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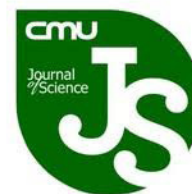
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# When Information Technology Fails: A Challenge for Nurses

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## ABSTRACT

Within the dynamics of technology, it is the increasing complexity of healthcare that inhibits and makes barriers to the transformational reforms to healthcare delivery. The technology nurses encounter in the nursing practice drastically improves patient care and safety. However, nurses' dependency on technology would mean it would be indispensable, that by losing this resource would mean adversity in the workplace. Information Technology-related failures in health care often are covered up, ignored, or rationalized, so mistakes are repeated. A probable solution would buildup nurses with technological resilience would mean survival in the worst-case scenario, although the notion needs to be grounded and philosophically underpinned. Being technologically resilient does not mean deferring the use of technology but rather an idea that, in the advent of an information technology breakdown, the nurse will be able to deliver positive patient outcomes despite the challenges. May the cause of technological stress be unintentional or intentional.

*Keywords:* barriers to information technology, technological resilience.

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According to Locsin and Purnell (2015), nurses will continue to use technologies, for they are challenged to sustain their caring nursing practice while responding to the complex technical demands of modern healthcare. The twentieth century brought about a technological "invasion" to nursing. The healthcare industry has been one of the areas where information technology flourished and has helped many people. It is essential to learn technologies used in nursing because it significantly affects the way nurses work (Lee, 2004). Like patient care and safety have been drastically improved by these technologies where the nursing practice at present would look nothing like it did 10, 20, or even 30 years ago. The technology nurses encounter in the nursing practice falls into two broad categories - clinical and other information systems, and smart medical devices, often with integrated computer chips and screens.

There is no denying the positive benefits of the use of information technologies. However, we also think that when everything is possible these days, it is also possible that these information systems are prone to failure (Preston, 2006). The author's purpose for this paper is to elucidate the traditional perspective of health information technology and technology, how health information technologies fail, how the system adapts to the loss of information, how to prevent such an event.

## Information Technology and Technology

Traditional or the positivist view of Information technology over the past decades was focused on the patient, and consumer needs have expanded the development and integration of these technologies (Eysenbach, 2000; Moore & Fisher, 2012). Whereas Information Technology has transformed the healthcare environment to realize its highest principles (Phillips & Merrill, 2015), while the advancement of information technology persuades us to take social and political positions (Feenberg, 1999). It is

vital that we acquire more knowledge and gather more skills about information technology, because information technology is increasing at unprecedented rates, and a growing number of people are required to dedicate their work to information-related activities in organizations throughout society.

Within the dynamics of technology, it is the increasing complexity of healthcare that inhibits and makes barriers to the transformational reforms to healthcare delivery (Marchand, Kettinger, & Rollins, 2000). Moreover, it is essential to note that the advancement of technologies can be anticipated to become more sophisticated, and more lives become dependent on these technologies that critically influence contemporary human experiences (Locsin & Purnell, 2007). Feenberg (1999) viewed information technology as a transformational process giving the human race the control to realize its highest ideals or destroy. Different authors have been claiming that a defining aspect of technology is the role that it plays in extending human capabilities (Lawson, 2010). However, in our modern era, "technologies are accepted as integral to contemporary life, occupying a universal technological domain that is coextensive with humans and their environment" (Locsin & Purnell, 2015). In nursing, coexistence between technology and caring are exemplified in the theory of Technological Competency as Caring in Nursing by Dr. Rozzano Locsin (Locsin, 2017). However, this does not mean efficiency in the healthcare system. The futuristic views on information technology have logical truth embedded in its context. However, most of the third world countries lag on these advancements in technologies (Akubue, 2002).

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## Information Technologies Used in Nursing

This list is not exhaustive. However, the following are technologies that could be responsible for the nursing transformation:

**Clinical Information Systems.** These systems are the computer and information systems used by healthcare personnel to facilitate patient care. These systems have changed from financial systems to real patient care systems with flexible levels of functionality. Initial systems provided laboratory and radiology printouts, and modern systems now offer copies of the radiology imageries and decision support for therapeutic orders (Hardin, 2000).

**Electronic Health Records.** Patient records in this format provide instant access to a patient's medical history, improve communication between caregivers, and offer flags and alerts to prevent conflicts over prescriptions and tests (Kalra & Ingram, 2006).

**Drug Retrieval-and-Delivery Systems.** These utilize several technologies, including bar codes and automated dispensing machines, to ensure patients receive the correct medications and dosages (Park, 2014).

**Tablet Computers, Wall-Mounted PCs, and Mobile Carts.** These computer-based tools allow nurses to enter and retrieve information housed in a facility's information system without leaving the bedside. The systems can operate wirelessly and connect to databases containing care guidelines and other clinical resources.

**Medical Devices.** World Health Organization (2017) defines a medical device as "an instrument, apparatus, implement, machine, appliance, implant, reagent for in vitro use, software, material or other similar or related article, intended by the manufacturer to be used, alone or in combination, for human beings, for one or more of the specific medical purpose."

**Personal Digital Assistants.** PDAs with add-on software is very similar to what is considered today as a smartphone; these devices can help nurses research conditions and check medication doses. Furthermore, wireless tech integrates information from disparate sources and delivers data faster, so nurses do not need to be tied to a precise station to get the necessary information.

### How do Health Information Technologies fail?

It was the year 2008, working as a staff nurse in a local, provincial hospital, there was so much excitement hearing about the modernization of the clinical charts. It was an ambitious project of the local government unit to introduce the electronic health record (EHR) here in the heart of Mindanao, Bukidnon. The implementation of EHRs, nurses, only read in books, visualizing a computer-generated clinical chart. Experts were conducting seminars and workshops routinely with the staff nurses and nurse assistants, while technicians install computers in every station. It was working well the past few days, and healthcare workers find the technology useful and efficient.

That event in the hospital was groundbreaking until the regular brownouts came in. It was a real mess since there was no electricity; there was no patient information — a true-to-life experience by the proponent of this paper.

### The Tech Factor: Our Dependency on Technology and Information Technology

The human experience portrayed in this example is a complex phenomenon that includes different dimensions (Lentini & Decortis, 2010). While nurses acknowledge that using information technology, technology in this context would be the resource in which it is perceived as an essential component for addressing inefficiencies in healthcare (Kadry, Sanderson, & Macario, 2010). Having technology, as viewed as a necessary component of the nursing practice, would mean that there is meaningful use. However, Information Technology systems occasionally force them to rethink how the nursing practice could fit in with technology, and technological glitches can impede their work. According to Locsin and Purnell (2007), Heidegger was concerned about technology to encompass the experiences of persons whose lives depend upon techniques and the skills of those persons who care for them. Dependency on technology would mean the nurse can be so dependent on technology, that by losing this resource would spell disaster in the workplace. This is why authors such as Dr. Locsin believes that the only way is to go with the flow and train nurses to be technologically competent because technologies in nursing will continue to become more sophisticated.

### Unintentional Technological Barriers on Information

Categorically, the example also portrays a common unintentional, accidental cause of technological barriers. Any technical glitches (e.g., electricity brownout, disaster, fire, environmental causes, and so forth) would mean the loss of information from the use of this information system technology because we all know, these technologies are highly dependent on electricity (Erdener, Pambour, Lavin, & Dengiz, 2014). Therefore it is common sense that if this particular resource is cut out, the information technology used in nursing will also cease to exist. How do you think the nurse experience will feel? Moreover, this dependency on the technology would mean staying away from the comfort zone, any upgrade, or update, a new version of the technology would mean going out of the comfort zone. Sometimes, the latest technology would not mean an increase in efficiency in the nursing practice.

Furthermore, human error does not constitute an intentional cause of information technology, that is why skills and knowledge of this information technology should be at par with its development because every upgrade means a new challenge for nurses. Hardware problems, machines, especially the storage for essential data and information, computer parts eventually they wear off and become not usable. In a doomsday scenario, we would be like going back to being nomads since we are so dependent on technology that, according to Prell (1996), "doomsday could arrive despite the availability of a backstop technology" that a simple subtraction of an electrical resource will affect the entirety of life. We would



not pray or hope that this would happen. Even if biblical predictions would not follow its course, we cannot deny the limited resource we have, our planet.

### **Intentional Technological Barriers in Information**

Intentional causes are those intentionally done by people who have an interest in the data. According to Mason (1986), three issues are governing the use of Information Technology. These are (1) Information privacy (2) Problems related to inaccurate information (3) Property rights for the info. This has already been predicted that soon everyone would like that piece of the data valuable for business or political interest. Intentional factors include cyber attacks, cyber hacks, identity thefts, criminal intentions, and so forth. Technological use in nursing can be uplifting because of its potential to improve healthcare systems, improve patient care advocacies. However, in the wrong hands, this poses an endangerment to personal identities and privacy.

### **Other Technological Barriers to Information**

Other Technological Barriers to Information would be very subjective. Barriers that consist of these are User-interface Usability, Software/Information Maintenance, Software/Information Management, and Complexity. For user-interface usability, do not consider age as a factor in selecting user interface. For example, the question of which phone do you prefer, an iPhone or an android? This may not relate how Information systems work on the field, but my intention upon this discussion is to elaborate that it does not matter what technology is there to use, it will always boil down to the preference of the end-user. For software and information maintenance, Information technologies like these need constant maintenance. Without support, the Information System would be most likely to fail. Same as with the implementation management. If the innovation is not carefully planned, all else will be jeopardized. Information technologies do not come cheap. Therefore any problems encountered even in an early phase might put the whole project into a failure. Within the context of management, Daniels and LaMarsh (2007) claimed that complexity as one of the causes the discontinuities among project in IT project management, and nursing is a very complicated career.

### **What Do Healthcare Organizations Prepare Themselves for Breakdown of Technology**

Based on legitimate journal sites such as Science Direct, Proquest, CINAHL, and Jstor, there are not many articles regarding Information technology failures and how they go about the failures. According to Kaplan and Harris-Salamone (2009), Information Technology-related failures in health care often are covered up, ignored, or rationalized, so mistakes are repeated. The same barriers and problems of health information technologists have been identified over the years. Moreover, despite the calls for increased research, there are still too few published research reports on healthcare IT failures, removals, sabotage of systems, or how failures became successes or were otherwise redefined. This is supported by Goldfinch (2007), claiming that the majority of information systems

developments are unsuccessful. Furthermore, Goldfinch (2007) argues that the higher the growth, the more likely it will be ineffective. Despite the perseverance of this problem for decades and the spending "of vast sums of money, computer failure has received surprisingly little attention in the public administration." Although there is a need to understand or gain knowledge on how to go about problems when Information Technology fails, within the technical side, the nurse as an end-user understand that both concepts of success factors and failure causes in IT-projects are primarily subjective and therefore difficult to quantify, depending on the point of view of the stakeholders involved (Montequin, Cousillas, Ortega, & Villanueva, 2014).

### **Developing Technological Resilience as Nursing Survival Skill**

Resilience is a natural part of our life (Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014), and so does technology and nursing. We cannot deny that technology in the field of nursing is indispensable. We also can not deny that the nursing practice radiates resilience as a process, a capacity, and an outcome for efficient delivery of positive results from day to day challenges for patient care and safety. Therefore being technologically resilient does not mean deferring the use of technology but rather a notion that, in the advent of a worst-case scenario, the nurse will be able to deliver positive patient outcomes despite the challenges. May the cause of technological stress be unintentional or intentional. As nurses, we always say that "prevention is always better than cure." Therefore, to buildup nurses with technological resilience would mean survival in the worst-case scenario, although the notion needs to be grounded and philosophically underpinned.

### **CONCLUSION**

In conclusion, the traditional perspective of health information technology and technology involves patient and consumer-focused applications for safety and efficient healthcare delivery. Health information technologies fail because of the complexities of the healthcare environment, our dependency, and how unintentional and intentional barriers contribute to the failure of these systems. That organizations acknowledged the increasing number of Information Technology projects but failed to mention how to go about and innovate failures. Moreover, a promising direction to nurses in building up technological resilience in preparation for any worst-case scenario.

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## Looking into the Concept of Self, Struggles, and Aspirations of Badjaus Who are Temporarily Settling in Bukidnon Province

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### ABSTRACT

This article focuses on one of the marginalized groups in the Philippines, the Badjaus, who are temporarily settling in Bukidnon. This looks into the nomadic behavioral patterns of the Badjaus and the factors that led them to this situation. To make sense of this query, we have discussed the "coming of Badjaus" in the mountain province of Bukidnon by exploring their sense of self, day-to-day struggles, aspirations, and the factors leading to their coming. Gathering of data was done by employing a descriptive-qualitative method with the aid of key-informants, in-depth interviews, and an obtrusive observation. The researchers interviewed ten respondents. Findings reveal that our Badjau respondents have been displaced and are forced to move out of the Zamboanga Peninsula due to conflicts between the military and terrorist groups. In the process of moving from places to places, they have encountered a more serious threat with their daily subsistence. Thus, affecting their total well-being and representation of the Badjaus in their day-to-day encounters. To survive, they find ways in search of basic necessities like food and shelter. Overall, the "coming of Badjaos" in Bukidnon is viewed as an act of coping, surviving and escaping the harsh social realities they experience.

**Keywords:** aspirations, Bukidnon, nomadic life

### INTRODUCTION

The "coming of Badjaus" in the province of Bukidnon deserves attention from both the government and the academe. Their arrival posed for concern because we see them in the cities and municipalities of Bukidnon in an unsettling condition. To illustrate, the Badjaus, together with their families, are sleeping on the streets, begging money for food, and roaming around in the areas they temporarily live. If you look at their situation, we could say that they are troubled or bothered by the mundane conditions they have encountered every day. Their nomadic patterns may also contribute to this troublesome experience. But the concept of nomadism associated with our respondents deserves unpacking at this time. This is because the term "nomadic" refers to the act of moving from one place to another in search of food or subsistence. But this might not be the only reason why they engaged in nomadic activities. So, our concern now delves on how and why the Badjaus who are labeled as "sea gypsies" are moving the mountain areas of Bukidnon. Are they still nomadic in its purest sense? Do they still consider themselves as one? If they are, what are the main reasons or factors of engaging this nomadic life? And finally, how does this coming of the Badjaus in Bukidnon contribute to the understanding of their self, struggles, and aspirations?

The literature provides that there may be variations, Roxas-Lim (2001) cited by Abrahamsson (2011), identify the Bajaus as "nomadic." On the other hand, the ways of life of the Badjaus have always been associated with or linked to the sea. Panaguiton (2010) contends that they are known to be navigators, sailors, fishermen, pearl divers, boat builders, and mat weavers. They are the

sea-gypsies who are found chiefly in a maritime region stretching from the coastal areas of Zamboanga Bay to the Sulu Archipelago in the Philippines. However, Zayas (2017) emphasizes that there are two kinds of Badjaus: the Sama-Badjaus who dwell in the sea and the Sama-Badjaus who dwell in drylands.

The sea for the Badjaus is their home and the boat or "banca" is a symbolic representation of their culture and identity. Furthermore, their "banca" plays a vital role in their everyday social and economic survival. Primarily, they are dependent on subsistence fishing. Thus, the boat is central to the Badjaus' material culture. And after centuries of experience in building their boats, this has become the highest manifestation of their artisanship. According to Nimmo (2001), the boats themselves contained the finest carvings found in the Tawi-Tawi area. Furthermore, these boats serve as their dwelling place (Perez III *et al.*, 1989). On the one hand, if they decide to repair or overhaul the boats, they can build temporary stilt houses for the time being.

But their way of life has changed. The Badjaus who use to dwell on the sea, have disembarked themselves and transferred to drylands. What led this transfer, however, is due to conflicts between the terrorist and military groups. Peace and order situation becomes unstable, and so the only way to survive is to leave the sea and find a new place to live.

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Historical accounts provide that during the rising tides of insurgency in the Philippines in the 1970s, the Badjaus were caught in the middle and had experienced the violent clashes between government forces and the Moro National Liberation Front (MNLF) armed groups (Bracamonte *et al.* 2011). Adding to this, a group of pirates complicates their situation. Since then, the Badjaus have been experiencing a series of displacements. Displaced from their ancestral sea domain, the Badjaus have been scattered over big parts of the Philippines, and most refugees live in stilt houses in urban areas of Mindanao, Cebu, Bohol, and Luzon, a number reportedly fled to many parts of Sabah and several areas in the country. The result of this displacement led to the loss of their traditional fishing grounds to big commercial fishing business people which has also exacerbated their dismal state. The coastlines have been occupied by millions of immigrants from the northern parts of the Philippines. The seas are exploited by international fishing companies (Alamia, 2005; Nimmo, 2006). Only a few remain nomadic (Nimmo, 2006).

