



Indigenized Context-Based Learning Materials in English

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Abstract

This study examined the effectiveness of indigenized context-based learning materials in improving the English language competency of Mamanwa learners at Cantugas Cultural National High School during the School Year 2023-2024. Guided by the ADDIES model, the materials were developed based on the learners' culture and daily experiences. Using a one-group pretest-posttest design, learners were assessed quarterly through pre-tests and post-tests, and data were analysed using mean, paired sample t-tests, and repeated measures ANOVA. This study revealed that the Mamanwa learners had a *beginning level* of English language competency before the implementation of indigenized context-based learning materials. However, they improved to *developing level* after the implementation. There is a significant difference in the English language performance of Mamanwa learners using the pre-test and post-test results. In terms of quality, DepEd validator found the materials to be largely aligned with standards in language, formatting, and readability. Minor issues, such as capitalization and formatting inconsistencies, were noted but did not affect overall usability. Based on the findings, the English competency of Mamanwa learners improved after using the indigenized context-based materials, with most moving from Beginning to Developing levels. Statistical tests confirmed significant difference between pre- and post- test scores across four quarters. Additionally, the materials generally met DepEd standards, with only minor issues in formatting and capitalization. These results show that culturally grounded materials are effective in enhancing language learning and are suitable for classroom use.

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Introduction

Across many classrooms in the Philippines, English lessons are taught using materials that follow national or global standards. While these resources aim to develop language competency, it often falls short of connecting with learners especially those from Mamanwa communities on a personal and cultural level. For many students, the words and stories they read are distant and unfamiliar, making learning more like memorization than understanding.

In recent years, there has been a growing call to make education more inclusive and culturally responsive, especially for indigenous communities. Many studies have shown that when learners see their own culture and language reflected in lessons, they become more motivated and engaged (Gay, 2010) ^[5]. For Indigenous learners like the Mamanwa, who often feel disconnected from mainstream education, indigenized learning materials can help bridge the gap between home and school.

Educational frameworks like the K to 12 Basic Education Curriculum (RA 10533) emphasize the need for contextualization and localization. Yet, despite this recognition, most English learning materials remain generic, designed for a "one size fits all" audience that often overlooks the rich diversity of Indigenous learners.

In the case of the Mamanwa learners of Surigao del Norte, this gap is deeply felt. Despite the Department of Education's push for contextualization, very few localized materials in English are truly crafted with Mamanwa learners in mind.

This study seeks to respond to that need. It aims to develop indigenized context-based learning materials in English that are rooted in the cultural realities of Mamanwa learners. These materials incorporate local stories, relevant vocabulary, familiar settings, and meaningful illustrations that reflect their way of life. More than just teaching in English, these lessons aim to validate identity and connect learning to live experience.

This research was prompted by a deep observation that Mamanwa learners are not lacking in ability, they are simply not being reached in the ways that matter most. When they see themselves in the lessons, they don't just understand the words better, they begin to feel that school is a place where they belong. This study hopes to be one step toward making that vision a reality.

Problem Statement

The study aimed to explore the impact of indigenized context-based learning materials on the English language performance of Mamanwa learners. It focused on evaluating the learners' English competency levels both before and after the use of these materials, assessing whether there is a significant difference in their performance based on pre-test and post-test results. Additionally, the study examined how well the indigenized materials align with DepEd standards, specifically in terms of language appropriateness and accuracy, consistency in formatting and layout, and overall readability and learner-friendliness.

Materials and Methods

Research Design

This study made use of a one-group pre-test post-test design. It is a type of quasi-experimental research design where a single group is measured before and after a treatment or intervention to determine any changes or effects. In this case, the intervention was the use of indigenized learning materials designed to align with the DepEd MELCs and tailored to the cultural context of Mamanwa learners.

Research Environment

This study was conducted at Cantugas, Cultural National High School in Brgy. Cantugas, Mainit Surigao del Norte. A rural community located along the northern shore of Lake Mainit with a population of 1,639 (2020 national census).

Respondents

The primary respondents of this study were the Grade 8 Mamanwa learners of Cantugas Cultural National High School, located in Barangay Cantugas, Mainit, Surigao del Norte. They exhibit distinct physical traits, such as medium height, dark brown skin, naturally curly hair, and soft facial features.

