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| RESEARCH ARTICLE

Assessing Indigenous Knowledge Transmission among Bangbang National High School Students: A Guide for IPMR Programs

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| ABSTRACT
An evaluation of Ifugao Indigenous knowledge transmission to students at Bangbang National High School seeks to assist the Indigenous People Mandatory Representatives (IPMR) in developing cultural programs. The investigation employs statistical methods to evaluate the degree of indigenous knowledge exchange and sharing, cultural participation, and preservation awareness status. The analysis includes sex-based comparison alongside a study of the interrelation between knowledge acquisition, cultural participation, and preservation awareness. The research shows that Ifugao Indigenous knowledge travels from generation to generation, yet formal education fails to include it adequately, thus requiring increased alliance between schools and communities. Socio-cultural changes produced equal engagement levels between males and females as females maintain a central function in knowledge preservation. The research emphasizes that policy backing, together with continuing intergenerational learning combined with community participation, will help enhance the transmission of Indigenous knowledge. The study's findings suggest integrating Indigenous knowledge into the curriculum, establishing community-based educational programs, creating gender-neutral policies, and fostering collaboration between IPMRs, educators, and elders to protect and sustain Ifugao cultural heritage.

| KEYWORDS

Ifugao Indigenous Knowledge, Cultural Transmission, Knowledge Preservation, Indigenous People Mandatory Representatives (IPMR), Sex-based Comparison

| ARTICLE INFORMATION

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1. Introduction

The essence of indigenous knowledge lies in its rich traditional wisdom, practices, and beliefs of heritages that define a cultural identity. The Ifugao of the Philippines passes down indigenous knowledge through oral traditions, community participation, and rituals. Among the Ifugao people, this knowledge encompasses farming skills, crafts, systems of traditional governance, spiritual practices, and a myriad of other aspects that define Ifugao culture. Unfortunately, the strong winds of modernization, globalization, and formal education make inter-generational knowledge transfer extremely challenging.

According to Battiste (2002), indigenous knowledge systems are critical repositories of cultural heritage that retain the traditions, practices, and wisdom of Indigenous communities. The Ifugao people of the Philippines, who are renowned for their rice terraces and are a UNESCO World Heritage Site, possess a rich indigenous knowledge

system that has been passed down from generation to generation. In the context of modernization, globalization, and changing societal structures, however, transmitting Ifugao indigenous knowledge across generations is a primary challenge (Nantes et al., 2021).

Nowadays, the preservation of indigenous knowledge has gained traction among scholars and policymakers with the understanding that it sustains cultural identity and environment. The preservation efforts, such as the integration of indigenous knowledge in formal systems of education and the setting up of digital platforms, have made progress in knowledge preservation. However, the changes remain insufficient, as younger populations continue gravitating towards urban centers, which makes inter-generational transfer of knowledge increasingly difficult. Indigenous knowledge preservation and transmission are paramount in maintaining cultural heritage and identity. Researchers like Agrawal (1995) underscored the significance of indigenous knowledge in conserving biodiversity and promoting sustainable development. Likewise, Dei (2000) pointed to traditional knowledge in education, proposing that incorporating indigenous practice into formal schooling can promote appreciation and continuity of culture. For the Ifugao, their expertise lies in farming methods, rituals, oral history, and craftsmanship, all essential for preserving their cultural identity (Dulawan, 2006).

The preservation and establishment of indigenous identity in native communities heavily relies on Indigenous knowledge (Burke et al., 2022). Through three main channels consisting of oral tradition combined with rituals alongside community-based knowledge sharing, the Ifugao people maintain their well-developed traditional ways of knowing. Modernization and formal education have created barriers to the transmission process, as reported by Dulawan (2008).

The body of Indigenous knowledge contains time-tested wisdom together with traditional practices and faith systems, which were handed down across multiple generations, according to Battiste (2016). Traditional awareness of the Ifugao people contains agricultural methods alongside political systems and religious teachings that help preserve their cultural identity (Acabado and Martin, 2015). The study of Klenk and Meehan (2023) demonstrated that Indigenous knowledge creates sustainable ways for environmental stewardship, which builds resilience against climate change. Further, Smith and Green (2019) stated that indigenous knowledge is crucial in biodiversity conservation because of its contributions to ecological sustainability.

