

# Archaeology in the classroom: A perspective from Kiangnan, Ifugao, Philippines

## Arkiyoloji sa silid-aralan: Isang pananaw mula sa Kiangnan, Ifugao

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### Abstract

How can archaeology enhance public knowledge of local history in a community? This paper explored this question in an elementary-level social studies class in the town of Kiangnan, Ifugao, Philippines, where archaeological excavations took place between 2012 and 2017. The authors present an example of the process of integrating archaeology in the classroom. As a form of public archaeology, "archaeology education" in this project utilized archaeological and Place-Based Learning concepts to develop archaeology modules that complemented classroom learning. This paper recounts the pilot project by providing details of the process of designing and developing the modules, the assessment, and the final product.

Paano mapapahusay ng arkiyoloji ang pangkalahatang kaalaman ng lokal na kasaysayan sa isang pamayanan? Sinayasat ang tanong na ito sa isang pang-elementaryang antas ng Araling Panlipunan sa bayan ng Kiangnan, Ifugao, kung saan naganap ang isang arkeolohikal na paghuhukay (taon 2012-2017). Ipapakita ng mga may-akda ang isang halimbawa ng proseso sa paglakip ng arkiyoloji sa pagtuturo ng Araling Panlipunan. Bilang isang uri ng "public archaeology" o pangkalahatang arkiyoloji, ang "archaeology education" na proyektong ito ay gumamit ng mga konseptong arkeolohikal at "Place-based Learning" para mabuo ang mga arkeolohikal na modyul na makakatulong sa pagturo ng Araling Panlipunan. Isasalaysay din ng papel ang proyekto sa pamamagitan ng pagbibigay ng detalyeng proseso ng pagdidisenyo at pagkakabuo ng mga arkiyolohikal na modyul, ang mga obserbasyon, at ang pangwakas na resulta ng proyekto.

**Keywords:** Public Archaeology, archaeology education, place-based learning, Ifugao | pangkalahatang arkiyoloji

Transformations in the practice and ethics of archaeology suggest ways in which we have expanded our academic purview to reach broader communities, including those who host us during our work. Archaeological knowledge has contributed immensely to a broad range of academic literature, which has helped shape people's understanding of the past and the basis of their social identities (Matsuda and Okamura 2011: 1). Archaeological research has also directly and indirectly affected the communities living within or near archaeological sites. These connections have strengthened archaeology's relationship with the public, and yet many still recognize a disconnect between archaeologists and the communities within places they work (Shackel and Chambers 2004; Merriman 2004; Matsuda and Okamura 2011; Skeates et al. 2012). Public archaeology has steadily built its own body of literature addressing both theory and practice, and its range of interdisciplinary studies (Richardson and Almansa-Sanchez 2015; Ellick 2002). Archaeology education, as a form of public archaeology is one example of bridging this gap as it harnesses the disciplines of archaeology and education to draw connections between people, places, and the archaeological record. This makes archaeology more relevant, especially to local communities, and in effect, encourage people to take responsibility and ownership of archaeological heritage of their place.

In 2015-2016, a pilot project developed archaeology modules for elementary-level social studies teachers in one of the elementary schools in the town of Kiangnan, Ifugao, Philippines. The project was a collaboration between the social studies teachers, the non-government organization Save the Terraces Movement Inc, a graduate student from the University of Hawaii at Manōa's Department of Anthropology, and supported by the Ifugao Archaeological Project (2012-2017). The project's main objective was to design archaeology modules to supplement social studies teachers' lesson plan and classroom lectures. The modules incorporated recent excavation results from the Ifugao Archaeological Project's (IAP) five-year investigation, which included excavation results, basic archaeological knowledge, and Ifugao prehistory into the social studies curriculum (Araling Panlipunan). This paper presents the process of developing the archaeology modules, from design, evaluation, to completion. It will also offer observations and recommendations for improvement.

The Ifugao have been creating cultural heritage initiatives to revitalize traditional knowledge. These actions can be attributed in response to the standardized national curriculum in the Philippine public education system that lacks in-depth regional histories, and the increasing tourism activities in UNESCO-recognized sites in the province. Non-government organizations (i.e. Save the Ifugao Terraces Movement) and local government institutions (i.e., Ifugao State University) in partnership with village elders, teachers, local farmers, and businesses mainly lead these efforts. Some initiatives are also found in elementary and secondary schools' extracurricular activities. These local programs mainly focus on promoting traditional customs and practices (i.e., rice harvesting and planting rituals, weaving, woodcarving, terrace walls and traditional house building, and cultural performances) or the occasional fieldtrips to the local museum. Recent archaeological studies (Acabado et al. 2019, Lapeña and Acabado 2017, Acabado 2016, Yakal 2017, Lauer and Acabado 2015, Eusebio et al. 2015) in Ifugao contribute to these revitalization programs to create a more encompassing background of Ifugao's past. Archaeology education, in effect, uses archaeological data, concepts, and activities to engage students in learning about history without having to leave their classrooms.

## **Public Archaeology: Archaeology Education and Place-Based Learning**

To practice “public archaeology”, we must understand and outline the intentions and goals of the project. One way to begin this is by defining “the public”. To whom does it refer to, and whom does it incorporate? The definition encompasses two main groups: the first is associated with “the state and its institutions”, such as museums and archaeological parks, and the second refers to “the active citizen” – the visitor of those institutions and the everyday-citizen (Merriman 2004: 1-4). Many archaeologists have engaged themselves in the latter concept, and situated their practice of archaeology (and in so doing, the archaeological sites) within current social, political, and economic contexts, such as cultural heritage management (Warner and Baldwin 2004; Shackel 2004), museums and education (Moyer 2004; Lea 2000; Kwas 2000), indigenous rights and representations (Brink 2002; Reeves 2004; Lucas 2004; Martin and Acabado 2015; Reetz and Quackenbush 2016; Acabado et al. 2017), heritage tourism (Shoocongdej 2011; Abu-Khafajah 2011; Hoffman et al. 2002), public engagement and outreach (McClung de Tapia 2002; Chiarulli 2016; Kowalczyk 2016), and formal education and curriculum (Smardz and Smith 2000; Ducady et al. 2016; Henderson and Levstik 2016; Moe 2016; Ellick 2016).

Public archaeology today is redefined to take a much closer look at archaeology’s relationship with the public. Okamura and Matsuda (2011: 4) argue that it should “be intended to bring about change – some improvement – in the relationship” between archaeologists and the public. These changes have to be committed to sustainability, inclusivity, and ethics in order to make archaeology more relevant and beneficial to contemporary society (Richardson and Almansa-Sanchez 2015; Okamura and Matsuda 2011). More importantly, archaeology has the ability to shed light on all histories. It takes the focus away from conventional narratives and creates avenues for histories that are particular to a place and to a people. The artifacts as objects of history represent multiple meanings, which continually shape perceptions of “national” historical accounts usually found institutionalized in the school curricula (Shackel 2004). In the United States for example, some of these topics include the archaeology of plantation life, where archaeologists document the resourcefulness of African slaves in utilizing their surroundings (Bartoy 2012; Henderson and Levstik 2016); the archaeology of the industrial revolution reveal immigrant experiences from sweatshops to boardinghouses (Shackel 2004); and the archaeology of the early mining industry, which recounts tragedies and hardships of miners and their families (The Ludlow Collective 2002). The outreach and education programs created from these archaeological sites enable the public to reflect on the day-to-day activities of people’s lives and have a deeper understanding of these significant events oftentimes inadequately explored or exposed in conventional historical narratives.