The Grade 8 Ethnical section comprises 41 learners, 25 of whom are Mamanwa students. Overall, the school accommodates approximately 43 indigenous students across different grade levels, many of whom face challenges in learning English. These language difficulties often hinder their academic performance and contribute to a lack of interest in the subject. The study focused on a selected group of 25 Indigenous learners who were identified as

experiencing academic challenges in English. This group consisted of 12 male and 13 female students.

Research Instrument

To gather meaningful data and gain insights into the academic challenges faced by Indigenous learners at Cantugas Cultural National High School, this study utilized a set of carefully developed research instruments that are aligned with the learners' cultural context and academic needs.

One of the primary tools was set of pre-test and post-test assessments in English. These tests are designed to measure student's understanding of key language skills before and after the implementation of the indigenized learning materials.

Alongside these assessments, indigenized English learning materials serve as both instructional and evaluative tools. These materials were developed to incorporate familiar context, local themes and culturally relevant examples, making language learning more meaningful and accessible to the students.

Ethics and Data Gathering

Before starting the study, the researcher obtained permission from the School Head of Cantugas Cultural National High School in Mainit, Surigao del Norte, and the Mamanwa tribal leader to ensure trust and consent from all involved. An orientation was held with the learners to explain the study's purpose and process in simple, respectful terms, with participation being voluntary. The indigenized materials were integrated into regular English classes held three times a week, with lessons running for about an hour. The teacher adapted activities to the students' needs and allowed extra time for unfinished lessons. Learners received their own copies of the materials, and their outputs were collected and reviewed as data. The materials were developed using the ADDIE model, starting with an analysis of the learners' needs and cultural context. The design phase focused on aligning objectives with both DepEd standards and Mamanwa learners' needs, while incorporating local themes and culturally appropriate instructional strategies. The materials were developed with context-specific activities, visuals, and language, followed by the implementation of lessons and activities in a supportive learning environment. Evaluation was done through pretests and posttests to measure progress, and data were analyzed for effectiveness, with results guiding future revisions. All data were treated confidentially, and the findings aimed to improve teaching practices and foster culturally relevant education for Indigenous communities.

Data Analysis

To assess the effectiveness of the indigenized learning materials in improving the English performance of Mamanwa learners, their test scores were analyzed before and after using the materials, as well as the retention of learning over time. The study used frequency count and percentage distribution to identify and tally errors in the materials. The mean was calculated to determine proficiency levels, while Repeated Measures ANOVA examined changes in scores across the pre-test, post-test, and general post-test. A paired sample t-test compared scores before and after the intervention to measure the immediate impact of the materials.

Results and Discussion

This section presents the data gathered, the results of the statistical analyses, and the interpretation of the findings in relation to the development and use of indigenized learning materials for Mamanwa learners. The presentation of results follows the sequence of the specific research problems and highlights the effectiveness of the context-based English language instruction.

English Language Proficiency Level of Mamanwa Learners Before and After the Implementation of the Indigenized Context-Based Learning Materials for English Language Instruction

Table 1: English language competency level before and after the implementation of indigenized context-based learning materials for English language instruction

Quarter		Means Scores	SD	Mean Gain	Interpretation
1 st Quarter	Pretest	21.68	10.68		Beginning Competency
	Post test	22.92	11.01	1.24	Beginning Competency
2 nd Quarter	Pretest	24.00	10.40		Beginning Competency
	Post test	25.48	9.79	1.48	Beginning Competency
3 rd Quarter	Pretest	24.80	9.00		Beginning Competency
	Post test	26.12	8.88	1.32	Beginning Competency
4 th Quarter	Pretest	29.36	9.08		Beginning Competency
	Post test	30.76	8.24	1.40	Developing Competency
General	Pretest	29.36	9.08		Beginning Competency
	Post test	30.76	8.24	1.40	Developing Competency

Legend:

Mean Score Range	Interpretation
45-50.00	Advanced Competency
40-44.99	Proficient
35-39.99	Approaching Competency
30 - 34.99	Developing Competency
0 - 29.99	Beginning Competency

By the second and third quarters, their scores continued to rise: 2nd Quarter from 24.00 to 25.48, with a gain of 1.48 points. 3rd Quarter from 24.80 to 26.12, with a gain of 1.32 points. In the fourth quarter, the average pre-test was 29.36, and the post-test reached 30.76, which means the learners finally moved into the “Developing Competency” level – a sign that they were not just learning more words or grammar rules but were actually improving in their understanding and use of English.