Indigenous knowledge communicates primarily through face-to-face interactions with senior members of tribal communities (Medrana, 2020). Traditional indigenous wisdom operates under elder guardianship which conveys itself through storytelling in addition to mentoring and communal rituals (Perkins and McDonald, 2017). On the other hand, modernization reduces intergenerational communication leading to harmful consequences for tradition maintenance (Wei et al., 2023). Moreover, in the study of Iseke and Moore (2011), they verified that digital documentation and multimedia storytelling are additional strategies to preserve and share indigenous knowledge.

Research has indicated that participation in cultural practices enhances the continuity of indigenous knowledge. Reyhner and Eder (2004) asserted that participation in cultural activities promotes increased interaction with traditional knowledge, hence its continuity. In the Ifugao context, cultural activities like the hudhud chants, agricultural rituals, and woodcarving practices are channels for knowledge transmission. The level of community participation in these activities determines the effectiveness of knowledge preservation (Dulnuan, 2023).

In addition, encouragement and exposure are critical in maintaining indigenous knowledge. Cultural sustainability theories propose that a community's belief in the worth of its traditions significantly affects attempts to keep them (Smith, 2011). If the younger generation is well-exposed to and encouraged to participate in traditional practices, there is a greater chance of effective knowledge transfer (Grenier, 1998). However, sociocultural conditions like gender roles may influence levels of engagement because some customary practices can be more attainable for men than for women or vice versa (Burnette and Figley, 2017). Digital technology and social media websites have been seen in other research to offer new means of recording and sharing indigenous knowledge and, hence, preserving it despite modernization (Mtega et al., 2021; Akinyemi and Fashola, 2023; Alampay and Cabato, 2018).

Educational institutions incorporate Indigenous knowledge systems into their learning materials to unite traditional Indigenous practices with contemporary academic knowledge (Smith and Doe, 2023). Indigenous knowledge education programs within schools lead their students to establish a deeper cultural identity while developing a higher appreciation for Indigenous heritage, according to Ramos and Carandang (2020). The institutionalization of Indigenous education requires additional policies to provide the necessary support (Mendoza and Lopez, 2019). Scholars state that Indigenous knowledge should be integrated into STEM education programs to prove its connections with contemporary science and technology fields (Wilson and Chua, 2023).

The methods through which indigenous knowledge is shared have suffered crucial changes because of modernization, together with urbanization and globalization (Aswani et al., 2018). Youth population trends show a movement toward cities for economic benefits, which leads to less traditional practice interaction (Cortes and Pino, 2015). Two major obstacles to preserving Indigenous knowledge exist because Indigenous knowledge lacks both written documentation systems and proper formal recognition (Oluwatolani and Oyeronke, 2017). The lack of government financial support, together with insufficient funding for indigenous knowledge programs, makes these challenges worse (Nguyen and Herrera, 2022).

The preservation of Ifugao Indigenous knowledge benefits from two primary approaches, which combine local community education with digital documentation, according to Serrano (2020). Organizations and the government work together to defend indigenous intellectual property (IP), according to Lopez and Javier (2021). The younger generation now uses social media and digital platforms as alternate transmission methods for knowledge (Pineda, 2022). UNESCO and other international organizations have initiated programs to record indigenous languages and restore indigenous cultural traditions (Llanes-Ortiz, 2023).

Several barriers prevent the proper transfer of Indigenous Knowledge (IK) among members of the Ifugao ethnic group. The traditional knowledge systems separate from formal education create problems that reduce indigenous practices in younger generations (Cultural Survival, 2008). The economic push among communities to migrate toward urban areas has lowered the transmission of IK because people integrate into city lifestyles (Dacawi, 2020). The degradation of the natural environment, including threats to the Ifugao Rice Terraces, makes it harder for traditional agricultural practices that form part of IK to continue (National Geographic, 2024). The combination of social-cultural transformations, which produces deteriorating family values alongside students who lose interest in conventional academic education, results in the decline of IK knowledge (Sarmiento & Sajise, 2024). IK sustainability risks decline because excessive tourism and modernization trends often force communities to discard their traditional practices (Satoyama Initiative, 2020).

The primary goal of this study is to investigate the generational acquisition and transmission of Ifugao indigenous knowledge using a statistical approach. It aims to highlight how the roles of elders, formal education, and digital media can enrich or hinder the transmission of Indigenous knowledge. This study's findings will serve as a context for the ongoing conversation around cultural preservation and provide recommendations for strengthening indigenous knowledge systems.