### ***Archaeology education***

This paper focuses on archaeology education and curriculum as a form of public archaeology. The classroom is an ideal setting to introduce archaeology, because it fits with various subjects taught in social studies, such as civics, history, geography, and anthropology to name a few. The interdisciplinary nature of archaeology makes it usable and accessible to teachers. Furthermore, archaeology applies hands-on, evidence-based learning that can stimulate and develop students’ critical thinking, and research and investigative skills.

The push for archaeology education can be attributed broadly in response to expanding urban development, vandalism, illegal trade in antiquities, and the increasing mobilization of people (Smardz Frost 2004). Archaeology education’s goals have focused on archaeological discoveries, archaeological concepts and techniques, and the importance of stewardship (McManamon 2000: 17). There are multiple approaches in archaeology education. Matsuda and Okamura (2011)

present four models of public engagement refined from Merriman's (2004) and Holtorf's (2007) proposals: educational, public relations, critical, and multivocal. How one applies a model depends on the goals and objectives of the project, so each outcome can be different from one model to another. All these models are meant to serve different purposes in public archaeology. It is important, then, that a project or program first establish its pedagogical goals and objectives, before it is introduced to the public.

The pilot project in Kiangnan follows the educational model, which supports programs that engage the public in archaeology in order for them to understand and appreciate the past (Okamura and Matsuda 2011:5). One example of this program is Ducady et al.'s (2016) partnership with Providence public schools in Rhode Island, USA. Archaeology educators worked with sixth grade teachers to create a museum-based archaeology program, "Think like an archaeologist", which uses archaeological methods and concepts to connect social studies content and the state's education standards. By conducting in-depth assessments of their program, the authors learned that artifacts, used as a medium of teaching, enhance classroom experience and student comprehension. Through archaeology, students learned the science or evidence-based inferences behind what is being taught in their textbooks. These learning experiences also corresponded to education standards, which required critical thinking as one of the crucial skills students need to develop in school.

### ***Archaeology education: Curriculum design and development***

The core of archaeology curriculum development is the collaboration between the archaeologists and teachers. Teachers must be included from the initial stage of development, because they are more familiar with their curriculum, the education standards, and their students' needs (Cole 2015: 118-119; Ellick 2002: 8-10). A constant advice in archaeology education is that teachers should be able to see the relevance of archaeology and the archaeology materials. "Why should we teach archaeology?" Education standards guide teachers on what they should teach students, whether in subject topics or skill development. Teachers, therefore, give careful consideration in planning their lessons and selecting classroom materials (Davis 2000: 59). Designing archaeology modules within a national education framework gives archaeology a chance to be used in classrooms if it follows the standards that teachers are assigned to teach in that specific grade level (Ellick 2002: 9). The interdisciplinary nature of archaeology provides additional material that teachers can apply in subjects such as, history, geography, and even natural and physical science, to increase students learning capacity (i.e., comprehension, critical thinking, analytical ability) (Ducady et al. 2016: 519, Davis 2000: 60).

The design and development approach of archaeology classroom modules does not use a cookie-cutter model that is easily duplicated from one school to another. Unlike other archaeology education programs in museums or archaeological sites, archaeology in formal education requires a more rigid framework and carries its own constraints. Once archaeology projects have established their goals and have a clear picture of their objectives, they demonstrate that introducing archaeology in formal education is more effective when 1) archaeology modules follow the national standards of education and target key objectives of specific grade levels (Devine 1990, Ellick 2002, Bardavio et al. 2004; Ducady 2016), 2) teacher training and well-written modules guide and complement teachers' class discussions (Podgorny, 1990; Wheat 2000), 3) teachers participate in the development process to make sure that students' needs are properly assessed according to appropriate archaeology topics, class activities, and resources (Ellick, 2002; Richardson &

Alamansa-Sanchez, 2015), and 4) archaeology modules are assessed before, during, and after they are implemented in the classroom (Henderson 2016; McNutt 2000; Moe 2016).

### ***Place-based learning***

Another concept incorporated in developing the archaeology modules is place-based learning (PBL). It is a teaching approach that uses the immediate surrounding or locality to create experiential learning for students. PBL is also referred to as “community-oriented schooling”, “ecological education”, or “bioregional education” (Woodhouse & Knapp 2000: 2). Initially developed for environmental education, place-based teaching can be applied to other subjects, such as math, science, language arts, and social studies (Knapp 2008). A place-based approach to learning employs hands-on, real-world experiences to connect students to the community (Woodhouse & Knapp 2000). It allows students to be reflexive of their environment, makes topics more relevant and content-specific to a particular place, and complements and enhances the existing classroom curriculum (Ibid).

When PBL is combined with archaeology, students become active participants in heritage preservation. The modules give them a chance to engage history and archaeological materials in their locality. By understanding their local history, students can cultivate citizenship, invest an interest in local issues, advocate for their community’s needs, and become active participants in the community (Howley et al. 2011: 218). In archaeology, PBL promotes a sense of stewardship towards material culture and archaeological sites. Furthermore, it eliminates public misconceptions about the purpose of archaeological research and the field activities normally involved in the process. The place-based approach also matters when history curricula, for example, only focus on major political events from socio-economic core regions of the country. Archaeology can help situate these major events to a local context, so students are able to link where they are to the greater history of the country and beyond.

In Sgouros and Stirn’s article (2016) *Community Heritage and Place-Based Learning at Linn Site Idaho*, they outline PBL principles and explain how they demonstrate parallel objectives in archaeology education. For one, PBL is a project-based, hands-on learning, and archaeological investigations are inherently participatory. Each archaeology education program contextualizes its topics and activities to students’ “home region,” which allows them to be involved in the archaeological process of understanding their local history. Second, PBL promotes real-world experiences and near-to-far teaching. In other words, classroom topics need to be familiar and relevant to students in order for them see the relationships and interactions between their community and the outside world. Archaeology, in this capacity, makes local history a primer or a “steppingstone” to learning about world history and other ancient civilizations in class. And lastly, PBL teaches environmental responsibility. As mentioned earlier, stewardship is one of the main goals that PBL hopes to inspire students to do. Archaeology education similarly intends to foster a shared cultural heritage and develop an ethical and sustainable relationship with the archaeological sites.

### **Ifugao and the Archaeology of Old Kiyangan Village**

Ifugao is a landlocked watershed province in the Cordillera Administrative Region of the Philippines. It borders the Mountain Province to the north, the province of Isabela to the east, Nueva Vizcaya to the south, and Benguet to the west (Figure 1). Kiyangan, the project’s area study, is one of the eleven municipalities of Ifugao. The Ifugao people and the rest of the highland groups had a different colonial beginning. While the Philippine lowlands were widely brought under

Spanish rule at the beginning of the 16<sup>th</sup> century, Cordilleran groups managed to evade and resist colonial subjugation (Dulawan 2001, Dulawan 2005). It was only until 1889, less than a decade before the Philippines declared its independence from Spain, that Spanish forces finally broke through the region and established an outpost in Kiangnan (Dulawan 2001 and Dumia 1979:28).



