

Practices and Academic-Cultural Innovations in Making Instructional Materials: Basis for Criteria and Guidelines Formulation of Tboli Culture-Based Learning Materials

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Abstract

This study explored the practices of Indigenous Peoples (IP) teachers and their academic-cultural innovation in the development of culture-based learning materials for Tboli students. It utilized an explanatory-sequential mixed-method research design. This study investigated the alignment of IP teachers' instructional practices with curricular goals, local knowledge integration, and local stakeholders' involvement in material development. It focused on understanding how IP teachers incorporate cultural heritage, regional languages, traditions, and community involvement into their teaching materials, fostering inclusivity and cultural identity. It assessed the level of IP teachers' practices in conforming to curricular goals, utilizing available materials, employing integrative teaching strategies, and utilizing ICT in contextualizing instruction. It also examined the extent to which teachers innovate academically and culturally. The research further sought to identify the challenges IP teachers face in creating accurate and culturally sensitive materials, including the need for ongoing professional development and collaboration with local communities. It evaluates how IP teachers, school leaders, and tribal leaders perceive the development of culture-based materials and their impact on educational outcomes and effectiveness. A criteria was made to ensure the materials are culturally relevant, inclusive, and aligned with both academic outcomes and community values.

Keywords: Teachers' Practices; Academic-Cultural Innovation; Instructional Materials; Guidelines Formulation; T'boli Culture-Based Learning Materials

I. INTRODUCTION

The connection between education and cultural heritage is crucial for Indigenous students' meaningful learning. Indigenous Peoples' School Teachers can play a vital role in improving this by developing instructional materials that align with academic standards and empower their students' cultural identities.

In education, there is a growing focus on considering the context and relevance of instruction (Karkkainen, 2012). This emphasizes adapting the curriculum to meet current needs (Wake, 2012). However, students encounter challenges in technical proficiency for creating, organizing, and managing digital culturally based resources (Wahyuningsih et al., 2021).

Teachers face significant challenges in integrating cultural context into instructional materials, including limited digital skills, inadequate culturally relevant resources, and insufficient knowledge about local cultures (Wang et al., 2021; Tica-a & Wangdali, 2023).

Additionally, there is a scarcity of materials that fit the context of the Tboli culture, resulting in difficulties in creating lessons that resonate with students' cultural backgrounds. These issues hinder the effectiveness of education by making it less engaging and relevant to the learners (Saysi & Batuctoc, 2023).

It is crucial to enhance the quality of education within the Tboli community by developing culturally sensitive instructional materials that support students' cultural identities and academic achievement. By addressing the gap between current educational practices and the need for culturally relevant resources, the study contributed to more effective and engaging learning experiences. It also supported the broader educational goal of preserving and promoting indigenous cultural heritage while meeting modern educational standards (DepEd Order 62, s. 2011; Fu, 2018).

Current literature highlights the challenges of integrating cultural context into educational materials and the importance of culture-based education. However, research on the Tboli community and the systematic integration of their cultural practices into instructional materials is limited, and guidelines for creating resources that effectively address academic and cultural needs are lacking.

This study aimed to bridge the gap between educational standards and cultural relevance, offering insights and solutions for developing instructional materials in the Tboli community. The criteria and guidelines created helped produce culturally appropriate resources, enhancing the learning environment for Indigenous students.

Specifically, this study addressed the following research questions:

1. What is the level of IP teachers' practices in making Instructional Materials in terms of:
 - 1.1 conforming to curricular goal;
 - 1.2 using available materials that support contextualization;
 - 1.3 involving local stakeholders;
 - 1.4 employing integrative teaching strategies; and
 - 1.5 utilizing ICT?
2. What is the extent of IP teachers in academic-cultural Innovation in making instructional materials, in terms of:
 - 2.1 cultural identity, cultural continuity, cultural community;
 - 2.2 cultural participation;
 - 2.3 practical value, economic value;
 - 2.4 civic culture education;
 - 2.5 culture sharing; and
 - 2.6 cultural sense of belonging and local cultural perception?
3. Is there a significant relationship between the level of practices and the academic-cultural innovation of IP teachers in making instructional materials?
4. What are the lived experiences of IP teachers in making culture-based learning materials?
5. How can IP teachers' expressed experiences and challenges be addressed?
6. How do IP teachers, school leaders, and tribal leaders perceive the development of culture-based learning material and its alignment with educational outcomes and effectiveness?
7. What criteria and guidelines formulate Tboli culture-based learning materials?

II. METHODOLOGY

Research Design: An explanatory sequential mixed-methods design was employed to investigate teachers' practices and academic-cultural innovations in creating instructional materials. It specifically focused on formulating criteria and guidelines for Tboli culture-based learning materials. According to Hjorth and Hinton (2019) and Wisdom and Creswell (2013), combining quantitative and qualitative methods provides rich, contextualized information. Creswell and Plano Clark (2018) emphasize that this design's strength lies in its ability to establish a broad overview with quantitative data and then explore nuanced details through qualitative analysis. Thus, it offers a robust framework for developing guidelines and criteria for culturally relevant instructional materials.

Locale of the Study: The study was conducted among Thirty-nine (39) public schools both

elementary and secondary of Lake Sebu East District in the municipality of Lake Sebu.

Respondents of the Study: For quantitative phase, there were 128 IP teachers identified as the respondents using total enumeration sampling. For qualitative phase, the study utilized purposive sampling through focus group discussion. There were 15 participants composed of 5 IP teachers, 5 School Leaders and 5 Tribal Leaders.

Data Gathering Instrument: For quantitative part, the instrument used was a survey questionnaire. The questionnaire to investigate the level practices of the IP teachers in making instructional materials was adapted from Primel N. Diago, PN & Dillo, L.R. (2022). Furthermore, the questionnaire to investigate the academic-cultural innovation of the IP teachers was adapted from Yan & Li (2023). For qualitative part, the study utilized validated semi-structured guide questions for focus group discussion.

