# Taking a Closer Look: Reflections of Indigenous Youths and Course Writers on Their Experiences Using Tablet-based Training on the Conservation of Ifugao Rice Terraces, Philippines

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## Abstract

*Tablet-based training has become a welcomed strategy in education and training programs. It is also considered an innovative way of implementing training programs in remote areas where resources are usually limited. With its advantages, the University of the Philippines Open University implemented a collaborative project. The project aimed to impart knowledge and capabilities to Ifugao youths through an exchange programme and tablet-based training. Training modules were specifically designed and developed according to the needs of the Ifugao youths, and then distributed to each participant through tablets. After its implementation, gathering the experiences of the participants and collaborators are necessary. Therefore, this study aimed to examine the views of youth participants on the use of tablets in capacity building; and to analyse the views of the course writers on the use of tablets in capacity building. Key informant interviews, focus group discussions, and narrative analysis were utilized in this study. Results show that the Ifugao youth participants were able to identify their strengths and limitations through the tablet-based training. They also reported the benefits of tablets for self-directed learning. Meanwhile, the course writers put grave emphasis on the importance of collaborations for each stage of the project. Strengths and challenges of their collaboration were discussed as well. Lastly, the study listed recommendations for future studies.*

**Keywords:** *tablet-based training, indigenous female youth, sustainable development, public service, heritage conservation*

## Introduction

Information and communication technologies (ICT) for capacity building have been significantly utilized in the past few years. This is attributed to the rapid advancements in the

potential of electronic gadgets (Lee et al., 2013), and to the growing popularity of ICT for teaching and learning among the younger generation (Ting et al., 2011). According to Shuler et al. (2013, as cited in Clarke & Svanaes, 2014, p.1) coupling mobile devices with mobile technology, internet access, and affordability offer learning of "unparalleled access to communication and information". Capacity building through mobile devices, particularly tablets, has become a welcomed strategy, and a widely studied topic.

Tablet-based capacity building or training is a type of e-learning that enables its users to access and use a variety of learning content, and improve their knowledge and skills on a specific topic. It is considered innovative and cost-effective, especially in remote areas where educational resources can be limited. A tablet is the usually preferred gadget in teaching and training as it offers the flexibility of mobile phones in larger screens. Tablet-based training is advantageous in terms of functionality, portability, and mobility. According to Cumming et al. (2014, as cited in Haßler et al. 2016, p. 145), tablet-based training offers "richer and more vivid pictorial representations than traditional paper books". Van't Hooft (2013, as cited in Clarke & Svanaes, 2014, p. 2) also highlighted its "accessibility (ease of use and its ability to turn on instantly), the ability to create, access and display information in multiple modalities (text, video, audio, graphics) and the ability to communicate and share information". On the other hand, among its issues are: inability to print, need of a power source for charging, personal ownership, computer literacy, difficulty of taking notes, device variability, connectivity, small screen sizes with poor resolution, color and contrast, limited memory, distraction from other applications besides the learning materials, and copyright of learning materials (Clarke & Svanaes, 2014; Hung et al. 2014; Kljunić & Vukovac, 2015).

Recognising the advantages of tablet-based training as an avenue for teaching and learning, particularly in remote areas, the University of the Philippines Open University (UPOU) implemented a collaborative project with academic institutions UP Los Baños (UPLB) and Ifugao State University (IFSU). The project was entitled "Youth Capacity Building and Exchange Program toward Sustainable Development and Conservation of Ifugao Rice Terraces" (#Y4IRT). Through exchange programmes and tablet-based training in 2018, "the project aimed to empower [participating] Ifugao youth with both the knowledge and leadership capabilities to sustain the Ifugao Rice Terraces (IRT) landscape" (Bandalaria et al. p. 44, 2020). The IRT is recognised as both a Globally Important Agricultural Heritage Systems (GIAHS), and a World Heritage Site (WHS). Due to these recognitions, the landscape garners local and international popularity and tourism. However, according to Drost (1996), tourism affects sustainable development, preservation, and conservation of a WHS. While the promotion and tourism of the IRT is necessary, there is also an obligation to properly manage it.