### The Badjaus Today: Present Situation

Now, we mostly see the Badjau mothers and even fathers carrying their children begging and scavenging for food. Based on our observations, most of the people around them do not even bother to notice. In one instance, when we approached one Badjau family, we noticed that people around were aghast and that some of them kept their distance from the Badjaus. This seemingly act of keeping a distance is a clear manifestation that the Badjaus are still misunderstood and frowned upon. They have become the subjects for prejudices and various forms of discrimination. Sather's findings support this claim that the Badjaus are facing fierce discrimination from neighboring tribes, even from other Sama groups as well as non-indigenous groups. He states that "relations between Badjau and more powerful populations ashore (such as the Tausug and Maguindanao in the Southern Philippines) have seldom been founded on mutual respect, and everywhere the Badjau, as a sea people, have tended to be marginalized, excluded from positions of power, despised, and confined to the lowest rungs of the social ladder." (Sather 1995)

In general, there is a bulk of literature that emphasizes that the Badjaus who are roaming around the streets in cities and other urban areas still experience discrimination because of their perceived derogatory disposition. Sociologist Regina Estorba Macalandag delves into the Badjaus in an urban environment and discusses the tensions between Badjau and the province of Tagbilaran, Bohol (Macalandag, 2009). On the other hand, the study of Burton (2010) focuses on the struggles of the Badjaus in urban areas, still suggests that the lack of understanding about them, particularly on their nomadic activities. But what constitutes this lack of understanding? To shed light on this question, we need to define the concept of the Badjau's living conditions from their struggles and aspirations and explore the possibility of understanding them without giving derogatory remarks.

More so, we would like to contend that the results of our study may not represent the Badjaus in general. This is because we only focus on their narratives during

their temporary settlement in the province of Bukidnon. Furthermore, their experiences may not be similar in other areas, specifically outside Bukidnon province, which could either be favorable or unfavorable. But whatever the outcome of our research inquiry, it is our fervent hope that we can give the readers a full understanding of their present condition. Consequently, this research was conceptualized to conduct proper profiling of the Badjaus in Bukidnon so that we can mobilize and tap their full capacities and development as members of our society. We hope to address the development of four major components, namely: capacity building, equity, empowerment and sustainability manifested by economic progress, wider distribution of this economic progress, productive employment and better social conditions like health, education, housing, food and water (Bracamonte *et al.* 2011).

So, in this article, we discuss the following points: First, there is a need to re-define the concept of the Badjaus' self from their experiences or perspectives. The researchers also provide theories to support the conceptualization of the self. Second, the researchers elaborate on their struggles and how these can affect their overall development. Lastly, the researchers discuss the respondents' aspirations in life, and it is the hope of the researchers that by providing the narratives about their aspirations will guide both public and private institutions in framing necessary programs for the well-being of the Badjaus.

### Theorizing the Everyday Presentation of the Self

Psychologists and sociologists stressed that the self is a multidimensional entity composing of ideas, images, beliefs, or schemas of an individual (Markus & Wurf, 1987). Myers (2016) emphasize that the self revolves on four domains, namely: **self-concept** (Who Am I?), **self-esteem** (sense of worth), **self-knowledge** (explanation and prediction about the self), and **social self** (role as an individual). Accordingly, these domains have a big influence on presenting one's self in the social world. We also believed that the self is influenced by the roles we play in our day-to-day interaction as well as their cultural practices. While Mead (1934) emphasized that the self develops through social activity and social relationships. Thus, the development of the self is the byproduct of social experiences. In his theory, he stressed that stimuli coming from the social environments allow an individual to respond and create mechanisms. Moreover, the self can always occur or exist without social contact. On the one hand, the self is also a product of culture. This premise emphasizes that self-concept is influenced either by individualistic or collectivist societies. Individualism refers to the concept of giving priority to one's own goals over group goals and defining one's identity in terms of personal attributes rather than group identifications. However, collectivism means giving priority to the goals of one's group (often one's extended family or workgroup) and defining one's identity accordingly.

Many social scientists have contended that these perceptions of one's self from different cultures and that these variations can explain cross- cultural variations

in social cognition and behaviors (Markus & Kitayama, 1991; Marsella, DeVos & Hsu, 1985; Triandis, 1995). In the Philippine context, however, the self is always embedded in culture and that "cultural meanings and practices construct psychological process" (Macapagal *et al.*, 2013). In the context of our study, we contend that the Badjaus' self is both a product of their cultural practices as well as their social experiences in their day-to-day interaction.

## METHODOLOGY

This study employed a descriptive-qualitative approach utilizing key informant interviews, in-depth interviews, and an obtrusive observation. This study was conducted in the municipality of Maramag and cities of Valencia and Malaybalay within six months. There were a total of ten respondents coming from five Badjau households involved in the conduct of this study. The respondents were composed of the following: two elderly women aged 60-70, four women, and four men aged 21-50. We also interviewed two key-informants who were the Barangays workers in the municipality of Maramag and Malaybalay City. They were instrumental in pointing out the location of the Badjaus.

To conduct the interview process, we used the Cebuano language to be able to gather our data. Fortunately, the head of their household know how to speak Cebuano and helped us in translating some of the questions into Sama language. The data gathered were analyzed thematically which include but are not limited to their day-to-day struggles, aspirations, perceived identity, and the factors leading to their situation nowadays.

### Scope and Limitations

Interviewing the Badjaus was a bit challenging because of their mobile character. It was observed that they kept on moving from one place to another. However, the researchers managed to contact them through mobile communication. During the interviews, the researchers observed that the head of the Badjau family, the father, owned a low-end mobile cellular phone, which is being used for contact purposes only. When asked about their whereabouts, they lamented that they sometimes do not have e-loads, or sometimes the battery is off. They seldom recharge the cellular phone if the battery drains because this is still subject to the availability of their funds. Often, they charged their mobile phones the stores but are not free of charge.

### Ethical Consideration

The researchers submitted a letter of request to the mayor of Maramag, Valencia, and Malaybalay cities and asked permission to conduct the research. Likewise, consent forms were also prepared and confidentiality was observed.

## RESULTS AND DISCUSSION

This section has the following parts: First, we discuss the representation of the Badjaus' self based from their perspectives. Second, we discuss their day-to-day

struggles and the factor(s) that have caused their "coming" to the province of Bukidnon. Finally, we present their aspirations and dreams for their family.

### The Concept of Badjau's Self

One of the components of the self is identity. There are two types of identity: *independent* and *interdependent*. Independent identity is defined by individual traits and goals, while interdependent identity means connections with others; it is social, not personal. But identity can also be represented in many ways, which includes language, religion, beliefs, traditions, arts, and even their ways of making a living. For example, one's identity can be linked to one's ethnicity or ethnic origin. According to Tajfel (1981), ethnic identity has been defined as one's knowledge of membership in a social group and the personal meaning associated with that membership. Typically, ethnic groups have an interdependent identity because they value the "we" feeling rather than "I," which usually happens in an individualistic society.

Since the Badjaus are considered to be one of the ethnic groups in the Philippines, their identity is interdependent. The researchers observed this type of identity during the interviews. They do some things together, like eating, sleeping, walking, and begging. Aside from being interdependent, our respondents have a symbolic relationship to the sea. To them, the sea as a natural dwelling place. Thus, this contributes to the Badjaus' conceptualization of the self. And we would like to emphasize that their banca as material possession also represents their identity.

The respondents have also identified themselves as Samal Badjau, who originated from Jolo, Sulu, who speak the Samal dialect. By origin, they classify themselves as affiliated with the religion of Islam, and that they are Muslims. But they also claimed that they are different from those mainstream Muslim groups since they have a different church. Some studies stated that though listed as part of the Moro Ethno-linguistic groups, the Badjaus remained obscure in terms of how Islamized they are. Rodil (2003) asserts that the Badjaus are only considered as Muslims because of their relationship with the Sultanate of Sulu but they are not Muslims.

Groups with an interdependent identity like the Badjaus are closely associated with their family members. This, of course, is one of the Filipino traits wherein the family is closely knitted together. This is particularly true in a collectivist society wherein the "self is defined in terms of primary ingroups or relationships" (Macapagal *et al.*, 2013). So in times of difficulties, they stick together and rely on each other. The Badjaus the researchers interviewed in the municipality of Maramag, Bukidnon were composed of one kin group, a couple with three children (a teenager, a toddler, and an infant), an elderly couple (in-law of the first couple), one widow (daughter of the elderly couple), and one male (son of the elderly couple). The same couple with three children was also found at Quezon, Bukidnon (they were forced to leave Maramag, Bukidnon). They were accompanied by two Badjau female teenagers, together with their mothers (both are widows).

The family then is perceived as an important part of the Badjaos' life. Triandis (1994) emphasizes that the family is the prototype of all social relationships in the Philippines. So, cooperation and sharing are expected within their family members. This can be seen by how they earn a living. When they received money from begging, they share this with their elders, children, and other family members within their kin. Even in the process of moving, they go together.

## Struggles

This section presents the everyday forms of struggles experienced by the Badjaos in the process of coming to the mountain area of Bukidnon. We have discussed them thematically showing their experiences of the unsettling condition, struggles for subsistence and acceptance and the lack of governmental services.

### Lack of acceptance

But because of their physical appearance, one might misjudge them. We already mentioned in our previous discussion that some people do not talk to them because of their appearance. One of the struggles that the Badjaos faced is the lack of acceptance. This condition is also apparent in our research sites because we have also observed that the Badjaos kept on moving from one place to another. When we looked for them in the cities of Valencia and Malaybalay, the Badjaos are nowhere to be found. We investigated this situation and found out that some Badjau children conflicted with some of the locals. This had alarmed the Local Government Unit and decided to transfer the Badjaos to another place. Unfortunately, these Badjau people do not even know why other people would not want to mingle with them. But this unfair treatment is insignificant to them since their main concern is the food and shelter for survival.

Nevertheless, if there is a chance that the other people in society will accommodate and accept them instead of treating them as outsiders, they will be much grateful. These social experiences specifically the society's lack of acceptance among this cultural minority, shaped them to feel that they are unwanted and insignificant in the mainstream community. As a result, they have less concern with their self-image and how they look physically and behave differently from other people. They are less concerned if they are being seen as indolent for as long as their stomachs are full. Their self-esteem is also very low, which reflects their behavior on being passive about how they are being looked at by the majority. From our interviews, they rarely mention their strengths and capacities as individuals. But one of our respondents claimed:

Respondent # 4: *Ang akong panglantaw sa mga tawo sa palibot kay maayo man sila.*  
(For me, people in the community are good).

So, despite stereotypical responses from the people around them, the Badjaos still find other people to be good. Literature provides that they are generally

deemed respectful, joyful, simple, humble, hospitable, and can easily be pleased. This supports Teo's (2001) description that they can go along with others. In a way, they have learned to speak Bisaya and Tagalog so they could get easily interact with other people.

## Series of Displacements

What had led these people to move from one place to another? According to the Badjaos, the Abu Sayyaf group attacked their *banca* as a tool used for fishing and destroyed their property. What is more unfortunate is that according to them, some of their family members were killed by the terrorists. This dire situation they have experienced has driven them to move from places to places. Unfortunately, some of these places are unfamiliar to them. So, in the process, they have escaped and resided along the coast of Zamboanga City but have transferred again to other places in search of food and income. They claimed that they have been to and stayed at Iligan City, Valencia City, Butuan City, and Davao City.

They keep on transferring from one place to another. This perhaps the reason why they are labeled as nomadic. When we interviewed them, we managed to capture that they do not want to keep on moving. One of our respondents lamented:

Respondent No. 3 *"Nga gusto ragyud mi mag puyo sa amung lugar pero kay gubot man"*  
(We really want to stay in our place, but there is conflict.)

So being nomadic these days is also one of the consequences of the conflict between military and terrorist groups. They even emphasized that they have no other choice but to move out of their place so they could find money to survive. Accordingly, the Samal Badjau people are not war freak individuals; instead they are peace-makers. For them, if they will not disturb or hurt others, they will not also be hurt. They also do not think that other people are harmful. The Samal Badjaos are also obedient in the sense that if they will be forced to leave the space they temporarily occupy, they will do so. They said that they are only "outsiders" and "strangers" of the area, and they do not have any rights to go against the rules. They will simply obey and leave. If people do not want them, they will not compel them.

Therefore, the Badjaos are still nomadic these days is because of various factors confronted to them like armed conflicts, stereotypical responses, discriminatory remarks and most importantly, the act of moving from places to places is an act of survival. So, based on our findings, we can say that their concept of the self is much related to their nomadic character. Because for them, being nomadic has always been a part of their cultural practices.

Henceforth, the self is a by-product of how society is shaping his/her experiences in life, which plays an influential factor in how an individual will become in society.

## Unsettling living conditions

The Badjau people who are temporarily living in Bukidnon occupy a small vacant or abandoned area where they cook their meals, eat, and even put their belongings. They are usually found at strategic locations like marketplaces, a plaza, restaurants, and other business establishments where a crowd of people is usually seen. They also own a small pot for cooking rice and viand, spoon, plastic plates, and plastic glasses. They do not have proper shelters to stay at and only sleep in used cardboard boxes along the streets. Sometimes, they are also found sleeping in parks or even outside some closed business establishments at night. During night time, they only use *malong*, an indigenous blanket, to keep them covered and warm. This living condition enables them to be exposed to mosquitos, illnesses, rainfall, and danger from offenders. Besides, having only these mere belongings enable them to transfer from another place if prompted easily. In the temporary place they are in, people are wary of their presence and merely interact with them. The locals see them as indolent since they beg for alms from other people. Their being marginalized in their society hampers them to improve their status of living.

For them to survive, the Samal Badjaos in Bukidnon are begging from the locals of the municipality Maramag and Valencia City for money. This activity is done as a family affair. They start their day either at dawn or every afternoon strolling around the municipality or city perimeter where there are crowds of people. Women and children participate in this begging activity, too. The more family members beg, the larger the amount of money they can collect. Every day, their average income from begging is 100 pesos. However, there are certain occasions that they could collect 200 pesos or even more. But most of the time, their collections are insufficient even for buying for their daily meals. Somehow, food need is determined on a day-to-day basis, mainly dependent on income from begging.

This unfortunate condition of the Badjaus in Bukidnon can be added to poverty incidence in the country. Accordingly, the poverty incidence among Filipino families based on the first visit of 2015 FIES was estimated at 21.1 percent during the first semester of 2015 and the subsistence incidence among Filipino families, or the proportion of Filipino families in extreme poverty, was estimated at 9.2 percent during the first semester of 2015 (<https://psa.gov.ph/content/poverty-incidence-among-filipinos-registered-263-first-semester-2015-psa>). Besides, the PSA also claimed that during the first semester of 2015, a family of five needed at least Php 6,365 on the average every month to meet the family's basic food needs and at least Php 9,140 on the average every month to meet both basic food and non-food needs. These amounts represent the monthly food threshold and monthly poverty threshold, respectively.

As in the case of the Badjaus in Bukidnon, their average income per day (Php 100) cannot even reach the least required income of Php 9,140 per month per Filipino family. Hence, the Samal Badjaus find it difficult to feed

their family thrice a day. Their children are malnourished and famished. One of the respondents lamented:

Respondent #2 "*Lisod kayo mi diri sa Bukidnon kay dili mi usahay makakaon, usahay pang snack lang, wala mi panihapon.*" (It is so tough here in Bukidnon because we rarely eat, we have snacks sometimes but no dinner.)

It was also unfortunate for the Samal Badjaus in Bukidnon are mostly unemployed. From their narratives, they want to have jobs as a source of income. However, they have difficulties to have one specifically a good paying one. This because they have not attained any educational training or schooling. Their lack of education also contributes to the difficulty of having a good paying-job.

Some Badjaus also thought that if they attend school, they will only be bullied or made fun of by others. However, when some teen Badjaus were asked why if they wanted to attend school, they replied that they do not. Aside from the fact that they do not know the basics of writing and reading, they also do not want the idea that their classmates might bully or harass them. Many locals would presume that these Badjau people are very unknowing individuals because of their lack of education. But the knowledge they gain from their experiences in life, though insufficient, has enabled them to adapt to the new societal changes particularly in terms of technology.

## Lack of knowledge or awareness about social services

With limited knowledge about city life, they have experienced difficulties as they battle for survival away from the sea where they depend for a living (Pallesen 1985, Blust 2005) and are considered as an outcast by many. Furthermore, it is unfortunate that coming from them. They view themselves as incompetent while living in urban areas because of their limited knowledge of social services offered. Not only that, they have come to believe that they are outcasts because of their disposition. This situation refers to what Steele (1997) calls as a stereotype threat, which means the risk of confirming negatively held beliefs about one's social group (Steele 1997). Thus, they can no longer become productive as they used to be because some of them have been deprived of the customary way of making a living.

Their lack of knowledge hampers them to find jobs that provide for their family's needs. One respondent expressed that he wants to find a job, but he could not because he knows nothing. The growing rate of uneducated Badjaus in the Philippines also is not reflected in the results collected by the authorized government agency about out-of-school children and youth in the Philippines. To state from the 2013 Functional Literacy, Education and Mass Media Survey (FLEMMS) which covered around 36 million population aged 6 to 24 years, one in every ten or about 4 million Filipino children and youth was out-of-school in 2013.

On the contrary, some of the respondents believed that they do not have access to social services and privileges



from the government. They also do not feel that they are protected. Thus, they are being distant and distrustful from others and strangers. They do not easily trust other people and stick to what they know as good for them. They have difficulty availing these government services because they do not have any legal records like birth certificates. For example, the Pantawid Pamilyang Pilipino Program is a program for the poor and marginalized Filipinos, but our respondents expressed:

Respondent No. 8: *"Wala gyud mi natagaan ug tabang sa gobyerno, maski 4Ps wa mi naapil"* (The government did not help us and we were not even included in availing 4Ps).

In addition, they claimed that they have little knowledge of how to avail health services from the local government. Thus, their awareness of this program is quite low. One respondent lamented she suffered from a chronic cough.