III. RESULTS AND DISCUSSION

Table 1. IP Teachers' Practices in Developing Instructional Materials in Conforming to Curricular Goals

Indicators	Mean	SD	Verbal Description
1. Materials supporting intended goals of curriculum contextualization are available.	4.26	.64	Agree
2. Reporting on curriculum contextualization at the school level are done and available.	4.20	.69	Agree
3. Aligning instructional material with the DepEd curriculum while infusing Indigenous cultural content.	4.28	.62	Agree
4. Integrating traditional knowledge and cultural practices into core academic subjects (e.g., math, science, social studies).	4.32	.60	Agree
5. Providing opportunities for students to apply academic concepts within the context of their Indigenous culture.	4.32	.65	Agree
6. Creating instructional materials that bridge the gap between traditional knowledge and modern academic concepts.	4.18	.60	Agree
7. Designing contextualized materials to address the specific skills and knowledge outlined in the curriculum.	4.20	.64	Agree
8. Integrating real-world examples and local context to enhance the relevance of instructional materials.	4.35	.65	Agree
9. Utilizing a strong awareness of the historical context and significance of Indigenous cultural elements with curriculum in the instructional materials.	4.28	.62	Agree
10. Providing opportunities for students to apply academic concepts within the context of their Indigenous culture and target competence	4.32	.65	Agree
Section Mean	4.27	.41	Agree

Table 1 presents the IP teachers' practices in developing instructional materials conforming with curricular goals. The highest mean score (4.35), categorized as "Agree", was associated with the statement "Integrating real-world examples and local context to enhance the relevance of instructional materials." This result suggests a frequent endorsement, indicating that teachers agree with incorporating real-world and local contexts into their instructional materials.

Overall, the section mean score of 4.27, categorized as "Agree," suggests a frequent endorsement of teachers' practices in developing instructional materials that align with Indigenous culture and curricular goals. The results demonstrate IP teachers' dedication to incorporating Indigenous knowledge, cultural significance, and practical applications into their lesson plans. This alignment implies that Indigenous education is actively supported, guaranteeing equal emphasis on academic proficiency and cultural identity. The strong agreement across several measures further supports the usefulness of contextualized learning materials in promoting Indigenous students' engagement and learning results.

Furthermore, the results are consonant with the ideas of Garcia et al. (2021), who highlight that contextualized teaching enhances skill and knowledge development by making lessons relevant to real-life experiences despite resource challenges. Similarly, Torres (2015) emphasizes that this approach aligns learning with local culture, environment, and society. However, these findings O'Brien (2025) argues that while integrating Indigenous culture into education is essential, it should not come at the expense of core subjects like mathematics, English, and science, suggesting that overemphasis on cultural content may detract from fundamental academic skills.

Table 2. IP Teachers' Practices in making Instructional Materials in Using Available Materials that Support Contextualization

Indicators	Mean	SD	Verbal Description
1. Utilizing activities suggested in textbooks	4.15	.71	Agree
2. Producing their own teaching materials that would contextualize concepts.	4.21	.66	Agree
3. Producing teaching materials by modifying the suggested activities in textbooks	4.25	.59	Agree
4. Relating available learning materials to intended competency during in-class discussions	4.27	.59	Agree
5. Providing instances of localizing approaches through asking probing questions or citing examples or illustrations.	4.40	.60	Agree
6. Relating available learning materials to the intended competencies during in-class discussions.	4.26	.66	Agree
7. Involving the utilization of local resources or local information	4.40	.60	Agree
8. Creating instructional materials that bridge the gap between traditional knowledge and modern academic concepts.	4.28	.61	Agree
9. Modifying existing instructional materials to align with the cultural diversity of my students, ensuring greater inclusivity.	4.40	.60	Agree
10. Connecting available learning materials with the intended competencies while conducting in-class discussions.	4.36	.62	Agree
Section Mean	4.30	.39	Agree

The section mean score (4.30) was described as “Agree” and interpreted as “A frequent endorsement of the statement, indicating clear agreement.” The results imply (1) Emphasis on Contextualization: IP teachers actively integrate local resources, cultural diversity, and traditional knowledge into lessons. (2) Localization Over Textbooks: Teachers prioritize local examples and modified materials over textbook-based activities. , And (3) Blending Traditional & Modern Knowledge: Lessons bridge traditional knowledge with modern concepts for greater relevance.

The results are consistent with Adlit (2022), which states that aligning instructional materials and teaching practices is essential for effective lesson contextualization, ensuring relevance and coherence. This process involves selecting appropriate sources, conceptualizing materials, and aligning instructional strategies with contextualization goals. Utilizing additional resources enriches the learning experience by addressing students' specific needs.

Similarly, Khare (2018) highlights the importance of scaffolding in contextualizing instructional materials. Scaffolding provides structured support, activities, and feedback to guide students toward learning objectives. Supplementary materials enhance this process by offering relevant tools to aid understanding. As students gain proficiency, scaffolding is gradually removed, like how construction scaffolds are dismantled once a building is stable.

Table 3. IP Teachers' Practices in Making Instructional Materials in Involving Local Stakeholders

Indicators	Mean	SD	Verbal Description
1. Visiting neighboring farms, markets, or workshops to allow my math lessons to become more vivid.	4.08	.78	Agree
2. Inviting local community elders or leaders to my classroom so that they talk to the class on some local issues	4.07	.87	Agree
3. Inviting experts in the locality (e.g., agriculture experts) to my classroom so that they share to my students on practical matters	4.07	.83	Agree
4. Giving projects or tasks which my students can complete by going out to the community (e.g., by asking community members)	4.18	.64	Agree
5. Collaborating with other educators and institutions to enhance the academic-cultural innovation in the instructional materials.	4.27	.63	Agree
6. Fostering a sense of community and interconnectedness among students, educators, and the broader Indigenous community.	4.28	.61	Agree
7. Incorporating local stories, traditions, and examples into lesson plans and teaching resources to enhance students' understanding of the community's heritage and values	4.30	.66	Agree
8. Assessing students' learning needs and consult with local stakeholders to tailor instructional materials, ensuring that the content resonates with students' cultural backgrounds and aligns with community aspirations.	4.29	.66	Agree
9. Demonstrating a commitment to cultural sensitivity by consulting with indigenous language speakers and linguists to ensure accurate translation and integration of local languages in teaching resources	4.26	.67	Agree
10. Adapting instructional materials to reflect local challenges, opportunities, and real-world scenarios, allowing learners to learn through relatable and practical context	4.37	.63	Agree
Section Mean	4.22	.50	Agree

Table 3 presents the practices of the IP teachers in terms of the involvement of local stakeholders. It can be observed that all indicators are categorized as “Agree.”

Table 3 shows the highest mean score (4.37) for the statement: “Adapting instructional materials to reflect local challenges, opportunities, and real-world scenarios, allowing learners to engage with relatable and practical contexts.” Similarly, a high mean score (4.29) was observed for “Assessing students' learning needs and consulting with local stakeholders to tailor instructional materials, ensuring that the content resonates with students' cultural backgrounds and aligns with community aspirations.” Additionally, “Fostering a sense of community and interconnectedness among students, educators, and the broader Indigenous community” had a mean score of 4.28.