According to Landorf (2009), continuous efforts for a heritage site's conservation could be done by involving and educating its stakeholders, and increasing their capacity, especially the youth. Taking this into account, proper landscape management and non-destructive tourism can be taught through education and capacity building programmes. This need was addressed through the tablet-based training component of #Y4IRT, while considering the fact that IRT and its stakeholders are located remotely. Through the project, training modules and multimedia resources on topics related to IRT culture, heritage, sustainable development, and conservation were developed by faculty members or course writers (CWs) from the collaborating academic institutions. Developed modules and resources were uploaded online through the project portal, and were loaded onto tablets through an offline application developed for the project. Through these measures, the tablet-based training was distributed and made accessible to the participating Ifugao youths.

## Research Objectives

With the implementation of the #Y4IRT, it is imperative to document the experiences of its participants and collaborators. Therefore, this study aimed to: 1) examine the views of youth participants on the use of tablets in capacity building; and 2) analyse the views of the course writers on the use of tablets in capacity building.

## Literature Review

Over the last decade, a significant number of literatures have established the use of tablets in teaching and training.

### Tablet-Based Training

Studies on tablet-based training are more commonly undertaken in developed countries (Mock, 2004; Cicchino & Mirliss, 2004), than in developing countries such as the Philippines. However, Tarek (2014) investigated the implementation of a tablet-based training for disaster preparedness in a rural community in South West Bangladesh. The study revealed that the participants found the training beneficial, "enjoyed the self-guided learning," and "developed a sense that [the training was] made for their locality" (Tarek, 2014, p. 293). Similarly, this study focuses on a self-guided tablet-based training specifically developed and conducted among participating Ifugao youths.

Several tablet-based training studies have also presented results of increased knowledge, better skills acquisition, and better appreciation and acceptance of tablets for learning (Haßler et al. 2016; Clarke & Svanaes, 2014; Hung et al. 2014; Kljunić & Vukovac, 2015). However, some studies were only implemented at a single point in time (i.e. tablets were only used for learning during a single class, in a single day). Haßler et al. (2016) recommended that implementation and evaluation of tablet-based training programmes should be done over a sustained period of time. In the context of this study, the tablet-based training was implemented for four months (August 2018 to November 2018), and evaluated during the fourth month.

### Capacity Building for Heritage Preservation and Conservation

Landorf (2009) cited heightened capacity building and partnerships as recommendations for WHS management. Similarly, the need to "equip the next generation of heritage-conservation professionals with the knowledge and skills needed to enable them to face the challenges and develop sustainable strategies for heritage conservation in the twenty-first century" was emphasized by Cassar (2009, p. 10). The same study also indicated that the existing professionals are responsible for developing reflective practitioners who will initiate change, take risks, and respond to the changing requirements of heritage conservation (Cassar, 2009). These needs were encompassed in the institutional collaborations in #Y4IRT, which is the focus of this study. The CWs from UPOU, UPLB, and IFSU were faculty members and professionals from various disciplines (e.g. environmental science, rural sociology, development communication, tourism, agriculture, and ecology). Their developed modules and resources ensured that the unique participant needs were properly and adequately addressed, and that sufficient knowledge on IRT management and conservation were imparted.

## Research Method

This study utilized key informant interviews and focus groups discussions for data collection, which transpired in November 2018 in Kiangan, Ifugao, Philippines. Study participants were five female Ifugao youths, five female CWs, and one male CW. #Y4IRT youth participants were limited (both in number and gender) due to the unavailability of the other participants. It was the same with the CWs. Through key informant interviews and focus groups discussions, youth participants shared their tablet-based training experiences. Discussions mainly centered on the youths' evaluation of the training design, content, and platform, and suggested improvements. On the other hand, through an focus groups discussion, CWs narrated the #Y4IRT collaboration process. Discussions elaborated their views and learnings from the collaboration, while giving emphasis to module and resource development. Transcriptions of these discussions were recounted and analysed in this study through narrative analysis. Narrative analysis is described as a research method involving gathered written, oral, and visual narratives that focus on the "meanings that people ascribe to their experiences, seeking to provide insight" (Josselson, 2006, p.3).