Fig 1. Kiangnan, Ifugao, Philippines. Source: Google Maps (Philippines) and Wikimedia Commons (enlarged Kiangnan map)

Early anthropological studies of the Ifugao were mostly ethnographic in nature (see see Barton 1919, Keesing 1932, Beyer 1955, and Lambrecht 1932). Early accounts recorded customs and oral histories, such as kinship and gender roles, traditional ceremonies, origin mythologies, songs and dances, feasts, and other socio-political and economic lifeways. Ethnographic accounts focused on socio-cultural aspects and noted the rice terraces as a hallmark of the Ifugao culture.

Archaeological contributions to the region's history, on the other hand, had been sporadic. Theories about the antiquity of the rice terraces and the agricultural practice, however, have long been debated. Beyer (1955) and Barton (1919) first proposed a date of 2000-3000 years old, according to personal estimates of duration of terrace construction (Barton 1919: 11). Keesing (1962) and Lambrecht (1932) later disagreed and found the former interpretation lacking in empirical evidence. Based on historical documents and ethnohistoric research of Ifugao folklore, the latter argue that the

construction of rice terraces began as a result of Spanish pressure in the lowland areas that caused people to escape north (Maher 1973). It was not until the 1960s, when Robert Maher conducted preliminary archaeological investigations in central and southeastern Ifugao in Banaue, Burnay, and Kiangnan (Maher 1973, 1981, 1983, 1984), that material evidence began to reveal Ifugao prehistory. His work focused on early Ifugao settlement patterns, their choice of residence and its association with availability of resources. Maher also initiated discussions on Ifugao pottery collection, its technological and stylistic origins, and its connection to the rest of northern Luzon and greater Southeast Asia (Maher 1973). Early archaeological excavations in Ifugao also provided the very first radiocarbon dates for the Cordillera, which ranged from 1100 – 1800 CE. According to Acabado (2012) the large parameters of Maher's time frame failed to synthesize and fully comprehend the timing of colonization and agricultural intensification in Ifugao.

### ***Old Kiyyangan Village***

In 2012, the Ifugao Archaeological Project (IAP) began excavations in Barangay Munggayang in Kiangnan, Ifugao. Kiangnan plays an important role in both Ifugao oral and written histories. Many of their origin stories began in Kiangnan, which identify the town as the place of origin of the Ifugao people, *Ipugo*. Historically, it was the military headquarters in Ifugao during the Spanish colonization and continued to be until the 1940s during the American occupation. Kiangnan was also the last holdout of the Japanese military in the Philippines during WWII (Dumia 1979). The outcome of the IAP project resulted in the reconstruction of early Ifugao culture history in terms of subsistence, their relationship with the environment, and shifts in social, political, and economic activities upon the arrival of colonial forces in lowland areas near Ifugao (Acabado 2012).

The majority of the artifacts are plain earthenware ceramics, including bowl-shaped pottery and 1-3 mm thin earthenware that proved to be an undocumented pottery type in the Philippines (Acabado 2012). Most of the pottery pieces were utilitarian, for cooking and water storage. Excavations also provided information on other uses of pottery. Earthenware jars were also adapted for burial purposes (Barretto-Tesoro in Lauer et al. 2015). Furthermore, every burial jar contained earthenware, stone, and glass beads. These identified trade materials, along with porcelain and stoneware, suggest that the Ifugao had interactions with lowland groups who had access to these goods. Other artifacts include pottery anvils, clay pipes, and loom weights.

Faunal remains were also abundant at Old Kiyyangan Village (OKV). The dominance of deer and juvenile wild pig remains indicates that early Ifugao relied more on wild game than domesticated animals, such as chickens, dogs, and domesticated pigs (Ledesma et al. 2015). Early Ifugao not only used animals for food, but also for other purposes. Domesticated animals, including dogs, were raised mostly for ritual ceremonies and other special occasions (*Ibid*). The bones have cut and chop marks indicating that metal tools were used to butcher animals. Domesticated animals were used to signal status or rank in the community. These social displays of material wealth expressed a person's capability to host communal feasts, such as the *uyauy* or *hagabi* (Dualwan 2001). Animal bones were also used as jewellery. Archaeologists found evidence of polished or smoothed bone rings that early Ifugao used as armlets or bracelets.

Pollen analysis from pottery sherds identified starches that were typical of Philippine crops, such as taro, breadfruit, and arrowroot (Eusebio et al. 2015). Based on OKV stratigraphy, taro phytoliths were found in the early stratigraphic layer, while rice remains were found later. The soil layer corresponding to taro was dated to about 700-900 years ago, while the layer that contained rice was 150-310 years ago. No evidence of rice cultivation or other kinds of rice processing was found

before the arrival of the Spanish (Eusebio et al. 2015), which suggests that early Ifugao primarily subsisted on taro and other starchy staples prior to rice. Early Ifugao used plants for building Ifugao houses (or *bale*), for carving wood objects, and for weaving. Plants also indicate social status in the Ifugao society. Rice, for example, is the most revered crop in Ifugao. Ritual ceremonies are held throughout the planting and harvesting cycle of rice.

Radiocarbon dating suggests that the OKV was settled 1,000 years ago. It was not until the 15th century, however, that pronounced changes appear at OKV. Although the Ifugao and the rest of the Cordilleras were not as easily subjugated as the lowland groups, the Spanish presence affected them politically and economically. Acabado et al. (2015) claims that the later transition from taro to wet-rice farming was a result of the arrival of the Spanish forces in the Philippines in the 16th century AD. This event also corresponds to the time period tradeware ceramics appeared in the archaeological record (Ibid). The intensification of agricultural practices and the shift of staple products were due to an increase in population and demand for food.

### **Developing Archaeology Modules in Kiangnan, Ifugao**

The goal of this pilot project was to create archaeology classroom materials that complement the early Philippine history content of the Department of Education's Grade V-level social studies curriculum, Araling Panlipunan (AP). It is important to note here that the intent to target this grade level was because fifth grade-level social studies in the Philippines especially focus on early Philippine history and the history of Philippine colonization in their curriculum. The Philippine Department of Education's Grade Level Standards require Grade V-level Araling Panlipunan students to:

Naipamamalas ang pag-unawa at pagpapahalaga sa pagkakabuo ng kapuluan ng Pilipinas at mga sinaunang lipunan hanggang sa mga malalaking pagbabagong pang-ekonomiya at ang implikasyon nito sa lipunan sa simula ng ika-labing siyam na siglo, gamit ang batayang konsepto katulad ng kahalagahang pangkasaysayan (historical significance), pagpapatuloy at pagbabago, ugnayang sanhi at epekto tungo sa paglinang ng isang batang mamamayang mapanuri, mapagmuni, responsable, produktibo, makakalikasan, makatao at makabansa at may pagpapahalaga sa mga usapin sa lipunan sa nakaraan at kasalukuyan tungo sa pagpanday ng maunlad na kinabukasan para sa bansa.