Conversely, the lowest mean score (4.07) was observed for “Inviting local community elders or leaders to my classroom to discuss local issues” **and** “Inviting local experts (e.g., agricultural experts) to share practical knowledge with my students.” A similar mean score (4.08) was recorded for “Visiting neighboring farms, markets, or workshops to make lessons more vivid.” Furthermore, “Assigning projects or tasks that require students to engage with the community (e.g., interviewing community members)” had a mean score of 4.18.

Overall, the section’s mean score was 4.22, which corresponds to the category “Agree.” The results imply that local stakeholders are significantly involved in the learning process, though with varying levels of emphasis. Additionally, a strong commitment was observed to integrating local context into instructional materials, ensuring cultural relevance, and fostering a sense of community. Moreover, some activities that require direct interaction with local elders, experts, and real-world environments are somewhat less emphasized, though they are still generally supported.

Table 4. IP Teachers’ Practices in making Instructional Materials in Employing Integrative Teaching Strategies

Indicators	Mean	SD	Verbal Description
1. Using local examples to make lessons more understandable	4.55	.57	Strongly Agree
2. Creating materials (other than those suggested in the textbook) to use them in class and other in-campus activities.	4.44	.57	Agree
3. Challenging students to relate what they learned in the different subjects to their real life experiences.	4.44	.59	Agree
4. Presenting curriculum concepts in real-life (outside the classroom) situations and experiences that are familiar to students.	4.41	.60	Agree
5. Providing the students with exercises that include various real, believable problem-solving situations that students can recognize its importance to current or possible future living.	4.36	.61	Agree
6. Encouraging students to apply concepts and information in useful contexts, projecting them the imagined future (e.g., possible careers) and unfamiliar locations (e.g., workplaces).	4.39	.56	Agree
7. Encouraging my students to participate regularly in groups where sharing, communicating, and responding to the important concepts and decision making occur.	4.48	.57	Agree
8. Introducing concepts by citing real-life scenarios or workplace by drawing on students’ past experiences	4.39	.56	Agree
9. Encouraging students to simulate or apply the concepts presented in the text or make discoveries either individually or in groups.	4.37	.64	Agree
10. Providing real-world applied problems in an interesting and relevant way of translating different subjects from an abstract, theoretical approach into concrete, applied approach through measurement, data collection, and real world simulation, and the like	4.39	.60	Agree
Section Mean	4.42	.43	Agree

Table 4 shows the practices of IP teachers in making instructional materials in terms of employing integrative teaching strategies.

The highest mean score (4.55) was observed for the indicator “Using local examples to make lessons more understandable.” Following this, the indicator “Encouraging my students to participate regularly in groups where sharing, communicating, and responding to important concepts and decision-making occur” had a mean score of 4.48. Additionally, a mean score of 4.44 was recorded for the indicators: “Creating materials (other than those suggested in the textbook) for use in class and other in-campus activities.”, and “Challenging students to

relate what they learned in different subjects to their real-life experiences.”

On the other hand, the lowest mean score (4.36) was observed for the indicator “Providing students with exercises that include various real, believable problem-solving situations that highlight their importance to current or future life.” Furthermore, the indicator “Encouraging students to simulate or apply the concepts presented in the text or make discoveries individually or in groups” had a mean score of 4.37. The mean score of 4.39 was recorded for the indicators: “Encouraging students to apply concepts and information in useful contexts, projecting them into an imagined future (e.g., possible careers) and unfamiliar locations (e.g., workplaces).”, and “Introducing concepts by citing real-life scenarios or workplaces, drawing on students’ past experiences.”

The section mean score of 4.42 (Agree) reflects teachers' strong commitment to integrative and contextualized teaching strategies. The results in Table 4 are consistent with previous research highlighting the value of integrated teaching techniques in creating educational materials. For example, Tani, Juuti, and Kairavuori (2013) showed that interdisciplinary learning improves engagement and understanding by having a beneficial impact on teacher and student attitudes.

Similarly, Ryan et al. (2015) emphasized the value of teaching children language skills according to their prior knowledge, encouraging a thorough communication process encompassing speaking, listening, writing, and reading. These studies support the high mean scores in the current research, especially when encouraging active student participation in group settings and using local examples to improve course comprehension.

Table 5. IP Teachers' Practices in making Instructional Materials in Utilizing ICT

Indicators	Mean	SD	Verbal Description
1. Sharing videos that bring the workplace into the classroom and demonstrate the importance of mathematics as an essential workplace skill	4.33	.66	Agree
2. Ensuring technology integration in teaching	4.42	.70	Agree
3. Supplementing the lesson with additional assessments and practice problems, re-teaching activities, and project-based learning ideas or activities	4.34	.60	Agree
4. Offering students to experience innovative technology supported learning environments in ICT applications	4.28	.66	Agree
5. Incorporating modern technological tools that support cultural preservation and innovation.	4.38	.61	Agree
6. Leveraging digital platforms to foster communication and collaboration among students, families, and communities.	4.29	.60	Agree
7. Encouraging learners to collaborate virtually with peers from diverse backgrounds, fostering a global perspective and enhancing their cultural awareness through ICT-facilitated interactions	4.30	.61	Agree
8. Using online platforms and educational software to create interactive lessons that align with the interests and experiences of elementary students, promoting active participation and deeper understanding	4.24	.70	Agree
9. Integrating digital resources such as videos, animations, and interactive applications to enhance the understanding of learners about real-world concepts	4.39	.58	Agree
10. Collaborating with colleagues to share best practices in integrating ICTs, fostering a supportive environment for continuous improvement in contextualizing instructional materials for learners	4.43	.55	Agree
Section Mean	4.34	.44	Agree

Table 5 shows the practices of the IP teachers in making instructional materials for utilizing ICT.

The highest mean score (4.43) was observed for the indicator “Collaborating with colleagues to share best practices in integrating ICTs, fostering a supportive environment for continuous improvement in contextualizing instructional materials for learners.” Following this, a mean score of 4.42 was recorded for “Ensuring technology integration in teaching.” Additionally, the indicator “Integrating digital resources such as videos, animations, and interactive applications to enhance learners' understanding of real-world concepts” had a mean score of 4.39.

