iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

T'BOLI PERSPECTIVES ON THE ACCEPTABILITY OF USING DIGITAL VISUAL COMMUNICATION FOR IKSP PRESERVATION

Maricar A. Retonel, LPT
Graduate Student - College of Development Management Graduate Program
University of Southeastern Philippines, Mintal Campus, Davao City

Dr. Cherrelyn P. Campaña, PhD
Program Head - College of Development Management Graduate Program
University of Southeastern Philippines, Mintal Campus, Davao City

ABSTRACT
This study examines the acceptability of Digital Visual Communication (DVC) as a tool for preserving the Indigenous Knowledge Systems and Practices (IKSP) of the T'boli people in South Cotabato. Guided by the Pinch and Bijker's (1984) Social Construction of Technology (SCOT) framework, Caroll et al.'s (2020) Collective Benefit, Authority to Control, Responsibility, and Ethics principles (CARE) for Principles for Indigenous Data Governance, and Nonaka et al. (2000) Socialization, Externalization, Combination, and Internalization (SECI) Model, the research evaluates the community's perspective through four thematic pillars: Social Readiness & Support, Technical & Cost Adequacy, Authenticity & Representation, and Archival & Educational Impact. Findings reveal a high level of acceptance, particularly in the realm of archival impact (M = 4.24), where respondents recognized DVC's potential use in bridging intergenerational and cultural gaps. While technical challenges, such as equipment costs and intermittent access, persist, the T'boli culture bearer perceives DVC not merely as a modern imposition but as a vital mechanism for asserting cultural ownership and ensuring the continuity of their heritage in this digital age.

Keywords:
Indigenous Knowledge Governance, Indigenous Knowledge Systems and Practices, Indigenous Data Sovereignty

BACKGROUND OF THE STUDY

The Indigenous Knowledge Systems (IKS) are more than just data or text found in history books; rather, they are a living system of negotiation among ideas, knowledge, practices, and social group norms. Because of the lack of sensitivity and awareness, marked by past colonialism using force and present cultural colonialism, there are global threats to our indigenous peoples' (IP) treasured knowledge. Indigenous Knowledge Systems are inherently characterized by tacit knowledge, as they exist in the form of oral traditions, practices, and lived experiences. Due to its nature, it is vulnerable to the growing digital culture, particularly when operating globally in a digital-first world. The battle of the preservation and continuity of IKS is a battle of knowledge management more than physical displacement of our IP. This is so relevant that the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (UN 2007) mentions the IP right to maintain, control, protect, or develop their indigenous knowledge. That is why the call for Indigenous Data Sovereignty (IDS) and Governance (IDG) is pushed to be adopted globally. Caroll et al. (2019) describe Indigenous Data Sovereignty as the right of IP in governing their data. This includes the collection, ownership, and use of it. Additionally, Indigenous Data Governance refers to the system of how IP govern and implement their knowledge. According to Carroll et al. (2019), the IDS and IDG are crucial in the IP's nation-building and nation-rebuilding efforts, and importantly, in the decolonization of data and the control of its governance.

Most of the population of South Cotabato originated from the resettlement efforts of the 1940s, formalized by Commonwealth Act No. 141, which contributed to resolving landlessness and agrarian unrest in Luzon and Visayas. Sadly, this resulted in an innate nature of cultural colonialism, through the displacement of the existing IP in the area. In Lake Sebu, South Cotabato, the dominant IP community is composed of the T'boli and Ubo people. According to Indigenous Peoples Mandatory Representative (IPMR) Antonio Abing, 10% of South Cotabato's population consists of IP.

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

Ironically, the celebrations in the city and other municipalities in the province focus on showcasing the Blaan and T'boli cultures, when in fact, most of the locals are from the Visayas and Luzon regions.

In connection, the preservation efforts of the IP culture are focused on festivals, commemorative days, and academic research. On the other hand, the Blaan and T'boli people are trying to preserve and showcase their culture through various art forms, including Mabal weaving among the Blaan and T'nalak weaving among the T'boli, as well as brass work and oral and performing arts. This is effective and authentic as it genuinely comes from these people.

Sadly, the scope of these preservation efforts is difficult to bridge among the settler population, without the risk of exoticism or cultural commodification. For example, festivalgoers would see the IP perform on the streets, sometimes painfully shoeless as they danced, and view the whole thing as just an attraction, not understanding what real cultural preservation truly means for the IP. In retrospect, there is no meaningful interaction among the settlers, beyond the usual setup in work and school, where IP children tend to assimilate into the settlers' culture. Shepherd (2002) describes, in his study, how, using the lens of anthropology, tourists or spectators, when trying to commodify the culture they are consuming, tend to alienate the producers or owners of the culture. This is akin to people attempting to perform rituals and wear cultural artifacts that hold significant meaning for certain cultures, but for these individuals, it is merely an attraction. By doing this, it becomes a double-edged sword, as it forces the owners of the culture to compromise to maintain a livelihood, or at times, for the sake of socialization. But, understanding IDS and IDG, there are no intentional initiatives when it comes to sovereignty and governance.

Knowledge Systems Management has the potential to serve as the framework for effective cultural preservation efforts. Technology has a big potential in helping with the IDS and IDG. There is a paradox when it comes to adapting technology. There are notions that technologies such as digital visual communication (DVC) tools are a threat to the traditional arts. This is understandable because the same technology can be distracting for the indigenous youth. But technology also offers an opportunity to be used as a tool in the process of Knowledge Systems, specifically in conveying tacit knowledge into explicit knowledge that is relevant and familiar to this generation.

STATEMENT OF THE PROBLEM

The principal problem, however, lies not in the settlers or a specific social group, but rather in the preservation of IKSPs. The very nature of IKSPs is in a tacit form, mainly oral-based, and is performed and practiced in real-world settings. This poses a direct threat to the continuity of indigenous knowledge systems, as mishandling of IKSPs within the community and the intervention of emerging cultures will be prominent without proper preservation efforts.

Internally within the study, there could be a complication, as the use of DVC as a tool for IKSPs is not intensively recorded. DVC is primarily a documentation tool, rather than a direct and established preservation tool. However, this can also present an opportunity to test this tool by utilizing existing frameworks and models properly. Another problem is the gap and uncertainty regarding the effectiveness, due to the lack of a formal framework and models for how IP can strategically utilize DVC in preserving knowledge systems. This study is the first phase of further research on introducing the DVC intervention. Therefore, the goal is to determine the acceptability level of the T'boli people towards DVC, to further study the feasibility of additional testing.

The main study question, therefore, is:

"What is the level of acceptability of the T'boli in using Digital Visual Communication?" (SOP 1) and "What is the level of acceptability of the T'boli in using digital visual communication in terms of:

1.) Role and Social Readiness and Support
2.) Technical Adequacy
3.) Authenticity
4.) Archival and Educational Impact (SOP 2)

SIGNIFICANCE OF THE STUDY

The findings of the study are beneficial to the following:

T'boli and Blaan communities in South Cotabato. This study can provide a respectful, effective, and appropriate community-based framework to assert Indigenous Data Sovereignty (IDS) and Data Governance (IDG), utilizing digital visual communication (DVC) assets in the management of Indigenous Knowledge Systems.

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

South Cotabato population. This study will help the non-IP population to be respectful and aware of the knowledge management of indigenous knowledge. They can also utilize the DVC assets and tools as pedagogical, anthropological, and data management tools.

The academe and the researchers. This study can fill the gap in the fields of Communication Studies, Information Management Science, Anthropology, and Indigenous Studies.