These results show that the more the learners were exposed to the indigenized learning materials, the better they performed. The small but consistent increase shows that learning was happening step by step. This aligns with studies

The Table 1 presents the English language competency level of Mamanwa learners before and after the implementation of the indigenized context-based learning materials for English language instruction.

As shown in Table 1, the learners’ English competency gradually improved each quarter after the implementation of the indigenized materials. During the first quarter, learners had a pre-test mean of 21.68, which increased slightly to a post-test mean of 22.92, showing a gain of 1.24 points. Though this change still falls under the “Beginning competency” range, it set a baseline for subsequent growth.

emphasizing the effectiveness of culturally responsive pedagogy in improving student learning outcomes. For instance, Gay (2010) ^[5] underscores that culturally relevant materials increase engagement and comprehension, especially among marginalized learners. Similarly Villegas and Lucas (2007) argue that culturally responsive teaching practices, including the use of indigenized content, help students connect new information to their lived experiences. Moreover, the table below shows significant difference in the effectiveness of context-based English language instruction, as reflected in the post-test results, across each quarterly assessment.

Normality Test

Quarter(Posttest)	N	Statistic	p-value	Decision
1 st Quarter	25	0.899	0.017	Not Normally Distributed
2 nd Quarter	25	0.959	0.405	Normally Distributed
3 rd Quarter	25	0.955	0.324	Normally Distributed
4 th Quarter	25	0.985	0.959	Normally Distributed

In the first quarter, the scores were not normally distributed ($p = 0.017$). This means, the scores were uneven meaning some learners did really well, while others scored very low, and only a few were in the middle.

In the 2nd, 3rd, and 4th quarters, the scores were normally distributed.

This means the learners’ performance became more balanced and consistent over time.

Table 3: Tests of Sphericity

	Mauchly's W	p	Greenhouse-Geisser ε
Quarter	0.428	0.002	0.678

Sphericity checks whether the changes in performance from quarter to quarter can be fairly compared. To test, the Mauchly's W Test Sphericity was used. Since the p-value is less than 0.05, this means the changes in scores across the quarters were not perfectly balanced. The improvement from one quarter to another was not the same each time.

The use of Greenhouse-Geisser ϵ due to the violation of the sphericity assumption (Mauchly's $W = 0.428$, $p = 0.002$),

strengthens the reliability of the result. This finding validates that the learners' performance changed significantly over time.

Significant Difference in the Effectiveness of Context-Based English Language Instruction

The Table 2 below presents the significant difference in the effectiveness of context-based English language instruction.

Table 2: Significant difference on the effectiveness of context-based English language instruction each quarter

Quarter (Before and After)	Mean Difference	t-value	df	p-value	Decision
1 st Quarter	2.12	2.86	24	0.009	Reject Ho
2 nd Quarter	4.32	4.83	24	<0.001	Reject Ho
3 rd Quarter	4.64	4.12	24	<0.001	Reject Ho
4 th Quarter	6.44	5.14	24	<0.001	Reject Ho

* if p value is <0.05 then there is a significant difference

According to the paired sample t-test results in Table 4, there is indeed a statistically significant difference in the English language competency of Mamanwa learners before and after the implementation. The gains increased over time.

In the 1st Quarter, learners improved by 2.12 points ($p = 0.009$). In the 2nd Quarter, learners improved by 4.32 points ($p < 0.001$). In the 3rd Quarter, learners improved by 4.64 points ($p < 0.001$). Lastly in the 4th Quarter, learners

improved by 6.44 points ($p < 0.001$).

The results of the study show that the learning materials were helpful and effective, but there is still room to improve them. This finding is supported by the Department of Education (DepEd 2015), stresses that indigenized and localized materials must undergo regular evaluation and refinement to ensure alignment with curriculum standards and learner contexts.