On the other hand, the lowest mean score (4.24) was observed for “Using online platforms and educational software to create interactive lessons that align with the interests and experiences of elementary students, promoting active participation and deeper understanding.” Other lower-rated indicators included: “Leveraging digital platforms to foster communication and collaboration among students, families, and communities” (4.29), and “Offering students opportunities to experience innovative, technology-supported learning environments in ICT applications” (4.28).

Table 5 also shows a section mean score of 4.34, which is described as “Agree” and interpreted as “a frequent endorsement of teachers' practices in

making instructional materials, indicating clear agreement.” Furthermore, the results confirm teachers' strong commitment to utilizing ICT in instruction.

Table 5's results are consistent with those of earlier studies, highlighting the value of integrating ICT into educational materials. For instance, Maryono (2018) emphasized how important ICT is to developing instructional materials and advancing teachers' careers. Similarly, Voogt et al. (2013) highlighted that teacher collaboration when using digital technologies improves instructional efficacy and cultivates a continuous improvement culture. These researches corroborate the findings, especially regarding instructors' dedication to utilizing ICT to enhance learning opportunities and the contextualization of instructional materials.

Table 6. IP teachers in Academic-Cultural Innovation in Making Instructional Materials in terms of Cultural Identity, Cultural Continuity, Cultural Community

Indicators	Mean	SD	Verbal Description
1. Incorporates elements of cultural identity in the instructional materials I create.	4.30	.58	Agree
2. Promotes cultural continuity by highlighting traditional values and practices.	4.39	.59	Agree
3. Involves the local cultural community in the development of instructional materials.	4.39	.64	Agree
4. Integrates cultural aspects into instructional materials enhances students' cultural understanding and appreciation.	4.32	.59	Agree
5. Adopts new cultural innovations and perspectives in my instructional materials to better align with the needs and preferences of my students.	4.25	.60	Agree
6. Incorporates local folklore, myths, and legends to strengthen cultural identity in instructional materials.	4.30	.63	Agree
7. Reflects indigenous knowledge systems and practices to preserve and promote cultural continuity.	4.33	.68	Agree
8. Involves local artists or cultural practitioners in the creation of instructional content to ensure authenticity.	4.31	.68	Agree
9. Promotes the use of local languages or dialects alongside national languages in instructional materials to support cultural identity.	4.38	.62	Agree
10. Highlights the contributions of local cultural figures and heroes to inspire cultural pride among students.	4.35	.62	Agree
Section Mean	4.33	.42	Agree

Table 6 shows the academic-cultural innovation of IP teachers in creating instructional materials, particularly in cultural identity, cultural continuity, and cultural community.

The highest mean score (4.39) was observed for the indicators “Promotes cultural continuity by highlighting traditional values and practices” and “Involves the local cultural community in the development of instructional materials.” Following this, a mean score of 4.38 was recorded for “Promotes the use of local languages or dialects alongside national languages in instructional

materials to support cultural identity.” Additionally, the indicator “Highlights the contributions of local cultural figures and heroes to inspire cultural pride among students” had a mean score of 4.35.

On the other hand, the lowest mean score (4.25) was observed for “Adopts new cultural innovations and perspectives in instructional materials to better align with the needs and preferences of students.” Other lower-rated indicators included: “Incorporates elements of cultural identity in the instructional materials I create” (4.30). “Incorporates local folklore, myths, and legends to strengthen cultural identity in instructional materials” (4.30). “Involves local artists or cultural practitioners in creating instructional content to ensure authenticity” (4.31).

Overall, the section mean score of 4.33 was described as ‘Agree’ and interpreted as ‘A frequent endorsement of teachers’ academic-cultural innovation in making instructional materials, indicating clear agreement.’ This confirms teachers’ strong commitment to integrating culture into education.”

The results in Table 6 align with Holt (2020), emphasizing the Cultural Innovation Model’s five key steps: analyzing cultural norms, identifying weaknesses, recognizing challengers of the status quo, developing new ideologies, and using symbols to communicate change. This framework drives cultural transformation by addressing gaps and introducing innovative perspectives, ultimately replacing outdated norms with more relevant alternatives.

Angola transparency (2023) defines cultural innovation as introducing new ideas, products, or services within or to a cultural group, fostering growth and adaptation. It focuses on developing creative solutions that enhance cultural practices and meet evolving community needs.

Table 7. IP teachers in Academic-Cultural Innovation in Making Instructional Materials in Terms of Cultural Participation

Indicators	Mean	SD	Verbal Description
1. Incorporates elements of local culture into the instructional materials.	4.33	.54	Agree
2. Seeks input from students or community members to ensure cultural relevance in my instructional materials.	4.34	.56	Agree
3. Accesses to sufficient resources and support in developing culturally relevant instructional materials.	4.32	.60	Agree
4. Collaborates with colleagues to share cultural innovation practices in instructional material development.	4.39	.57	Agree
5. Attends training and resources to support the integration of cultural elements into instructional materials.	4.34	.66	Agree
6. Integrates student projects or activities that reflect and celebrate local customs and traditions.	4.36	.52	Agree
7. Encourages active participation from the local community in cultural events or exhibitions tied to instructional themes.	4.41	.57	Agree
8. Seeks continuous feedback from cultural stakeholders to enhance the cultural relevance of teaching materials.	4.32	.63	Agree
9. Organizes cultural workshops where students can actively engage with local artisans or practitioners.	4.34	.71	Agree
10. Supports initiatives that promote student participation in local cultural festivals as part of their learning experience.	4.42	.60	Agree
Section Mean	4.36	.45	Agree

The table reveals that all indicators were described as “Agree” and interpreted as “A frequent endorsement of the statement, indicating clear agreement.” Table 7 shows that the highest mean score (4.39) was observed for the indicators “Promotes cultural continuity by highlighting traditional values and practices” and “Involves the local cultural community in the development of instructional materials.”

Additionally, the indicator “Promotes the use of local languages or dialects alongside national languages in instructional materials to support cultural identity” had a mean score of 4.38. In contrast, the indicator “Highlights the contributions of local cultural figures and heroes to inspire cultural pride among students” received a mean score of 4.35.

On the other hand, the lowest mean score (4.25) was recorded for “Adopts new cultural innovations and perspectives in instructional materials to better align with the needs and preferences of students.” Other lower-rated indicators included: “Incorporates elements of cultural identity in the instructional materials I create” (4.30), “Incorporates local folklore, myths, and legends to strengthen cultural identity in instructional materials” (4.30), “Involves local artists or cultural practitioners in the creation of instructional content to ensure authenticity” (4.31).