The policymakers. For the National Commission on Indigenous Peoples, Local Government Units, DepEd, and the Commission on Higher Education, among others, the findings can inform the creation of policies. This can help in the funding of community-led indigenous preservations using digital tools, mechanisms in indigenous knowledge preservation, and developing IP-centric educational materials

SCOPE AND LIMITATIONS

This is a study that sets its boundaries and limitations on the following:

Geography. The study is limited to the T'boli communities in Lake Sebu and Koronadal City, South Cotabato.

Participants. The study participants are limited to indigenous cultural bearers and masters, particularly among IP youth, who can become future creators and consumers.

Time frame. The study is conducted over only six months and possibly focuses solely on the openness of the IP community, rather than the actual practice of externalizing tacit knowledge into explicit knowledge forms.

Content. The study is limited to the use of DVC tools, specifically in static vector and pixel form, utilizing computer-aided drawing tools.

Definition of Terms

To ensure a clear understanding, the following operational terms will be used in this study.

Indigenous People/s (IP). Distinct ethnic groups that have direct continuity from the original inhabitants of the region. Often, they identify with the strong link to their traditional land and are marginalized because of physical and cultural displacement.

Indigenous Knowledge (IK). The holistic, tacit, community-based, and living body of knowledge of the T'boli and Blaan people encompasses language, oral traditions, practices, rituals, visual language, and ecological wisdom.

Indigenous Knowledge Systems (IKS). The system of holistic, tacit, community-based, and living body of knowledge by the IP.

Indigenous Knowledge Management (IKM). The community-led and indigenous process of the IP in creating, capturing, identifying, storing, and transmitting their IK.

Digital Visual Communication (DVC). Refers to the communication using digital visual tools. In an operational sense, this refers to the creation of meaning through computer-aided drawings and illustrations in vector or pixel form.

T'boli. An IP group located in the highlands of South Cotabato, specifically around the areas of Lake Sebu and T'boli.

REVIEW OF RELATED LITERATURE

Theoretical Framework

This study is grounded in an Indigenous Knowledge Systems (IKS) framework, recognizing that the T'boli and Blaan people of South Cotabato possess pre-existing, holistic, and community-owned knowledge management systems. It is imperative to adopt the appropriate approach when conducting this study. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (UN 2007) emphasizes the importance of indigenous knowledge, cultures, and traditions as a contributing factor for sustainability and equitable development. UNDRIP places importance on the prevention of forced assimilation or the destruction of their culture. Importantly, Article 31 further reiterates the rights of indigenous peoples (IP) to maintain, control, protect, and develop their cultural heritage, traditional knowledge, and traditional expressions. This includes the manifestations of technologies. Despite the primary focus of UNDRIP on protecting the environment, which is reinforced by the preservation of IKS, the United Nations declaration can be connected to the management of future technologies and knowledge systems related to IP.

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

As described in the study by Caroll et al. (2020), the importance of applying what they call CARE principles in handling Indigenous Data Sovereignty (IDS) is emphasized, which stands for: collective benefit, authority to control, responsibility, and ethics. The development of the CARE principle was based on data from various studies conducted between 2011 and 2018. They discovered that mainstream values and data often don't align with the indigenous cultures and collective rights. In IDS, it is important that the IP must first govern the collection, ownership, and application of its data. This grounding principle is crucial for advancing the study of the role of digital visual communication (DVC). To properly contribute to the wider IKS framework, the researcher must be sensitive in data gathering and proposing solutions for the preservation and promotion of IKS among the T'boli and Blaan people.

To further understand how to further the solution of using DVC, this study is guided by the SECI Model. Positioning the DVC as a key mechanism for externalization, which involves translating the oral and traditional visual communication of the T'boli and Blaan people into more explicit digital assets. Nonaka et al. (2000) emphasize the importance of knowledge creation as dynamic, not just a stock of knowledge, but rather a continuous process. This remains true to existing knowledge or technology, which in our study are the cultures and practices of the IP. In their theory, information becomes knowledge when individuals interpret it and give it context, anchoring it in their beliefs and commitments. Hence, knowledge is relational. Grounded in this theory, the researcher recognizes the importance of knowledge management extending beyond ideas to encompass the relational aspect of knowledge management, including artists and communicators using DVC.

Nonaka et al. (2000) describe two types of knowledge: explicit knowledge and tacit knowledge. Explicit knowledge is formal and systematic language. Here includes the DVC materials, which are an applied technology. On the other hand, tacit knowledge is highly personal and hard to formalize. This is deeply rooted in action, routines, commitment, ideals, values, and emotions. In the context of the IKS framework, it refers to the IKS, encompassing both the existing culture and practices. In the SECI model, which stands for socialization, externalization, combination, and internalization, the knowledge creation is the interaction of the two types of knowledge. In the process of socialization, as related to our study, IKS cultures and traditions are created through the interaction of the IP within their community. In applying the role of DVC for IDS, the researcher and the visual artists will enter the process of externalization. This is a simultaneous process, as we create digital assets while generating explicit knowledge. Going back to the UNDRIP, it is highly important that the IP would be part of the governance of their own indigenous data.

Lastly, regarding the frameworks to be used in this study, we must also investigate the impact and role of DVC when applying the IKS framework. Applying the Social Construction of Technology (SCOT) framework can help explain how the adaptation of digital tools, technology, and visual semiotics facilitates the communication of IKS. In Pinch and Bijker's (1984) work about the social construction of facts and artifacts, they described in their model that more than just the adaptation of technology as simply acquiring another knowledge in a linear way, the social constructivism plays a role where there is an exchange of meaning that makes technology relevant to a certain social group. The SCOT model explains the developmental process, where technology, as used by Pinch and Bijker, should first have a relevant meaning for the members of a certain social group to stabilize the norms of that technology for that social group. In relation to this study, the researcher can apply this model to determine the relevance and appropriateness of using DVC as a technology for preserving IKS and maintaining relevance for both the IP and the visual artists who will participate in this study. The model will also help prevent intrusion, as the study will first ensure that the T'boli and Blaan people have governance over the data and content they share, ensuring that the meaning is also relevant to them when introducing DVC.

Conceptual Framework

Figure 1 represents the interactions of identified concepts that is the guiding conceptual framework of this study. Identified concepts are as follows: (1) Concept 1: Input: Digital Visual Communication (DVC), (2) Concept 2: The Process: The Knowledge Management Process, (3) Concept 3: The outcome: Preservation and continuity of IKSPs, and (4) Concept 4: Context: Indigenous cultural context and governance.

Concept 1 is the input or the intervention, which is the DVC. This is the tool or practice that this study investigates in terms of its effects and plausibility. DVC in the initial study refers to digital assets, specifically digital illustrations, which are available in both vector and pixel formats. The emphasis is on using static assets rather than video formats.

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

Concept 2, which is the process, is the mechanism that enables the DVC to work. With this, we will maximize the use of Nanoka et al.'s (2000) SECI model, emphasizing externalization first, and briefly touching on the combination and internalization stages. The externalization happens in the process of conveying tacit knowledge, which is the IKSP, into explicit knowledge using DVC.

Concept 3, which is the outcome, is the indicator and is dependent on the effectiveness of the tools and mechanisms. For this study, the desired outcome is the preservation and continuity of the T'boli IKSPs in South Cotabato, using the DVC.

Finally, Concept 4, which refers to the context, encompasses the environment that influences the entire process. The three main frameworks will serve as the lenses to effectively identify the indicators. In applying the frameworks, this study identifies indicators such as: (1) the existence of the CARE principle, (2) shared meanings, and (3) adaptation of technology to fit the social and cultural norms.