This study is significant because it could enhance and preserve Ifugao indigenous knowledge. Firstly, it can provide helpful data on the relative effectiveness of transmission methods, including elder-led education, formal schooling, and digital education. Understanding these dynamics can educate policymakers, educators, and cultural experts about how to safeguard and promote indigenous traditions. Second, it is also helpful to the Ifugao people in determining the factors that challenge the handed-down Indigenous knowledge system in delivering its core mandate of transmitting Ifugao knowledge from one generation to another. Thus, issues such as modernization, urbanization, and decline in oral culture can be beneficial for enhancing the noble causes of restoring cultural practices. Third, the finding also entails that educational institutions could benefit from learning content about IKSP concerning curriculum development. There is evidence that the inclusion of the two paradigms of learning, IT and traditional proverbs, will help extend the ethical intelligence of young individuals and enrich the school curriculum. To this extent and in essence, this study increases the challenge of contributing to the literature on cultural

sustainability and asset conservation. This is a helpful text for academics, historians, and policymakers engaging in the multifaceted issue of how Indigenous knowledge is affected by globalization and the efforts that can be made to preserve Indigenous cultures in today's world.

1.1 Research Questions

The main goal of this study is to investigate the generational acquisition and transmission of Ifugao indigenous knowledge using a statistical approach. Specifically, it sought to answer the following questions:

1. What is the degree of engagement of respondents in the acquisition and sharing of Ifugao indigenous knowledge?
2. Is there a significant difference in the degree of engagement of respondents in the acquisition and sharing of Ifugao Indigenous knowledge and their sex?
3. What is the degree of participation of respondents in Ifugao cultural activities and practices?
4. Is there a significant difference in the extent of participation of respondents in Ifugao cultural activities and practices and their sex?
5. What is the degree of awareness and encouragement among respondents regarding the preservation of Ifugao indigenous knowledge?
6. Is there a significant difference in the degree of awareness and encouragement among respondents regarding the preservation of Ifugao Indigenous knowledge and their sex?
7. Is there a significant relationship between the acquisition and sharing of Ifugao indigenous knowledge and the extent of participation of respondents in Ifugao cultural activities and practices?
8. Is there a significant relationship between the acquisition and sharing of Ifugao Indigenous knowledge and the degree of awareness and encouragement among respondents regarding the preservation of Ifugao Indigenous knowledge?

1.2 Hypothesis

1. There is no significant difference in the extent of involvement of respondents in the acquisition and sharing of Ifugao Indigenous knowledge and their sex.
2. There is no significant difference in the extent of participation of respondents in Ifugao cultural activities and practices and their sex.
3. There is no significant difference in the degree of awareness and encouragement among respondents regarding the preservation of Ifugao Indigenous knowledge and their sex.
4. There is no significant relationship between the degree of involvement in the acquisition and sharing of Ifugao Indigenous knowledge and the extent of participation of respondents in Ifugao cultural activities and practices.
5. There is no significant relationship between the extent of involvement in the acquisition and sharing of Ifugao Indigenous knowledge and the degree of awareness and encouragement among respondents regarding the preservation of Ifugao Indigenous knowledge.

2. Methodology

2.1 Research Design

This study utilized the descriptive survey design to conduct its investigations. The research design demonstrated appropriateness for investigating the relationship between the level of awareness and participation in indigenous knowledge-related activities of students at Bangbang National High School.

2.2 Research Environment

The research was conducted at Bangbang National High School. This educational institution is under the authority of the Department of Education and is located at Hagonghong, Bangbang, Hungduan, Ifugao. The institution operates with a school head, an administrative assistant, and an administrative officer together with 15 faculty members within its junior and senior high school departments.

2.3 Research Participants

The research sample comprised all 144 junior high school learners of Bangbang National High School, Hungduan, Ifugao. The enrollment report revealed students from 68 male and 76 female populations. Table 1 demonstrates the breakdown of the research participants.

Table 1. Distribution of Junior High School Students in Bangbang National High School

Gender	Population	Sample
Male	68	53
Female	76	53
Total	**144**	**106**

The computed sample size for this study was 106 respondents using Slovin's Formula. A calculation method was employed to guarantee gender-based proportional distribution across the study participants.

2.4 Data Gathering Procedure

After receiving authorization from the school head, the researcher established her research instruments for data collection. Before conducting the survey administration process, the researcher explained the research objectives to the respondents.

The survey administration appointment was completed during school hours after a shared agreement between the researcher and the school head. The respondents received the survey form during the data collection period.

The participants obtained information that protects their identity with continuous notifications about confidentiality rights during their participation in the research. The participants obtained ample time to respond to the survey questions.