Overall, Table 7 produced a section mean score of 4.36, which is described as “Agree” and interpreted as “a frequent endorsement of teachers' academic-cultural innovation in making instructional materials, indicating clear agreement.” The results imply that teachers consistently integrate cultural participation into instructional material development.

The results are consistent with OECD iLibrary (2023), which emphasizes that cultural participation underscores the need for instructional materials that promote diversity, engagement, and inclusivity. This involves integrating culturally diverse content, such as texts and images, to ensure students feel represented and respected. Educators can enhance students' adaptability and cultural awareness in an increasingly globalized world by incorporating multimodal learning and activities that encourage critical thinking and cross-cultural understanding. Similarly, Bourdieu (1986) highlights that cultural participation is a key indicator of academic-cultural innovation in instructional materials, reflecting the active engagement of students, educators, and institutions in cultural activities that promote awareness and diversity. As a measure of cultural capital, it ensures that instructional materials foster inclusion and engagement while enhancing learners' cultural and social development.

Table 8 shows the academic cultural innovation of the IP teachers in making instructional materials in terms of practical and economic value.

The highest mean score (4.38) was recorded for the indicator “Reuses and adapts materials for multiple classes and cohorts of students, which can yield long-term savings.” Following this, a mean score of 4.37 was observed for “Makes the most of the resources already available, reducing the need to purchase new materials or create them from scratch.” Additionally, the indicator “Develops instructional materials using locally available resources, reducing dependence on imported or expensive resources” had a mean score of 4.36.

On the other hand, the lowest mean score (4.22) was recorded for “Partners with local businesses or organizations to fund or support the creation of affordable, culturally relevant instructional resources.” Other lower-rated indicators included “Reduces the need for costly interventions like tutoring or remedial classes because learners are already more engaged and more likely to grasp and retain the content” (4.27), “Creates a more inclusive and equitable learning environment that reduces potential challenges related to cultural insensitivity, which might require costly interventions” (4.32), “Collaborates with local communities and experts in the creation of cost-effective resources that draw on the collective knowledge and expertise of community members” (4.32), and “Recycles and upcycles materials to create culturally relevant instructional tools at minimal cost” (4.32).

Table 8 presents a section mean score of 4.33, which is described as “Agree” and interpreted as “a frequent endorsement of teachers' academic-cultural innovation in making instructional materials, indicating clear agreement.” The results imply that teachers effectively implement practical and economic strategies in instructional material development.

The results support Banton (2023). Economic value in learning materials refers to the perceived worth of an educational resource based on its benefits to the user, often measured by their willingness to invest in it. Unlike market value, which reflects the actual price of a resource, economic value varies based on individual assessments of its usefulness and impact.

Table 8. IP Teachers in Academic-Cultural Innovation in Making Instructional Materials in Practical Value and Economic Value

Indicators	Mean	SD	Verbal Description
1. Makes the most of the resources already have, reducing the need to purchase new materials or create them from scratch.	4.37	.63	Agree
2. Reduces the need for costly interventions like tutoring or remedial classes because learners are already more engaged and they are more likely to grasp and retain the content.	4.27	.65	Agree
3. Reuses and adapts material for multiple classes and cohorts of students which can yield long-term savings.	4.38	.62	Agree
4. Creates a more inclusive and equitable learning environment. That reduce potential challenges related to cultural insensitivity, which might require costly interventions	4.32	.62	Agree
5. Collaborates with local communities and experts in the creation of cost-effective resources that draw on the collective knowledge and expertise of community members.	4.32	.62	Agree
6. Develops instructional materials using locally available resources, reducing dependence on imported or expensive resources.	4.36	.58	Agree
7. Recycles and up cycles materials to create culturally relevant instructional tools at minimal cost.	4.32	.55	Agree
8. Designs culturally resonant content that fosters higher student engagement, reducing dropout rates and improving educational outcomes.	4.35	.60	Agree
9. Partners with local businesses or organizations to fund or support the creation of affordable, culturally relevant instructional resources.	4.22	.65	Agree
10. Utilizes cost-effective digital tools to deliver culturally enriched content, reducing the need for physical materials.	4.35	.60	Agree
Section Mean	4.33	.46	Agree

Additionally, the findings align with Belfield et al. (2015). A benefit-cost analysis evaluates the economic feasibility of an investment by comparing its costs to its expected benefits. When applied to instructional materials, it assesses whether the financial investment in their development is justified based on the value of the outcomes they produce.

Table 9. IP teachers in Academic-Cultural Innovation in Making Instructional Materials in Terms of Civic Culture Education

Indicators	Mean	SD	Verbal Description
1. Makes the instructional materials more relatable to the students' lived experiences and cultural backgrounds.	4.50	.54	Agree
2. Acknowledges and respects the diversity within the classroom, contributing to a more comprehensive understanding of civic culture.	4.53	.57	Agree
3. Offers relatable real-world examples, enabling students to apply civic culture concepts to their lives, making learning more practical and meaningful.	4.41	.56	Agree
4. Recognizes the cultural knowledge that students bring through culturally relevant content helps create a more equitable educational experience.	4.44	.57	Agree
5. Fosters cultural competency in students for their readiness to navigate and contribute to the globalized, multicultural world.	4.39	.56	Agree
6. Facilitates discussions on cultural rights and responsibilities as part of civic education.	4.33	.57	Agree
7. Encourages students to participate in community service projects that promote civic culture and cultural understanding.	4.37	.59	Agree
8. Links cultural history with civic duties to inspire responsible citizenship among students.	4.39	.56	Agree
9. Emphasizes the role of local governance and traditional leadership in shaping civic culture.	4.32	.57	Agree
10. Promotes critical thinking by exploring how cultural values influence modern civic issues and policies.	4.48	.58	Agree
Section Mean	4.42	.43	Agree

Table 9 shows that all indicators were described as “SAgree” and interpreted as “A frequent endorsement of the statement, indicating clear agreement.”

The highest mean score (4.53) was recorded for the indicator “Acknowledges and respects the diversity within the classroom, contributing to a more comprehensive understanding of civic culture.” Following this, a mean score of 4.50 was observed for “Makes the instructional materials more relatable to the students' lived experiences and cultural backgrounds.” Additionally, respondents rated a mean score of 4.48 for “Promotes critical thinking by exploring how cultural values influence modern civic issues and policies.”