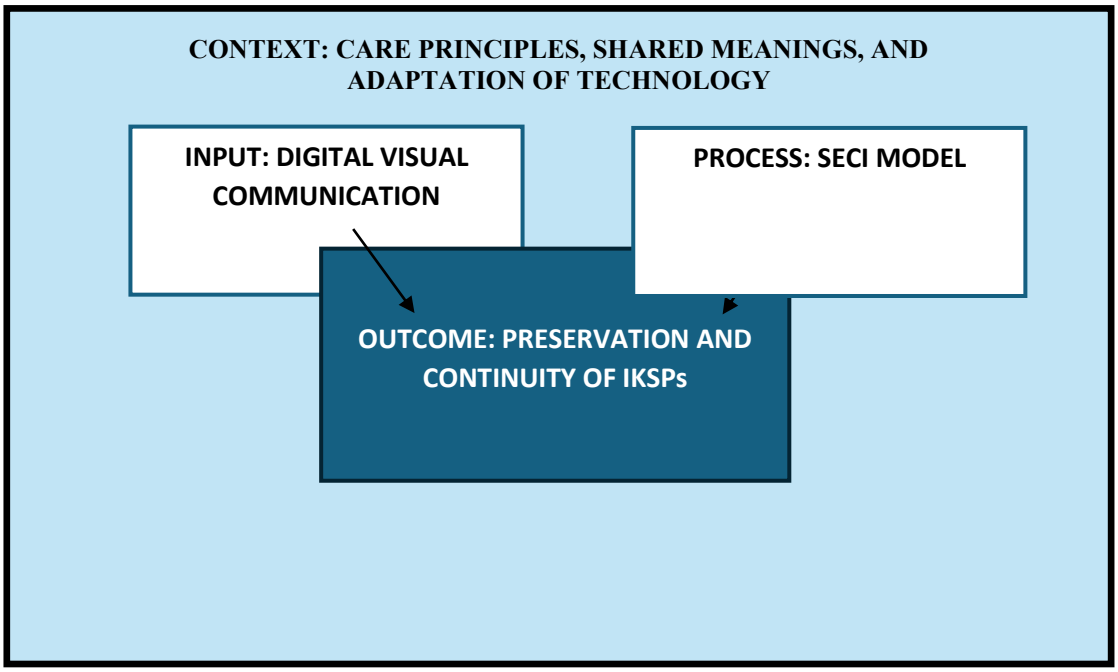

Figure 1. Conceptual Framework for the study on the Role of DVC in the Preservation and Continuity of T'boli and Blaan IKSPs.

Assumptions

This study conceptualizes that using Digital Visual Communication as input in the Knowledge Management Process, with an emphasis on externalization, hypothesizes that it will lead to the desired outcome of indigenous knowledge preservation and Continuity. The entire framework is situated within and moderated by Indigenous Cultural Governance and the context of the T'boli people in South Cotabato. These concepts are best understood through the lenses of IKS, IDS, and SCOT, which serve as the guiding lights for the effective use of DVC tools.

Additionally, Figure 2 presents the study's results, which reveal a framework for T'boli perspectives on the acceptability of using Digital Visual Communication (DVC) for Indigenous Knowledge Systems and Practices (IKSP) preservation. This framework illustrates the multidimensional nature of T'boli perspectives on the acceptability of DVC for preserving IKSP. Drawing on the Social Construction of Technology (SCOT) model, it categorizes the community's acceptance into four critical domains: Social Readiness, which gauges cultural preparedness; Technical and Cost Adequacy, which addresses the practical feasibility of technology use; Authenticity & Representation, which ensures that digital outputs accurately reflect identity (supported by the CARE Principles by Caroll et al., 2020); and Archival & Education Impact, which measures the long-term value of DVC and addresses the Knowledge Management process, supported by Nonaka et al.'s (2000) SOCI model, bridging generational gaps and securing cultural ownership through Indigenous Data Sovereignty. Together, these pillars represent the interpretive flexibility of the T'boli people as they negotiate the integration of modern digital tools with traditional heritage.

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

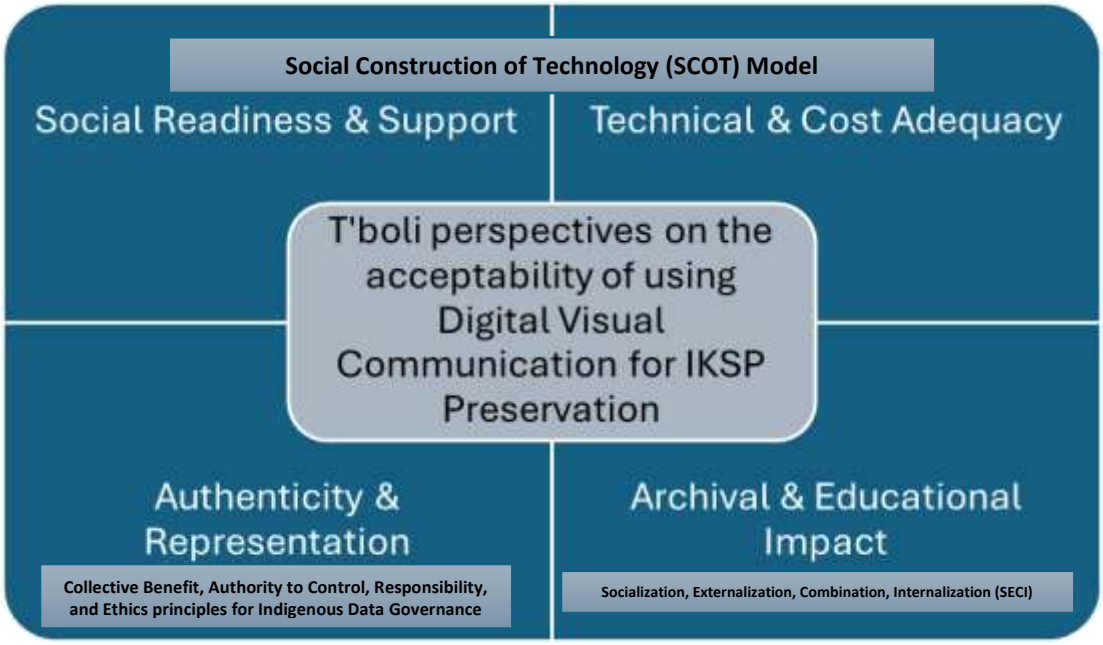

Figure 2. T'boli Perspectives on the Acceptability of Using Digital Visual Communication for IKSP Preservation.

METHODOLOGY

This chapter presents the research design, study locale, respondents, research instrument, data collection procedures, and statistical treatment of the data used in the study.

Research Design

This study employs a quantitative, descriptive, correlational research design. The descriptive aspect of the study involves measuring the "level of acceptability," and by using means and Standard Deviations, this study can provide an overview of the desired objectives. Correlational measurements is also applied to determine whether there is a relationship on the demographic profile, such as role in the community, and their level of acceptance.

Locale and Respondents of the Study

T'boli youth and cultural workers are spread out across South Cotabato. One of the main domains of the T'boli tribe is in Lake Sebu. In this study, T'boli respondents mostly reside in Koronadal or Lake Sebu. Instead of choosing respondents randomly, this study purposely selected respondents who were already exposed to Digital Visual Communication, in forms such as video, pictures, or digital art. Additionally, they possess a level of expertise in either digital art or cultural work. Even those dubbed 'youth' here are somehow, in some capacity, involved in training for cultural work. This is to accurately determine whether they understand the concept of DVC and are fully introduced to it, to establish the proper acceptance level. Subsequently, the sample is divided into categories based on sex, role in the community, and age.