## Findings and Discussion

Analysis of participant discussions reveals a number of thematic insights. Moreover, since study participants were the Ifugao youths and CWs, the study provided emic and etic perspectives from both groups. The emic perspective refers to the insider's point of view, or the understanding of a phenomenon from the lens of the members of a particular culture or community (Willis, 2007). Meanwhile, the etic perspective captures the researchers' insights (Peek, 2010). Both participants have emic and etic perspectives in the sense that the Ifugao youths know about the IRT culture, heritage, and environmental condition; but the tablet-based concept of learning is something that is introduced to them by the CWs. On the other hand, the developed training modules capture both the emic and etic perspectives about the IRT culture and heritage since module CWs are composed of professionals from two distinct ethnolinguistic groups: Ifugao and Tagalog. Emic and etic perspectives from the CWs play a significant role in realising the capacity building programme among the Ifugao youths through the tablet-based training.

### Views of Ifugao Youth Participants on the Use of Tablets in Capacity Building

Generally, the youth participants viewed the tablet-based training modules as an indicator of their strengths and limitations. Narratives were mostly on how their appreciation of the IRT landscape was heightened or renewed. The participants also gave points to which tablets encourage self-directed learning.

#### *Self-Realisation of Lack of Knowledge of Their Own Identity, Natural and Cultural Heritage*

Admittedly, the Ifugao youths got to know more about the IRT through the tablet-based training modules. They became more aware of their culture, heritage, as well as the environmental conditions of the IRT (e.g. erosion, unregulated farming, abandoned paddies). These youths thought they already had excellent knowledge of the IRT and their locality. Yet, it took outsiders, or non-Ifugao residents, and a tablet-based training to make them realise the relevance of the IRT. This was evident in the following statements:

> "*You were the ones who brought [the modules], then after reading the content, it was only then that we understood [the importance of the IRT]. So on our part, it's quite embarrassing*."

> *"Because we see it [the rice terraces] everyday, it is being taken for granted, it seems normal to us. We do not give importance to it. But through the [capacity building] programme, we realised that it has meaning to other people. So if other people see it as important, we [as the Ifugao youth] should also give importance to it."*

The CWs' perspectives through the training content affected and influenced the youth participants' perspective towards the IRT, which for them was just a part of their daily lives. As one participant puts it, the IRT is something they have "taken for granted":

> *"...knowing that we are the Ifugao youth, it is expected that we know something [about our place], but it turns out that we do not. You were the ones who introduced and thoroughly explained [through the modules] about our place, which is somehow humiliating on our part."*

### *Validation of the Tablet-Based Training Modules through Activities of the Exchange Programme*

As previously mentioned, the #Y4IRT was composed of tablet-based training and exchange programmes. #Y4IRT did not just involve Ifugao youths, it also invited urban youths. In the exchange programme, Ifugao youths immersed themselves in an urban environment, while the urban youths immersed themselves in Ifugao. Activities during the exchange programme reflected and integrated the theories and concepts discussed in the tablet-based training modules. The exchange programme also provided a venue for interaction and engagement between participating Ifugao and urban youths. Of particular interest in this study was the Ifugao youths' simultaneous exchange of cultural knowledge and values to the urban youths, and growing appreciation of the IRT. As previously discussed, it was through these modules that the Ifugao youths became aware of the environmental conditions of the IRT. This was also evident on their reflections of their cultural heritage (e.g. oral traditions, customs). It is noteworthy that through the exchange programme, including its activities and youth interactions, did the Ifugao youths fully comprehend and acknowledge the relevance of the modules:

> *"With the [modules], it gives us a realisation...and [in a] personal aspect, through the exchange programme, it serves as evidence or proof that what is stated in the [modules] is indeed happening."*

> *"Because sometimes, when I just read about these things, I tend to question if these are really true, especially that I am an Ifugao. But through this [exchange programme], we have experienced it today, and I can say it's [the contents of the modules] really true."*