On the other hand, the lowest mean score (4.32) was recorded for “Emphasizes the role of local governance and traditional leadership in shaping civic culture.” Other lower-rated indicators included: “Facilitates discussions on cultural rights

and responsibilities as part of civic education” (4.33), and “Encourages students to participate in community service projects that promote civic culture and cultural understanding” (4.37).

Table 9 presents a section mean score of 4.42, described as “Agree” and interpreted as “A frequent endorsement of teachers' academic-cultural innovation in making instructional materials, indicating clear agreement. The results imply that teachers successfully integrate academic-cultural innovations into civic education, ensuring students develop a deep appreciation for cultural identity and civic participation.

The results align with National University (2023), highlighting the link between knowledge, citizenship, societal change, and global economic roles, providing a framework for civic participation and responsibility. Similarly, Hess et al. (2022) stress the importance of teachers in developing students' deliberation skills, critical thinking, and engagement with societal issues. By fostering political friendship, educators promote democratic values and a more trusting political climate.

Table 10. IP Teachers in Academic-Cultural Innovation in Making Instructional Materials in Terms of Culture Sharing

Indicators	Mean	SD	Verbal Description
1. Exposes students to various cultures, traditions, and perspectives, increasing their cultural awareness.	4.46	.55	Agree
2. Encourage students to share their own cultural backgrounds, fostering a sense of community and mutual learning.	4.56	.54	Strongly Agree
3. Celebrate diverse cultures to promote a sense of multiculturalism and inclusion, reinforcing the importance of respecting and valuing all backgrounds.	4.42	.58	Agree
4. Analyze and compare cultural practices and values, promoting critical thinking skills that challenge them to think critically.	4.41	.64	Agree
5. Expose to 60 different cultures encourages empathy, deeper understanding of others' experiences and viewpoints and promoting tolerance and reduces stereotypes.	4.37	.59	Agree
6. Encourages cross-cultural group projects where students collaborate and learn from each other's cultural backgrounds.	4.35	.55	Agree
7. Facilitates cultural exchange programs or virtual tours with schools from different cultural regions.	4.28	.63	Agree
8. Develops assignments where students research and present on cultures different from their own.	4.31	.64	Agree
9. Hosts cultural diversity days where students can showcase their own traditions and learn about others'.	4.27	.68	Agree
10. Promotes peer learning by having students co-create instructional content that reflects a wide range of cultural perspectives.	4.35	.60	Agree
Section Mean	4.38	.46	Agree

Table 10 presents the academic-cultural innovation of the IP teachers in terms of culture sharing in instructional materials.

The highest mean score (4.56) was observed for the indicator “Encourages students to share their cultural backgrounds, fostering a sense of belonging and mutual learning.” A mean score of 4.46 was recorded for “Introduces students to various cultures, traditions, and perspectives, enhancing their cultural awareness.” Additionally, respondents rated a mean score of 4.42 for “Promotes multiculturalism and inclusion by celebrating diverse cultures, emphasizing respect and appreciation for all backgrounds.”

On the other hand, the lowest mean score (4.27) was recorded for “Organizes cultural diversity events where students can present their traditions and learn about others.” Other indicators with relatively lower scores included “Facilitates cultural exchange programs or virtual tours with schools from different cultural regions” (4.28). And “Assigns research projects where students explore and present on cultures different from their own” (4.31).

Table 10 presents a section mean score of 4.38, categorized as “Agree” and interpreted as “A frequent endorsement of teachers' academic-cultural innovation in making instructional materials, indicating clear agreement.” The results signify that teachers effectively integrate academic-cultural innovations in instructional materials, promoting cultural identity and civic participation.

The findings support Katrini (2018), who defines sharing culture as informal social networks within a region that emphasize collaboration, solidarity, and sustainability over profit. Social structures and the area's physical environment influence this community-driven approach to meeting daily needs.

Additionally, Yeros (2023) underscores that fostering a multicultural or global education requires time, effort, and self-reflection. By embracing other cultures, remaining open to learning, and integrating multicultural perspectives into their daily lives, children must develop self-esteem, self-respect, and an appreciation for diversity.

The results align with Yao (2015) and Sheldon et al. (2011), emphasizing belonging as vital for emotional resilience, educational success, and well-being. McFaul (2016) identified five key elements of belonging, including peer and faculty support. Research also shows that international

students primarily socialize with co-national peers, followed by other international students.

Table 11. IP teachers in academic-cultural Innovation in Making Instructional Materials in Cultural Sense of Belonging and Local Cultural Perception

Indicators	Mean	SD	Verbal Description
1. Makes learning more relatable and engaging when students see their own culture in their studies, it boosts their motivation and interest in the subject.	4.45	.59	Agree
2. Celebrates local culture in educational materials preserves traditions, languages, and customs, safeguarding the richness and diversity of local cultures.	4.39	.60	Agree
3. Offers holistic education beyond academic that students grasp their cultural heritage, values, and way of life, as valuable as academic learning.	4.34	.60	Agree
4. Promote a global perspective, fostering understanding of diverse cultures and encouraging respect for cultural diversity.	4.39	.61	Agree
5. Offers a holistic education beyond academics, enabling students to understand their cultural heritage, values, and ways of life, equally valuable as academic learning.	4.30	.61	Agree
6. Encourages students to explore and document their own cultural heritage as part of their learning experience.	4.42	.58	Agree
7. Introduces community elders to share local cultural practices and stories with students to strengthen cultural ties.	4.31	.62	Agree
8. Highlights the importance of preserving endangered cultural practices and languages through educational materials.	4.38	.60	Agree
9. Facilitates student-led initiatives that celebrate local history and cultural achievements.	4.41	.57	Agree
10. Offers opportunities for students to reflect on their cultural identity and how it shapes their understanding of the world.	4.38	.54	Agree
Section Mean	4.38	.46	Agree

Table 11 presents the IP Teachers' Academic-Cultural Innovation in Making Instructional Materials in terms of cultural sense of belonging and local cultural perception. It reveals that all indicators were described as “Agree” and interpreted as “a frequent endorsement of the statement, indicating clear agreement.”

The highest mean score (4.45) was recorded for “Enhances learning engagement and motivation when students see their own culture reflected in their studies.” Following this, a mean score of 4.42 was observed: “Encourages students to explore and document their cultural heritage as part of their learning experience.” Additionally, respondents rated a mean score of 4.39 for: “Celebrating local culture in educational materials helps preserve traditions, languages, and customs, safeguarding cultural diversity.”, and “Promotes a global perspective, fostering cultural understanding and encouraging respect for diversity.”