[Demonstrate an understanding and appreciation of the formation of the Philippine archipelago and ancient societies, and to the large economic changes and their implications to society at the beginning of nineteenth century using principal concepts, such as historical significance, continuity and change, and cause and effect to cultivate a child that is observant, considerate, responsible, productive, environmental, compassionate to others, and able to value past and present social issues that shape the future of the country.]

Guided by published works of public archaeologists and archaeology educators, the project collaborated with schoolteachers and Save the Ifugao Terraces Movement (a local NGO) to incorporate Kiangnan archaeological data, basic archaeological concepts, and Ifugao culture history into the classroom modules. As a result, the project provided a local context of early Filipino



society for Ifugao students – something that is not highlighted in the regional social studies curricula throughout the country. It also contributed teaching materials that enhanced lessons in Philippine prehistory, which worked towards providing students a deeper appreciation and understanding of early Philippine history. Utilizing a place-based concept of teaching, the project developed the Ifugao archaeology modules within the local history, specifically meant for Ifugao students.

The Old Kiyyangan Village (OKV) modules worked on three archaeological themes: material evidence of change and continuity in early Ifugao life, Ifugao people's relationship with the land and its resources, and Ifugao interactions in early colonial period of the Philippines. The design and development of OKV modules had four phases: Front-end evaluation, module development, practice run and formative evaluation, and revision. Each phase builds on each other and requires teacher involvement and participation until completion.

### ***Phase 1: Front-end Evaluation***

Phase 1 begins by gauging student's understanding of Ifugao prehistory to determine the scope of the project, gaps in students' knowledge, and appropriate topics for the archaeology modules. The evaluation, in the form of a questionnaire (Appendix A), was based on five research themes of the Old Kiyyangan Village archaeology: 1) Oral history that deals with Ifugao origin mythology; 2) Early Ifugao social organization; 3) Subsistence in terms of past diet and environment; 4) Material culture and trade; and 5) Antiquity of the rice terraces. The evaluation, conducted in two classes (n=63 students), showed parallel results of students' prior knowledge about Ifugao prehistory (Table 1). More than 50% of the class had knowledge of Ifugao oral history and social organization, while only about 30-40% had answered early Ifugao subsistence and material culture questions correctly. Only 11% of the class correctly answered the question on the antiquity of rice terraces. Following the front-end evaluation, results show that students had prior knowledge of Ifugao oral history and social organization, while topics, such as past subsistence, early material culture, and antiquity of the rice terraces were considered lacking. These last three topics were mainly archaeological in nature, which highlighted the significance of these types of place-based modules in social studies classes.

	(#questions)x(#students)	total	#correct answers	(#correct answers)/(total)x100
oral history	2x63	126	77	61%
social organization	3x63	189	106	56%
subsistence	2x63	126	48	38%
material culture	2x263	126	46	37%
terraces (antiquity)	1x63	63	7	11%

Table 1 Combined averages of both grade levels (63 students).

### ***Phase 2 Creating the OKV modules.***

The front-end evaluation results led to the development of three archaeology modules. Guided by the evaluation results, and in collaboration with social studies teachers, the school principal, and SITMo, we came up with three topics, all of which were also covered in peer-reviewed articles

published by the National Museum of the Philippines' Journal of Cultural Heritage in 2015 (see Lauerand Acabado 2015; Ledesma et al. 2015; Eusebio et al. 2015): (1) Introduction to archaeology and the Old Kiyangan Village, (2) Early Ifugao diet and environment, and (3) Early Ifugao imported (trade) goods. These topics easily relate to Grade V's overall curriculum framework and learning objectives, which focus on early Filipino history in the first quarter of the academic year. In the current Grade V textbook (Palu-ay 2010), these archaeological topics can be applied to the first unit section, Early Filipino Life (Yunit 1: Pamumuhay ng Sinaunang Pilipino), which discusses early forms of livelihood, social status and hierarchy, material wealth, religion, and local and foreign economic trade (See appendix B for AP learning standards).

The drafted modules follow a typical outline of a lesson plan: Title, objectives, background (introduction), activity, closure/summary, and evaluation. Objectives of these modules also had to conform to the national Grade V social studies curriculum (Araling Panlipunan (AP), Baitang V). The background is an overview of the archaeology topic and related Ifugao culture history. The archaeology activity provides a step-by-step instruction, complete with a list of materials. The Florida Public Archaeology Network's Beyond Artifacts (Harper 2011) and The Society for Georgia Archaeology's Archaeology in the Classroom (The Society for Georgia Archaeology 1992) are two of many online resources that compile archaeology classroom materials for teachers. Two of the classroom activities were taken from these sources, and the third was adopted from an archaeology laboratory activity from the Anthropology department of the University of Hawai'i at Mānoa. The archaeology activities were customized to fit the grade-level, the Ifugao culture history context, and the Araling Panlipunan (AP) curriculum standards.

### ***Module organization***

The OKV modules were semi-structured according to the accompanying teacher's manual of the AP textbook, as recommended by the teachers themselves. The modules copy a similar organizational layout from the AP teacher's manual (Table 2). The first section of the module enumerates the learning objectives (Layuning Tiyak). The three main categories of objectives follow the AP teacher's manual (Palu-ay 2010), namely comprehension (pangkaalaman), values (pandamdamin), and proficiency (pangkasanayan). Under these categories, the objectives are tailored to the educational purpose of each module, in order to address its relevance to each topic.

The second section lays out the main themes of the module. This section also directs teachers to the corresponding topics in the AP textbook (Palu-ay 2010). The modules take into account that textbooks continually change, so the OKV themes are consistent with the themes of the Araling Panlipunan curriculum rather than the textbook. Module One's theme, "early Ifugao life: change and continuity", applies to topics regarding "the social condition of early Filipinos" (kalagayang panlipunan ng mga sinaunang Pilipino). These textbook topics include early types of social organization, settlement, and livelihood. Module Two, "early Ifugao diet and environment", relates to topics under "early Filipino life" (pamumuhay ng mga sinaunang Pilipino). And lastly, Module Three's theme on "early Ifugao trade goods" relates to "early Filipino livelihoods" (paghahanapbuhay ng mga sinaunang Pilipino).

The third section is the overview, which provides the content for discussion. It is divided into two parts: the Ifugao culture history background and the archaeology background. These parts link together to form the concept of the module. The culture history background provides the context for Old Kiyangan Village, while the archaeology background provides the epistemology. In other

words, the archaeology background presents an explanation as to “why we know what we know” about these claims in history. The archaeology background reveals the scientific process, empirical evidence, and the reasoning behind the OKV research. The archaeology background is important in developing critical reasoning for students.

The fourth section is called “Process,” and is divided into four sub-sections. This part of the module came from the AP teacher’s manual. This section originally appears under V. Pamamaraan (V. Process), which focuses on instructions for implementation of each module in class (See Appendix C for AP teacher’s manual). The OKV modules under this section differ in the way they are written, in that it provides a rationale for the module’s topic, explaining why the particular topic was chosen, how it fits into the AP textbook, and how it relates to Ifugao culture history [See Section IV.A. Paghahanda (Getting ready – introducing the module in class) in the module]. A few sample scripts explain the archaeology section to contextualize archaeological concepts and help teachers understand certain archaeological terms [Section IV.B. Paglinang ng aralin (deconstructing/making sense of the lesson) in the module]. These modules (including the archaeology activities) are also able to stand alone, so teachers can pick and choose what to incorporate into their class discussions. This allows teachers to have more creative freedom in the implementation of the modules in class.