Since the population of digitally aware and active cultural experts is small and finite, the researcher opted to purposefully choose the accessible population (N = 52).

Research Instrument

This study employed a researcher-designed survey questionnaire, utilizing a 5-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). This study grounded the questions in the objectives of determining the acceptance level for DVC, perceptions on using technology for the effective recording of IKSPs, and perceptions on the positive impact of using DVC for the preservation of IKSPs. The researcher also ensures that technical terms and ideas are translated and explained in the local dialect during the administration of the survey, so that respondents can clearly understand each item. Some survey questionnaires were also disregarded if there was a blatant disregard for answering truthfully, such as answering with obvious patterns.

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

Gathering Procedures

Step 1. Permission. Before conducting the actual survey, the researcher ensured that letters requesting permission were sent in advance, first to the mayor's office, the NCIP, and then to the community. The researcher is given limited access to which respondents to approach. So, the researcher opted to focus on the T'boli people already in Koronadal City. This also became aligned with the objective that the respondents are familiar with DVC.

Step 2. Administration. The distribution of the survey is accompanied by a T'boli enumerator, who is ready to explain the process and item questionnaire during the survey. As the majority of respondents are well-versed or familiar with DVC, there was minimal difficulty in conducting the survey.

Step 3. Retrieval and Tallying. The survey questionnaires are collected and assigned control numbers to prevent duplication during the encoding process. The data are then encoded in Excel and run using Jamovi and double-checked using Python.

Statistical Treatment of Data

1. First, the Mean and Standard Deviation are calculated using Jamovi to determine the level of acceptability. (SOP 1)
2. Spearman's Rank Correlation (Spearman's Rho) is used to determine the significant relationship between age or role in the community and acceptance. Spearman is used instead of Pearson due to the small sample size N=52. (SOP 2)

RESULTS AND DISCUSSION

Here are the results and discussion of the data gathered from the T'boli community in Lake Sebu and Koronadal regarding the acceptability of digital visual communication for IKSP preservation.

Normality Test

The Shapiro-Wilk Test, applied to all 30 indicators listed in Table 1, indicates that every indicator yielded a significance value of $p < 0.001$, which is below the 0.05 threshold. Therefore, the null hypothesis of normality is rejected for all items.

			Shapiro-Wilk	
	Mean	SD	W	p
1. I am comfortable using my digital devices (camera, computer) within the community for documentation purposes.	4.25	1.046	0.727	<.001
2. I feel that the community and the Elders are open to my presence while I am taking photos or videos.	4.02	0.98	0.813	<.001
3. I ensure that the technology I use does not disrupt or violate the sanctity of the rituals.	4	1.12	0.814	<.001
4. I have adequate equipment and software to properly document the detailed aspects of the culture.	3.67	0.985	0.873	<.001
5. I am willing to undergo training to learn how to create illustrations and photographs for the preservation of T'boli culture.	4.23	1.002	0.759	<.001
6. I trust my ability to safeguard and secure the digital files I have gathered.	4.15	0.998	0.792	<.001
7. I feel the support and cooperation of the community regarding my ongoing project.	3.96	0.989	0.839	<.001
8. I am willing to teach or share my technical skills with interested members of the community.	4	1.085	0.821	<.001
9. I do not view my equipment as a threat, but rather as a bridge to cultural preservation.	3.94	1.018	0.808	<.001
10. The cost of my equipment and production is adequate and appropriate for the documentation requirements.	3.46	1.056	0.885	<.001
11. I believe that my shots and designs effectively capture the intricate details of T'boli art	4.13	1.121	0.747	<.001
12. I feel that my digital outputs accurately portray the emotion and "spirit" of the culture.	3.88	0.9	0.86	<.001
13. The visual materials I created provide a clearer understanding for those unfamiliar with the culture.	4.45	0.73	0.725	<.001

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

14. My photos/videos explain the symbols better than mere verbal descriptions.	4.22	0.879	0.796	<.001
15. As an artist, I am able to maintain the authenticity of the tradition even when it is translated into a digital format.	4.04	1.038	0.822	<.001
16. My editing and finalization process minimizes potential historical misinterpretation.	3.78	0.966	0.848	<.001
17. My recorded interviews capture the nuances and tones of the Elders that cannot be captured in writing.	3.82	1.053	0.797	<.001
18. My digitized works serve as adequate representations should the original physical art be lost.	3.92	1.197	0.779	<.001
19. The visual aids I created are easy to use as instructional materials.	4.08	1.093	0.792	<.001
20. I am satisfied that the quality of my documentation does justice to and shows respect for the T'boli culture.	4.14	1.02	0.792	<.001
21. I can see that my works help the T'boli youth appreciate their culture more.	4.45	0.783	0.71	<.001
22. Documenting stories is faster and more organized using my digital workflow compared to manual methods.	4.2	0.825	0.809	<.001
23. Through my documentation, the culture can be shared outside the community without disrupting their way of life.	4.12	0.864	0.818	<.001
24. My files serve as a permanent archive that can be used by the next generation.	4.24	0.79	0.804	<.001
25. My outputs are effectively utilized as references in schools or cultural centers.	4.08	1.017	0.804	<.001
26. I notice that people's interest in the culture increases when they see my visual presentations.	4.08	1.036	0.801	<.001
27. It is easier to manage and retrieve community information using the database I built/am using.	4.18	0.842	0.809	<.001
28. The digital format of my work serves as protection against the deterioration of physical artifacts.	3.86	1	0.853	<.001
29. My documentation process facilitates interaction between the Elders and the youth.	4.14	0.8	0.825	<.001
30. The records I created can be used as evidence of the tribe's cultural ownership.	4.24	0.79	0.804	<.001

Table 1. Shapiro-Wilk Test for Normality of Individual Indicators

The study's results indicate high acceptability and consensus among the respondents (GM = 4.09, GSD = 0.97). Table 2 shows the overall thematic summary based on the results of this study. Archival & Educational Impact (M = 4.24, SD = 0.63), followed by Social Readiness & Support (M = 4.11, SD = 0.77), Authenticity & Representation (M = 4.05, SD = 0,88), and Technical & Cost Adequacy (M = 3.93, SD = 0.79). The social demographic that shows the highest acceptance level is the cultural workers (M = 4.24), and the lowest is the youth (M = 3.79).

Themes	**CW**	**DA**	**WC**	**Youth**	**Overall Mean**	**SD**	**Interp.**
1. Social Readiness & Support	4.27	4.19	4.14	3.82	4.11	0.77	High
2. Technical & Cost Adequacy	4.04	3.92	4.18	3.58	3.93	0.79	High
3. Authenticity & Representation	4.17	4.08	4.23	3.75	4.05	0.88	High
4. Archival & Educational Impact	4.48	4.14	4.31	4.05	4.24	0.63	Very High
Grand Total Mean	**4.24**	**4.08**	**4.22**	**3.79**	**4.09**	GSD **0.97**	**High**

Legend: CW (Cultural Worker), DA (Digital Artist), WC (Working Class).
(Scale:1.00-3.39 = Moderate/Low; 3.40-4.19 = High; 4.20 - 5.00 = Very High)

Table 2. Thematic Summary Table

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

Archival & Educational Impact. Primarily, T'boli people perceive Digital Visual Communication as a tool for Archival and Educational Purposes. This indicates a positive outcome, showing that the introduction of DVC to the T'boli people has value, primarily due to the preservation of Indigenous Knowledge Systems and Practices. Table 3 presents the indicators that comprise the theme Archival & Educational Impact. Leading this theme is the indicator 'The visual materials I created provide a clearer understanding for those unfamiliar with the culture' (M = 4.43). This is followed by indicators: 'I can see that my works help the T'boli youth appreciate their culture more.' (M = 4.36), 'My files serve as a permanent archive that can be used by the next generation.' (M = 4.25), 'The records I created can be used as evidence of the tribe's cultural ownership.' (M = 4.23), 'My documentation process facilitates interaction between the Elders and the youth.' (M = 4.13), and 'My outputs are effectively utilized as references in schools or cultural centers.' (M = 4.06). The highest social demographic showing a high acceptance level in this theme is community workers (M = 4.48), and the lowest acceptance level is among youth (M = 4.05).

