement in terms of participation, task completion and motivation which shows the importance of worktext. This highlights that with students' engagement, it improves student participation, task completion and motivation. To sum it up, worktext helps to enhance students' academic engagement in order to achieve high academic performance.

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In line with the study of Marcy Baughman (2022), students may be guaranteed to be not only taking in knowledge but also thinking critically and applying what they have learnt if you engage them in stimulating and demanding activities. Engagement activities develop the critical thinking and problem-solving abilities that are essential for both academic performance and practical applications.

Table 13
Test of relationships on the use of AFA worktext on Student Engagement

Worktext (IV)	Students' Engagement (DV)		
	Participation	Task Completion	Motivation
Components			
Objectives:			
Pearson	0.357	0.357	0.357
Correlation	0.000*	0.000*	0.000*
p-value	60	60	60
N			
Content:			
Pearson	0.357	0.357	0.357
Correlation	0.000*	0.000*	0.000*
p-value	60	60	60
N			
Assessment:			
Pearson	0.357	0.357	0.357
Correlation	0.000*	0.000*	0.000*
p-value	60	60	60
N			
Reflection:			
Pearson	0.357	0.357	0.357
Correlation	0.000*	0.000*	0.000*
p-value	60	60	60
N			
Characteristics			
Usefulness:			
Pearson	0.357	0.357	0.357
Correlation	0.000*	0.000*	0.000*
p-value	60	60	60
N			
Clarity:			
Pearson	0.357	0.357	0.357
Correlation	0.000*	0.000*	0.000*
p-value	60	60	60
N			
Appropriateness:Pearson	0.357	0.357	0.357
Correlation	0.000*	0.000*	0.000*
p-value	60	60	60
N			
Complexity:			
Pearson	0.357	0.357	0.357
Correlation	0.000*	0.000*	0.000*
p-value	60	60	60
N			

Note: * p < .05

g) Significant Effect of using AFA worktext on students' outcomes

To test the effect of worktext components on students' outcomes data were treated statistically in Minitab 14 using Regression Analysis. The major findings were presented in the following table.

The result shows a significant positive effect of worktext component in terms of content, assessment and reflection on students' outcomes only in terms of written test. This indicates that the components of worktext learning materials helps improve students' outcomes through written test. This also shows that the components of worktext helps students to apply their knowledge and understanding about the lesson being discussed.

However, the result shows that there is no significant positive effect of worktext component in terms of objectives on students' outcomes in terms of written test. This indicates that the components of worktext learning materials in terms of objectives do not help the learners in improving their learning outcomes. This also shows that the content of worktext learning materials do not affect the learning outcomes of the students.

Meanwhile, the results indicate that there is no significant positive effect of worktext characteristics—specifically in terms of usefulness, clarity, appropriateness, and complexity—on students' outcomes as measured by written tests. This suggests that the features of worktext learning materials in agriculture and fishery do not influence student performance. One possible reason for this lack of impact is that student engagement and active participation in the learning process are critical factors that often outweigh the inherent qualities of the learning materials themselves. Additionally, the context in which learning occurs plays a significant role in determining outcomes. Factors such as classroom dynamics, teaching methods, and the overall learning environment can significantly influence how students interact with worktext materials. For instance, if the instructional approach is predominantly lecture-based, students may not feel motivated to engage deeply with the worktext, leading to suboptimal learning outcomes.

Table 14
Test of effect on the use of Agriculture and Fishery Arts worktext on student outcomes

Worktext Components (IV)	Students' Outcomes (DV)
	Written Test
Objectives:	
t-value	0.27
p-value	0.792
N	60
Content:	
t-value	3.14
p-value	0.003*
N	60
Assessment:	
t-value	2.76
p-value	0.008*

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N	60
Reflection:	
t-value	2.24
p-value	0.029*
N	60
Worktext Characteristics (IV)	Students' Outcomes (DV)
	Written Test
Usefulness:	
t-value	0.15
p-value	0.884
N	60
Clarity:	
t-value	0.14
p-value	0.892
N	60
Appropriateness:	
t-value	0.25
p-value	0.804
N	60
Complexity:	
t-value	0.82
p-value	0.414
N	60

Note: * p < .05

In line with the study, Inarda (2023) revealed that utilizing the modules realized the increase in performance of the experimental group due to their exposure to the materials. However, one of the pitfalls has been revealed in utilizing self-directed learning material; thus, academic performance will only improve if students are organized to set their own goals and learning pace. Using outcomes-based instructional materials leads to substantiating learning, effectively enticing learners' interest. It maximizes students' motivation and participation since topics are well-planned and designed comprehensively. The materials are an essential tool in inviting the enthusiasm of business students to engage in learning. These are valuable means to encourage independent learning without sacrificing the competencies to be learned and applied by the learners.

IV. Conclusion and Recommendations

Based on the foregoing findings, the following conclusions were drawn.

A significant relationship between Agriculture and Fishery Arts worktext and students' engagement was shown resulting to rejection of null hypothesis. This implies that using the AFA worktext into instructional activities contributes to a heightened level of interest and enthusiasm among students.

Specific component of the worktext namely content, assessment and reflection of the Agriculture and Fishery Arts Worktext component has significant effect on students' outcomes specifically in written test. Likewise, all the indicators under the characteristics do not have significant effect on students' outcomes resulting to partially acceptance of the null hypothesis. This implies that focusing on improving the characteristics of the worktext could be more beneficial for student success than attempting to address less influential factors.

Based on the drawn conclusions resulted in the following recommendations:

Teachers may encourage to develop and integrate worktexts into their lesson plans to enhance students' engagement and improve learning outcomes. These materials can tailor to address students' specific learning needs and curriculum requirements.

Schools may conduct training and workshops on effective worktext development, ensuring that teachers are equipped with the necessary skills to create high-quality, engaging, and effective instructional materials.

Teachers may continuously assess the effectiveness of their worktexts by gathering student feedback and analyzing test results. Necessary revisions and improvements should be made to ensure the materials remain relevant and effective.

Educators and curriculum developers may design and enhance worktexts to optimize their characteristics, ensuing they effectively support student learning, improve outcomes and boost motivation.

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