### *Use of Tablets Encouraged Self-Directed Learning*

With the tablet-based training modules distributed to each Ifugao youth participant, learning occurred remotely and individually. Ifugao youths learned at their own pace and convenience. Since most of the Ifugao youths were students, learning occurred during the night, when they had finished their school requirements and household chores. However, learning was not confined to their homes since the Ifugao youths indicated that they can bring the modules with them anywhere. Evidently, their narratives indicate the use of tablet for self-directed learning:

> *"The importance of the tablet is that it is super convenient. You can bring it everywhere. Because just like our cell phone, we take care of it. Unlike if you give us a printed module, it would just be placed anywhere. With the tablet, even after reading, since [the module have] videos, we just listen and watch the videos."*
>
> *"When you read [the modules], you can also imagine having a teacher discussing the topics with you."*
>
> *"Even if you do not listen to the lecture, as long as it is thoroughly discussed in the tablet, it is okay. If ever there are topics that are hard to understand, and you are the shy type who does not usually ask questions, you can still read [from the tablet], and try to understand by yourself."*

Analysis of the youths' narratives also indicated that lessons can be better understood with content-loaded tablets since learners could easily return to and repeat topics whenever needed. Likewise, the convenience and flexibility of tablets compared to printed modules was highlighted. This was attributed to the reduced bulk (i.e. number of pages if it were printed), and the availability of multimedia resources (e.g. photos and videos) to complement the lessons. Multimedia resources also developed a sense of attending a classroom. Although unlike a classroom setting, video resources enable discussions to be repeated as necessary. Overall, the Ifugao youths did not indicate difficulties in using and navigating the tablets. According to Cumming et al. (2014, as cited in Haßler et al. 2016), tablet users no longer need introduction on how to use these gadgets as they have prior experience. Although there was an initial concern that the videos were not playing in the loaded modules. This concern was immediately resolved with an application update. It was also noteworthy that the Ifugao youths reported distractions on their tablet use. They were occasionally side-tracked to use applications meant for leisure and socialisation instead of reading the modules.

## The Course Writers' Views on the Use of Tablets in Capacity Building

Generally, the CWs viewed the collaboration as a challenge but an eye-opening experience, and a success. Different schedules, responsibilities as faculty members, and geographical barriers were among the challenges mentioned. Nonetheless, their effective and efficient collaboration were attributed to commitment to project objectives, delegation of CW roles and responsibilities prior to module development, and frequent team communication.

### *Seeing the Importance of Collaboration in Preparing the Modules for the Tablet-Based Training*

In every stage of the project implementation, especially during the preparation of the tablet-based training modules, the importance of collaboration among CWs was emphasized. This was reflected up to module development, where each module has at least one of the collaborating IFSU faculty members as CW. This ensured that "insider" or Ifugao perspectives were carefully considered and included in the content. The inclusion of "insider" perspectives can be seen as "the emic perspective [that] attempts to capture participants' indigenous meanings of real-world events" (Yin, 2010, p. 11). Through the collaboration, both "insider" and "outsider" perspectives were represented, and different fields of expertise were merged and contextualised to IRT management and conservation. Simultaneously, module design and content were validated by the IFSU CWs themselves. These were evident in the CW narratives:

> *"It is delightful to merge tourism and culture, [or] to merge two different ideas. We all can work together, it was organised, and each one of us incorporated our respective fields [of expertise] all in the context of the IRT. I am happy that we were able to put it all together in certain modules. Even if we come from different fields, we were able to merge those into one [output and] we simplified it into five modules that covered everything."*

> *"What was produced might have been different if it was only [one faculty] from IFSU who made the tablet-based modules. What I am trying to say is collaboration is indeed necessary between IFSU and outside universities for projects like this one."*

> *"And even if I know my field, [I am an expert in my field], it might still not be written [in the modules] in such a good way if I did not collaborate [with all of you]."*

> *"What is important here is networking, we know each other and [we know] what we are capable of giving to this project as an extension of our work for our universities."*

The listed narratives are also acknowledgements from the CWs that while they are experts in their respective fields, coupling their expertise with institutional collaborations resulted in the development of significant training modules which were recognised and appreciated by the Ifugao youths. Sprunger (2017) stated that writing with different collaborators requires an individual to communicate their ideas and methods "more effectively than you might when writing for your peers" (para. 4).