Theme	Indicators	CW	DA	WC	Youth	Overall	Interp.
Archival & Educational Impact	13. The visual materials I created provide a clearer understanding for those unfamiliar with the culture.	4.55	4.5	4.29	4.39	4.43	Very High
	21. I can see that my works help the T'boli youth appreciate their culture more.	4.7	4	4.43	4.33	4.36	Very High
	24. My files serve as a permanent archive that can be used by the next generation.	4.5	4.33	4.29	3.89	4.25	Very High
	25. My outputs are effectively utilized as references in schools or cultural centers.	4.35	3.83	4.29	3.78	4.06	High
	29. My documentation process facilitates interaction between the Elders and the youth.	4.4	4	4.29	3.83	4.13	High
	30. The records I created can be used as evidence of the tribe's cultural ownership.	4.4	4.17	4.29	4.06	4.23	Very High
	Theme Mean	**4.48**	**4.14**	**4.31**	**4.05**	**4.24**	**High**

Table 3. Table of indicators under Archival & Educational Impact

T'boli cultural bearers see that having visual materials creates a clearer understanding. They see that their work would help T'boli youth appreciate culture, and if they are to create digital work, the T'boli youth would appreciate their culture more. They also see the importance of digital files can be permanent archives, as it can also be used in bridging the knowledge coming from elders to be passed to the youth, and to add that the T'boli culture bearers still feel that they own this knowledge as they are the ones in charge of this knowledge management process, through DVC. Regarding which demographics see the importance of using DVC materials as archival or educational materials, data show that community workers are more likely to adapt DVC for the preservation of IKSPs. Interestingly, the youth are the least likely to show acceptance level in regard to this theme. Although the data coefficient is still high, it provides a basis for further studies when compared to cultural workers.

These results suggest that Nanoka et al.'s (2000) SECI model, which describes the conversion of tacit knowledge into explicit knowledge, can be effectively applied using Digital Visual Communication for archival purposes. This also aligns with our initial objective of preserving knowledge management by translating tacit knowledge into explicit knowledge. The T'boli people recognize that cultural knowledge, as well as the proper documentation of these cultural treasures, is equally important, particularly for the purpose of education and the transmission of traditions.

Social Readiness & Support. Based on the data gathered, the second major theme contributing to the respondents' acceptability of DVC as a tool for IKSP preservation is social readiness and support (M = 4.11). Biggest contributing factor is the indicator 'I am comfortable using my digital devices (camera, computer) within the community for documentation purposes' (M = 4.35), followed by 'I am willing to undergo training to

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

learn how to create illustrations and photographs for the preservation of T'boli culture.' (M = 4.23), 'I feel that the community and the Elders are open to my presence while I am taking photos or videos.' (M = 4.01), 'I do not view my equipment as a threat, but rather as a bridge to cultural preservation.' (M = 3.98), and 'I feel the support and cooperation of the community regarding my ongoing project.' (M = 3.95). The demographics of those with high levels of acceptance under this them are still cultural workers, and the lowest levels of acceptance are among youth (M = 3.82).

This indicates that T'boli culture bearers are comfortable using digital devices for documentation. They also indicate that they are ready to commit to training to learn digital creation skills, such as illustration and photograph preservation. They also believe that their elders will be open to documentation using photography and video making. The results also show that they don't view digital equipment as a threat, but rather as a bridge for cultural preservation. They will also cooperate with the community on preservation projects.

Theme	Indicators	CW	DA	WC	Youth	Overall	Interp.
Social Readiness & Support	1. I am comfortable using my digital devices (camera, computer) within the community for documentation purposes.	4.55	4.67	4.43	3.74	4.35	Very High
	2. I feel that the community and the Elders are open to my presence while I am taking photos or videos.	4.05	3.83	4.14	4	4.01	High
	5. I am willing to undergo training to learn how to create illustrations and photographs for the preservation of T'boli culture.	4.5	4.17	4.29	3.95	4.23	Very High
	7. I feel the support and cooperation of the community regarding my ongoing project.	4.2	4	3.86	3.74	3.95	High
	9. I do not view my equipment as a threat, but rather as a bridge to cultural preservation.	4.1	4	4.14	3.68	3.98	High
	Theme Mean	**4.27**	**4.19**	**4.14**	**3.82**	**4.11**	**High**

Table 4. Table of indicators under Social Readiness & Support

Pinch and Bijker's (1984) Social Construction of Technology (SCOT) Model explains that a social group's readiness and relevance to a technology determine the success of that technology in gaining effective entry into a particular group or society. Pinch and Bijker said, "the key requirement is that all members of a certain social group share the same set of meanings, attached to a certain artefact [technology]." If this is applied to the findings of the study on the acceptability of the T'boli people, especially among the cultural workers, it would be deduced that their high acceptance level indicates a potential introduction of the digital technology in the preservation of IKSPs.

Authenticity and Presentation. Authenticity and Presentation (M = 4.05) are another major theme regarding the acceptability level of the respondents in the study. Major contributing indicator is 'I believe that my shots and designs effectively capture the intricate details of T'boli art.' (M = 4.2). This is followed, narrowly by 'I am satisfied that the quality of my documentation does justice to and shows respect for the T'boli culture.' (M = 4.19). And identically followed by indicators: 'I ensure that the technology I use does not disrupt or violate the sanctity of the rituals.' (M = 3.98), 'My editing and finalization process minimizes potential historical misinterpretation.' (M = 3.87), and 'The digital format of my work serves as protection against the deterioration of physical artifacts.' (M = 3.87). The social demographics that show a high acceptance level under this theme are the cultural workers (M = 4.17), and the lowest is the youth (M = 3.72).

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

Theme	Indicators	CW	DA	WC	Youth	Overall	Interp.
Authenticity and Presentation	3. I ensure that the technology I use does not disrupt or violate the sanctity of the rituals.	4.2	3.5	4.43	3.79	3.98	High
	11. I believe that my shots and designs effectively capture the intricate details of T'boli art.	4.35	4.5	4.14	3.79	4.2	Very High
	16. My editing and finalization process minimizes potential historical misinterpretation.	3.75	3.67	4.43	3.61	3.87	High
	20. I am satisfied that the quality of my documentation does justice to and shows respect for the T'boli culture.	4.3	4.33	4.29	3.83	4.19	High
	28. The digital format of my work serves as protection against the deterioration of physical artifacts.	4.05	3.83	4	3.61	3.87	High
	Theme Mean	**4.17**	**4.08**	**4.23**	**3.72**	**4.05**	**High**

Table 5. Table of indicators under Authenticity and Presentation

The study's results demonstrate that using DVC effectively captures the intricacies of T'boli art. Culture bearers believe that they can effectively document their culture, demonstrating respect for the art and craft. They can also ensure that technology will not disrupt or violate the sanctity of their rituals or misinterpret historical events. Ultimately, they believe that the digital format will protect these records from deterioration.