Respondent No. 2 *"Giubo man ko pero wala man ko nagadto sa hospital of wala koy tambal, ginaubo ko kada gabii og buntag"* (I suffered from cough but I do not go to the hospital and I also do not have medicines, I have persistent cough at night and in the morning as well).

When asked if they know that government hospitals provide free services, they said yes and elaborated by saying that:

Respondent No. 9: *"Basta Badjau dili sila mokuha og bayad"* (If Badjau, they would not ask for a fee).

Stout, Kipling, and Stout (2001) still found that ethnic or aboriginal groups still lack the necessary health services necessary for optimal survival. Thus, their lack of knowledge to avail government services impedes them to become active participants in society. They have not asked for help from the local government because they do not know how to. When asked if they have leaders to organize and lead them, the Badjau people simply said that leaders are useless since they cannot be with them at home every day and protect them. They remain to have no recognized community leader/s that could help them established a political institution that could advance their collective interest in society.

Overall, the problems faced by the Bajaus up until today are products of the society's structure like socio-political and economic spheres. This is because they are still marginalized and have no access to government services. And the lack of understanding and recognition to the Badjaos hampers the achievement of their total cultural development.

## Aspirations

For this section, we were able to extract three dominant themes concerning to the respondents'

aspirations. These can be summed up into their providing for their daily subsistence, going home, and dreamt of sending their children to schools.

### *Provision for their daily subsistence*

To our respondents, their main aspiration in life is simply to have their daily subsistence. They hope to just feed their stomach every day from earning 100 or 200 pesos per day. Although there are times that they only eat 1-2 times a day, they still manage to survive by way of collecting money from begging. The act of begging in this context is seen as an adaptive strategy to achieve economic needs. If given a choice, they would want to go back to fishing because that is an easy way to earn money and food for their daily subsistence. So they have created ways in the process of survival by begging money and selling cultured pearls which they got from the Zamboanga peninsula and Davao region. But money has always been a problem because they also need to buy medicines if one of the family members gets sick.

### *Dream of going back home*

They always aspire to go back to their place near the coastal areas so they could use their boats for fishing once again. So, the reason why most of them beg for money is for them to save enough for fare and their boats. As one of the respondents expressed:

Respondent # 5: *Ang akong plano kay gusto ko mubalik didto sa Jolo kay mangisda man akong bana tapos ako sa balay lang.* (My plan is to go back to Jolo because my husband can go fishing and I can stay in our house).

The Badjau families are trying to save enough amount of money to go back to Zamboanga City and fulfill their wish to buy a banca. For them, possessing a banca for fishing is important because this has been their customary activity for the longest time. They perceived that this would surely provide food for their whole family. But because of conflicts, they needed to move to the mountains for survival. Nimmo (2001) affirms this claim that the Badjau people did try to make a living on land but only for a short period of time. Since most of them would still prefer the life of the sea by which almost all of their economic lives are centered.

However, money earned from begging is insufficient, so they also try to invest in pearl vending. Saving money for fare is not always attainable accordingly, and it will take months to do so if in case their income from begging is not sufficient to suffice their daily needs. The desire to go back to their place means they will have their life back as sea people or sea nomads. But because of the unending conflict in the area, the only way to escape from these harsh reality is to go to the mountains to find refuge for a while.

### *Send children to school*

Despite problems encountered regarding money, we managed to capture that some of them, particularly the



mothers, wish to send their children to school. They want their children to be educated. One of our respondents stressed:

Respondent No. 2: *"Ganahan unto ko makapaskwela sa mga bata pero dili nako makaya."* (I really like my children to go to school, but I cannot do it).

Like many other indigenous individuals, education nowadays is seen as important cultural capital and as a means to get out of poverty. However, the Badjau's lack of resources like money to send their children to school, the act of moving from one place to another and no permanent residency hinge them from the possibility of achieving this cultural capital. According to them, it is so unfortunate to see their children being forced to help and beg money from the residents in the area they are not familiar with. Based on their narratives, financial constraint is seen to be one of the main reasons why they are not able to send their children to school. On the contrary, some Badjau parents do not encourage their children to attend school because they prefer their children to help them in bringing income for the family in the form of begging and other ways of making a living like selling of goods and pearls.

On a positive note, our respondents are motivated to achieve certain needs and aspirations. But because of the problems relating to subsistence or day-to-day survival, they cannot fully reach their aspirations and goals. For now, it can be observed that their most basic need like physiological one motivates them to go on with their lives. Thus, the Badjau people have only achieved the most basic needs for physical survival and not being able to realize its full potential in the process of self-actualization fully. This is because they are still deprived and facing economic struggles for subsistence comes in first. But despite all of these experiences, some of them are still hopeful about their situation. One of the mothers believed that some people can still help them in their daily needs. One respondent has this to say:

Respondent #9: *Wala kayo namo gihuna-huna nga problema among kahintang kay makapangayo man pud mi.* (We don't really think much of our problem because we can always beg.)

So, the act of begging is interpreted here as an act of survival. In the process, they become creative agents by way of asking through for economic performance. This performance may not be theatrically driven, but it has become an effective tool to earn a living momentarily. But according to our respondents, given enough choice, they would rather stay in their hometown and live in harmony with their families and other people as well. But because of the unfortunate events, they remained to be displaced and are still considered as one of the marginalized groups in the country today.

Overall, the Badjau's aspirations mainly focused on economic survival from their day-to-day encounters. And those were achieved by their creative ways in making

sense of their survival by asking money and selling some pearls which they got from their act of moving from one place to another.

## CONCLUSION

The literature on the Badjau suggests a multifold documentation of their lives, lifestyle, personality, and culture as a whole. But despite its voluminous publications, a vital concern should delve into what had really transpired from the past researches that the Badjau are still beholden to a different form of social inequalities like poverty, stereotypes, prejudices, and discrimination. So, the lack of opportunities for the Badjau people especially those who have temporarily settled in Bukidnon. This now posits a difficulty in integrating themselves in the community due to the preconceived ideas or hasty generalizations people have on them.

The poverty situation among the Badjau indicates underdevelopment, deprivation, and degradation- a call for an appropriate development intervention is a must to enable them to survive their constantly changing environment. On the one hand, the "coming of Badjau" to the mountain areas of Bukidnon allows them to be creative agents in the pursuit of their own survival. For one thing, the act of begging is seen as an economic performance by which they can able to sustain some of their basic needs. Moreover, the patterns of migration to evade from the unending conflicts between the terrorist groups and military personnel in Sulu Island push them to move from places to places to seek refuge, security, and survival. This unfortunate situation also contributes to their nomadic activities nowadays. But this act of moving from one place to another is a mechanism for their day-to-day survival.

For now, the Badjau are constantly moving from one place to another and the process of survival was a bit tough. Because these people who used to get their resources from the sea needed to shift to other ways of survival, thus, this affects their overall well-being and self-development as the Badjau are baffled with the everyday forms of struggles for survival.

## RECOMMENDATION

Based on the results, this paper recommends for programs regarding capacity development for the displaced Badjau. This aimed to develop and enhance the individual's self-concept. Furthermore, this paper suggests revisiting of the programs of the government, focusing more on the displaced indigenous people and create mechanisms that will help in their overall well-being.

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and may this study become an instrument to let your voices be heard.

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## Linguistic Cityscape of Billboard Advertisements in Mandaue City

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### ABSTRACT

This study analyzed the linguistic cityscape of billboard advertisements found in the selected areas in Mandaue City and the occurrence of linguistic compositions and linguistic landscapes in billboard advertisements. This study used a mixed-method. Billboard advertisements along the highways and flyovers in Maguikay, Subangdaku, Umepad, Banilad, Tipolo, and Guizo, Mandaue City were the corpus of the study. A survey was also conducted to verify the effectiveness of billboard advertisements. Results revealed that the English language was the dominant language in the billboard advertisements, while complementary multilingual writing and phrases prevailed among the other types of writing. On the other hand, the emotional appeal was the commonly used advertising appeal in non-official signs. The results suggest that consumers have purchasing power based on emotion. However, they use logic to justify their decision.

**Keywords:** Cebu, cityscape, composition, linguistic units

### INTRODUCTION

Advertisement is a vital part of Philippine society (Javillonar, 2017; Dayag, 2008). Advertisers frequently employ strategies and skills in advertising language (Liu, 2012). In fact, Dayag (2008) was also able to examine the discourse of print advertising in the Philippines, specifically on the generic structures and linguistics features. The way languages are displayed vis-à-vis each other will give the people further information on the relative importance given to each language (Degi, 2012). Moreover, the presence of the English language, as well as the presence of the non-English language on public signs, might reflect the society's perception of English and non-English language (Dixson, 2015).

In relation to language use, multilingualism is a common phenomenon that can be studied from different perspectives. One of the possibilities is to analyze languages by focusing on the written information that is available on signs in a specific area. It is evident in the institutionalization of the Bilingual Education Program (BEP) in 1974 that the Filipino language has given equal importance to the English language. However, Filipino could not be considered as sharing equal status with English because it is not widely used in other formal settings (De Los Reyes, 2015). Remarkably, the number of Filipino-only commercials is extremely low (Klimenko, 2016).

Furthermore, advertising uses appeals as a way of persuading people to buy certain products (Clow & Baack, 2010). Simpson (2001) also focused on the types of appeal evident in the discourses of advertisements, while Fill *et al.* (2013) emphasized the advertising appeals designed to create a positive image of the individuals who use certain products. These different types of advertising appeals are

used by advertising agencies to influence the purchasing decisions of people such as *humor, fear, sex, rationality, emotion, and scarcity appeals* (Clow & Baack (2010).

Moreover, studying the linguistic landscape of a given geographical area and analyzing the languages on signs is a relatively new area of inquiry within the broad area of Applied Linguistics (Fekede & Gemechu, 2015). While the use of studying the linguistic landscape has proven to be beneficial in understanding multilingual contexts, there has not been a study exploring the linguistic landscape of the billboard advertisements in Cebu province and cities. Through studying the linguistic cityscape of an area, researchers see the obvious dominant language, but can also find the minority language present in an area (Edelman, 2010). To fill the research gap, this study paid particular attention to the commonly used languages and linguistic cityscape that are present in the billboard advertisements. Specifically, the present study aimed to determine and analyze the linguistic compositions, advertising appeals, linguistic cityscape, and effectiveness of these billboards commonly displaced in the billboard advertisements, and the impact of billboard advertisements along the different areas in Mandaue City. Specifically, this study sought to answer the following questions: (1) Which of the following linguistic compositions are commonly displayed in the billboard advertisements proposed by De Los Reyes (2015), Reh (2004) and Halliday and Matthiessen (2004)?, (2) What linguistic landscapes are embodied in the billboard advertisements postulated by Clow and Baack (2010), and (3) What linguistic techniques are employed

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in the billboard advertisements posited by Suryasa (2016) and O'Dell and McCarthy (2010)?

## REVIEW OF RELATED LITERATURE

With the growing interest in the linguistic landscape, several studies have explored and analyzed the significance of the inclusion of the English language on public signages and advertisements in a given area. Al-Athwary (2017) looked into the multilingual written texts of the signboards. The close examination of the public space in Yemen revealed that the linguistic landscape of Yemen is much more multilingual with the dominance of duplicating multilingual writing in advertisements. A local study conducted by Magno (2017) investigated the language distribution and language functions displayed on bulletin boards in Communication departments of selected universities in Cebu. Results revealed that the majority of the respondents preferred reading bulletin boards written in English, Filipino, and Cebuano languages. Concerning the perception of bulletin board displays, all respondents agreed on the boards' usefulness and expressed the need to continue the usage of these bulletin boards.

Furthermore, Akbari (2015) aimed to fill the existing gaps in the marketing literature by providing a comprehensive comparison of rational versus emotional appeals based on high and low involvement products to increase advertising effectiveness. The results of the study showed that both advertising appeals (rational and emotional) have a positive effect on advertising attitude and purchase intention. Akbari (2015) concluded that for low involvement products, emotional appeals have a more significant effect on advertising attitude; for high involvement products, rational appeals are more influential.

Similarly, a study conducted by Tynkkyne (2013) aimed to develop an understanding of how advertising appeals influence consumers' behavior and to examine the types of advertising appeals effective in generating approach behavior in consumers. The main finding of this study was that consumers feel different degrees of pleasure towards different advertising appeals. Furthermore, Tynkkyne (2013) noted that the emotional appeal induced strong feelings of pleasure; however, as was the case with the interactive advertisement, the felt pleasure did not induce approach behavior.

## METHODOLOGY

The study used the mixed method in identifying the languages used and the linguistic cityscape of billboard advertisements found in Mandaue City. The observation was done in analyzing the text to provide additional insights into the present study. Concerning the quantitative method, frequency and percentage were used to measure the frequency of the languages used and the linguistic cityscape found in the data collected. Analyzing the texts in the billboards was done for the qualitative method, specifically content analysis based on the theories mentioned above.

This study analyzed a total of 30 billboard advertisements found along the different areas of Mandaue

City. The researchers focused primarily on billboard advertisements found along the highways and flyovers in Maguikay, Subangdaku, Umapad, Banilad, Tipolo, and Guizo, Mandaue City. A total of 30 billboard advertisements served as the data in the study. Dayag's (2008) categories were adopted and modified by the researchers; namely: food, fashion, health, transportation, banking/finance, and housing. This study used the purposive sampling technique. The purposive sampling technique helped the researchers to identify and select the billboard advertisements that are suited in the researchers' criteria. The following criteria were used in choosing the billboard advertisements: (1) the billboard advertisement mainly consists of a slogan, (2) the billboard advertisement is posted along the selected streets in Mandaue City and (3) the same billboard advertisement posted in several locations will be counted as one. Various themes of the billboard advertisements such as humor, fear, sex, rationality, emotions, and scarcity (Clow and Baack, 2010) were utilized as a framework in the analysis and interpretation of the billboard advertisements in Mandaue City.

Smartphones were utilized as tools to take photos of the billboard advertisements. The linguistic analysis of the linguistic cityscape relies on photography and visual analysis (Hult, 2009). Coding sheets were used to list and rank the languages displayed and the linguistic landscape used in the billboard advertisements. The researchers used a nonreactive content analysis technique. Photographs of the billboard advertisements observed in the selected areas in Mandaue City were taken during the whole month of October 2017. The collected photographs of the billboard advertisements were arranged and categorized according to their themes based on Clow and Baack (2010) and Ben-Rafael *et al.*, (2006). The results were presented in tabular forms showing the frequency and percentage. The results of the study were verified by an inter-rater who was selected under the following criteria: a member of the DCLL Faculty or an MA Applied Linguistics graduate and native of either Cebuano or Filipino but proficient in all three languages. The researchers choose the topic on billboard as this is in line with the Department of Communications, Linguistics, and Literature's Research Agenda specifically on the discourse and genre analysis and bilingualism in environment – related semiotics, lexical meaning of advertisements.

## RESULTS AND DISCUSSION

This section provides the key results of the study in terms of linguistic composition, advertising appeals, linguistic cityscape, and effectiveness.

### Linguistic Composition

Table 1 displays the languages used in billboard advertisements. In addition, the table presents the languages used.

**Table 1.** Languages used in the Billboard Advertisements

	TOTAL	
MONOLINGUAL	F	%
English	20	66.6



Filipino	2	6.66
Cebuano	0	0
BILINGUAL		
English-Filipino	8	26.66
English-Cebuano	0	0
Filipino-Cebuano	0	0
TOTAL	30	100%

Table 1 reveals that among the two types of languages, the dominant language used by advertisers is the monolingual English language (20). The dominance of the monolingual English language indicates that advertisers prefer to use the English language, either in full or in combination with the Filipino language, than presenting the advertisement in the Filipino language alone. The result of the present research is comparable to that of a study by Reyes (2015), where the English language was highly preferred in advertisements in LRT and MRT stations. The remarkable difference in the occurrence of English and Filipino language in the billboard advertisements does not imply that the Filipino language is declining. Reyes (2015), also stated that the Philippines, although known as a multilingual country, has generally embraced a bilingual policy where Filipino and English are considered as the official languages. This indicates that the English language is continuously given importance in the Philippines. Magno's (2017) study also supports that English is the preferred language in bulletins and other printed materials found in Communication departments of selected universities in Cebu.



Figure 1. Hollywood Trading (BA2)

Figure 1 displayed an advertisement that is expressed in the English language. To become more direct towards the readers, advertisers must convey the message in the shortest and quickest way possible. Thus, expressing the texts in a different language would perplex readers because there is no equal translation for most of the words presented in the advertisement.

Contrary to the findings of the present study, the survey reveals that the majority of the respondents are in favor of the English-Filipino (i.e., Taglish) language (8) as a means of communication in billboard advertisements in the different areas along Mandaue City. This indicates that viewers are accustomed to speaking two or more languages. Exposure to English-Filipino language in the academe could be a factor in the language preferences of the respondents. This supports Reyes' (2015) claim that the Philippines embrace a bilingual policy. English had continuously been given importance, either as a subject from elementary to college levels or as a language of instruction from upper elementary to college levels (Reyes, 2015). Researches on the linguistic landscape

have established the importance of the English language as a tool for international communication. Because of its dynamic role in globalization, English has enjoyed privilege and status not only in European countries but also in Asia (Magno, 2017).