Table 3: Significant difference on the effectiveness of context-based English language instruction

Source of Variation	Sum of Squares	df	Mean Square	F	p-value	Greenhouse-Geisser ϵ	Interpretation
Quarter (Time)	800	2.03	393.70	8.54	< .001	0.678	Reject Ho
Error (Residual)	2249	48.80	46.10				

* if p value is <0.05 then there is a significant difference

This table showed significant difference on the effectiveness of context-based English language instruction. The p-value was less than 0.001, which is far below the 0.05 leading to the rejection of the null hypothesis. This implies that the learners improved significantly across the quarters in their English language competency level when indigenized context-based learning materials were used during the English language instruction. This finding is supported by the

study of Flores and Obod (2023), who assessed the effectiveness of instructional materials used for Indigenous Peoples learners. Their study revealed that learners generally had positive learning experiences when teachers incorporated indigenized materials into instructions.

Indigenized context-based learning materials adhere to DepEd standards

Table 4: Frequency Tally of Error Types

Error Type	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Capitalization of letters (choices)	9	5	4	4	22
Beginning words of phrases capitalized	8	4	6	6	24
Written in small letters	8	4	0	3	15
Missing periods/ formatting issues	2	0	1	1	4
Total Observations	27	13	11	14	65

This section, presents the results of the evaluation of the indigenized context-based learning materials in terms of language appropriateness and accuracy, formatting and layout consistency, and overall readability and learner-friendliness.

The findings were gathered from DepEd validator using the standard summary form for language findings in DepEd-developed learning resources. The analysis focused on four main types of errors recurring across the materials in Quarters 1, 2, 3, and 4.

Table 5: Percentage Distribution of Error Types Across Quarters

Error Type	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total	Percentage
Capitalization of letters (choices)	9	5	4	4	22	33.85%
Beginning words of phrases capitalized	8	4	6	6	24	36.92%
Written in small letters	8	4	0	3	15	23.08%
Missing periods/ formatting issues	2	0	1	1	4	6.15%
Total Observations	27	13	11	14	65	100%

The data reveal that the most frequent type of error was related to inconsistent capitalization of beginning words in phrases, with a total of 24 instances, representing 36.92% of the total errors observed. This suggests a recurring challenge in sentence –level grammar, which directly relates to language appropriateness and accuracy, as specified in the DepEd standards.

Errors involving the capitalization of letters representing multiple-choice options (such as A, B, C, and D) followed closely, with 22 instances (33.85%). While relatively minor, these types of errors fall under formatting consistency and affect the professional quality and clarity of assessment items, particularly in learner modules and self-assessment tools.

Another prevalent issue was the use of small letters in place of appropriateness uppercase letters, accounting for 15 cases (23.08%). These errors further indicate the need for more rigorous proofreading during the finalization of instructional texts.

Less frequent were issues related to missing punctuation marks or formatting inconsistencies, with only 4 documented instances (6.15%). Despite being fewer in number, these errors still impact the overall readability and structure of the material and should be addressed to maintain the expected standards of layout and learner-friendliness.

In terms of quality distribution, Quarter 1 had the highest number of identified errors (27), which may indicate that the initial phase of material development required refinement. Subsequent modules, (Quarters 2 to 4) showed fewer errors, suggesting that earlier feedback and revisions led to improved technical accuracy and formatting.

Overall, the results indicate that while the materials exhibit minor but recurring lapses in capitalization and formatting, they were generally found to be compliant with DepEd standards, as confirmed by the validator's remarks recommending only minor revisions. These findings support the conclusion that the indigenized context-based learning materials are largely aligned with DepEd's guidelines on linguistic quality, formatting consistency, and learner accessibility.

Conclusion

The study found that the use of indigenized context-based learning materials significantly improved the English language performance of Mamanwa learners, with a notable shift from Beginning to Developing competency levels. Statistical analyses confirmed the effectiveness of the materials, as significant differences were observed in pre-test and post-test scores over all four quarters. The materials also largely met DepEd quality standards, with only minor improvements needed in areas such as formatting and capitalization. These results demonstrate that culturally relevant, context-based tools not only enhance language development but also increase learner engagement by affirming their identity and everyday experiences, making learning more inclusive and empowering for Indigenous learners.

Recommendations

The study recommends that school administrators recognize the unique learning needs of Indigenous students by providing culturally relevant materials and fostering inclusive English instruction that honors their heritage. Mamanwa students are encouraged to engage actively in

lessons that reflect their culture, as they promote both language development and cultural pride. Teachers should adopt culturally responsive strategies in literacy instruction and continually improve their methods to better serve Mamanwa learners. Finally, Indigenous communities are encouraged to share cultural knowledge and support educational initiatives to ensure that learning remains meaningful and rooted in heritage.

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