Caroll et al.'s (2020) study on Indigenous Governance champions the discourse of Indigenous Knowledge and identity, positioning Indigenous Peoples as the primary movers. Under the theme Authenticity and Presentation, there is strong potential that a capacity-building process, with the T'boli people owning preservation, documentation, and sensitivity efforts, will be on point. By letting the T'boli people and culture bearers govern how Indigenous Knowledge is preserved, supported by technologies that further protect their Indigenous Governance, Indigenous Knowledge Sovereignty will be secured. Caroll et al. (2020) emphasize the important role of culture bearers in this:

> "Given that most Indigenous data are held by non-Indigenous governments, institutions, and agencies, increasing Indigenous Peoples' participation in data governance activities is central to realizing Indigenous Data Sovereignty."

By having T'boli cultural workers with the highest acceptance level, there is a higher likelihood that, upon the controlled introduction of the technology, no harm will occur, provided the T'boli people are fully secured in their ownership of their Indigenous Data.

Technical and Cost Adequacy. The last theme, Technical and Cost Adequacy (M = 3.93), in this study still yielded a significant indication of the respondents' acceptability regarding the use of DVC for IKSP preservation. The highest indicator under this theme is 'It is easier to manage and retrieve community information using the database I built/am using.' (M = 4.27), followed narrowly by 'Documenting stories is faster and more organized using my digital workflow compared to manual methods.' (M = 4.25). To add indicators under this theme are: 'I have adequate equipment and software to properly document the detailed aspects of the culture.' (M = 3.67) and 'The cost of my equipment and production is adequate and appropriate for the documentation requirements.' (M = 3.52). The social demographic that shows the highest acceptance level under this theme is the working class (M = 4.18), while the youth show the lowest acceptance level (M = 3.58).

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

Theme	Indicators	CW	DA	WC	Youth	Overall	Interp.
Technical and Cost Adequacy	4. I have adequate equipment and software to properly document the detailed aspects of the culture.	4	3.5	3.86	3.32	3.67	High
	10. The cost of my equipment and production is adequate and appropriate for the documentation requirements.	3.6	3.33	4	3.16	3.52	High
	22. Documenting stories is faster and more organized using my digital workflow compared to manual methods.	4.35	4.33	4.43	3.89	4.25	Very High
	27. It is easier to manage and retrieve community information using the database I built/am using.	4.2	4.5	4.43	3.94	4.27	Very High
	Theme Mean	**4.04**	**3.92**	**4.18**	**3.58**	**3.93**	**High**

Table 6. Table of indicators under Technical and Cost Adequacy

The results indicate that culture bearers believe that using digital technology would make it easier to document, organize, and retrieve data and recordings. Although there is an indication of doubt regarding the adequacy of equipment and funding for production, these data show the lowest coefficient of variation among all indicators. It is also noticeable that, about this, cultural workers are aware of the downsides of technical and cost adequacy as they show a lower acceptance level under this theme. The working class, on the other hand, shows more optimism regarding the readiness of equipment and cost. Youth still remain the least accepted in this regard, even in terms of this theme.

Pinch and Bijker's (1984) SCOT Model also explains the phenomenon in which, upon the introduction of technology, a social group initially encounters problems before adapting or acquiring it. Pinch and Bijker (1984) describe in their model that there can be initial conflicts between technology's design and specific social needs. That is why the SCOT Model is a multi-directional model, consisting of a series of problem-solution loops. Only then would a closure on the use of technology be achieved if the cycle of determining problems and finding solutions is continuous. In relation to the study of T'boli perception and acceptability of using digital tools and technology, the initial problem is the erosion of knowledge among the youth, which introduces the possibility of using digital visual communication as a technology for the preservation of IKSPs. However, as shown in the results of this study, there is a reluctance to administer the technology. This includes technical and cost adequacy. Theoretically, the effectiveness of technology interventions also relies on solving this problem, so that the DVC technology can be effective. It is also important to consider that this is multi-directional, and that preservation and protection nuances can arise along the process, especially among the elders and the youth's accuracy in determining the totality of recording from tacit to explicit, as described in Nanoka et al.'s (2000) SECI model.

SUMMARY OF THE FINDINGS

The study's results indicate high acceptability and consensus among the respondents (GM = 4.09, GSD = 0.97). The study identifies four pillars that emerge from the thematic summary of this study. Archival & Educational Impact (M = 4.24, SD = 0.63) reveals the highest reason of the perceived acceptability of the role of DVC in IKSP preservation, followed by Social Readiness & Support (M = 4.11, SD = 0.77), Authenticity & Representation (M = 4.05, SD = 0,88), and Technical & Cost.

The social demographic that shows the highest acceptance level is the cultural workers (M = 4.24), and the lowest is the youth (M = 3.79). This is an interesting turn of results, as the main primary movers and cultural bearers, who are the cultural workers, show a more positive attitude towards the use of Digital Visual Communication as tools compared to the youth respondents.

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

CONCLUSION

Based on the study's results, it can be concluded that the T'boli people, especially cultural workers, show high potential in embracing Digital Visual Communication as a technology to bridge their culture to future T'boli youth and the benefits it offers as a tool for archiving cultural knowledge and practices. Additionally, the T'boli culture bearers are willing to adapt and train to ensure the archival and documentary process is efficient, effective, and properly conducted. They also demonstrate high acceptability in their responsibility to govern their own Indigenous Knowledge and take claim to their Indigenous Data Sovereignty. Lastly, they are also aware of the potential challenges of technical and cost adequacy, as DVC technology takes time to adjust and is costly to sustain.

Despite the challenges, the drive for archival and preservation efforts outweighs the perceived hurdles in the technical aspects and cost. Like Pinch and Bijker's (1984) SCOT model, which describes a series of Problem-Solution Cycles, the need for technological intervention addresses the problem of cultural erosion and cultural misinterpretation. However, the problem of adapting to technology will also hinder the preservation process if not addressed well ahead of time. At the end of the day, in the tradition of Indigenous Knowledge Governance and Indigenous Data Sovereignty, which is explained by Caroll et al.'s (2020) study, the driving force lies in the T'boli as a social group.

In conclusion, the primary movers are the T'boli cultural bearers, especially the youth and cultural workers. The responsibility for balancing preservation with modernization rests with the guardians of indigenous knowledge. The solution depends on how aware and capacitated Indigenous Peoples are regarding their Indigenous Knowledge Governance. If the mindset is stable and the community supports governance and preservation efforts, the Problem-Solution cycle in the SCOT model would be overcome, and technology would not threaten preservation efforts.

RECOMMENDATION

The following are the recommended actions based on to the results of this research:

For the T'boli community, especially the primary movers and cultural bearers, the idea of Indigenous Knowledge Governance and Indigenous Data Sovereignty should be clear and reinforced. The fire of continuous preservation efforts lies in the community's willingness to take ownership of their culture and the responsibility to take the necessary actions.

For local governments and Policymakers, there is an opportunity to support Indigenous People in providing the proper training, as well as ample financial and technical support, for their preservation efforts. In addition to skills, community support is crucial for strengthening IKSP preservation. The urgency should not be lost in creating and building mechanisms that would protect the IKSPs as well as the IP community.

For educational institutions and NGOs, integrating T'boli community-produced DVC materials into educational instructions, especially in Indigenous Peoples Education (IPED), is integral to bridging the culture to future generations of T'boli people and mitigating the effects of cultural misinterpretations and prejudice.