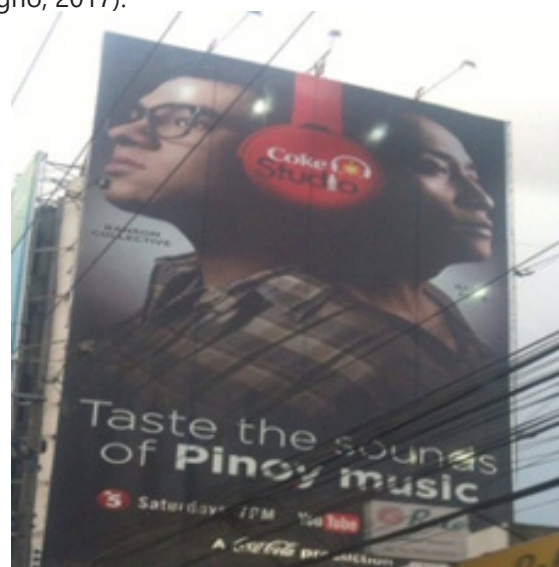


Figure 2. Coke Studio (BA6)

Figure 2 displays the Filipino term *Pinoy* as a reference to the Filipino people's music genre, which is Original Pilipino Music, commonly known as OPM. *Pinoy* is considered as an informal expression. Coke Studio is a television series and international music franchise which features live studio-recorded music performances by established and emerging artists. This suggests the advertisements' attempt to create a sense of belongingness. In the text, "Taste the sounds of Pinoy music," the word *Pinoy* is considered as a Filipino language term among the words.

Table 2 illustrates the multilingual writing information employed in billboard advertisements:

Table 2. Types of Multilingual Writing Information

	TOTAL	
	F	%
Complementary	7	87.5
Fragmentary	1	12.5
Overlapping	0	0
Duplicating	0	0
TOTAL	8	100%

As illustrated in Table 2, the complementary multilingual writing (7) is the most utilized in terms of the billboard advertisements that consist of bilingual English-Filipino languages. The presence of the English language on both official and non-official signs reflects conscious language decisions on the part of the state and the local community to support the presence of English in the linguistic landscape (Al-Athwary, 2017). Moreover, the presence of more than one language on commercial signs is due to the mutual relation between the English language and success in marketing. Contrary to the findings of Al-Athwary (2017), there was no instance found in the billboard advertisements consisting duplicating multilingual writing.





Figure 3. Magnolia (BA9)

Figure 3 features an advertisement for Magnolia Whole Chicken displaying the English-Filipino language (i.e., *Pambansang Manok*), that is, *National Chicken*. The advertisement is considered as an example of complementary multilingual writing since it provides additional detail in a different language.

Table 3 presents the instances of different linguistic units used in billboard advertisements.

Table 3. Linguistic Units in the Billboard Advertisements

TOTAL		
	F	%
Phrases	13	43.33
Sentences	10	33.33
Clauses	7	23.33
TOTAL	30	100%

Table 3 shows that phrases (13) are frequently employed in the billboard advertisements along the selected areas in Mandaue City. Following is the use of sentences (10). Among the three types of linguistic units, phrases prevalence suggests that billboard advertisements have text constraints and should be able to create a slogan consisting of brief statements. It is noteworthy that the advertisements contain short and simple sentences to catch the reader's attention in a short span of time. The main purpose of writing phrase form slogans in billboard advertisements is to ensure that readers can read their message in just a short span of time. The data suggest that that slogan messages are supposed to be readable, easy-to-understand, and therefore likely-to-be-memorized pieces.

In general terms, it is apparent that the results of the present study have an association with the English language being extensively used in the Philippines setting, particularly in Mandaue City, as nearly all billboard advertisements presented contain the English language. This corresponds with Maslova *et al.* (2013), where they mentioned that the words in billboard advertisements should not be more than seven. The occurrence of the linguistic units in the present study is similar to the study

carried out by Pilátová (2015), where she mentions that a vast majority of slogans use phrases and sentences in advertisements.



Figure 4. McDonald's (BA19)

In Figure 4, the advertisement presented an expression that is noticeably written in a large font to make it visible for the viewers with a brief statement. McDonald's is one of the top long-running fast-food chains in the Philippines and worldwide. The advertisers presented the advertisement in a short yet straight to the point statement. For instance, BA 19 shows McSaver Meals, which is short and straight to the point phrase that informs the readers about the affordability of the meal of McDonald's.

### Advertising Appeals

Table 4 shows the frequency and percentage of the different types of advertising appeals in billboard advertisements.

Table 4. Types of Advertising Appeals in Billboard Advertisements (Clow and Baack, 2010)

TOTAL		
	F	%
Emotion	17	54.83
Rational	12	38.73
Humor	1	3.22
Scarcity	1	3.22
Fear	0	0
Sex	0	0
TOTAL	31	100%

Emotional appeal (17) is prevalent in billboard advertisements because emotions greatly affect the consumers' purchase decision. This indicates the significance of not only demonstrating the stopping power but also creating an effect on the behavior of consumers towards a certain product. Since those emotions ranked as the most prevalent appeal in the billboard advertisement, the main reason why advertisers employ emotions in advertisements is that they want customers to captivate the consumers in liking the brand easily.

The findings validate the preceding result that emotional appeals are customarily utilized in the billboard advertisements in Mandaue City. Evidently, the fact that humans have the innate capacity to feel emotions can be

a great factor in the consumers' purchase decision. Murray (2013) inferred that people rely on emotions, rather than information, to make brand decisions and that emotional responses to advertisements are more persuasive to consumers. Furthermore, Murray (2013) reckoned that, in reality, emotions greatly influence and, in many cases, even determine customers' decisions.

Bernstein (as cited in Simpson, 2001) also proposed those distinctions of advertisements into reason advertisements (i.e., those which suggest a motive or reason for purchase) and tickle advertisements (i.e., those which appeal to humor, emotion and mood). It will be argued that Bernstein's distinction can be accommodated relatively systematically within contemporary frameworks of language and discourse. The results of the survey also bear a resemblance to the findings of the present research, where the emotional appeal is the dominant appeal followed by rational appeals.



Figure 5. Mang Inasal (BA8)

Figure 5 is a *Mang Inasal* advertisement where it presented an example that is immensely connected with Philippine culture and tradition. *Mang Inasal* is the leading *Pinoy* branded outlet in the country. *Mang Inasal* is known for its authentic fusion of traditional Filipino cuisine, especially native-style chicken inasal.



Figure 6. Tambuli Resort Residences (BA7)

As shown in Figure 6, the advertisement features a slogan that says *Seaside living*. For readers who are not familiar with Tambuli, it could be interpreted as merely residential. Thus, it is shifting towards becoming a residential resort.

Table 5 shows the frequency and percentage of appearance of official and non-official signs in the

billboard advertisements.

### Linguistic Cityscapes

**Table 5.** Types of Linguistic Cityscapes that are Employed in the Billboard Advertisements

	TOTAL	
	F	%
<b>SIGNS</b>		
Non-official Signs	29	96.66
Official Signs	1	3.33
<b>TOTAL</b>	30	100%

Non-official signs (29) are commonly seen in the city of Mandaue since almost the entire billboard advertisements being displayed are owned by private enterprises like *Coca-Cola* and *Mang Inasal*. According to Wang's (2015) point of view policy implementation, non-official signs are local establishments that develop their own programs and implement them.



Figure 7. Timex (BA21)

Figure 7 is an example of a non-official sign since it is implemented by private sectors that encompass all for-profit businesses that are not owned or operated by the government. An American company manufactured the the billboard advertisement about Timex Production.

On the other hand, official signs (1) are seen less in billboard advertisement because these signs are public signs that municipal institutions have to put up. Wang (2015) mentioned that official signs are the starting point of the authoritative decision; as the name implies, government officials are seen as the most relevant to producing the desired effect. These people are regarded to be the decision-makers who are responsible for formulating an efficient statute that suits the kind of existing problem. According to Shohamy and Gorter (2019), the messages delivered by the billboards are about societies, people, the economy, policy, class, identities, multilingualism, multimodalities, forms of representation and additional phenomena.

Figure 8 is an example of an official sign since barangay officials implemented it, and the sign itself is for the people who are living in the community. It is self-evident that the billboard sign is intended for the public because it serves as awareness for people that they are





Figure 8. Barangay Umapa (BA13)

city in Mandaue. The sign is for everybody, and it indicates that everyone should be responsible and united in keeping the place clean.

Overall, based on the text analysis and responses specified by the respondents, the monolingual English language dominated in the billboard advertisements, while English-Filipino language dominated in the linguistic landscape of the selected six areas along Mandaue City. Substantially, the superiority of the monolingual English and English-Filipino languages appeared to be most commonly found on highways such as in Maguikay, Mandaue City, to cater to the international target market. Hence, emotional appeal and non-official signs appeared to be the most utilized appeal in the billboard advertisements.

### CONCLUSIONS

Based on the findings, the researchers have come up with the following conclusions. First, although English is considered as the effective language used for business success, English is more persuasive and easily understood in promoting the products very well and is the language of globalization, the viewers of the billboards still prefer to see the Filipino-English languages. These could be attributed to the contexts of the Filipinos, who are basically multilingual. Thus, the target audience also prefers to see billboards with at least two languages such as Filipino as the national language while English as their second language since these two languages are considered official languages in the Philippines.

Second, consumers have purchasing power based on emotion. However, they use logic to justify their decision. Emotional appeal is the most used appeal of advertisement because it gives customers perceived value, making them attracted and interested in buying the product. It also influences consumer's buying behavior and their taste and preferences as their bases in their decision-making process.

Third, the non-official signs are commonly-seen in billboard advertisements because private sectors mostly owns the advertised product, and the city of Mandaue is known as the *Industrial Heartland* of the Island, where many of the industries are located.

Based on the conclusions, the following recommendations are considered. First, Linguistics majors should look into the prevalence of the Cebuano-Bisaya language in other areas in Cebu province especially small localities. Second, advertisers should often use the local language of the city in making advertisements to maintain and for culture and heritage. Third, future researchers may include assessing the effectiveness of the different types of appeals in non-official signs.

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## Functions, Characteristics and Effectiveness of the Selected Public Signs in Cebu City

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### ABSTRACT

This study aimed to determine and analyze the classifications, functions, characteristics, and effectiveness of the selected 30 public signs found along the roads and streets going to Basilica Minore Church, Magellan's Cross, Museo Sugbo, Fort San Pedro, and Ayala Center Cebu. Starting from Kilometer Zero (KM 0), photos of the public signs found along the roads and streets going to the five most preferred places in Cebu City were taken. A survey questionnaire was also answered by the 55 respondents composed of motorists, jeepney drivers, pedestrians, commuters, local and foreign tourists. Findings reveal that *static signs* predominated in the classifications of the public signs. In addition, *indicative signs* were predominantly found in both local and foreign tourists who visit Cebu City. Also, the *absence of uncommonly-used words, concise wordings, and capitalized words* were the most dominant characteristics in the public signs in Cebu City. Further, the public signs in Cebu City are effective in terms of giving information and directing local and foreign tourists in Cebu City. Lastly, public signs that were problematic were addressed by stating observations and recommendations for the improvement of the physical state of the signs.

**Keywords:** public signs, classifications, functions, characteristics, effectiveness, locals and tourists

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### INTRODUCTION

Public signs are among the fastest ways to directly inform the public on what they are supposed to do, especially when they are on the road. Public signs may appear on a paper, metal, or board shown outside or inside an establishment, institution, and other places where people can see them. Meanwhile, Cebu City, has become a well-known destination for both locals and foreigners coming from different countries. Due to the increasing number of locals and tourists visiting the city, there is a need for the government sectors to manage and control the people who visit the place, especially at the famous spots in Cebu City to maintain and establish a peaceful environment. Various studies such as Chan *et al.* (2016) and Bornilla *et al.* (2010) have given attention to investigating symbols and texts present in public signs, specifically those on the streets and roads of the different cities in the country.

This paper discusses the classifications, functions, characteristics, and effectiveness of the selected public signs in Cebu City. The classifications of the public signs include static signs which provide fixed information to the readers of the sign, while dynamic signs demand the public to do a certain action (Yang, 2009). Further, Yang (2009) mentioned that the functions of the public signs are indicative signs which direct people to a certain location and prohibitive signs mainly restrict the public from a specific act. The characteristics of the public signs consist of noun phrases, verbal phrases and gerunds, abbreviations, simple present tense and imperative mood, the absence of uncommonly-used words, the standardized usage of

language, the conciseness of words, the capitalized words, and the combination of words and graphic symbols. The extent of effectiveness of the public signs can be manifested through awareness and compliance by the public.

This study aimed to determine and analyze the selected thirty public signs present in the five most visited places in Cebu City (Static signs and Dynamic signs) according to (Yang, 2009), functions of public signs (Indicative Function and Prohibitive Function) according to (Tang & Wang, 2017), characteristics of public signs (Noun Phrases, Verbal Phrases, and Gerunds; Abbreviated Forms; Simple Present Tense and Imperative Mood; Absence of Uncommonly-used Words; Standardized Usage; Concise Wordings; Capitalized Words; and Combination of Words and Graphic Symbols) as enumerated by Yang (2009), and the extent of effectiveness of the selected public signs in Cebu City.

### METHODOLOGY

This study utilized a quantitative-qualitative design in analyzing the 30 public signs found along the roads and streets in the five most visited places in Cebu City. The five tourist locations were Basilica del Santo Niño de Cebu, Magellan's Cross, Fort San Pedro, Museo Sugbo, and Ayala Center Cebu. In gathering the data, starting from

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Kilometer Zero (KM 0), the researchers took photos of the public signs along the roads and streets going to the five most preferred places in Cebu City. To verify and determine the extent of effectiveness of the signs, the researchers conducted a survey with the 55 respondents (composed of motorists, jeepney drivers, pedestrians, commuters, local and foreign tourists). Furthermore, to verify the results of the survey, a statistician was asked to measure and evaluate the effectiveness of the signs. Moreover, two engineers from the Department of Public Works and Highways were interviewed to validate the data and gather information regarding public signs in Cebu City.

## RESULTS AND DISCUSSION

### Classifications of Public Signs

Findings reveal that static signs occur more in the classifications of the public signs. Table 1 exhibits the classifications of the selected public signs found in the five most visited places in Cebu City according to Yang (2009).

**Table 1.** Classifications of Public Signs

Classifications	Frequency (f)	Percentage(%)
Static signs	17	56.67
Dynamic signs	13	43.33
<b>Total</b>	<b>30</b>	<b>100%</b>

Table 1 shows that static signs are mostly present in the five most visited places in Cebu City. Static signs have a total frequency of seventeen with a percentage of 56.67. On the other hand, dynamic signs have a frequency of thirteen with a percentage of 43.44. The present study illustrates that most public signs are static because there is a need to direct the public of the roads and streets within the city. Cebu City is an urban area with popular historical sites that attract most local and foreign tourists. On the one hand, dynamic signs exist mostly to prompt the public to do any kind of action. Most of the dynamic signs found along the roads and streets in Cebu City restrict the public from doing some action.

However, Yang (2009) mentioned in his study that in contrast to static signs, dynamic signs are fewer in quantity. Yet, the present researchers observed that dynamic signs are more frequent in the roads and streets going to the five tourist spots in Cebu City since these signs are repetitive. Also, dynamic signs that were found on the streets and roads going to the five tourist spots were mostly intended for drivers, not many for the pedestrians.

### Functions of Public Signs

Indicative signs were found to be more occurring and helpful to both local and foreign tourists who visit Cebu City. Table 2 displays the frequency of the functions of the public signs that were found in the five most visited places in Cebu City, according to Tang and Wang (2017).

**Table 2.** Functions of Public Signs

Functions	Frequency(f)	Percentage(%)
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<b>Indicative</b>	<b>21</b>	<b>70</b>
Prohibitive	9	30
<b>Total</b>	<b>30</b>	<b>100%</b>

Table 2 shows that most of the public signs present along the roads and streets going to the five most visited places in Cebu City functions as indicative. The indicative function has a total frequency of twenty-one with a percentage of 70. On the other hand, public signs that function as prohibitive has a total frequency of nine and with a percentage of 30.

The present researchers believe that indicative public signs are prevalent than prohibitive public signs due to the researchers' chosen locations, which were the streets and roads going to the famous tourist spots. The selected roads are located within Central Cebu where Basilica del Santo Niño de Cebu, Magellan's Cross, Fort San Pedro, Museo Sugbo, and Ayala Center Cebu are situated. With this matter, locals and foreigners mostly visit the roads within the five tourist locations, which are the reason why indicative signs should be positioned to guide the public of the ways to take or to go to their destination, particularly if tourists want to visit the five tourist spots. As stated by Tang and Wang (2017), indicative public signs help foreigners to get the necessary information in going to a certain place.

### Characteristics of Public Signs

The absence of uncommonly-used words, concise wordings, and capitalized words were the most dominant characteristics that appeared in the public signs in Cebu City. Table 3 demonstrates the characteristics of public signs along the streets going to the five most visited locations in Cebu City.