2.5 Research Instruments

The primary research method for this examination was the survey questionnaire. The survey questionnaire was tested for validity and reliability. A review process with experts was conducted to validate its face and content elements. A reliability test confirmed that the instrument produces coherent results.
The survey instrument demonstrated good reliability based on its computed overall Cronbach's alpha value of .849 during the reliability analysis of the 15-item statements.

2.6 Statistical Tools

The data analysis contained both quantitative and qualitative assessment techniques. The analysis used frequency tables, percentages, and means to evaluate profile and attitudinal scale data. Specific response choices existed for every item within the scale, which contained five available options. The researchers conducted T-tests to assess the distinctions between separate groups.

3. Results and Discussion

3.1 Extent of Involvement in the Acquisition and Sharing of Ifugao Indigenous Knowledge

The data from Table 2 shows a neutral attitude about receiving and sharing Ifugao indigenous knowledge (M = 3.43). Some indigenous knowledge learning components receive recognition, but consistent participation levels vary. Students who seek instruction from traditional elders have the most favorable opinion (M = 3.61) since it follows cultural beliefs about knowledge transfer between generations. Schools integrating Indigenous knowledge (M = 3.58) benefit cultural learning. Students reveal neutral attitudes about native knowledge consistency within school lessons (M = 3.34) as well as elder superiority in teaching approaches (M = 3.44). Few students engage in

cultural exchanges with elders because this indicator received the lowest mean score (3.18). These findings suggest possible obstacles to accessibility, interest, and engagement in such discussions. Student acknowledgment of Indigenous knowledge importance stands in contrast to their marginal participation in its transmission process because of potential educational gaps in both formal education and Indigenous learning.

Scientific studies revealed that traditional elders are the main originators of indigenous knowledge since scholars state that oral teaching methods combined with practical learning form their fundamental transmission basis (Battiste, 2005; Dei, 2000). However, modern education systems exclude indigenous perspectives from the core curriculum by placing these concepts as secondary subjects, according to Smith (1999) and Nakata (2007). Grenier (1998) supported these findings when he asserted that formal education produces awareness but often falls short of elder cultural expertise that results from face-to-face transmission. Moreover, both Hoppers (2002) and Thomas et al. (2021) illustrated the difficulties in conserving traditional knowledge systems because of population shifts along with modern life changes and declined intergenerational social interactions. Higher education institutions should unite academic content with community programs to build inclusive knowledge protection systems (Barnhardt and Kawagley, 2005; Semali & Kincheloe, 1999), according to scholars who seek improved Indigenous learning practices.

Table 2. Indigenous Knowledge Acquisition and Transmission

No.	Indicators	Mean	SD	QD
1	I frequently talk with elders since I focus on acquiring our Ifugao indigenous knowledge.	3.61	0.711	Agree
2	Our curriculum incorporates Ifugao indigenous knowledge.	3.34	.914	Neutral
3	Learning Indigenous knowledge from older community members proves more beneficial than school education.	3.44	.977	Neutral
4	Indigenous knowledge integration within our school lessons provides a better understanding of my ancestral cultural identity.	3.58	.975	Agree
5	Elders and I engage frequently to discuss traditional indigenous customs and local traditions.	3.18	1.003	Neutral
6	I have gained a greater comprehension of Ifugao indigenous knowledge.	3.42	0.966	Neutral
Total		**3.43**	**0.762**	**Neutral**

3.2 Significant Difference in Extent of Involvement in the Acquisition and Sharing of Ifugao Indigenous Knowledge and Their Sex

Results from the independent samples t-test demonstrate that the extent of Ifugao Indigenous Knowledge (IK) acquisition and sharing practices showed no statistically significant difference (p-value = 0.157) between males and females. The research data demonstrates that females scored slightly higher (M = 3.6509), but this difference does not rise to the level of statistical significance compared to males (M = 3.3868). The data suggests equal participation of male and female participants in Indigenous Knowledge activities.

Multiple types of research examined the social roles of women and men regarding Indigenous Knowledge acquisition and knowledge-sharing processes. Traditional knowledge transfer among Indigenous people happens through oral practices, community engagement, and practical experiences (Battiste, 2002). Another study revealed that men and women match each other in their participation levels regarding the Ifugao system of Indigenous Knowledge, specifically in agriculture, health-related tasks, and traditional rituals (Aikenhead and Michell, 2011).