For future researchers, there is a need to conduct longitudinal studies on how digital archives affect T'boli cultural preservation. There is also room to explore further topics, such as digital IP rights, to address the validity of content shared on global social media platforms. Additionally, extensive long-term cultural research and monitoring are needed to measure the effectiveness of DVC's role in IKSP preservation.

REFERENCES

1) Alexander, A. P. (2019). Lincoln and Guba's quality criteria for trustworthiness. IDC International Journal, 6(4), 1–6.
2) Braun, V., et al. (2023). Doing reflexive thematic analysis. In Supporting research in counselling and psychotherapy: Qualitative, quantitative, and mixed methods research (pp. 19–38). Springer.
3) Carroll, S. et al. (2020). The CARE principles for indigenous data governance. Data Science Journal, 19.
4) Carroll, S. R., et al. (2019). Indigenous data governance: Strategies from United States native nations. Data Science Journal, 18, 31.
5) Cordova, J. C. (2024). Creating a Digital House of Knowledge: Ensuring the Continuation and Integrity of Indigenous Knowledge Transfers in the Digital Era.
6) Douglas, D. G. (2012). The social construction of technological systems, anniversary edition: New directions in the sociology and history of technology. MIT press.

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

7) Nations, U. (2007). United Nations declaration on the rights of indigenous peoples.
8) Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation. Long Range Planning, 33(1), 5–34. https://doi.org/10.1016/S0024-6301(99)00115-6
9) Pinch, T. J., & Bijker, W. E. (1984). The Social Construction of Facts and Artefacts: Or How the
10) Sociology of Science and the Sociology of Technology might Benefit Each Other. Social Studies of Science, 14(3), 399–441. https://doi.org/10.1177/030631284014003004
11) Shepherd, R. (2002). Commodification, culture and tourism. Tourist Studies, 2(2), 183–201.

APPENDICES

Table 7. Descriptive Statistics Table

	Role in the Community	N	Missing	Mean	Median	SD	Minimum	Maximum
1. I am comfortable using my digital devices (camera, computer) within the community for documentation purposes.	Cultural Worker	20	0	4.55	5	0.95	1	5
	Digital Artist	6	0	4.67	5	0.82	3	5
	Working Class	7	0	4.43	5	1.13	2	5
	Youth	19	0	3.74	4	1.05	1	5
2. I feel that the community and the Elders are open to my presence while I am taking photos or videos.	Cultural Worker	20	0	4.05	4	1	1	5
	Digital Artist	6	0	3.83	4.5	1.6	1	5
	Working Class	7	0	4.14	4	0.69	3	5
	Youth	19	0	4	4	0.88	3	5
3. I ensure that the technology I use does not disrupt or violate the sanctity of the rituals.	Cultural Worker	20	0	4.2	4	0.7	3	5
	Digital Artist	6	0	3.5	4.5	1.98	1	5
	Working Class	7	0	4.43	5	0.79	3	5
	Youth	19	0	3.79	4	1.23	2	5
4. I have adequate equipment and software to properly document the detailed aspects of the culture.	Cultural Worker	20	0	4	4	0.73	3	5
	Digital Artist	6	0	3.5	3.5	1.52	1	5
	Working Class	7	0	3.86	4	0.69	3	5
	Youth	19	0	3.32	3	1.06	1	5
5. I am willing to undergo training to learn how to create illustrations and photographs for the preservation of T'boli culture.	Cultural Worker	20	0	4.5	5	0.83	2	5
	Digital Artist	6	0	4.17	5	1.6	1	5
	Working Class	7	0	4.29	4	0.76	3	5
	Youth	19	0	3.95	4	1.03	2	5
6. I trust my ability to safeguard and secure the digital files I have gathered.	Cultural Worker	20	0	4.35	5	0.88	2	5
	Digital Artist	6	0	4.33	5	1.63	1	5
	Working Class	7	0	4.14	4	0.69	3	5
	Youth	19	0	3.89	4	0.99	2	5
7. I feel the support and cooperation of the community regarding my ongoing project.	Cultural Worker	20	0	4.2	4	0.83	2	5
	Digital Artist	6	0	4	4.5	1.55	1	5
	Working Class	7	0	3.86	4	0.69	3	5
	Youth	19	0	3.74	4	1.05	2	5
8. I am willing to teach or share my technical	Cultural Worker	20	0	4.15	4	1.04	1	5
	Digital Artist	6	0	4.33	5	1.21	2	5

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

skills with interested members of the community.	Working Class	7	0	4	4	0.58	3	5
	Youth	19	0	3.74	4	1.24	1	5
9. I do not view my equipment as a threat, but rather as a bridge to cultural preservation.	Cultural Worker	20	0	4.1	4	0.85	2	5
	Digital Artist	6	0	4	5	1.55	2	5
	Working Class	7	0	4.14	4	0.38	4	5
	Youth	19	0	3.68	4	1.16	1	5
10. The cost of my equipment and production is adequate and appropriate for the documentation requirements.	Cultural Worker	20	0	3.6	4	1	1	5
	Digital Artist	6	0	3.33	3.5	1.37	1	5
	Working Class	7	0	4	4	0.58	3	5
	Youth	19	0	3.16	3	1.12	1	5
11. I believe that my shots and designs effectively capture the intricate details of T'boli art	Cultural Worker	20	0	4.35	5	0.99	1	5
	Digital Artist	6	0	4.5	5	0.84	3	5
	Working Class	7	0	4.14	4	0.69	3	5
	Youth	19	0	3.79	4	1.4	1	5
12. I feel that my digital outputs accurately portray the emotion and "spirit" of the culture.	Cultural Worker	20	0	4.1	4	0.91	2	5
	Digital Artist	6	0	4	4	0.89	3	5
	Working Class	7	0	4.14	4	0.69	3	5
	Youth	19	0	3.53	3	0.91	2	5
13. The visual materials I created provide a clearer understanding for those unfamiliar with the culture.	Cultural Worker	20	0	4.55	5	0.76	2	5
	Digital Artist	6	0	4.5	5	0.84	3	5
	Working Class	7	0	4.29	4	0.76	3	5
	Youth	18	1	4.39	4.5	0.7	3	5
14. My photos/videos explain the symbols better than mere verbal descriptions.	Cultural Worker	20	0	4.3	5	0.98	2	5
	Digital Artist	6	0	4.33	4.5	0.82	3	5
	Working Class	7	0	4.43	4	0.54	4	5
	Youth	18	1	4	4	0.91	3	5
15. As an artist, I am able to maintain the authenticity of the tradition even when it is translated into a digital format.	Cultural Worker	20	0	4.05	4	1.15	1	5
	Digital Artist	6	0	4.33	5	1.21	2	5
	Working Class	7	0	4.29	4	0.76	3	5
	Youth	18	1	3.83	4	0.99	2	5
16. My editing and finalization process minimizes potential historical misinterpretation.	Cultural Worker	20	0	3.75	4	0.97	1	5
	Digital Artist	6	0	3.67	4	1.51	1	5
	Working Class	7	0	4.43	4	0.54	4	5
	Youth	18	1	3.61	4	0.85	2	5
17. My recorded interviews capture the nuances and tones of the Elders that cannot be captured in writing.	Cultural Worker	20	0	4	4	0.92	1	5
	Digital Artist	6	0	3.83	4	1.47	1	5
	Working Class	7	0	4.14	4	0.69	3	5
	Youth	18	1	3.5	4	1.15	1	5
18. My digitized works serve as adequate representations should	Cultural Worker	20	0	4.2	4	1.01	1	5
	Digital Artist	6	0	4.33	5	1.03	3	5
	Working Class	7	0	4	4	0.58	3	5