**Table 3.** Characteristics of Public Signs

Characteristics	Frequency(f)	Percentage(%)
<b>Absence of Uncommonly-used Words</b>	<b>28</b>	<b>18.06</b>
<b>Concise Wordings</b>	<b>27</b>	<b>17.42</b>
<b>Capitalized Words</b>	<b>25</b>	<b>16.13</b>
Standardized Usage	24	15.48
Noun Phrases, Verbal Phrases and Gerund	19	12.27
Combination of Words and Graphic Symbols	17	10.97
Simple Present Tense and Imperative Mood	13	8.39
Abbreviated Forms	2	1.29
<b>TOTAL</b>	<b>155</b>	<b>100%</b>

Table 3 exhibits that almost all public signs located on the streets and roads going to Basilica del Santo Niño de Cebu, Magellan's Cross, Fort San Pedro, Museo Sugbo, and Ayala Center Cebu have the absence of uncommonly-used words. This characteristic gathered a frequency of twenty-eight with a percentage of 18.06 which is the highest

percentage among the results of the eight characteristics in the table. The second-most common characteristic is the presence of concise wordings in public signs. This has a frequency of twenty-seven and a percentage of 17.42. The top third highest percentage is 16.13 with a frequency of twenty-five is the use of capitalized letters in words present in public signs. In contrast, the least applied characteristic is the use of abbreviations, occurring two times with only 1.29 percent among the results of the eight characteristics of public signs found in specified streets and roads in Cebu City.

The results of the present research reveal that most of the public signs located on the roads and streets of Cebu City utilize words that are common and familiar to the public. The use of common words and language simplifies the message it wants to convey since these signs are intended for the public after all. In this way, local and foreign tourists who would visit certain places in Cebu City will be guided and not be confused while trying to locate the desired place to visit.

In addition, the majority of the public signs contained brief and concise words that enable the public to read and comprehend the signs easily. This is most important for the vehicle drivers who do not have time to halt just to read a sign since it could cause traffic congestion that affects all the succeeding drivers (Interview, Dela Cruz, 2018). On the other hand, short and brief public signs also accommodate pedestrians and tourists who are on the road since these signs are informative and do not require much time for the people to read. Furthermore, Most of the public signs were capitalized since it would be more readable to the public, especially to those drivers who are on the road that need signs to be clear and visible enough to save time from reading the signs (Interview, Dela Cruz, 2018).

On the one hand, the public signs in Cebu City avoid the use of slangs and jargons to fulfill the function or purpose of signs, which is to effectively communicate the message to all. Slangs should not be utilized in public signs because it might confuse the public which leads to misinterpretations of the signs. Jargons should also be avoided because only a limited group of people can understand them. Besides, public signs are meant for the public, so as much as possible, the meaning has to be clear enough for everyone in the community to understand it (Deng, 2014).

### Effectiveness of Public Signs

In line with whether or not the public follows the texts transcribed on the signs, the present researchers were able to identify the extent of the effectiveness of the selected public signs through the results of the survey. The current researchers conducted a survey to a total of 55 respondents composed of motorists, jeepney drivers, pedestrians, commuters, Filipino and foreign tourists visiting the five tourist spots in Cebu City.

The following tables and graphs are the outputs of the data analysis done using SPSS (Statistical Package for the Social Sciences).

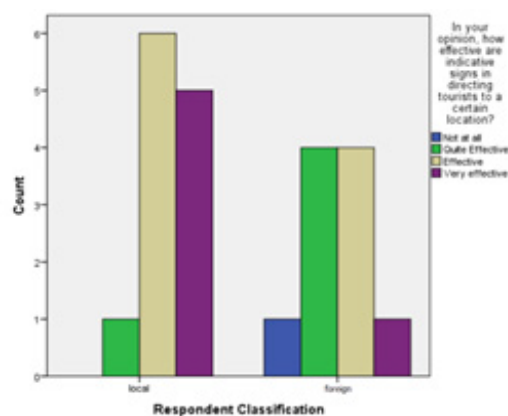


Figure 3. Survey Question #3

As presented in Figure 3, most local tourists responded effectively to the third question *"In your opinion, how effective are indicative signs in directing tourists to a certain location?"* than foreign tourists who answered both *effective* (represented by beige bar on the left) and *quite effective* (represented by green and beige bars on the right side).

As a whole, the findings suggest that indicative signs are effective enough in giving sufficient information, most especially to local and foreign tourists who are visiting a certain tourist spot.

On the one hand, another function of a public sign is to forbid the public from doing a certain kind of action. The effectiveness of prohibitive signs was also determined through the fourth question in which it asks the 30 respondents *"How effective are prohibitive signs in disciplining the public?"* Figure 4 shows the equal number of the local and foreign respondents and the effectiveness of prohibitive signs in restricting the public.

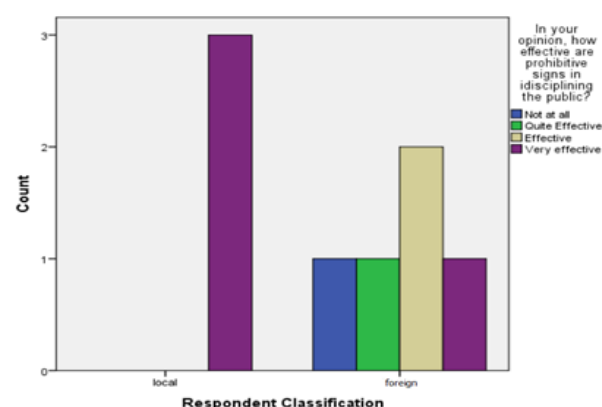


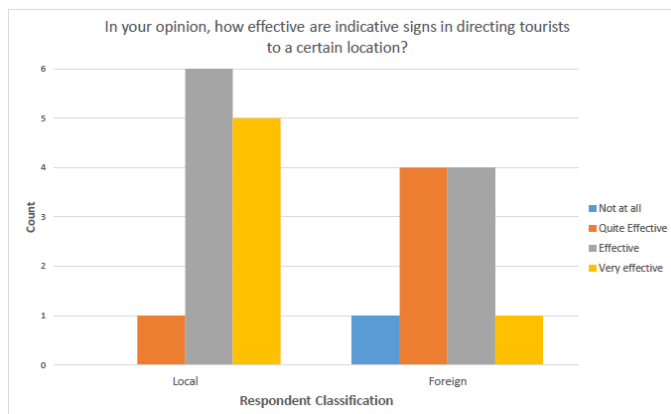
Figure 4. Survey Question #4

As displayed in Figure 4, the majority of the local tourists answered that prohibitive signs are *very effective* in restricting the public (represented by violet bars). Meanwhile, most of the foreign tourists responded that prohibitive public signs are *effective* (represented by beige bars).

Furthermore, the present researchers utilized the survey to ask 15 local tourists and 15 foreign tourists who were visiting the five most visited destinations in Cebu City whether they follow the public signs they see from certain

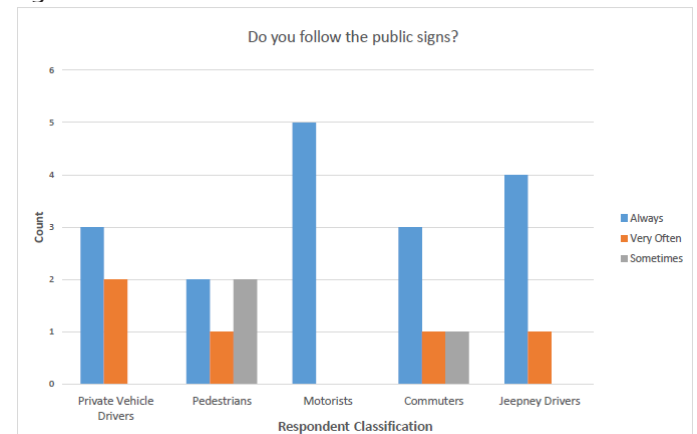
roads and streets in Cebu City leading to the tourist spots.

respondent answered never or rarely to following the signs.



**Figure 5.** Survey Question #2 for Drivers, Pedestrians, and Commuters

Figure 5 reveals that the majority of the local drivers, pedestrians, and commuters understand the information, directions, prohibitions, and warnings displayed in the public signs installed along the roads leading to the five tourist destinations. The blue bars represent the Always, yellow bars for Very Often, and orange bars for Sometimes. The majority of the respondents, particularly the motorists, answered that they always understand the messages of the signs. Three out of five private vehicle drivers, as well as three jeepney drivers, responded that they always easily understand the public signs. Among the 25 respondents, four of them answered that they sometimes understand the signs.

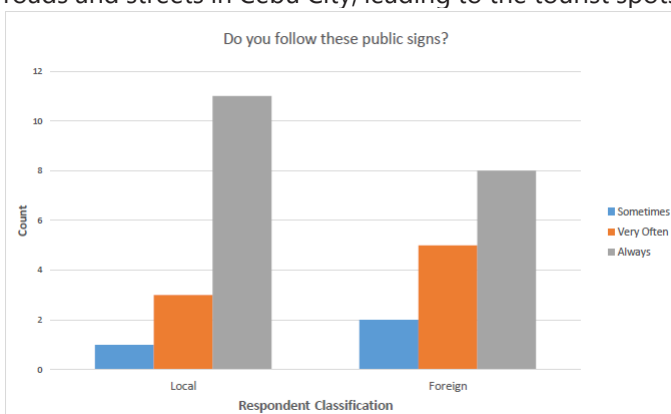


**Figure 7.** Survey Questionnaire #3 for Drivers, Pedestrians, and Commuters

Figure 7 exhibits that most of the local drivers, motorists, commuters, and pedestrians who answered the survey always abide by the instructions, directions, and prohibitions in the public signs. The vertical bars in the figure represent the answers of the respondents. The orange bars stand for *Always*, the blue bars for *Very Often*, and green bars for *Sometimes*. All five motorist respondents answered that they always follow the instructions indicated on the public signs they see. At the same time, four out of five jeepney drivers also responded that they always comply with the signs. Other respondents, such as the commuters and pedestrians very often or sometimes follow the signs.

Furthermore, the present researchers utilized the survey to ask 15 local tourists and 15 foreign tourists who were visiting the five most visited destinations in Cebu City, whether they follow the public signs they see from certain roads and streets in Cebu City, leading to the tourist spots.

To add, Figures 6 and 7 reveal that the majority of the tourists in Cebu City and local drivers and commuters adhere to the public signs installed in the roads and streets. No respondent rarely or do not follow the instructions and prohibitions displayed in the signs.



**Figure 6.** Survey Question #5

Figure 6 displays that most tourists asserted that they always follow the public signs installed in some areas within Cebu City. With the representation of the beige bar visible from the graph, most of the respondents who answered *always* are local tourists with a frequency of 11. Eight from the foreign tourists also responded that they always follow the signs, while the remaining 11 respondents answered either *very often* or *sometimes*, showing that most of them still follow the directions, information, as well as the prohibitions and instructions of the sign. No

According to Akpan *et al.*, (2015), the effectiveness of the public signs is reflected in the obedience or compliance of the public. With this in mind, the public signs put up in the roads of Cebu City are identified to be effective since tourists adhere to the signs. Additionally, the present researchers interviewed Engr. Joshua Monsanto, who is from the DPWH-Planning and Design Division, and is also a faculty member from the Civil Engineering Department. He stated that the effectiveness of the public signs largely depends on whether the public follows the public signs they see, and if they do not obey to the signs, it is ineffective (Interview, Monsanto, 2018).

On the other hand, the functions and characteristics of the signs correlate with the effectiveness of the signs. It is vital to consider the clarity of the signs for it to communicate effectively. Public signs displaying clear, brief, and appropriate use of terms would let more people attend to the information delivered by the sign. The results of the survey show that the majority of the respondents understand the messages of the signs. This implies that the public can interpret the information, urging them to take action on the necessary instructions they need to follow.

Likewise, the effectiveness and characteristics of the sign also involve its functions. The representation of

the texts in the signs, as well as the symbols, is presented according to its corresponding function. The results of the survey depict that the respondents were aware of the kind of function the public signs have. This tells that the readers have a clear understanding of the purpose of the signs, which is similar to the findings of Ganesh (2016) that most of the perception of the passengers with the signs in the airport was positive. The participants recognized the signs as effective, which means that the signs in the chosen airports need not to be improved. With this in mind, the public's perceptions of the signs depend on how the signs are represented. The awareness of the public on the purpose of the signs also shows that they understand the purpose of the sign. All of these show the correlation of the effectiveness of both the characteristics and functions of the sign.

## CONCLUSIONS

1. The effectiveness of public signs is manifested in the awareness of the public and their compliance with the public signs.

The extent of the effectiveness of the public signs influences the motorists and pedestrians' obedience to the signs and the extent of understanding of the motorists and pedestrians to the message of the signs. Following the instructions of the public signs shows that the signs are effective, since the motorists and pedestrians understand the sense of the signs, and are aware of its functions and purposes. The characteristics, functions, and the classifications of the public signs are all regarded in examining the effectiveness of the signs. Thus, people who are mindful of the content, quality, quantity, and purpose of the public signs, specifically those that indicate and prohibit, can follow and obey the intended message. To add, the tourists visiting Cebu City who participated in the survey regarding the effectiveness of public signs mostly follow the signs they see in certain tourist destinations within the city. This verifies that the public signs going to the five most visited spots in Cebu City are effective.

2. The drivers, motorists, and commuters adhere to the public signs especially if there are traffic enforcers and police officers who reinforce the rules displayed on the signs.

In the survey conducted, the motorists, drivers, and commuters mentioned that they usually follow the public signs as they are aware that the police officers and traffic enforcers are monitoring them. They are mindful of the penalties that they will get from the police officials who are in charge of the flow of traffic and capturing those individuals who violate the law. So, the presence of police and traffic enforcers greatly helps in monitoring and maintaining safety along the roads and areas in Cebu City.

## RECOMMENDATIONS

Based on the findings and conclusions of the study, the following recommendations are formulated:

1. The Philippine government agencies, such as the Department of Public Works and Highways and Land

Transportation Office, can make use of this research in examining and evaluating current conditions of the public signs present within Cebu City. Consequently, the present study can assist the government sectors in improving, repairing, and monitoring public signs that need attention due to insufficiency, improper disposition, and defectiveness.

2. Future researchers should explore more areas in Cebu or outside the province in gathering public signs. The research environment should not be restricted within the city proper only, but also inspect public signs in rural areas with tourist attractions to know and interpret more the differences or patterns of the installations of public signs, and to be able to know the effectiveness of public signs in various locations.

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## Students' Perceptions and Learning Gains Using Whole Brain Teaching Strategy in the STEM Strand of K to 12 Education

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### ABSTRACT

In this study, the researchers explored the effectiveness of Whole Brain Teaching (WBT) in teaching circuits to Senior High Students (SHS), particularly Academic track, STEM strand of K to 12 curriculum. Learning activities in electric circuits were developed as WBT strategy and administered in a pretest-posttest design. To further analyze the effectiveness of WBT, learning gains of respondents were compared to students exposed to the traditional method of teaching of electric circuit. The result showed that SHS students attained 19.3% learning gain which is considerably small. However, comparative statistical results gave a significant difference ( $t = 2.62$ ,  $p = 0.007$ ) in favor to WBT approach. Further, a survey instrument was developed, validated and administered to assess if using varied teaching strategies could be linked to positive student perceptions of the teaching intervention. Further, regression analysis was conducted to determine if such approaches were predictive to learning gains. Results showed that perceptions of the student have no significant effect on their learning and no quadrant of the brain can be considered predictive on the learning gains. Therefore, the result of the study may support the significance of catering the four brain quadrants in teaching for conceptual understanding.

**Keywords:** Perceptions, STEM K to 12, Whole Brain Teaching (WBT) strategy

### INTRODUCTION

One of the core subjects in the SHS STEM strand of the Academic track is General Physics. Researches have shown that generally, student performed low in Physics among other sciences. This poor performance can be accounted to school-related and teacher-related factors (Orleans, 2007). According to Orleans (2007), factors affecting conceptual understanding and lack of enthusiasm towards learning science subjects, especially physics, are the following; repetitive learning approaches such as memorizing, note copying which is exam oriented, traditional teaching strategies such as lectures with minimal student participation, and laboratory activities with prescribed practical procedures. Another factor is the prior conception that Physics is a difficult subject that would also result in the student's lack of interest in Physics classes (Orleans, 2007). Therefore, it is a challenge for every physics teacher to provide a learning environment that wards this misconception off and maximizes student engagement in the learning process.

Since education is designed to enhance the brain, educators ought to figure out how the brain works and process information. One of the most significant models that have attempted to explain the brain's structure, mechanisms, and learning processes is the Herrmann Whole Brain Model (HWBM) (Torio, 2016) which emphasized that the learning characteristics of the upper and lower brain differ and that the brain is further subdivided into right

and left hemispheres. As quoted in the study conducted by Bawaneh (2011) "The upper brain deals with abstract and conceptual concepts, while the lower brain deals with emotional and organic ideas. The upper left quadrant deals with logic and quantity, whereas the lower left quadrant deals with sequence and organization. In contrast, the upper right quadrant deals with conceptual and visual constructs, whereas the lower right quadrant deals with interpersonal and emotional concepts." Accordingly, it would be better than teaching should target these four brain compartments.

The Whole Brain Teaching (WBT) method stresses providing equal learning opportunities for different learners, where each of the four brain compartments will be exercised during the whole period of class. Previous studies (Bawaneh et al., 2012; Torio et al., 2016) showed effects on the use of WBT in Physics classes. Thus, it is highly encouraged to implement WBT method in senior high school Physics classes.