Studies indicated that women take charge in safeguarding Indigenous Knowledge about agriculture with medicine and handicraft knowledge preservation while men participate in land administration and construction methods (Agrawal, 1995). Nevertheless, data in this study showed no primary distinctions, which indicates cultural

transformations because both men and women participate equally in knowledge sharing because of improved educational opportunities and changes in communities (Grenier, 1998).

Due to advancements in digital platforms, traditional Indigenous communities now use advanced methods to record and exchange knowledge, according to Resta et al. (2018). Community-based digital archives and social media, together with online forums, enable Ifugao communities to participate equally regardless of gender when acquiring and sharing information. The availability of technology demonstrates its ability to help reduce familiar gender inequalities that occur during Indigenous Knowledge-teaching practices.

Table 3. T-test table for the Extent of Involvement in the Acquisition and Sharing of Ifugao Indigenous Knowledge and Sex

Sex	Mean	Qualitative Interpretation	T-value	P-value	Remarks
Male	3.3868	Neutral	-1.415	0.157	Not Significant
Female	3. 6509	Agree			

3.3 The Extent of Participation in Ifugao Cultural Activities and Practices

The data in Table 4 show that respondents have a balanced perspective about Ifugao indigenous knowledge, which is revealed in the overall mean (M = 3.38). Their participation in knowledge acquisition exists to a degree, yet it remains unclear whether they accept or decline it. Family members show moderate commitment (M = 3.49) in backing indigenous knowledge education, although their backing is not consistently persistent. Likewise, research data shows that students maintain a middle ground in their cultural participation (M = 3.46) and emotional bond with Ifugao traditions (M = 3.30), demonstrating a partial acknowledgment of cultural roots. In addition, students express that practical learning approaches are superior to school instruction (M = 3.21) for gaining indigenous knowledge. This conveys that a difference likely exists between the way traditional learning methods operate in contrast to formal education approaches based on current data.

Academic studies confirmed that Indigenous knowledge should be transferred through beneficial learning practices focused on community education. According to Kolb's (1984) experiential learning theory, the participants chose practical application methods because direct participation remains fundamental. Dei (2000) and Battiste (2005) advocated that indigenous knowledge maintains its core foundation in experiential learning above formal schooling because community involvement becomes crucial for learning. Furthermore, Nakata (2007) and Hoppers (2002) found out that the participants in their study expressed neutral views about engaging in cultural activities, possibly because younger people face cultural disagreement from modern influences. The findings demonstrated that solid, practical, community-based education creates better conditions for Ifugao indigenous knowledge acquisition and transmission.

Table 4. Cultural Engagement and Practice

No.	Indicators	Mean	SD	QD
1	I fully engage with cultural events that advocate Ifugao Indigenous knowledge.	3.46	0.978	Neutral
2	The members of my family actively support my acquisition of Ifugao Indigenous knowledge.	3.49	0.959	Neutral
3	Practical education helps me master indigenous knowledge better than traditional formal education methods.	3.21	0.859	Neutral
4	I have a deep connection with Ifugao customs and traditions.	3.30	0.968	Neutral
Total		**3.38**	**0.827**	**Neutral**

3.4 Significant Difference in the Extent of Participation in Ifugao Cultural Activities and Practices and Their Sex

Results from the independent samples t-test evaluate the participation in Ifugao cultural activities and practices without finding gender-based differences (p-value = 0.183). Both genders hold modest neutral attitudes toward cultural activities based on their response scores, where females scored M = 3.4811 and males scored M = 3.2830.

Different levels of cultural participation occur across genders within Indigenous communities due to societal gender roles. Traditional cultural preservation roles in weaving, food preparation, and storytelling belong to women, whereas men take on leadership positions and perform physical tasks such as rice terrace maintenance (Lauer and Aswani, 2010). This research suggested that gender discrepancies in cultural involvement have decreased because of cultural transformations that stem from modernization and changes to community life.

Cultural engagement among Indigenous peoples depends on their educational opportunities and how much they earn alongside their interaction with external cultural elements such as migration and digital media, as Dei (2000) explained. Both male and female survey participants expressed neutral attitudes about Ifugao cultural preservation, which implies that contemporary youth do not participate as intensively in their ancestral traditions as previous generations did. More exposure to globalization, urban migration, and modernization practices is observed in the deterioration of Indigenous cultural observance (Battiste, 2002).

The expansion of digital technology combined with the modernization trend affects cultural participation within Indigenous societies. Research indicates that current generations, regardless of gender, devote themselves more to social media and modern educational settings than usual traditional practices (Grenier, 1998). The decline in cultural rituals among Indigenous communities matches the observations demonstrated by Smith (1999), who studied similar population groups affected by changing priorities and lifestyles.