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

the original physical art be lost.	Youth	18	1	3.44	4	1.5	1	5
19. The visual aids I created are easy to use as instructional materials.	Cultural Worker	20	0	4.4	5	1	1	5
	Digital Artist	6	0	4.17	4.5	0.98	3	5
	Working Class	7	0	4.29	4	0.76	3	5
	Youth	18	1	3.61	4	1.24	1	5
20. I am satisfied that the quality of my documentation does justice to and shows respect for the T'boli culture.	Cultural Worker	20	0	4.3	5	1.08	1	5
	Digital Artist	6	0	4.33	5	1.21	2	5
	Working Class	7	0	4.29	4	0.76	3	5
	Youth	18	1	3.83	4	0.99	2	5
21. I can see that my works help the T'boli youth appreciate their culture more.	Cultural Worker	20	0	4.7	5	0.57	3	5
	Digital Artist	6	0	4	4.5	1.27	2	5
	Working Class	7	0	4.43	5	0.79	3	5
	Youth	18	1	4.33	4.5	0.77	3	5
22. Documenting stories is faster and more organized using my digital workflow compared to manual methods.	Cultural Worker	20	0	4.35	4	0.67	3	5
	Digital Artist	6	0	4.33	5	1.21	2	5
	Working Class	7	0	4.43	5	0.79	3	5
	Youth	18	1	3.89	4	0.83	3	5
23. Through my documentation, the culture can be shared outside the community without disrupting their way of life.	Cultural Worker	20	0	4.25	4	0.85	2	5
	Digital Artist	6	0	4.17	4.5	1.17	2	5
	Working Class	7	0	4	4	0.58	3	5
	Youth	18	1	4	4	0.91	2	5
24. My files serve as a permanent archive that can be used by the next generation.	Cultural Worker	20	0	4.5	5	0.61	3	5
	Digital Artist	6	0	4.33	5	1.21	2	5
	Working Class	7	0	4.29	4	0.49	4	5
	Youth	18	1	3.89	4	0.83	3	5
25. My outputs are effectively utilized as references in schools or cultural centers.	Cultural Worker	20	0	4.35	5	0.88	3	5
	Digital Artist	6	0	3.83	4.5	1.47	2	5
	Working Class	7	0	4.29	4	0.49	4	5
	Youth	18	1	3.78	4	1.11	2	5
26. I notice that people's interest in the culture increases when they see my visual presentations.	Cultural Worker	20	0	4.25	4.5	0.85	3	5
	Digital Artist	6	0	4	4.5	1.27	2	5
	Working Class	7	0	4.43	4	0.54	4	5
	Youth	18	1	3.78	4	1.26	1	5
27. It is easier to manage and retrieve community information using the database I built/am using.	Cultural Worker	20	0	4.2	4	0.89	2	5
	Digital Artist	6	0	4.5	5	0.84	3	5
	Working Class	7	0	4.43	5	0.79	3	5
	Youth	18	1	3.94	4	0.8	3	5
28. The digital format of my work serves as protection against the	Cultural Worker	20	0	4.05	4	0.95	2	5
	Digital Artist	6	0	3.83	4.5	1.6	1	5
	Working Class	7	0	4	4	0.82	3	5

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

deterioration of physical artifacts.	Youth	18	1	3.61	3	0.92	2	5
29. My documentation process facilitates interaction between the Elders and the youth.	Cultural Worker	20	0	4.4	4.5	0.68	3	5
	Digital Artist	6	0	4	4	0.89	3	5
	Working Class	7	0	4.29	4	0.49	4	5
	Youth	18	1	3.83	4	0.92	2	5
30. The records I created can be used as evidence of the tribe's cultural ownership.	Cultural Worker	20	0	4.4	4.5	0.68	3	5
	Digital Artist	6	0	4.17	5	1.33	2	5
	Working Class	7	0	4.29	4	0.49	4	5
	Youth	18	1	4.06	4	0.8	3	5

Table 8. Normality Test Table

			Shapiro-Wilk	
	Mean	SD	W	p
1. I am comfortable using my digital devices (camera, computer) within the community for documentation purposes.	4.25	1.046	0.727	<.001
2. I feel that the community and the Elders are open to my presence while I am taking photos or videos.	4.02	0.98	0.813	<.001
3. I ensure that the technology I use does not disrupt or violate the sanctity of the rituals.	4	1.12	0.814	<.001
4. I have adequate equipment and software to properly document the detailed aspects of the culture.	3.67	0.985	0.873	<.001
5. I am willing to undergo training to learn how to create illustrations and photographs for the preservation of T'boli culture.	4.23	1.002	0.759	<.001
6. I trust my ability to safeguard and secure the digital files I have gathered.	4.15	0.998	0.792	<.001
7. I feel the support and cooperation of the community regarding my ongoing project.	3.96	0.989	0.839	<.001
8. I am willing to teach or share my technical skills with interested members of the community.	4	1.085	0.821	<.001
9. I do not view my equipment as a threat, but rather as a bridge to cultural preservation.	3.94	1.018	0.808	<.001
10. The cost of my equipment and production is adequate and appropriate for the documentation requirements.	3.46	1.056	0.885	<.001
11. I believe that my shots and designs effectively capture the intricate details of T'boli art	4.13	1.121	0.747	<.001
12. I feel that my digital outputs accurately portray the emotion and "spirit" of the culture.	3.88	0.9	0.86	<.001
13. The visual materials I created provide a clearer understanding for those unfamiliar with the culture.	4.45	0.73	0.725	<.001
14. My photos/videos explain the symbols better than mere verbal descriptions.	4.22	0.879	0.796	<.001
15. As an artist, I am able to maintain the authenticity of the tradition even when it is translated into a digital format.	4.04	1.038	0.822	<.001
16. My editing and finalization process minimizes potential historical misinterpretation.	3.78	0.966	0.848	<.001

iJETRM
International Journal of Engineering Technology Research & Management
(IJETRM)
https://ijetrm.com/

17. My recorded interviews capture the nuances and tones of the Elders that cannot be captured in writing.	3.82	1.053	0.797	<.001
18. My digitized works serve as adequate representations should the original physical art be lost.	3.92	1.197	0.779	<.001
19. The visual aids I created are easy to use as instructional materials.	4.08	1.093	0.792	<.001
20. I am satisfied that the quality of my documentation does justice to and shows respect for the T'boli culture.	4.14	1.02	0.792	<.001
21. I can see that my works help the T'boli youth appreciate their culture more.	4.45	0.783	0.71	<.001
22. Documenting stories is faster and more organized using my digital workflow compared to manual methods.	4.2	0.825	0.809	<.001
23. Through my documentation, the culture can be shared outside the community without disrupting their way of life.	4.12	0.864	0.818	<.001
24. My files serve as a permanent archive that can be used by the next generation.	4.24	0.79	0.804	<.001
25. My outputs are effectively utilized as references in schools or cultural centers.	4.08	1.017	0.804	<.001
26. I notice that people's interest in the culture increases when they see my visual presentations.	4.08	1.036	0.801	<.001
27. It is easier to manage and retrieve community information using the database I built/am using.	4.18	0.842	0.809	<.001
28. The digital format of my work serves as protection against the deterioration of physical artifacts.	3.86	1	0.853	<.001
29. My documentation process facilitates interaction between the Elders and the youth.	4.14	0.8	0.825	<.001
30. The records I created can be used as evidence of the tribe's cultural ownership.	4.24	0.79	0.804	<.001