In this study, the proponents explored the effectiveness of the WBT method in teaching direct circuits in senior high school students for the first time in the

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Philippine context. Moreover, a study on how the said strategy directly impacts learning outcomes is still needed due to the limited research available as of this time (Van Hosen, 2017). In addition, the present study explored the possibility that varied teaching strategies could be linked to positive student perceptions of the teaching intervention. Basing research reviews, perception survey built on HWBM compartmentalized learning contexts was developed and validated for the first time in this present study.

## REVIEW OF RELATED LITERATURE

There are several varieties of the brain-based pedagogy. One brain-based strategy is known as Whole Brain Teaching (WBT). According to Torio and Cabrillas-Torio (2016), WBT is a brain-based teaching strategy rooted in the concepts developed by Biffle (2013) and Hermann (1998). This strategy treats every child to have four brain areas that require close attention. The four brain areas correspond to four learning activities to address the holistic need of an individual. The four learning activities are (1) lecture; (2) individual work; (3) group work; and (4) practical display.

Whole brain teaching strategies emphasize active learning. This type of instructional approach was derived from studies such that when you tap into both hemispheres of the brain (left and right), learners are better able to make connections. In whole brain learning, teachers may play music during instruction or use guided meditation to help build a more relaxed atmosphere, while students are encouraged in visualizing, drawing, and acting out what they are learning. Essentially, whole brain teaching strategies are tapping into the way the brain works best. It's just teaching strategies that you are already using in a new, unique way (Cox, 2000).

It is believed by the advocates of the Whole Brain Teaching approach that each learning opportunity ought to have the capacity to address the four areas of the brain. To address the four areas implies giving exercises or activities that will invigorate the brain functions of every region. The WBT approach is used to target the four learning areas of the brain for the holistic development of individual students/learners. The idea is that, in order to cater the holistic development of an individual, the four learning areas of the brain should be satisfied.

Herrmann (2000) discussed the four areas of the brain with different learning styles associated in each area. Figure 1 shows the Whole Brain Model by Ned Herrmann. The upper left quarter (A) represents external learning wherein learners within this category traditionally learn best through lectures, textbooks, and teachers as knowledge dispensers. The lower left quarter (B) refers to procedural learning. Procedural learners characterized by a step-by-step approach, in which practice, repetition, hands-on activities, abstract cognition, and common sense are most emphasized. The lower right quarter (C) describes interactive learning where interrelations and kinesthetic work are emphasized. Interactive learners perform best in an environment created by experience, feedback, listening, physical experimentation, and shared thinking. The upper right quarter (D) represents internal learning in which the

ideal learning context is characterized by insightfulness, idea construction, and concept understanding that occur instantly, totally, comprehensively and intuitively.

According to Pedersen (2011) and Lepper (2011) from Calhoun (2012), learning more effectively took place when connections were made between the right and left hemispheres of the brain. The left brain was associated with cognition, while the right brain was associated with creativity. Activating both hemispheres of the brain encouraged effective learning and student engagement. This approach specifically addressed the commands and techniques used as part of the whole brain learning experience.

Torio & Cabrillas-Torio (2016) conducted a study to determine the effect of the use of whole brain teaching on students' learning gains and motivation in thermodynamics. In their study, WBT strategy was used as a means to target the performance of students as well as motivation. Their study was conducted in the laboratory school of Philippine Normal University. The two sections of grade 10 students made up the two groups as respondents of the said study. A set of six lessons were planned and delivered to these two groups in their physics class. Learning gain was measured by getting the difference of pretest and posttests using a validated 40-item test items. The study identified academic performance as a weakness in the Philippines and meant to be addressed by considering a teaching strategy, the WBT. The researchers concluded that academic performance is a complex interplay of a lot of school factors. The teaching strategy is just one of the many factors that can bring positive changes to the performance level of students. Another big factor that affects performance is motivation. In addition, the results of the study revealed that there is an average learning gain of 20% after facilitating classes under WBT. The results revealed positive effects on academic performance and motivation could be derived from the use of WBT as a teaching strategy. The researchers also added that the motivation component is highest in terms of intrinsic sources followed by extrinsic sources. This teaching innovation is just one of the many possible teaching strategies that can be explored by practitioners in the field. The positive learning gains that resulted after the introduction of the strategy is indicative that the effort to innovate and improve teaching and learning is paying off.

Whole Brain Teaching advocates the concept of providing varied tasks to address four learning areas of the brain (Bawaneh & Saleh, 2011). The results of the study conducted by Bawaneh, Zain, Saleh, & Abdullah (2012) showed that Herrmann Whole Brain Teaching Method (HWBTM) surpassed the Conventional Teaching Method (CTM) in enhancing students' motivation towards science learning. In HWBTM, students preferred thinking styles towards motivation in science learning is not significantly different. However, there were shown differences across CTM.

Palasique (2009) conducted a study to seek ways on how to create a more engaged learning environment for the students by using WBT teaching method. The researcher concluded that the students who were used to WBT approach have become more engaged in every lesson

on a day to day basis. Results showed that students were more eager for the next day lesson and the accountability that was given to them through WBT method.

Calhoun (2012) says brain-based learning is a way of activating all the parts of the brain during the learning process. Schools who have implemented brain-based teaching and learning have shown increases in student achievement over a period of time. Effective teachers use brain-based techniques to keep students actively engaged in the learning process. When students are actively engaged in the learning process, both hemispheres of their brains can be activated to increase learning. While most students prefer one learning style, modality, or hemisphere over the other, activating both left-brain and right-brain activities can increase student achievement. Teachers also must recognize their own learning preferences and adjust their lessons to reach both types of learners. Research has shown brain-based strategies to be effective, engaging, and exciting in the education environment. Many strategies, including whole brain teaching, can and should be employed in the classroom to activate the brain and increase learning in students.

### OBJECTIVES

This study envisioned to develop teaching materials and approaches that cater the four brain areas of the learner as a holistic approach in addressing brain-based needs. In addition, a survey instrument that would measure the association of WBT and learning basing on the student's perceptions is being developed and validated. Specifically, the study aimed to:

1. develop four main learning activities in electric circuits as WBT strategy
2. determine the effect of WBT on students' conceptual understanding.
3. develop a survey instrument to measure the student's perceptions of the WBT strategy.
4. correlate perceptions of the students in the implementation of WBT to their learning gains.

### METHODOLOGY

The participants were senior high school students in STEM curriculum strand, General Physics 1 at Central Mindanao University taking electric circuit. The researcher did not randomly assign participants, which means, WBT intervention was given to the entire STEM classes to avoid possible complaints of impartial treatment. The electric circuit class composed of science education students was taken as the control group. The subject content and their prior knowledge in this set-up were most-likely comparable.

There were 240 respondents composed of seven (7) sections in General Physics 2 in which electric circuit was one of the major topics. Profile in terms of age and gender is shown in Table 1 for WBT and control group, respectively. Most of the respondents were female students with a total of 147 (61.2%). In terms of age, the majority were 18 years old (70%) followed by 17 years old (17.1%) and 19 years old (12.1%). Two students were 26 and 27 years of age during the conduct of this study.

**Table 1.** Profile of the respondents in terms of Age and Sex.

		WBT		Control	
		N	Percentage	N	Percentage
SEX	Male	93	38.8	17	61.2
	Female	147	61.2	11	38.8
	TOTAL	240	100	28	100
AGE	17	41	17.1	0	0
	18	168	70	3	10.7
	19	29	12.1	14	50
	20	0	0	6	21.4
	21	0	0	4	14.3
	22	0	0	1	3.6
	26	1	0.4	0	0
	27	1	0.4	0	0
	TOTAL	240	100	28	100

Male students (61.2%) outnumbered the female in the control group. Half of the students were 19 years of age, 18 years old for the youngest and one student in his 22 years of age which was the oldest in the class.

### Research Design

This study used quasi-experimental design which involved administration of pre-test and post-test. Determining and Interpreting Resistive Electric Circuit (DIRECT) instrument was used as the assessment tool for conceptual understanding. The pre-test measurement served as the baseline assessment for normal gain computation. The normal gain scores indicated the precise change of scores from pretest to posttest which serves as the basis for assessing conceptual understanding. The computation of normal gains was based on Hake's model or normalized gain (Hake, R., 1998). Comparative statistical and graphical analysis were conducted to assess the effectiveness of WBT. DIRECT pre and post-tests were the basis of comparison using Analysis of Covariance (ANCOVA).

### Data Gathering Procedure

The study started with the Capability Building. Collaborators, who are license physics teachers, were briefed with WBT strategy- theoretical background, features of the strategy and how it will be delivered in a classroom setting. Then, research collaborators developed the Lesson Guides (LG) in electric circuits as WBT lessons. These lesson guides consist of activity sets or teaching approaches which cater four chambers of the brain following Hermann Brain Dominance Theory. The template includes the following features:

- a. Objectives of the lesson
- b. Topic/Subject Matter
- c. Procedure:
  - i. Pretest (five-item multiple choice)
  - ii. Lesson proper in WBT approach
  - iii. Manual work
  - iv. Group work



- v. Practical Display
- vi. Posttest (five-item multiple choice test)

Collaborators conducted teaching demo with their lesson guides of WBT strategy. Teaching demonstration phase ensures that the flaws of prepared LG were addressed prior to the conduct of actual classroom teaching. Physics instructors/professors who were handling or have taught circuit classes were invited to observe and give comments/suggestions for the improvement of WBT lesson guides. There were suggestions and minor revisions raised in which collaborators and researcher agreed and thus LG was modified. Capability building activity ended with all the evaluators favorably endorsing the use of WBT learning guides for STEM circuit classes.

The DIRECT pretest was first given in a 4 weeks gap before the implementation of posttest to avoid retention problem. The collaborators implemented LG to STEM physics classes and DIRECT posttest was administered at the end of the two weeks intervention. To further verify the effectiveness of the approach, a comparative study was conducted. One electric circuit class, composed of science major education students, was taken as the control group. The DIRECT pretest was given to them before a traditional method of discussions and posttest after covering the whole circuit topic.

#### Development and implementation of Perception Survey Instrument

A survey instrument was developed to assess the perceptions of the students on the conduct of WBT. Each statement was constructed in such a way that it could address specific brain quadrant or target a specific learning area. Sample item is the statement "The teacher provided an environment where you can listen and share ideas with your classmates" which addresses quadrant C, the interpersonal and emotional aspect. Further, each statement or item in the survey was subjected to content validation through consultations with collaborators and physics teachers who willfully gave their comments. Common and sensible suggestions were taken into consideration in drafting the final survey items.

#### Data Analysis

Learning gains were computed basing pretest and posttest data gathered from student respondents. Statistical t-test analysis was conducted to compare experimental (STEM students) and control (physics education students) groups. To determine the reliability of the WBT perception survey, Cronbach's alpha was computed. Each quadrant has Cronbach's alpha greater than 0.7 which indicates that the items in the respective quadrants formed a scale that has reasonable internal consistency reliability. Correlation analysis was done to assess if perceptions of the students on WBT implementation affects their learning gains. Further, to determine if learning is predictive with respect to a specific brain quadrant, regression analysis was conducted.

## RESULTS

### Testing the Effectiveness of WBT strategy

To test the effectiveness of WBT strategy, DIRECT instrument was administered before and after the implementation of the said teaching strategy both for experimental and control group. Validity of DIRECT instrument was supported by these data; internal consistency ( $KR-20$ ) = 0.71, item reliability of 0.33 (higher than ideal value of 0.2) and the average difficulty index of 0.49 which is in between the ideal value range of 0.40 to 0.60 (Engelhard & Beichner, 2004). Though DIRECT was developed and validated in other country, its validity and reliability were already tested in local researches. Examples are the studies conducted by Dr. Teresita D. Taganahan (2014) and Dr. Cecilia Bucayong (2016).

Descriptive statistics is shown in Table 2. Control group had a minimum score of 6 and a maximum of 18 while scores in the experimental group ranged from two (2) to 17. Both groups demonstrated improvement in conceptual understanding but the experimental group got the highest score of 22 compared to only 19 in the control group. On the average, the control group was considerably higher during pretest but the reverse happened in the posttest. Thus, the experimental group obtained an average score gain difference of 1.92 which is 47% higher than the control group.

**Table 2.** Mean score distribution for both experimental and control groups

	Group	Mean	SD	Min	Max	Average Scores
Pretest	Experimental	2.609	9.91	2	17	9.91
	Control	2.109	11.05	6	18	11.05
Posttest	Experimental	2.796	13.65	6	22	13.48
	Control	2.159	12.81	8	19	12.81
Gain	Experimental	3.048	3.69	-12	11	3.68
	Control	2.189	1.76	-2	5	1.76

The significant difference between experimental and control groups was statistically analyzed with assumed unequal variances due to different sample sizes. The result is shown in table 3. Pretests results were significantly different,  $t(26) = 2.32$ ,  $p < 0.05$ ,  $d = 0.54$  which means that control group performs better in the pretest.

**Table 3.** Independent t-test comparing experimental and control groups in various tests.

Test Scores	t-value	df	p-value	Interpretation
Pretests	2.32	25.7	0.029	Significant
Posttests	1.67	26.3	0.107	Not significant
Gain	3.7	27.3	0.001	Significant

Results in the posttest revealed that scores in the experimental and control groups were not significantly different,  $t(26) = 1.67$ ,  $p > 0.05$ , with a smaller magnitude of the difference ( $d = 0.32$ ). However, computing the differences in their learning gains, t-test result showed that experimental group is significantly higher than the control group,  $t(27) = 3.7$ ,  $p < 0.05$ , with larger effect size than

typical ( $d = 0.88$ ).

Since the pretest scores showed a statistically significant difference, ANCOVA analysis was conducted to test this difference. Levene's test and normality check were carried out and assumptions were met as shown in Table 4. As  $p > 0.05$ , equal variances can be assumed.

**Table 4.** Levenes' test of Equality of Error Variances using posttest as dependent variable.

F	df1	df2	Sig.
2.060	1	258	.152

Result of ANCOVA analysis in Table 5 showed a significant difference in the posttest [  $F(1,257) = 5.859$ ,  $p = 0.016$  ] between control and WBT groups.

**Table 5.** Analysis of Covariance evaluating the effect of WBT in the posttest.

Variable	df	F	Sig.
Control	1	5.859	.016
Experimental	257		

Pretests and posttests percentage scores are shown in table 6. Control group obtained a higher percentage pretest score of 38.10 % over the experimental group with only 34.18%. However, there was reversed turned out in the posttest result with 46.88% for the experimental group compared to 44.17% in the control group. Thus, the normalized gain for the experimental group was 9.5% higher than the control group. The researchers used Hake's model in computing normalized gain (Hake, 1998) which resulted to 19.3% and 9.8 % average gain for experimental and control group, respectively. The normalized gain was preferably used since differences in their pretests scores would not necessarily affect the average gain in this computation model.

**Table 6.** Normalized Gain for both experimental and control groups

	Pretest(%)	Posttest(%)	Normalized Gain
Experimental	34.18	46.88	19.3%
Control	38.10	44.17	9.8%

### Perception Survey

The "Students' Perceptions on WBT Implementation Survey Questionnaire" was first drafted basing on the four quadrants of the brain modeled by Herrmann (Herrmann, 2000). The survey questionnaire was categorized into four constructs according to quadrants, specifically; Quadrant A, Quadrant B, Quadrant C and Quadrant D. The first draft was then subjected to the opinions, constructive suggestions and editing of all the research collaborators and physics teachers who are knowledgeable on the content of the study. Originally, there were 40 items in the survey but seven items were discarded after a thorough evaluation in terms of clarity, content, and construct relating to brain quadrants. Thus, the survey questionnaire finalized with 33 items in 4-point Likert scale from "very true" rated as four to "not at all true" with the rating of one (1). Please see

supplementary material accompanying the article.

To assess the internal consistency of the survey questionnaire, Cronbach's' Alpha was computed based on the data gathered. Table 7 provides reliability statistics for all items in respective quadrants. There were 240 students who answered the survey but only 234, 231, 237, and 235 valid subjects (without missing items) for quadrants A, B, C, and D, respectively. Quadrant A had the greatest number of perception questions with a total of nine items whereas only seven items for quadrant D with the least alpha value. However, all quadrants had the Cronbach's alpha greater than 0.7 which indicates that the items in the respective quadrants formed a scale that has reasonable internal consistency reliability. Thus, all the 33 items in the questionnaire were retained as shown in the supplementary material.

**Table 7.** Reliability Statistics of WBT Perception Survey Questionnaire

Quadrant	N Valid	No. of Items	Cronbachs Alpha
A	234	8	0.74
B	231	9	0.71
C	237	8	0.73
D	235	7	0.70

To assess whether students perception affects the conceptual understanding of the students, correlation analysis between these variables was conducted. Descriptive statistics is given in Table 8.

**Table 8.** Descriptive Statistics for Learning Gains and Perception in the Four Quadrants(N = 240)

	N	Min.	Max.	Mean	Std. Deviation	Skewness	
	Stat	Stat	Stat	Stat	Stat	Stat	Std. Error
Quad. A	235	2	4	3.11	.436	-.382	.159
Quad. B	232	2	4	3.06	.412	-.143	.160
Quad. C	237	2	4	3.02	.431	-.224	.158
Quad. D	235	2	4	2.99	.456	-.286	.159
Gain	240	-12	11	3.68	3.048	-.125	.157

All the quadrant variables had missing cases except for learning gains with total N statistics of 240. The minimum and maximum values are within the Likert scale range of one to four. On the contrary, learning gain minimum value is -12, which means some students incurred lesser posttest compared to their pretest scores which may contribute to a greater standard deviation. However, means and standard deviations are within reasonable values. Skewness statistic values were all less than plus or minus one ( $< +/- 1.0$ ) which can be assumed that variables are approximately normally distributed.