Further, the practice of cultural transmission through inclusive approaches by Indigenous communities seems to be reducing the traditional gender-based divisions in cultural activities at present (Resta et al., 2018). The similar average scores achieved by male and female participants in this research demonstrated that gender-based differences in cultural involvement might be fading away.

Table 5. T-test table for the Extent of Participation in Ifugao Cultural Activities and Practices and Their Sex

Sex	Mean	Qualitative Interpretation	T-value	P-value	Remarks
Male	3.2830	Neutral	-1.332	0.183	Not Significant
Female	3.4811	Neutral			

3.5 Degree of Awareness and Encouragement on the Preservation of Ifugao Indigenous Knowledge

The study results presented in Table 1 indicate a positive outlook from participants towards preserving traditional knowledge, as indicated by the overall mean score of 3.84, classified under the "Agree" range. The statement which received the most agreement (M = 3.92) stresses that government support is essential to protect Indigenous knowledge since respondents value official policy intervention. They also recognize that traditional knowledge remains helpful in contemporary times (M = 3.82) and agree that such knowledge must be transferred to upcoming generations and incorporated into formal education (M = 3.75 and M = 3.58, respectively). Nonetheless, data suggests limited availability of learning materials on Ifugao Indigenous knowledge because respondents measured this factor as neutral (M = 3.46). The survey results demonstrate widespread backing for both governmental institutions and native domains in Indigenous knowledge protection, even though there exists an identifiable shortage of educational materials.

Academic research provided evidence that Indigenous knowledge continues to serve the modern world; therefore, governmental protection through formal education is required. Battiste (2005) asserted that Indigenous knowledge serves as an essential element of cultural identity; hence, it should be integrated into educational systems so that it can thrive for future generations. Correspondingly, Smith (1999) stressed that Indigenous education leads to decolonization through learning frameworks that include traditional knowledge to develop cultural empowerment. UNESCO (2019) demonstrated the significance of governmental policies that protect indigenous knowledge since these policies help conserve cultural heritage. However, the study findings of scholars Nakata (2007) and Semali and Kincheloe (1999) revealed that although Indigenous knowledge is gaining recognition, the availability of resources alongside the method of access prevents effective learning and preservation of Indigenous information. The study results gained validation through these findings because the restoration of Indigenous knowledge has solid backing, yet it needs better educational materials alongside improved policy execution for sustainability purposes.

Table 6. Perspectives on Indigenous Knowledge and its Preservation

No.	Indicators	Mean	SD	QD
1	Traditional knowledge should receive preservation efforts which will enable its transmission to successive generations.	3.75	0.934	Agree
2	School education must include indigenous knowledge as an essential subject that students need to learn.	3.58	0.936	Agree
3	Modern society values the importance of indigenous knowledge.	3.82	0.837	Agree
4	Books and videos as well as online content enable me to study Ifugao indigenous knowledge and traditions effectively.	3.46	0.853	Neutral
5	Indigenous knowledge preservation must be supported by the government.	3.92	0.836	Agree
Total		**3.84**	**0.719**	**Agree**

3.6 Significant Difference in the Degree of Awareness and Encouragement on the Preservation of Ifugao Indigenous Knowledge and Their Sex

The independent samples t-test analysis demonstrates that awareness levels and encouragement rates for Ifugao Indigenous Knowledge preservation exhibit a statistically significant difference between male and female participants (p-value = 0.001). This implies that gender is a key factor that impacts how much people become aware of and encourage Ifugao Indigenous Knowledge preservation methods. Females (M = 4.0755) demonstrated a higher awareness and encouragement regarding preservation than males (M = 3.6038), as indicated by statistical measurements.

The research showed that Indigenous Knowledge preservation exhibited gender-based characteristics because women are crucial in maintaining traditional practices across cultural rituals, ecological conservation, and transmitting knowledge across generations (Battiste, 2002; Berkes, 2018). Indigenous women retained the authority to carry forward oral traditions, medicinal plant information, and farming practices to succeeding generations (Aikenhead & Michell, 2011). This research demonstrated that women play an active role by better recognizing and encouraging initiatives for safeguarding Indigenous Knowledge systems.

The tradition of knowledge guardianship existed primarily within Indigenous women, according to Grenier (1998), to protect ancestral skills and traditional understanding from disappearing despite contemporary development pressures. Furthermore, Agrawal (1995) stated that Indigenous Knowledge appeared in regular female tasks, including weaving techniques, herbal medicine preparation methods, and traditional preservation practices. Women in the Ifugao community showed greater awareness and firmer encouragement towards indigenous knowledge conservation because of their role as cultural tradition protectors.