On the other hand, the lowest mean score (4.30) was recorded for “Provides a holistic education beyond academics, helping students understand their cultural heritage, values, and way of life, which are equally valuable as academic learning.” Other indicators with relatively lower scores included: “Invites community elders to share local cultural practices and stories with students to strengthen cultural ties” (4.31) and “Integrates

cultural heritage, values, and way of life into education, reinforcing their significance alongside academic learning” (4.34)

Table 11 presents a section mean score of 4.38, categorized as “Strongly Agree” and interpreted as “a strong positive endorsement of teachers' academic-cultural innovation in making instructional materials, indicating clear agreement.” The section mean score implies that teachers are committed to academic-cultural innovation, which enhances cultural identity and global awareness in education.

Table 12. Relationship between the Level of Practices and their Academic-Cultural Innovation of IP Teachers in Making Instructional Materials

	N	Mean	SD	r	p-value	Interpretation
IP Teachers' Practices	128	4.31	.33			
IP Teachers Academic-Cultural Innovation	128	4.36	.38	.675	.000	Significant Correlation

.05 level of Significance (2 tailed)

The table 12 shows that there is a significant relationship between level of practices and their academic-cultural innovation of IP teachers in making instructional materials, since the r -value is .675 which is higher or beyond than the p value .000 .It signifies that level of practices and their academic-cultural innovation of IP teachers in making instructional material is related.

The findings suggest a strong positive relationship, meaning that as IP teachers enhance their instructional material practices, their academic-cultural innovation also increases. With a mean score of 4.31 (SD = 0.33) for instructional practices and 4.36 (SD = 0.38) for academic-cultural innovation, the results confirm that teachers who actively implement effective instructional strategies are more likely to integrate cultural elements into their teaching materials. The study's overall findings support the significance of culturally responsive teaching by demonstrating how teachers' methods directly impact their capacity to innovate and incorporate cultural components into the classroom.

The Lived Experiences of IP Teachers in Making Culture-Based Learning Materials

Creating culture-based learning materials is crucial for Tboli students to connect education with

their traditions. Tboli teachers' experiences developing these materials highlight the challenges and strategies for integrating culture into the curriculum. Understanding their perspectives helps improve resources that support cultural preservation and academic success. This is discussed using two (2) emergent themes: *motivation to contextualize* and *Mechanism to challenge*.

Emerging Theme 1. Motivation to contextualize

This theme focuses on the motivation of the participants to contextualize. It is characterized by five clustered themes: Cultural Responsibility, Student Empowerment, Enhancing Relevance, Curriculum Alignment, and Identity and Self-worth.

The Motivation to Contextualize theme highlights participants' drive to integrate culturally relevant materials and practices into teaching. It is defined by five interconnected themes: Cultural Responsibility, emphasizing the role of preserving cultural heritage; Student Empowerment, where contextualized teaching boosts student confidence and pride in their identity; Enhancing Relevance, ensuring learning materials are meaningful and relatable to students' lives; Curriculum Alignment, adapting the curriculum to reflect local culture while meeting educational standards; and Identity and Self-Worth, fostering students' pride and confidence through a culturally inclusive approach. These themes demonstrate the commitment to creating an educational environment where students connect deeply with the content and feel valued.

Emerging Theme 2. Mechanism to Challenges

This theme is essential for sustaining cultural initiatives and addressing community needs. The subcategories seek financial assistance from external organizations, engage to elders for cultural insights, collaborate with experts and systematic curriculum integration.

Sustaining cultural initiatives and addressing community needs require a strategic approach involving several key actions. These include Seeking Financial Assistance from External Organizations, which helps secure project funding, and Seeking Support from various stakeholders to ensure long-term success. Engaging to elders for

cultural insights can display significant insights, resources and support, conforming that the materials developed is equally culturally relevant. Collaborating with experts is vital for collaboration and enabling shared resources and expertise. Lastly, Systematic Curriculum Integration ensures that cultural content is embedded into the education system, creating a lasting impact. Together, these efforts are crucial for the sustainability and effectiveness of artistic initiatives.

The IP Teachers' Expressed Experiences and Challenges

There are three challenges confronted in contextualizing, challenges in creating accurate cultural materials, misalignment with cultural community and challenges of cultural sensitivity and appropriateness.

Contextualizing educational materials comes with several challenges that must be addressed for effectiveness. One major challenge is creating accurate cultural materials, which requires extensive research and community involvement to avoid misrepresentation. Another challenge is the misalignment with the cultural community, as materials must resonate with and reflect the values and experiences of the people they are meant for. Additionally, ensuring cultural sensitivity and appropriateness is crucial to avoid offending or misrepresenting cultural practices. Overcoming these challenges demands careful planning, consultation with cultural experts, and a deep respect for cultural identities.

Emerging Theme 1. Challenges in Creating Accurate Cultural Materials

This Theme Comprises of three categories, Complexity of Cultural Translation, Aligning with Educational Standards Cultural Sensitivity and Accuracy

Emergent Theme 2. Challenges of Cultural Sensitivity and Appropriateness

Teachers were aware that cultural materials need to be sensitive, age-appropriate, and aligned with the community's values. They quickly discovered the need for careful consideration to

ensure the materials respected Tboli culture and traditions. This include three (3) categories, Hard to Ensure Accurate Cultural Representation, Avoiding Stereotyping and Bias in Contextualizing Materials, Age-Appropriateness and Relevance

Emergent Theme 3. Misalignment with Tboli Community Values

Misalignment with Tboli community values occurs when diverse interpretations, conflicting priorities, and varying dedication to cultural preservation and education create challenges. This category includes: Diverse Cultural Interpretations, Conflicting Cultural Priorities, and Passion and Dedication to Cultural Preservation and Education, Sustainability and Longevity of Cultural Practices

Perception of the Teachers, School Leaders and Tribal Leaders on the Development of Culture-Based Learning Materials and its Alignment with Educational Outcome and Effectiveness

Teachers, school leaders, and tribal leaders view the development of culture-based learning materials as crucial for preserving cultural heritage while aligning with educational outcomes, making learning more meaningful and relevant for students. There are eight emerging theme comprising this question, namely: *Cultural Relevance in Teaching Practices, Adapting to Modern Educational Needs, Enhancing Identity and Belonging, Sustainability and Longevity of Cultural Practices, and Community Ownership of Educational Content, Collaborative Development of Learning Materials, Ensuring Cultural Sensitivity, Student Engagement and Cultural Connection*

Emergent theme 1. Cultural Relevance in Teaching Practices

Educators believe that incorporating cultural elements into teaching practices makes learning more relatable and engaging for students. Teachers feel that students are more motivated to learn when their cultural values, traditions, and language are represented in lessons. This is verbalized using the three (3) sub categories, such as Local Traditions, Cultural Inclusion and Contextual Content.