Section	Title	Description
1	Objectives	Enumerates learning objectives
2	Main Themes	Lays out main themes of the modules
3	Overview	Provides Ifugao cultural history and archaeology content
4	Process	Provides instructions for the implementation of each module
5	Importance/significance of the lesson (Closure)	Summarizes the module and provides a closing statement
6	Evaluation	Provides a culminating activity that serves as a review
7	Summative Test	Sample test for the module

Table 2 Summary of module organization.

### ***Archaeology activity***

The archaeology activity is found under Section IV. Process of the module. As mentioned at the beginning of this paper, the aim of this project is to bring archaeology into the classroom through hands-on, evidence-based learning. One way to achieve this is to have classroom materials and props that engage students in a more constructive and experiential way. In the recent *Advances in Archaeological Practice*, Chiarulli (2016: 552-553) suggests that providing teachers with classroom materials is one way of encouraging teachers to incorporate archaeology into their classes. The archaeology activities, therefore, were designed to be reproducible and affordable, so that teachers can easily recreate or modify them. It also helps to show teachers that all materials used to create the activities were purchased locally, as was the case in Kiangnan. Each archaeology activity relates to the theme of the module and is explained in detail. The goal of the archaeology activities is to develop students’ critical thinking skills through hands-on exercises with materials.

Module One’s archaeology activity, “What our artifacts say about us,” teaches students how archaeologists analyze and interpret artifacts by using modern materials (Figure 2). The activity

introduced students to the scientific method in order to understand change and continuity in Ifugao life. Module One established the archaeological background of the Old Kiyyangan Village, and explained the methods in which archaeologists derive their conclusions and interpretations of an archaeological site. An assortment of artifacts was collected, such as instant noodle wrappers, empty canned food, bottle caps, broken pieces of plates and glass bottles, utensils, a tube of lipstick, hair pins and ties, toys, plastic bottles, coffee packets, etc. Students were then asked to create a “site history” by examining and identifying the “artifacts” in their box. Class discussion included questions, such as “what kind of archaeological site did these ‘artifacts’ come from, and why do you say so? What can be said about the people who left these things behind?”



Fig 2 Activity kits for Module One archaeology activity: What our artifacts say about us. Source: Charmaine Ledesma

Module Two’s archaeology activity, “Understanding soil stratigraphy in archaeology”, focuses on the excavated faunal and plant remains, and the way these archaeological artifacts explain changes in the landscape through time. This module explains the relationship between early Ifugaos and the environment, and emphasizes early Ifugaos’ extensive use of their surroundings, including plants and animals. The illustrated soil stratigraphy is an actual stratigraphic profile of Old Kiyyangan Village from published research papers (See Eusebio et al. 2015 and Lauer et al. 2015). The goal was to show students how archaeologists provide context and meaning to a place, and how they base their claims on empirical evidence. To create the activity, the module developed a soil stratigraphy chart and laminated cutouts of Old Kiyyangan faunal, and plant remains. Students use dry erase markers and tape to attach and draw on the laminated chart (Figure 3).

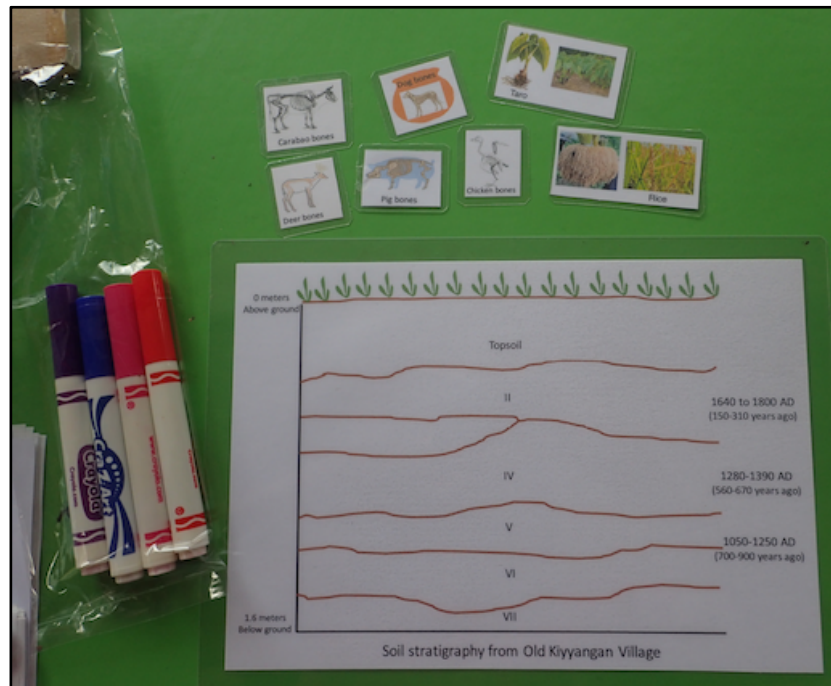


Fig 3 Module Two archaeology activity: Understanding soil stratigraphy in archaeology. Source: Charmaine Ledesma

Module Three's archaeology activity, "Site on floor," brings an archaeological feature into the classroom by creating archaeological scenarios for students. For this module, it was a house feature that included a house platform, hearth (cooking area), and cultural materials. This activity emphasizes interpretation of archaeological sites. It also highlights the OKV material culture, and what they mean to the Ifugao. The activity goes a step further by discussing the importance of site preservation by discussing the importance of provenience and the dangers of looting. Assorted broken pieces of ceramics, beads, poster board, felt and coloured papers, markers, and crayons were used to create the simple floor plan (Figure 4).

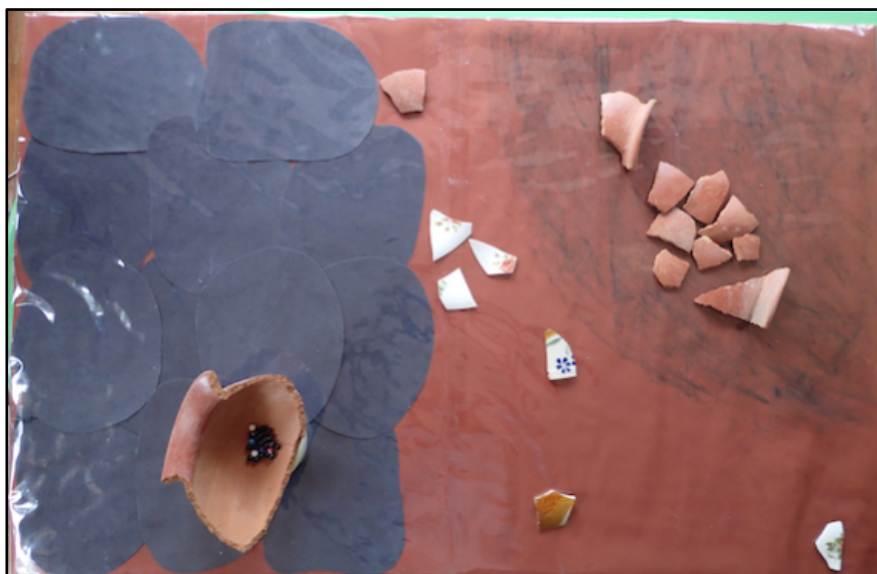


Fig. 4 Module Three archaeology activity: Site on floor. Source: Charmaine Ledesma

The fifth, sixth, and seventh sections summarize the lesson, provides a culminating evaluation activity, and generates a summative test for each module. These sections drive home the topics discussed and serve as a review for the class. (See Appendix E for a sample archaeology module).