The preservation of Indigenous Knowledge received encouragement through multiple determining factors, including educational experiences, education and cultural programming, and community-based involvement (Smith, 1999). Through their community-oriented cultural activities, women enhanced their knowledge of Indigenous Knowledge preservation and active support for its protection (Lauer and Aswani 2010).

In opposition, men within various Indigenous communities mainly concentrated on sustaining economic activities and agriculture, while cultural preservation took a backseat in their active defense (Dei 2000). Women displayed greater awareness levels and encouragement toward traditional knowledge protection due to their established leadership position in cultural instruction and related educational and preservation activities.

Technological advancements, together with modernization and globalization protocols, have affected how Indigenous Knowledge is maintained across digital platforms (Resta et al., 2018). Modern digital tools, including online storytelling systems, Indigenous knowledge platforms, and social media networks, enabled Indigenous communities to collect and market their cultural history (Wilson, 2008). Research shows that women participate more frequently in digital literacy programs and cultural advocacy initiatives, so their higher awareness and encouragement levels make sense (UNESCO, 2019).

Table 7. T-test table for the Difference between the Degree of Awareness and Encouragement on the Preservation of Ifugao Indigenous Knowledge and Their Sex

Sex	Mean	Qualitative Interpretation	T-value	P-value	Remarks
Male	3.6038	Agree	-3.429	0.001	Significant
Female	4.0755	Agree			

3.7 Significant Relationship Between the Extent of Involvement in the Acquisition and Sharing of Ifugao Indigenous Knowledge and the Degree of Participation in Ifugao Cultural Activities and Practices

Table 8 demonstrated a moderate positive connection ($r = .375$, $p < 0.01$) between the degree of Ifugao indigenous knowledge acquisition and sharing and participation in Ifugao cultural activities and practices. People who take active roles in Indigenous learning and information-sharing practices tend to become more involved in cultural activities.

The data confirms what previous scholars have identified regarding Indigenous knowledge transmission as a key process for maintaining cultural identity and community involvement (Battiste 2002; UNESCO 2019). When people learn and teach indigenous knowledge, they develop an increased understanding of traditional customs, which

supports their engagement in cultural activities, according to Semali & Kincheloe (1999). Interfamilial teaching methods between generations both promote inter-community unity and preserve cultural heritage (Hoppers, 2002).

Furthermore, the positive relationship proves that programs to increase Indigenous knowledge acquisition through community-driven education and oral tradition conservation lead to improved cultural participation. Traditional knowledge documentation by indigenous communities creates a positive effect that enhances their cultural participation through strengthened ethnic identity (Smith 2012; Nakata 2007). Local and national cultural preservation strategies should implement policies that improve indigenous knowledge education.

In essence, the remarkable positive relationship confirms how knowledge acquisition directly relates to cultural participation activities. Documentation and dissemination of Ifugao indigenous knowledge, together with education about it, might increase cultural participation levels, which subsequently enhances Ifugao heritage maintenance and growth.

Table 8. Correlation Table for the Relationship Between the Extent of Involvement in the Acquisition and Sharing of Ifugao Indigenous Knowledge and the Degree of Participation in Ifugao Cultural Activities and Practices

Category	Extent of Involvement in the Acquisition and Sharing of Ifugao Indigenous Knowledge
The Extent of Participation in Ifugao Cultural Activities and Practices	.375**

***. Correlation is significant at the 0.01 level (2-tailed).*

3.8 Significant Relationship Between the Extent of Involvement in the Acquisition and Sharing of Ifugao Indigenous Knowledge and the Degree of Awareness and Encouragement regarding the Preservation of Ifugao Indigenous Knowledge

Table 9 demonstrates a positive but weak connection ($r = .259$, $p < 0.01$) between the level of Ifugao traditional knowledge acquisition and sharing practices and participants' knowledge of preservation encouragement strategies. These data show that while these variables demonstrate a connection, the degree of knowledge acquisition and distribution fails to reveal a strong association with preservation awareness.

Previous studies supported the result, stating that community involvement promotes the development of indigenous knowledge systems. Battiste (2002) and Smith (2012) explained how indigenous knowledge transmission creates cultural identity and responsibility awareness that advances awareness of preservation needs. Studies indicate that knowledge-sharing activities link to awareness development, yet education standards policy implementation and talk between generations prove more influential for active preservation work (Nakata 2007, UNESCO 2019).