Emergent Theme 2. Adapting to Modern Educational Needs

There is a need to adapt cultural learning materials to modern educational trends while maintaining cultural integrity. School leaders recognize that culture-based materials should not only reflect traditional practices but also prepare students for a globalized world. This is formulated using the three (3) sub categories, such as Digital Literacy, Flexible Learning and Career Readiness.

Emergent Theme 3. Enhancing Identity and Belonging

Cultural materials help students develop a strong sense of identity and belonging in school. Teachers observe that when students see their cultural heritage in schoolwork, they feel a sense of pride and connection to their roots. This formulated using the three (3) sub categories, such as Cultural Pride, Inclusive Classrooms and Diversity Celebration.

Emergent Theme 4. Sustainability and Longevity of Cultural Practices

Culture-based learning materials are viewed as tools to ensure that cultural knowledge is passed on to future generations. Tribal leaders emphasize the importance of creating materials that will continue to preserve culture in an evolving educational landscape. This framed using the three (3) sub categories, such as Knowledge Sharing ,Cultural Adaptation and Environmental Sustainability.

Emergent Theme 5. Student Engagement and Cultural Connection

Culturally-based learning materials are seen as key to increasing student engagement, especially for Indigenous students. Educators believe that students are more likely to engage with content that reflects their own cultural background.

Emergent Theme 6. Collaborative Development of Learning Materials

Teachers, school leaders, and tribal leaders need to work together to co-create learning

materials that accurately reflect local culture. Teachers suggest that collaboration with tribal elders and community members will ensure the authenticity of the cultural content used in the classroom. Community Partnerships. This is expressed in three (3) sub categories such as Community Partnerships, Student Input and Resource Utilization.

Emergent Theme 7. Ensuring Cultural Sensitivity

There is an emphasis on making sure that learning materials are not only culturally relevant but also culturally sensitive. Teachers and leaders are concerned about the risk of misrepresenting or oversimplifying culture in educational materials, which could lead to stereotypes. This formulated using the three (3) sub categories, such as Avoiding Stereotypes, Cultural Competence and Inclusive Representation.

Emergent Theme 8. Community Ownership of Educational Content

The community should have ownership of the development and use of culture-based learning materials to ensure accuracy and respect. Tribal leaders stress the importance of community participation in educational decisions, including creating culturally appropriate materials. This is articulated in three (3) sub categories such as Cultural Activities, Student-Centered and Cultural Awareness.

Criteria and Guidelines Formulation of Tboli Culture-Based Learning Materials

To formulate effective Tboli culture-based learning materials, the following criteria and guidelines should be considered, synthesizing the emerging themes related to the experiences, challenges, and perceptions of teachers, school leaders, and tribal leaders.

Focus	Activities/Task
Cultural Relevance in Teaching Practices	<ul style="list-style-type: none"> ✓ The materials must integrate Tboli cultural practices, language, and traditions to ensure students see their cultural values represented. ✓ Lessons should be adapted to reflect Tboli students' lived experiences and environments, enhancing relatedness and engagement.
Cultural Sensitivity and Appropriateness	<ul style="list-style-type: none"> ✓ Materials must be free from cultural misrepresentation or stereotypes, ensuring a respectful and accurate portrayal of Tboli heritage. ✓ Teachers must be equipped with knowledge about Tboli culture to teach effectively and inclusively. ✓ All elements of the learning materials should foster respect for diverse cultural identities within the Tboli community.
Community Ownership of Educational	<ul style="list-style-type: none"> ✓ Local leaders, teachers, and community members should actively participate in the development process, ensuring authenticity and cultural relevance. ✓ The community must play an integral role in guiding the preservation and transmission of Tboli traditions.

efforts were evident in their high ratings for promoting cultural continuity, involving local communities, and incorporating local languages and traditions in their instructional materials. This integration of cultural values spans various areas of education, such as civic culture, culture sharing, and local cultural perception, fostering inclusivity and respect for diversity. Their practices aligned with key cultural innovation and civic engagement frameworks, emphasizing the importance of reflecting cultural identity in educational materials to increase student engagement and learning outcomes.

A significant positive correlation existed between IP teachers' instructional practices and their academic-cultural innovation, with a correlation of $r = 0.675$ ($p = 0.000$). Teachers enhance their instructional practices. They are more likely to integrate cultural elements into their teaching materials. This highlighted the importance of culturally responsive teaching in helping educators innovate and bring cultural components into the classroom.

IP teachers were also highly motivated to contextualize learning materials, seeing it as a way to preserve cultural heritage, empower students, and make education more relevant. This motivation was driven by a desire to integrate cultural responsibility, foster student identity, and align curricula with the needs of the local culture. However, teachers faced challenges in this process, particularly in creating culturally accurate content, ensuring alignment with cultural communities, and maintaining cultural sensitivity. When cultural norms are not adequately reflected, these challenges can lead to misrepresentation, alienation, and disengagement among students. To overcome these issues, on-going collaboration, professional training, and careful development of materials are essential for ensuring the educational content's cultural relevance and accuracy.

Culture-based learning materials were vital in preserving cultural heritage while aligning with modern educational goals. These materials enhance student engagement by incorporating local traditions, cultural pride, and inclusive teaching practices. Furthermore, collaborative development

IV. CONCLUSION

Indigenous Peoples (IP) teachers are deeply committed to contextualizing their instructional materials by incorporating real-world examples, traditional knowledge, and Indigenous culture. They prioritize using local resources, fostering collaboration with community stakeholders, and blending traditional and modern knowledge in their lessons. Integrative strategies, such as utilizing local examples, encouraging student participation, and integrating information and communication technology (ICT), create a culturally relevant and engaging educational experience. This approach aligns with existing research on the benefits of contextualized teaching and demonstrates the potential of technology integration to enhance learning.

IP teachers were strongly committed to integrating cultural elements into their teaching regarding academic-cultural innovation. Their

and community ownership ensured that the materials were culturally sensitive, accurate, and meaningful to students, contributing to a more inclusive and effective learning environment.

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