### ***Phase 3 Practice run and formative evaluation***

As recommended by teachers, the approved modules were tested in class. The purpose was for teachers to evaluate each prototype. This phase was the most critical part of the development, because teachers participated and observed the application and effectiveness of the modules. Formative evaluation allowed the teachers to assess the quality of the modules. The evaluation for this project was a combination of personal meetings with 5<sup>th</sup> and 6<sup>th</sup> grade social studies teachers and SITMo, and a written survey after every practice run. The survey was categorized by 1) Process, which focused on the general organization and objectives of the module; 2) Material content in terms of its appropriateness to the grade level, and 3) Impact of module to student. Teachers then concluded the practice run by summarizing and connecting the archaeology modules to their current lesson. (See Appendix D for a sample of Formative evaluation questions)

### ***Phase 4 Revision***

The last phase, revising the modules, addressed three aspects of the module: content, composition, and implementation. For content, teachers pointed out insufficient background information on the archaeology of Old Kiyangan Village during Formative Evaluation. In terms of composition, the evaluators commented on word choice in the modules, citing that some were too technical and required a bit more explanation. For implementation, teachers noted that “the practice run was very fast to cover all content”, which implied that the 40-minute class session was not enough to cover an entire module. And finally, teachers requested that the modules be written in Filipino to follow Department of Education’s language requirement in Araling Panlipunan classes to provide easier access for teachers and students. Revision and translation of modules took place back at the University of Hawaii at Manōa after receiving formative evaluation results and final meetings with AP teachers and SITMO. The modules were translated through the Filipino and Philippine Literature Program of the University.

## **Discussion**

The interest in promoting Ifugao heritage and history has become more pertinent as Ifugao become increasingly modernized in terms of tourism influx and outbound migration to name a few. Ifugao boasts five UNESCO World Heritage Sites recognized as living cultural landscapes, two of which are in Kiangan (Figure 5). This recognition has brought the rice terraces and Ifugao culture to the forefront of the province’s tourism industry. The expanding tourism and debates on the commodification of the Ifugao culture have strengthened heritage conservation initiatives and brought to attention the need for “revitalization of diminishing Ifugao culture and traditions and the transmission of cultural knowledge to younger Ifugao generations” (Save the Ifugao Terraces Movement 2008: 55-56). Through various cultural revitalization projects, government and non-government organizations (NGO) have found ways to develop sustainable practices where indigenous knowledge and traditions can complement economic development and address issues of heritage management and conservation.





Fig 5 Nagacadan rice terraces, Kiangnan, Ifugao, Philippines, UNESCO World Heritage Site (Source: Charmaine Ledesma)

Projects relating to indigenous knowledge systems and practices were created not only to promote Ifugao culture for tourism purposes, but also to ensure that the Ifugao continue to practice these traditions (Save the Ifugao Terraces Movement 2008). One result of this project is the Ifugao Indigenous Knowledge (IK) Workbook. Led by the Ifugao State University (IFSU), the authors of the workbook created lesson plans for IFSU students on Ifugao traditional knowledge regarding land and water management, rice production practices, biodiversity, stone works, house construction, traditional laws and the justice system, and Ifugao rituals, dances and festivals (Gonzales and Ngohayon 2015).

In time with these practical realizations and innovations in archaeology education, the practice of conducting archaeological projects strive to be more inclusive and attentive to the local communities' needs. This has been done in various ways, such as conducting community consultations, sharing results with the public, training locals in preservation and archaeological techniques, developing on-site education programs for all ages, and inviting community participation. Archaeologists in heritage education, especially with descendant communities who are the stakeholders of these cultural and historic places, take these ideas very seriously. Generally speaking, not only do these education programs endeavour to raise public awareness and appreciation for past cultures and histories and encourage stewardship of archaeological heritage, but also create an open relationship built on mutual trust between archaeologists and the community.

The general purpose of an archaeology education program is to add a layer of depth to history in order for the audience to better understand the extent of human experience, and the material evidence of human activities and behaviour (Henderson and Levstik 2016: 504). Archaeology education also endeavours to promote the scientific process involved in these inquiries, and to link the ancient past to its present significance. In Ifugao, archaeology education makes the archaeological results of Old Kiyyangan Village more accessible to students by bringing archaeology to the classroom, enhancing the social studies curriculum, and supporting teachers in classroom discussions and activities. The Old Kiyyangan Village modules address material evidence of changes and continuities in early Ifugao life, of people's relationship with the land and immediate resources, and of early interactions with other Filipino lowland groups.

### ***Final outcome and teachers' assessments***

The product output of this project became the Archaeology Teacher's Manual for the Prehistory of the Old Kiyyangan Village (OKV), which serves as a teacher's companion for 5<sup>th</sup> grade elementary social studies (*Araling Panlipunan*). In addition to the archaeology modules, the manual includes a preface describing its use, brief overviews of Cordilleran archaeological research and the archaeology of Old Kiyyangan Village, and lastly, Filipino and English versions of each module complete with illustrations and blank activity worksheets.

There are four important aspects used in the design and development of the manual. First, the archaeology modules followed the national standards of education and targeted key learning objectives of specific grade levels (Devine 1990, Ellick 2002, Bardavio et al. 2004, Ducady et al. 2016). In terms of the OKV manual, the topics covered in the archaeology modules fit accordingly with the fifth-grade level social studies curriculum of the Philippines, which focuses on early or ancient Filipino lifeways during the first quarter of the academic year. The modules also easily relate to the current accompanying textbook, which covers topics in early forms of Filipino livelihood, settlement, social organization, material wealth, early colonial period and societal change (Palu-ay 2010).

Second, the archaeology modules contained clear and appropriate content and classroom activities that were translatable to the teachers (Podgorny 1990, Wheat 2000). Modules also showed the relevance of archaeology and archaeology materials in relation to the curriculum and considered teacher's existing lesson plans in the development (Davis 2000: 59). According to Wheat (2000:18), archaeology modules should be able to answer the teacher's questions such as:

- How will this topic or lesson fit with my purpose in teaching?
- Why will my students be asked to learn this topic?
- What specifically will my class gain from the study?
- How much time (in class, in preparation) can I devote to this study?
- Why institutional strategies will be most effective with these students?
- Which resources already exist, and which do I have to locate or create?

These concerns were addressed in the OKV modules by making sure that the content, especially the rationale of each archaeological topic, were written in a non-technical way in order for teachers to easily incorporate the topics into their classroom discussions. The accompanying AP teacher's manual guided the format and content of the archaeology modules.