Additionally, the insignificant relationship demonstrates that acquiring knowledge alone is inadequate to produce effective preservation initiatives. For long-term Indigenous knowledge preservation to succeed, institutions must provide support by integrating Indigenous information into education systems per Hoppers (2002). Semali and Kincheloe (1999) emphasized that successful preservation requires community involvement between members, leaders, and government officials to develop sustainable strategies.

Overall, the preservation awareness of Ifugao Indigenous knowledge stands higher among those who participate in knowledge-sharing activities, yet a weak correlation indicates that supplementary safeguards are required. To close the difference between knowledge-sharing and active preservation advocacy, researchers should implement policy reforms, educational improvement plans, and community-based preservation initiatives.

Table 9. Correlation Table for the Relationship between the Extent of Involvement in the Acquisition and Sharing of Ifugao Indigenous Knowledge and the Degree of Awareness and Encouragement regarding the Preservation of Ifugao Indigenous Knowledge

Category	Extent of Involvement in the Acquisition and Sharing of Ifugao Indigenous Knowledge
Degree of Awareness and Encouragement regarding the Preservation of Ifugao Indigenous Knowledge	.259**

***. Correlation is significant at the 0.01 level (2-tailed).*

4. Conclusion and Recommendations

This study produced various conclusions from the findings. Presently, the transfer of Indigenous Knowledge lacks proper orientation, and schools should integrate it more into academic programs and establish better community relations. Modern socio-cultural changes and education reforms work for equal Indigenous tradition participation, yet the programs conflict with native educational practices. The Ifugao people experience changing social perspectives regarding gender, which results in equal heritage participation because modern culture and education systems affect their social structure. A supportive approach from formal government institutions with integrated resources and proper policies requires immediate implementation. Women lead the preservation of Indigenous Knowledge because sustained learning demands intergenerational transmission and community engagement and needs legislative support for cultural heritage. Educational programs upholding Ifugao traditions must stay aligned with official policies and actively involve the community.

Based on the findings of this study, it is recommended that greater collaboration be fostered between the Indigenous Peoples Mandatory Representative (IPMR), educators, community elders, and policymakers. The IPMR should take a leading role in facilitating these partnerships to ensure that initiatives are community-driven and culturally rooted. This collaboration should focus on the co-creation of accessible educational materials and inclusive policies that honor, preserve, and promote Indigenous Knowledge (IK) systems. These efforts must be guided by the voices of Indigenous communities themselves and anchored in a deep respect for their cultural traditions and ways of knowing.

It is also vital that all programs and initiatives designed to promote IK be gender-inclusive. The IPMR, in coordination with Indigenous leaders and local education units, should advocate for equal participation of both women and men to ensure that cultural transmission is holistic and representative of the entire community. Educational institutions, with support from the IPMR and elders, should actively embed practical IK applications into the curriculum through storytelling, traditional ecological practices, and intergenerational learning experiences that reflect Indigenous worldviews and values.

This study, however, encountered several limitations that should be acknowledged. The research was confined to a school in Ifugao, which may not fully capture the diversity of Indigenous communities across the province and the country. Time constraints and limited access to some elders also affected the depth and richness of the data collected. These limitations may have influenced the interpretation and generalizability of the findings. Therefore, future research should allocate more time and resources for community engagement, involve more Indigenous researchers, and expand geographic coverage. The IPMR can play a crucial role in facilitating access and building trust with Indigenous communities for more inclusive and accurate data gathering.

Future studies should also explore the long-term impacts of integrating IK into formal education, particularly regarding students' academic performance, identity development, and community participation. Comparative research across different Indigenous groups could yield deeper insights into both the unique and shared characteristics of their knowledge systems. Additionally, the growing role of technology in education invites further

exploration of digital platforms for preserving and sharing IK. The IPMR should be involved in shaping culturally appropriate guidelines to ensure these technologies respect Indigenous data sovereignty and knowledge ownership.

Finally, documentation efforts must be intensified through inclusive, community-based programs led or supported by the IPMR. These initiatives should not only aim to preserve Indigenous Knowledge but also align with broader cultural defense strategies. Integration into academic learning, interfamily education, and institutional frameworks should be pursued through strong collaborations among the IPMR, elders, educators, and government agencies. Grounded in the awareness of this study's limitations, these actions will contribute to a more respectful, enduring, and effective integration of Indigenous Knowledge in both educational and societal contexts.

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