### *Seeing the Collaboration as Challenging But Beneficial To Most Parties Involved*

As with other collaborations, #Y4IRT faced challenges. Among those shared by the CWs were their schedules and responsibilities, and geographical barriers between collaborating institutions which affected most coordination efforts. They also reported that CWs of the same institution experienced coordination difficulties. Geographical barriers, such as the distance between Laguna (provincial location of UPOU and UPLB) and Ifugao, were the reported main challenge. Although web-based communication technologies are present, such as emails and instant messaging, issues were still encountered since not all CWs have access to stable internet connections. One notable experience was the CW workshop in UP Baguio in Benguet province where all the CWs have to work together to finish the modules. Despite these challenges, the CWs looked back on the developed modules, and saw them as a significant win to the Ifugao youths, the Ifugao community, and collaborating institutions:

> *"First, it was a challenge. I also imagined how we are going to execute the process, i.e. determining the course writers for each module. And when there is already an assigned module, it was a challenge for me because you have to revisit the things you did not do in the past. Then you have to contextualise it based on who will use the modules, who will benefit [from the modules], which are the Ifugao youth."*

> *"There was a challenge in terms of how it will be different from others. In a sense that it will indeed come from the youth, it is a need of the community, because it was one of my frustrations when the project was being conceptualised. The grand plan and expectation [for this project] was large. But the beauty of this project is: the grand plan is definitely achievable only through collaboration. The team is already engaging [that] even though it is seldom for us to be complete,*

*for us to come up with something, we were able to produce something tangible and usable not just for this project, but for our classes as well. [The modules] are having a life of their own not just for their intended purpose. They can be used for other purposes], they have a lot of possibilities."*

The collaboration process indeed posed a challenge, but collaborations conducted with universities are "positively correlated with innovation and provide material benefits to [the education] industry" (Huang & Yu, 2011, as cited in Bozeman et al. 2012, p.33). The developed modules were not seen as an end, but a mean to further opportunities for knowledge creation, research, and collaboration.

### *Transcending the Usual "Power" Issues among Universities*

The tablet-based training modules, from its development, distribution to evaluation, provided avenues for the establishment of better relationships and stronger networks. Throughout the whole process, knowledge exchanges and empowerment were imparted to the CWs. CW narratives indicate that there were no "power" issues among them. Power issues such as who contributed more to the module, or who has better written their part were not encountered. Their narratives equally declare that each CW contributed significantly and accordingly to what was expected of them. Apart from collaborating on the developed modules, collaborating on every stage of the project (e.g. data collection, implementation, and evaluation) was apparent:

*"For me, it's good that we have started this collaborative [work]. Based on what I've heard, there were instances in which IFSU fellows were only data collectors or enumerators [in some studies]. But this did not happen to us."*

*"That was what we avoided in the beginning, [the mentality that] one institution is better than the other. We're on equal footing, and each of us has his and her own expertise laid out on the table. And that's what's important."*

*"Another contribution from this project is [the information it will provide about the] more sustainable way of doing collaborative activity and research."*

Power issues in collaborative projects may be inevitable, but the focus must remain on the project objectives. Collaborators' priorities should be poured into delivering their contributions fairly and significantly, which was what the #Y4IRT CWs have displayed. The outputs of #Y4IRT would not have been possible without the deep commitment and strong collaborative spirit among the CWs.

## Conclusion

Analysed narratives from Ifugao youths and CWs described their experiences with the tablet-based training, and collaboration for module development, respectively. The Ifugao youth participants were able to realise their current knowledge about the IRT and their culture was limited. Nonetheless, it was through the tablet-based training that they were able to learn more and understand their significant role in the conservation of the IRT. This study showed positive results for learning with tablets. Specifically, tablet convenience and flexibility were highlighted as features that encourage self-directed learning. On the other hand, the tablet-based training also proved that collaborations among different and geographically dispersed institutions can be successful and fruitful. Challenges for collaborative projects are certain, but commitment to objectives produce notable results for the project stakeholders, community, and collaborators. It is recognised that the limited number and gender of study participants could render different results. Further investigation

on tablet-based training in remote areas, and on collaboration of geographically dispersed institutions are recommended.

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