Table 9 shows the inter-correlations of learning gains to the perceptions of students as categorized in different quadrants. Statistical analysis shows that no specific quadrant was significantly correlated to the learning gains,  $n = 235$ ,  $r < 0.08$ ,  $p > 0.05$ .

**Table 9.** Inter-correlations between Learning Gains and student Perceptions by Quadrant (N = 235)

Quadrant		A	B	C	D	Gain
A	Pearson Correlation	1				
	Sig.(2-tailed)					
B	Pearson Correlation	0.735**	1			
	Sig.(2-tailed)	0.000				
C	Pearson Correlation	0.625**	0.657**	1		
	Sig.(2-tailed)	0.000	0.000			
D	Pearson Correlation	0.645**	0.642**	0.624**	1	
	Sig.(2-tailed)	0.000	0.000	0.000		
Gain	Pearson Correlation	0.043	-0.008	0.068	-0.002	1
	Sig.(2-tailed)	0.516	0.903	0.294	0.971	

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

Since the correlation of variables gave only their corresponding associations, the researcher opted to use regression analysis to determine the predictive ability of brain compartments to the conceptual understanding of the students basing on their learning gains. The result of multiple regression analysis is shown in Table 10.

**Table 10.** Simultaneous Multiple Regression Analysis for Learning Gains and Brain Quadrants (n = 235)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.779	1.703		1.632	0.104
Quadrant A	0.704	0.771	0.098	0.914	0.362
Quadrant B	-1.062	0.819	-0.142	-1.296	0.196
Quadrant C	1.158	0.684	0.162	1.692	0.092
Quadrant D	-0.519	0.649	-0.078	-0.801	0.424

*Dependent Variable: Conceptual Understanding*  
*Note: R<sup>2</sup> = 0.019; F (4, 221) = 1.077, p > 0.05*

Simultaneous multiple regressions result in Table 8 shows that no brain quadrants could significantly predict learning gains. Combination of variables can only predict learning gains with  $F(4, 221) = 1.077, p > 0.05$ , which means not significant. Beta gives correlation coefficients and it has shown that values in all quadrants were minimal. The adjusted R square value was only 0.019. This means that only 1.9 % of the variance in learning gains can be explained by the assumed predictors.

### SUMMARY OF FINDINGS

The above findings showed that WBT approach in teaching with the use of researcher-made learning guides was effective in creating impact on the students learning gains. Though the normal gain of 19.3% belongs to a "lower" category according to Hakes' Model, but the comparison of this result to other studies conducted may gave significant insight. The WBT conceptual assessment outcome is considerably higher than previous studies conducted with the same assessment tool but

using different teaching pedagogies. Previous studies resulted to less than 12% learning gains (Taganahan, 2014; Sangam & Jesiek, 2012; O'Dwyer, 2012; Lakdawala, Zahorian, Gonzalez, Amit, Leathrum, 2002; Engelhardt & Beichner, 2004). Though there was one study in electric circuit context for engineering students using intentional learning pedagogy, which resulted to a normal gain of 23.6% (Bucayong, 2018), still a 19.3% learning gains in WBT is justifiable considering the fact that the respondents for WBT were Senior High School (SHS) students.

Inter-correlation analysis revealed that no specific quadrant was significantly correlated to the learning gains. To assess further, if there could be somewhat predictive factor to the conceptual understanding of the student, simultaneous regression analysis was conducted. The result showed that no specific brain quadrant was a significant predictor in understanding electric circuit lessons.

### CONCLUSIONS

A holistic teaching approach by addressing four quadrants of the brain known as WBT strategy in teaching circuits was developed for this study. Learning gains in DC Circuits among students taught with the WBT approach with those taught without the WBT strategies were compared. Results revealed that WBT is an effective pedagogy in the context of electric circuits.

Further, a survey questionnaire was developed and statistically validated for the assessment of students' perceptions of WBT per brain quadrants. Data obtained served as the basis for determining the degree of association of a specific brain quadrant teaching strategy to the learning gains. Results showed that no specific quadrant was significantly correlated to the learning gains. Further, the regression analysis supported this finding by showing that no brain quadrants could significantly predict learning gains.

Thus, teaching strategy should not necessarily be focused on the logical, emotional, sequential or integrated approach which addresses a specific brain quadrant. Rather, teaching strategy should be holistic by addressing the four quadrants of the brain. This result significantly verified the importance of WBT strategy or the holistic approach in teaching.

### RECOMMENDATIONS

The study implies the significance of WBT strategy in teaching electric circuits. The result may provide awareness on the part of the teachers and curriculum designers of the pedagogy that best fits a specific context. Nevertheless, the researcher recommends that WBT strategy will also be tested in other contexts especially in the fields that assumed to require more of analytical approach.

In addition, an investigation with regards to learning retention is also recommended. This is to check whether conceptual understanding using four quadrants of the brain promotes learning retention better than other approaches.

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### Compliance with ethical Standards:

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**Ethical Approval:** This article does not contain any studies with animals performed by the author. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee.

**Informed Consent:** Informed consent was obtained from all individual participants included in the study.

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## Cebuano Particles and their Functions in the Selected Radio Segments

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### ABSTRACT

This study analyzed the Cebuano-Bisaya particles and their corresponding functions, as well as their frequency of usage between two disk jockeys (DJs) and a random number of callers. The current research involved six (6) chosen 99.5 RT Ninduta Ah! Radio broadcasts, specifically from a segment called "*Itanong Mo Portion*." The DJs and the callers served as the participants for this study. The recorded conversations from the said segment containing the use of the different types of Cebuano-Bisaya particles provided the study's main source of data. Results unveiled that placeholder particles were the most evident among all the types of the Cebuano-Bisaya particles; "word search while holding a turn ranked first as the most common function of the Cebuano-Bisaya particles, followed by "*emphasis*," "to assert information" as the third and "to convey an attitude" as the fourth. However, the use of "euphemism" and "reformulating clausal structure" provided no data in the study, and the post-nominal type of particles was the least used. Furthermore, between the DJs and the callers, it was found out that the DJs were the frequent users of the Cebuano-Bisaya discourse particles compared to the callers.

**Keywords:** Cebuano language, discourse particles, radio segment

### INTRODUCTION

One of the most widely spoken languages in the Philippines is the Cebuano language, gathering up about 20 million people in Central Visayas, western parts of Eastern Visayas, eastern Negros Island Region, and some major parts in Mindanao (Ager, 2016). Despite being the second most spoken native language in the Philippines with an approximate 20 million speakers (Zorc, 1977; Cinc, 2016), the local language has unfortunately not been completely given as much importance and attention compared to that of the English language, which is generally used as a medium of instruction in schools and universities. However, with the enactment of the Mother Tongue-Based Multilingual Education (MTBMLE) requiring the teaching of the mother tongue language as a separate learning area for Grades 1 and 2, the Cebuano language has finally been given importance. According to Malone (2007), more children will gain confidence in their ability to communicate meaningfully in their mother tongue, which they have built from their knowledge and experience of observing and interacting with people within their community. Additionally, the experience, knowledge, and most especially, the language that children bring with them to school are very significant matters for them to build an important foundation for their learning in the classroom.

Despite the development of the use of the mother tongue language, there are only a few local studies about the language. One particular aspect of the Cebuano-Bisaya language, which has not been investigated by many researchers, is on discourse particles.

The utilization of the Cebuano language is observable in many different communication milieus, such as newspapers, television shows, and radio programs,

particularly of those FM radio stations like 99.5 RT Ninduta Ah! Among these communication media, the radio, according to Altheide and Snow (1986, p. 273), is the only mass medium that "follows an exact linear progression of time, keeping pace with the listener's sense of real-time throughout the day." Thus, listeners can tune in anytime to hear and get updates with the latest news, music, weather, and daily traffic report. Additionally, radio can become an open mic forum where people in the society are given a chance to express opinions, legitimize actions, and mobilize fellow listeners (Crittenden, 1971).

The significance of radio endures in the society until now for it remains as a venue for stance, in which it is not only contemporarily limited to. AM broadcasting but also extended in FM radio programs which now offer listeners the opportunity to air out their opinions, ask and seek advice through the variety of segments conducted during radio broadcast.

The dearth of local researches on Cebuano-Bisaya particles and the inevitability of their occurrence during conversations in radio programs are the reasons why the researchers conducted this study. This study aims to determine the frequency of the appearances of Cebuano-Bisaya particles in the selected segment of the 99.5 RT Ninduta Ah! radio broadcast, as well as to look into their functions using Tanangkingsing's (2009) framework.

Dita (2011, in Tanangkingsing, 2012) reported that

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discourse particles in the Philippine language are devoid and expletive, as they lack any identifiable meaning outside of discourse. More so, this is similar to what Tanangkingsing (2009) and Aijmer (2002) have mentioned, that discourse particles do not mainly contribute to the content of the utterance, and thus, only play a minor role in the Cebuano grammar.

The first framework by Tanangkingsing (2009) provides the different Cebuano-Bisaya particles' level of discourse: clause-initial particles, clause-final particles, post-nominal particles, and placeholders.

The second framework by Tanangkingsing (2009) identifies the following twenty-one major functions of Cebuano-Particles with examples: agreement, collocation, confirmation marker, demonstrative, disappointment, disbelief, discourse marker (elicitation to the hearer), emphasis, euphemism marker, exaggeration, confrontation or interrogation, imperative, referent is known, reformulating clausal structure, repair marker, tag question, topic marker, assert information, to convey an attitude, warning, and word search while holding a turn. These functions pertain to the Cebuano-Bisaya particles' accurate usage and are the ones most likely to be based as a reference to what the utterance wishes to convey or the underlying meaning.

This study attempted to identify the occurrence of the Cebuano-Bisaya particles and their functions in the radio segment *Itanong Mo* Portion from the 99.5 RT *Ninduta ah!* It also aimed to compare the frequency of the usage of discourse particles between the participants, callers, and the Disc Jockeys (DJs).

1. What are the Cebuano-Bisaya particles, as mentioned by Tanangkingsing (2009), used in the radio segment *Itanong Mo* portion?

2. What are the functions of the Cebuano-Bisaya particles, according to Tanangkingsing (2009), present in 99.5 *Ninduta ah!*'s *Itanong Mo* Portion?

3. Who uses discourse markers more between the Disc Jockey and caller in the segments *Itanong Mo* Portion?

## METHODOLOGY

The data were gathered from the online radio station podcast (<http://www.radio.org.ph>) containing live streaming of various radio stations in the Philippines including the number one radio station in Cebu, 99.5 RT *Ninduta Ah!* which is aired from Mondays to Fridays from 10:00 AM to 5:00 PM.

A total of six (6) 99.5 RT "Ninduta ah" radio broadcast sessions served as the researchers' basis for data analysis of the Cebuano-Bisaya particles. The following criteria were considered in selecting the podcasts: (1) Cebuano-particles must be taken from the selected segment of the 99.5 RT *Ninduta ah!* namely the "*Itanong Mo*" portion and (2) the data must be based on the 99.5 RT *Ninduta ah!* Radio Broadcast only. The total frequency and occurrence of such Cebuano-particles were determined and analyzed

as well as their functions in every conversational radio segment.

The researchers gathered their data for three weeks. For each week, the researchers gathered ten minutes for each radio session of the "*Itanong Mo*" portion and only gathered the data two times a week. Hence, the researchers randomly chose when the data gathering for each week will occur.

The researchers identified the functions of each Cebuano-Bisaya particle found in the selected segment of the 99.5 RT *Ninduta Ah!* Radio Broadcast. The researchers recorded, listened, and transcribed — with the use of Jefferson's (1985) glossary of transcript symbols — the radio sessions from the segment "*Itanong Mo*" Portion for the analysis and data gathering.

The study used the purposive sampling procedure in identifying the functions of each Cebuano-Bisaya particle found in the selected segment from the 99.5 RT *Ninduta Ah!* Radio Broadcast.

## RESULTS AND DISCUSSION

Table 1 presents the frequency of occurrence of the types of Cebuano-Bisaya particles used in the recorded radio segments as well as their percentage to determine which of the types are common and least used by both callers and the DJs.

**Table 1.** Frequency of Cebuano-Bisaya Particles found in the Selected Radio Segment

Types of Cebuano-Bisaya Particles	F	%
Clause-initial Particles	214	27.94
Clause-final Particles	109	14.23
Post-nominal Particles	75	9.79
<b>Placeholder Particles</b>	<b>368</b>	<b>48.04</b>
<b>Total</b>	<b>766</b>	<b>100</b>

Table 1 shows that from the gathered segments of the *Itanong Mo* radio broadcast portion of 99.5RT *Ninduta Ah*, Placeholder particles ranked first in the classification, garnering 48.04% out of a hundred. Clause-initial particles followed with 27.94%. Totalling 14.23%, clause-final particles came in third. Post-nominal particles came in last, having only 9.79% of particles used out of a hundred percent.

Having a percentage of 48.04, placeholder particles were prominently used by the speakers due to the fact of their conversation's spontaneity. The unrehearsed and casual discourse between the interlocutors moved them to inevitably use placeholder particles, most especially during their word search, as not to sound wooden or avoid having their turn getting taken from them, the speakers, during word search. In comparison to Castro's (2009) study on discourse particles in EFL classrooms, students made great use of placeholder particles (or fillers) compared to the other kinds of discourse particles she presented (e.g. opening frame marker, closing frame marker, topic switchers, etc.).

Table 1.1 exhibits the frequency of the used placeholder

**Table 1.1.** Frequency of Placeholder Particles found in Selected Radio Segments N = 368

Placeholder Particles	(f)	%
<i>Kuan</i>	60	16.30
<i>Kana-ang</i>	52	14.13
<i>Unsa</i>	8	2.17
<i>A</i>	248	67.39
Total	368	100

Although it is not included in Tanangkingsing's (2009) list of Cebuano-Bisaya particles, the researchers have added *a* to the list, in which the researchers refer to Lynn and Zic's (Lynn and Moder, 2004 in Dylgjeri, 2014) definition of particles, stating that particles "are words or phrases that are syntax-independent and do not change the definition of a sentence, and have considerably no meaning." As observed by the researchers, the *a* particle was prominently used by the speakers in contrast to the other discourse particles presented by Tanangkingsing (2009). With this, the researchers found out that out of the four considered placeholder particles, *a* is the commonly uttered particle with 67.39%. It is followed by *kuan* with 16.30%, and *kana-ang* following close by with 14.13%.

As stated by Amiridze, Davis, and Maclaga (2010), placeholders describe items that help the speakers hold the floor while retrieving a word, a topic, or a fleeting association that is seemingly important to the conversation. As mentioned by Tanangkingsing (2009), placeholders, or fillers, function to keep a turn from being taken by another person. A study conducted by Castro (2009) looked into the functions of discourse markers in the EFL classroom, one of those particles' functions being used as pause fillers and turn keepers. In this study, Castro (2009) found out that students mainly used particles to hold the floor and at the same time, as pause fillers. In comparison to this study, the researchers found out that placeholder particles are the most commonly used type of Cebuano-Bisaya particles by the interlocutors, having a total number of three hundred sixty-eight, with a percentage of 48.04%.

As found out by the researchers, the particle *a* is commonly used in the process of a speaker's word search. This coincides with Taboada (2006), in which he stated that particles are frequently used as turn-holding devices. The DJs commonly used the *a* particle for them to hold their turns while searching for the next set of words to utter. Like the other placeholder particles, *a* served as a filler to pauses during word search.

The particle *a* is the most uttered placeholder particle. This can be attributed to the fact that the particle *a*, in contrast to the other three placeholder particles, can be uttered in a prolonged manner without sounding awkward. Also, the particle *a*, only having one syllable, is easier to utter during a person's word search.

#### Sample 1

(Itanong Mo 4)

**C1:** OO niya::: diri sa may gaisano:::↓ (.) *a*::: eight four::: tulo mani ka numero diri (.7) sa may gaisano

#### Translation

**C1:** Yes, and here near Gaisano, a, eight four, there's three numbers here, near Gaisano.

In sample 1, speaker C1 made use of the particle *a* as he took his time to search for the words to utter next. The particle *a* is often uttered in a prolonged manner. Akin to the particle *a* is the English particle *well*. According to Jucker (1993), *well* is used as a 'delay device,' in which it is uttered when the speaker is in the state of searching for the right word to say, or as a 'delaying tactic.'

Table 2 presents the frequency of the corresponding functions of the Cebuano-Bisaya discourse particles found in the selected segment "Itanong Mo Portion" from the 99.5 Nindota Ah! Radio broadcast, as well as their percentage to determine which of the different functions and discourse particles are commonly used.