Third, the archaeology modules were evaluated before, during, and after the practice run. These evaluations provide a baseline that demonstrates long-term success and sustainability, reveal inadequacies, and improve modules to provide high-quality materials for teachers (Moe 2016: 449-452). In the project, the practice run and the formative evaluation phase (Phase 3) was the most revealing part of the project, because the teachers had a chance to evaluate the implementation of each in class. By observing someone else running the modules, they were able to critically assess the impact of the archaeology content and exercises in class, formulate their own plan of action, point out weaknesses in the modules, and suggest appropriate revisions. In the OKV modules, having the teachers become observers, made the archaeology modules, and eventually the manual, more applicable to the class and responsive to the needs of the teachers.

Fourth, and the most important aspect to the development of the manual stakeholder involvement, is teacher participation. Teacher participation in every stage of the design process is important to ensure curriculum requirements and students' needs are addressed in terms of relevant archaeology topics, class activities, and resources (Ellick 2002, Richardson & Alamansa-Sanchez 2015). Teachers were consulted in the content of the modules, they evaluated the modules, and were consulted again during revisions of the modules. In fact, it was on their recommendation, that OKV modules be turned into a manual that would provide more background to the modules and make the connection more explicit between all three modules. Teachers were the ones who requested that the modules be translated into the Filipino language as it is the primary language used in social studies classes in the Philippines.

Teacher participation in every process of design and development of the manual encourages an enabling environment that allowed the project to work. In addition, other groups knowledgeable of the archaeological and culture history topics also assessed the project. Save the Ifugao Terraces Movement, an indigenous grassroots nongovernment organization in Ifugao is a wealth of knowledge in Ifugao culture and history. Their insights were instrumental in evaluating the modules, specifically on the Ifugao culture history content of the modules, while the Ifugao Archaeological Project reviewed the archaeology aspects of the modules.

### ***Further Recommendations***

Despite evaluations from teachers and SITMo, however, this project was not able to assess students' comprehension of each module quantitatively. The teachers were the focus of this project, and the objective was to create archaeology modules that would enhance their classroom materials and assist them in class discussions. In essence, the modules are dependent on the teacher's willingness to use and apply them in class. The goal was to provide teachers with enough classroom content that they would be able to incorporate archaeology topics and Ifugao culture history into their lessons.

Reiterating King's (2016) call for a systematized archaeology education program, the next steps after the teachers' assessments would have been to focus on student comprehension. The short version would be to conduct assessments before and after each class session. A longer version, however, would be more appropriate for this next stage. This would evaluate the effectiveness of the modules for the entire unit section on early Filipino history during the first quarter of the school year. As an example, the Kentucky Archaeology Survey developed a comprehensive study of their archaeology education program by conducting follow-up interviews of students regarding their archaeological experiences (Henderson and Levstik 2016). The authors concluded that archaeological activities have "considerable sticking power" with the students (Ibid: 510). For

instance, students remembered the artifacts they handled during their participation, and gave important insights on how objects relate the past to the present (Ibid: 503).

During the evaluation, one of the comments was that the modules were too dense. Indeed, the practice run covered an entire 40-minute class period. This would not have been ideal, unless this was an archaeology class, because the modules are supposed to serve as supplementary material to contextualize the Araling Panlipunan curriculum. They could have been unpacked and sub-tasked into multiple class sessions. Meaning, modules can be broken down into further sub-topics and class activities. For example, Module Two: diet and environment could be divided into two separate modules. This will have created a more thorough discussion of each topic and provide additional archaeology activities in class. After the completion of the pilot project, author 1 taught one module in class for two days (Figure 6).



Fig 6 One of the authors (Dulnuan) using Module 2: Early Ifugao Diet and Environment with her 5th graders in 2018. Source: Jennifer Humiwat Dulnuan

Contextualization and integration of the archaeology modules depend on teachers' teaching strategies, time, and assessment of student capabilities. The Philippine Department of Education encourages teachers to contextualize their lessons to fit their students' level of understanding and the community in which they live. This task falls under the teacher's responsibility, so to further assist the teachers, the modules should also have a step-by-step teaching procedure formatted to the ones supplied by the Department of Education. This is different from the archaeology modules in that it requires sample dialogues between teacher and students of the class discussions, including anticipated student responses and appropriate teacher responses.

Lastly, there should be a teacher's workshop on the OKV teaching modules, where all the teachers in Kiangnan and neighbouring municipalities can learn about archaeology, and its uses in teaching. According to Wheat (2000) and Brunswig (2000), a teacher workshop is one of the best ways to

introduce archaeology and establish a relationship with teachers. It is also where teachers can get together and share their thoughts and experiences about teaching the new concept. There is a greater chance that teachers will use the archaeology modules if they are readily provided with materials and resources. Modules should also be presented in a teachable format. Teachers are often pressed with time and the volume of topics they have to teach. New concepts, like archaeology for example, have to respond to these factors. One way to do this is to make the concept of teaching archaeology relevant to the curriculum and the standard lesson plan. An archaeology teacher workshop will be able to illustrate the integration and “identify opportunities in the existing curriculum for archaeology to be injected” (Wheat 2000: 120-121). The teacher workshop, as a form of public archaeology, is also another avenue to reach out to other sectors of the public. The Ifugao archaeology workshop could ideally partner with the local Department of Education office, the local university, or the Kiangnan Museum to get accreditation/certification-hours teachers need to meet ongoing educational requirements. This validation would not only incentivize teachers to attend the workshop, but also encourage teachers to adopt the archaeology materials into their lesson plans.

## Conclusion

This paper has documented the process, purpose, and rationale behind the pilot project in Kiangnan, Ifugao. Certainly, the modules will always need improvement as new archaeological information comes out of the OKV research or the school curriculum standards change (For current publications on Old Kiyangan Village see Lapeña and Acabado 2017, Yakal 2017, Acabado 2018, Horrocks et al. 2018 and Acabado et al. 2019,). The English version of the archaeology modules have no copyright restrictions to discourage revisions, especially if new ideas could suggest ways to make the modules better for public consumption. The modules are intended for classroom use, but their structure allows other educational institutions and professional training programs (i.e., museums, heritage centres, teacher workshops) to use the materials. The structure also gives educators more liberty and creativity to incorporate the modules, according to their desired method and style of teaching. The modules function as a guide for teachers and contribute to the current Ifugao educational material.

The point of archaeology education is not to teach about archaeology, but *through* archaeology. As Bartoy (2012: 555) succinctly writes in *The Oxford Handbook of Public Archaeology*, “the goal of public archaeology should not be to teach the practice of archaeology... but instead, to use archaeology as a tool through which to teach a variety of lessons”. As a scientific discipline, archaeology is best used as an analytical lens for studying history (Henderson and Levstik 2016: 511). Students learn the importance of substantiating interpretations of history through multiple lines of evidence and reasoning. They do this by learning to make human-object connections from the material remains (empirical evidence) of the past people who left them behind (Ibid). Furthermore, archaeology creates an understanding of universal themes in anthropology that allows students to appreciate both past and present cultures, and to see the relationships that people create through time. Critical thinking in archaeology education encourages students to question, evaluate, and investigate history. Archaeological inquiries also guide students to acknowledge multiple interpretations of history and open up narratives that inspire students to appreciate and understand their heritage further. This critical way of thinking about history and the process of inquiry complements the Philippine Department of Education’s Araling Panlipunan curriculum core learning area standard, which aims to develop an educated and socially conscious citizenry that harnesses their ability to investigate, think critically, and make informed decisions of current and historical importance (Republic of the Philippines Department of Education 2016):

“Naipamamalas ang pag-unawa sa mga konsepto at isyung pangkasaysayan, pangheograpiya, pang-ekonomiya, pangkultura, pampamahalaan, pansibiko, at panlipunan gamit ang mga kasanayang nalinang sa pag-aaral ng iba’t ibang disiplina at larangan ng araling panlipunan kabilang ang pananaliksik, pagsisiyasat, mapanuring pag-iisip, matalinong pagpapasya, pagkamalikhain, pakikipagkapwa, likas-kayang paggamit ng pinagkukunang-yaman, pakikipagtalastasan at pagpapalawak ng pandaigdigang pananaw upang maging isang mapanuri, mapagnilay, mapanagutan, produktibo, makakalikasan, makabansa at makatao na papanday sa kinabukasan ng mamamayan ng bansa at daigdig.”

[To demonstrate an understanding of historical, geographical, economic, cultural, governmental, civic, and social concepts and issues using skills developed in the study of various disciplines and fields of social studies including research , analysis, critical thinking, sound judgment, creativity, camaraderie, natural resource use, communication, and expanding global perspectives to become a reflective, contemplative, accountable, productive, environmental, patriotic, and compassionate individual, who will build the future of the nation and the world.]

In Oral Literature of the Ifugao, Ifugao indigenous scholar Manuel B. Dulawan stressed the need to study Ifugao culture by expressing that “most [Ifugao have] assumed the conditioned belief that anything of Ifugao culture origin is either no good or inferior. They lack both a knowledge of, and appreciation for, Ifugao culture” (Dulawan 2005: 17-18). He wrote the book in an effort to change this perspective, and to retrieve, preserve, and share important oral histories of the Ifugao culture that may serve elementary and high school students in the province (Ibid). Similarly, Save the Ifugao Terraces Movement (SITMo) in their cultural and environmental impact assessment on tourism also acknowledged this necessity in order to bring back traditional agricultural practices in the rice terraces that have been “disrupted” by out-migration of youth (Save the Ifugao Terraces Movement 2008: vi). As a response, SITMo organized an indigenous knowledge transfer project that connected cultural practitioners to the youth. This pilot project supports these cultural revitalization efforts from an archaeological perspective.

Returning to the main question of this project – how can archaeology enhance public knowledge of local history in a community – archaeology’s role in cultural resource preservation and management is becoming increasingly relevant, as people become more mobile and connected and archaeological sites around the world become more accessible. Communities within or near these sites are affected by this shift, and many archaeologists have long recognized this complex relationship. Archaeology, through education, can foster stewardship and promote an appreciation for the cultural past. As ethical practices improve and community interest for these sites continue to increase, archaeologists must recognize their responsibility to make their work more transparent and accessible, in order to create positive and long-lasting relationships with the communities included in their work.

### ***Larger Implications of the project***

Archaeological inquiries have always incorporated broader research implications for advancing the study of the past. These broader implications have now included archaeology’s social implications as well. When it comes to archaeology education, it not only deals with fundamental concepts of

archaeology and archaeological content, but it also focuses on the stewardship and preservation of archaeological sites, the uses of archaeology, and access to archaeology (Franklin and Moe 2012). As mentioned throughout the paper, archaeology education encourages public support for the protection of archaeological sites and the knowledge they contain about the past. It also provides greater appreciation and understanding of history and heritage that reflect decision-making processes regarding the fate of these sites, in terms of demolition, economic development, and exploitation of resources.

These aims can only be achieved, however, if the public sees the relevance of these sites, and the field of archaeology in general. Archaeology education is best when its educational context is situated within the public's (or student's) immediate locality. This effective way of teaching allows the public to use their previous experiences as a reference for learning about the past. Furthermore, this method of teaching moves away from the "banking concept of education". Borrowing from Paulo Freire's *Pedagogy of the Oppressed* (1993), Bartoy (2012: 554) uses this term to advocate for archaeology's role in promoting active participation, developing critical thinking skills, and creating dialogues about history between archaeologists and the public, between teacher and students. Materials-based learning, such as archaeology education, moves away from didactic teaching that tends to dissuade student participation.

Furthermore, the archaeology of Ifugao, although known to some Ifugao intellectuals, is still for the most part unclear to the public. The Philippine education system lacks the capacity to help students learn their local histories as part of a broader history lesson. The public education system has been highly centralized since its establishment in 1901 during the American colonial period of the Philippines (Enkiwe-Abayao 2002). This American policy inculcated in Filipinos the English language among other introduced Western "values", and in effect, a new and different way of life that slowly eroded the ideals of Filipino nationalism and resistance against American colonization (Constantino 1970). Fast forward to the present, the system at its core basically remains the same. In addition, the system continues to place less emphasis on regional studies that include indigenous culture histories (Enkiwe-Abayao 2002 and Rovillos 2002). Even at the university level, no curriculum offers general courses for indigenous studies (Enkiwe-Abayao 2002: 60). Teachers who make the effort to incorporate indigenous culture and history into their classroom lectures lack the requisite knowledge, education materials, and teaching strategies (Ibid).

H.O. Beyer, the founder of Philippine Anthropology, further ingrained colonial ideas of the past when he introduced the "Waves of Migration" theory of the origin of the Filipinos, which claims a succession (or waves) of arrival of different groups based on biological features (i.e. skin colour, etc.) and cultural sophistication (i.e. technological advancements). The first wave being the dark-skinned Negritos were pushed into the interior and to the mountains, when the subsequent waves arrived. This theory became dominant in the Philippine narrative that still continues to be taught in Social Studies classrooms in the country.

In light of the archaeological results of Old Kiyangan Village, Acabado et al. (2014) argue that the perpetuation of this colonial narrative aided in the stereotyping and exoticization of ethnic groups in the Philippine highlands, and conveyed an "isolated" and "unchanging culture". The archaeology of Old Kiyangan Village challenges this dominant historical narrative by illustrating major shifts in social, political, and economic life of the Ifugao.

## Notes and acknowledgements

Readers will find only one module attachment in this paper. The rest of the modules, including the translated versions and blank worksheets can be accessed at University of Hawaii's Center for Southeast Asian Studies website, <https://www.cseashawaii.org/projects/tagalog-animations/resources/teachers-archaeology-manual/> along with a variety of Southeast Asian and other Philippine public outreach projects.

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### Supplementary Material (online)

- Appendix A: Front-end evaluations
- Appendix B: Araling Panlipunan (AP) learning objectives
- Appendix C: Araling Panlipunan (AP) teacher's manual
- Appendix D: Formative evaluation (Survey results)
- Appendix E: Module 2: Early Ifugao Diet and Environment

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