**Table 2.** The Frequency of the Corresponding Functions of Cebuano-Bisaya Particles found in the Selected Radio Segment "Itanong Mo Portion" from the 99.5 Nindota Ah! Radio Broadcast

Function of Cebuano-Bisaya Particle	f	%
Agreement	7	0.91
Collocation	10	1.31
Confirmation Marker	24	3.17
Demonstrative	26	3.39
Disappointment	7	0.91
Disbelief	6	0.78
Discourse Marker (Elicitation to the Hearer)	36	4.70
<b>Emphasis</b>	<b>78</b>	<b>10.18</b>
Euphemism	0	0
Exaggeration	21	2.74
Interrogation or Confrontation	39	5.09
Imperative	31	4.05
Referent is Known	30	3.92
Reformulating Clausal Structure	0	0
Repair Marker	24	3.13
Tag Question	9	1.17
Topic Marker	11	1.44
<b>To Assert Information</b>	<b>63</b>	<b>8.22</b>
To Convey An Attitude	59	7.70
Warning	2	0.26
<b>Word Search While Holding A Turn</b>	<b>282</b>	<b>36.81</b>
TOTAL	766	100

Table 2 exhibits that among all the Cebuano-Bisaya particles, three functions appeared to be most evident in the data gathered. The function "word search while holding a turn" has been used by the participants of the data with 36.81%. This is followed by "emphasis" with 10.18% and "to assert information" with 8.22%, the total number of 63 Cebuano-Bisaya particles.

"Word Search While Holding A Turn" appeared to be the most prominent function from the data gathered for the speakers in the call-in talk conversations were most likely to avoid hanging or awkward speech. Apparently, word search while holding a turn function in providing a speaker's point or argument while actually making use

of placeholders particles which consists of word fillers like that of *a*, *unsa*, and *kuan*. Moreover, the use of word search is more common than those of the other functions for *Itanong Mo* Portion, as a segment involving conversations that are done without much thought, is most likely to conduct informal speech between the participants. It appeared that the use of fillers in replacement for a word in a speaker's utterance is contemporary when a language is used in a relaxed tone and is not suited for serious or official speech.

**Word Search while Holding a Turn.** This function of Cebuano-Bisaya particles is when a particle is being used as a convenient word to utilize during a word search (Tanangkingsing, 2009).

#### Sample 2

(Itanong Mo 2 Placeholder particle "*a*")

PJ: [Well, some use that scary Halloween.

C: O:: [(Mao lagi)

PJ: [and some just use *a*:: the word *happy*, because its-

#### Translation

PJ: Well, some use that scary Halloween.

C: Yes, exactly.

PJ: and some just use uhhh, the word, happy, because it's-

Sample 2 reveals that placeholder particle *a* operated by the participant, Papa Joe (PJ), serves as a convenient word to utilize during the time of word search. As stated by Piurko (2015), it basically acts as a filler or delaying tactic used to sustain speech or hold the floor.

#### Sample 3

(Itanong Mo 2 Placeholder Particle "*kuan*")

C: [Sayop nga mga *kuan* pud ba, mga words=

PJ: =Depende, depende sad na sa:: imohang gamiton nga words, ingana=

#### Translation

C: Wrong uh *kuan* too, words

PJ: It depends. It depends also on the words you use.

In sample 3, placeholder particle *kuan* is used by the participant, caller (c) as filler or a filled pause during word search while holding a turn. Jacobs (2014) explains that filled pauses are actually functional in informing listeners that the speaker needs a pause to collect and organize his or her thoughts to complete an utterance.

**Table 3.** Frequency Usage of Discourse Particles between the Disc Jockeys and the Callers

Radio Segment	Total no. of DMs used by the DJs	%	Total no. of DMs used by the callers	%
Itanong Mo Portion 1	66	12.45	51	21.34

Itanong Mo Portion 2	75	14.15	25	10.46
Itanong Mo Portion 3	97	18.30	54	22.59
Itanong Mo Portion 4	86	16.23	34	14.23
Itanong Mo Portion 5	83	15.66	36	15.06
Itanong Mo Portion 6	123	23.20	36	15.06
Total	530	100	236	100

Based on the findings from Table 3, it was observed that the Disc Jockeys used more discourse particles, with a total number of 530, compared to the callers who have a total of 236. In all the recorded segments by the researchers, it was always the Disc Jockeys who used more Cebuano-Bisaya particles compared to that of the callers, noting that Itanong mo portion 6 had the highest number of used particles for the Disc Jockeys, while Itanong mo portion 3 for the callers. With the Disc Jockeys having to be the hosts of the program, they initiate conversations not just with the callers who participate during the segment but also towards each other. In the data that the researchers have gathered, there were a number of instances in which speaker (disc jockey) dominated the open conversations because of how frequently he gets carried away with the advice-giving and also because he was the main Disc Jockey, and with the participation and agreement of the other Disc Jockey towards the main Disc Jockey, more Cebuano-Bisaya particles tend to be utilized. On the other hand, the callers only get the chance to talk at the time when they call the station, and oftentimes, they only get the portion of asking questions for the Disc Jockeys to answer. Thus, the utilization of Cebuano-Bisaya discourse particles by the callers results in being less prevalent since their only role is to ask and interrupt at times during the conversations, compared to that of the Disc Jockeys who are always most likely to provide information and further commentaries about a certain subject matter.

Nor (2013) tackled a study about discourse markers in turn-initial positions in which it included the variability of the turns, turn size, and turn content's distribution. Radio talk shows have pre-allocation of turns by radio hosts and interviewees in which there is an evident usage of DMs. In Nor's (2012) study, guest speakers were the key informants of each radio segment, while the hosts occasionally interrupt due to either ask questions or add commentary. It was noted that the guest speakers, being the key informants and the key speakers of the radio segments, were more prone to using discourse particles compared to the hosts of the radio segments. A slight comparison and contrast can be made in this study and to that of Nor's (2012).

In this study of Cebuano-Bisaya particles, DJs, being key informants and hosts of the show, have shown to be more prominent in the usage of discourse particles compared to that of the callers since they were the ones who asked questions and were expected to be experts. On the other hand, the callers use few discourse markers because



they are aware of their roles to simply ask questions and clarify unclear topics. However, this can also be a contrast to that of Nor's (2012) study because other than the hosts being the commentators and asking questions, the hosts in this study take the role of being key informants.

Discourse markers are used to manage, organize and connect ideas or emphasize such utterances in a text. Ergo, the DJs use more particles than that of the callers for the DJs are the ones who provide answers to the latter's questions, as well as pieces of advice. The callers, on the other hand, have already thought of their questions even before pressing the telephone buttons. The DJs commonly use the placeholder particle *a*, especially during word search.

#### Sample 4

(Itanong Mo 4)

PJ: nahibong ko ana kay *a*::::: diri sa may south kay *a*::::: eight ra man to:::: [sa lapu lapu kay *a*::::: eight eight eighty two]

#### Translation

PJ: I'm shocked with that because, *a*, here in the south because, *a*, it was only eight, in Lapu-lapu, it's, *a*, eight- eight- eighty two!

In sample 4, the DJ made use of the particle *a* three times, all during in word search. The researchers have noticed that the usage of *a* was quite a prominent usage of the DJs when it comes to word search while at the same time holding the floor in the conversation. Akin to that of Jucker's (1993) study of the particle *well* in which the English particle was used as a delay device, uttered whenever the speaker is in the state of word search, or as 'delaying tactic.'

#### Sample 5

(Itanong Mo 4)

C1: =naa koy panguta=- kana::::ng nag travel man gud ko papa joe sa around south *ba* niya diri pud na (.) NA observe nako *ba* naay mga dagko lagi nga::::: kana ganing-

#### Translation

C1: I have a question. I was traveling around South Papa Joe [*ba*], and then it's also here. I have observed [*ba*] that there are big, [kana ganing]-

As shown in sample 5, the caller made use of the particle *ba* twice, both functioning as an emphasis on the information given by the caller. This is akin to Alavi-Nia and Mozaffari's (2014) study in which Persian discourse particles such as */ha:/*, often functions as an emphasis on the speaker's statement.

Although some consider discourse particles as empty, fulfill no semantic role, dependent on their surrounding context, and add no meaning to the sentence structure (Sun, 2013), they play a huge role in conversations considering that people use them often, as observed in this study. Generally speaking, they help guide the hearer's interpretation process of the sentence's context (Blakemore, 2002), acting as filled pauses (Sun, 2013), also

in signaling the speaker's intention to the next turn in the preceding utterances (Fraser, 1999). Due to their constant appearances in the data gathered, it is safe to say that discourse particles have really helped the interlocutors to converse smoothly manner without having long pauses.

## CONCLUSIONS

Based on the significant findings of the present research, researchers have put together the following conclusions.

Interlocutors make frequent use of Cebuano-Bisaya particles in varying positions in their utterances. Based on the recorded radio segments, Cebuano-Bisaya particles, though perceived by most researches as words without semantic meaning, have important roles in the flow of conversation.

Cebuano-Bisaya particles are very apparent due to their syntactic feature in which they can be found either in the clause-initial position, clause-final position, or added flexibly to an utterance. The Cebuano-Bisaya particles are versatile in a way that they have multiple meanings, which can be based on their function in an utterance. Their meanings can be understood in a context and not in a semantic domain.

The usage of Cebuano-Bisaya particles is both unavoidable by both the Disc Jockeys and the callers for their discourse is usually spontaneous and unrehearsed. In this research, although the Disc Jockeys made use of more discourse particles compared to the callers, both interlocutors used a number of discourse particles in their utterances. Spontaneity and the fact that the discourse is unscripted are the contributing factors of the radio interlocutors' frequent use of discourse particles. Further, since the radio discourse is not done in a face-to-face setting, the use of discourse particles are important to send signals to the opposing party.

## RECOMMENDATIONS

The following recommendations are offered for practitioners and future researchers in the field of Linguistics.

(1) Cebuano teachers may use this material as a reference in their lectures should they ever consider including Cebuano-Bisaya particles in their discussions.

(2) Linguists may use this paper as a benchmark should they ever pursue studies in regards to discourse particles, particularly that of the Cebuano-Bisaya language.

(3) Linguistics students may refer to this paper as a source for their farther pursuit of knowledge regarding Cebuano-Bisaya discourse particles.

(4) Future researchers may collaborate with other studies to that of discourse particles such as frequency of usage of discourse particles between female and male callers and/or male and female Disc Jockeys.

(5) Future researchers may conduct a study concerning Mother Tongue Based Multilingual Education (MTBMLE) in which Cebuano-Bisaya particles may appear relevant to the classroom based discussion in the near future.

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## The Bliss and Burdens of Grandparents in Child Caregiving: The Case in Bukidnon

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### ABSTRACT

Grand-parenting is a phenomenon in the Philippines. Grandparents attending to their grandchildren in schools and at home is a common scenario. They serve as caregivers or child-minders, extending financial, physical, moral, and spiritual support. Hence, the study was conducted to analyze the issues concerning grand-parenting and care-giving. The study was conducted in Bukidnon. A survey was conducted to 120 respondents, and a Key Informant Interview was facilitated to the Senior Citizen Organization officers. Most grandparents are in an abject situation. They are poor whose health is fragile and delicate but are still compelled to work to support themselves and their grandchildren. The factors behind grand-parenting include financial instability of parents, broken relationships, financial dreams, personal choice, and compulsion. The role of caregivers over grandchildren is overwhelming, but most elderly perceive grand-parenting positively. For them, it is a part of life, a stage to welcome. Grandparents are happy because they are blessed with grandchildren, but they are financially hard-up, struggling to survive with their grandchildren. Though burdened, their perceptions on grand-parenting and the meanings they attach to it, give them the spirit to perform their tasks. Their situations and experiences put into context the principles of Activity Theory.

*Keywords:* grandparents, child-minders, poverty, issues

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### INTRODUCTION

Grand-parenting is a phenomenon in the Philippines. Grandparents attending to their grandchildren in schools and at home is a common scenario. According to Cruz (1999), many of our senior citizens have remained resources. They continue to support their grown-up children and, according to Sorita (2004), even their grandchildren. They extend financial and physical support as caregivers. Likewise, Robertson (1995) found that in the Philippines couples have less need to look for assistance outside the family because they can rely on grandparents to bear some of the responsibilities in providing care and support to the grandchildren.

In Taiwan, the elderly are usually profiled as care recipients. A significant portion of them is playing substantial childcare responsibilities. One of the factors behind this is the increasing participation of women, of which many of whom are mothers, in the labor force. They can no longer personally attend to their growing children. Second, there is a lack of facility or institution in Taiwan that would take care of the children while the parents are out for work. Hence, grandparents are taking the role as caregivers or as safety nets to growing children (Peng, 2013).

Grandparenting is not only widespread in the developing countries in Asia like the Philippines, many seniors in the US and European nations are also serving as caregivers to their grandchildren. In these countries, grandparenting is seen as beneficial by some. It helps the elderly maintain cognitive functioning. Likewise,

grandparenting serves as an avenue for social activity, it gives the elderly a sense of responsibility, and it keeps them abreast with time and intergenerational exchanges. However, when grandparenting has become a burden because of excessive time and tasks, the activity becomes stressful and tiring than being beneficial (Arpino and Bordone, 2012).

Indeed, grandparents across cultures have emerged as potentially significant figures as caregivers, attending to their grandchildren. More and more, grandparents serve as a valuable source of help in most families. Especially in times of family crises like teenage childbearing, single parenting, separation, spouse working abroad, financial difficulty, company downsizing, and illness, grandparents serve as a sanctuary and source of support (Thomas, 1990). They are the very persons who are just a few meters away, willing to give their support.

Practically, as individuals grow old, they become weak, are prone to diseases, physical impairments and are likely to suffer disengagement from work (Dadang, 2016). The elderly are vulnerable and, in some cases, helpless. Hence, serving as providers and child-minders to grandchildren, maybe adding a burden on them. Thus, this study was conducted to analyze the situation behind grand-

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parenting, problematizing care-giving, or child-minders as the role of grandparents. Particularly, the study unveils the factors behind grand-parenting, the support extended to grandchildren, the perceptions of grandparents on care-giving, and the issues on grand-parenting.

## METHODOLOGY

The study was conducted in Bukidnon, particularly in Manolo, Malaybalay, Valencia, and Quezon. The four areas represent the four districts of the Province of Bukidnon. Quezon, Valencia, Malaybalay, and Manolo represent districts 1, 2, 3, and 4, respectively. Likewise, to make the study well-represented, Malaybalay and Valencia were picked to represent the urban communities, and Quezon and Manolo represented the rural. The study is descriptive. It assesses the experiences and roles of grandparents as care-givers and analyzes the issues in grand-parenting. The data were gathered from April to July 2018. A Survey and Key Informant Interview (KII) were conducted among the senior citizens of the places mentioned above who were grandparents. The respondents were asked about the situation they are in to as grand-parents, unearthing their experiences, perspectives, and challenges as care-givers. The survey had 120 respondents, 30 from each area of study. Purposive sampling was used in determining the respondents of the survey. Some were interviewed at their homes; others were at the schools because they were attending their grandchildren. Some of the questions were extracted from the study on "Dependency, Disengagement, and Life Satisfaction: The Challenges Confronting the Elderly of Maramag, Bukidnon, Philippines," a study of Dadang and Mendoza that was transformed into an article in 2016 and was substantiated with some relevant questions. The questionnaire was peer-reviewed. It had five parts: Biographical information, Situation causing grand-parenting, The Support Extended to grandchildren, Grandparents' perceptions on care-giving, and the issues on grand-parenting. To elucidate the issues gathered in the interviews, a KII was conducted to the officers of the Senior Citizen Federation. There were six key informants; three from Quezon and three from Valencia City. The discussion revolved around the issues confronting grand-parenting and the situations of the grandparents.

The study came out with quantitative and qualitative data. The former was analyzed through frequency count and percentages, while the latter was analyzed through thematic analysis. In analyzing qualitative data, the information was categorized in matrix form to identify discernible patterns, and later on, were revised based on emerging themes. The following themes came out: Factors behind grand-parenting, Joy in grand-parenting, grand-parenting as an additional burden. SWOT (Strengths, Weaknesses, Opportunities, and Threats) method was used to come up with an analysis.

The study was conducted observing research ethics. It underwent the institutional review. Likewise, the researcher sought permission from the municipal mayors. During data gathering, she and the interviewers explained to the respondents the nature and purpose of the study conducted and assured them that their identities would be kept anonymous. They were asked to participate, but

it was made clear to them that they had the right not to answer questions that they believe were not sound.

## Theoretical Framework

The study is anchored on the Activity Theory of aging. The theory explains that the elderly are happiest when they stay active and maintain social interaction. The participation and involvement of the elderly in different activities allow them to interact with other people. The activities may be provided by the different sectors like the formal support networks such as the church, the local government unit, and the civil society units, and the informal support networks such as their family, relatives, friends, and neighbors. The activity theory postulates that a high level of activity enhances personal satisfaction. It also says that the elderly would not desire social withdrawal, as disengagement is bound to reduce the meaning of the elderly's life. To maintain a positive sense of self-concept, the person must substitute new roles for those that are lost because of age. Giving them with familial roles may help maintain or develop a positive self-concept (Maciones, 2004). Likewise, as a branch of symbolic interactionism, activity theory believes in the meanings one attaches to activities and interactions. According to Blumer (as cited by Maciones, 2004), symbolic interactionism rests on three primary premises: First, that human beings act towards things based on the meanings those things have for them; second, that such meanings arise out of the interaction of the individual with others; and third, that an interpretive process is used by the person in each instance in which he must deal with things in his environment.

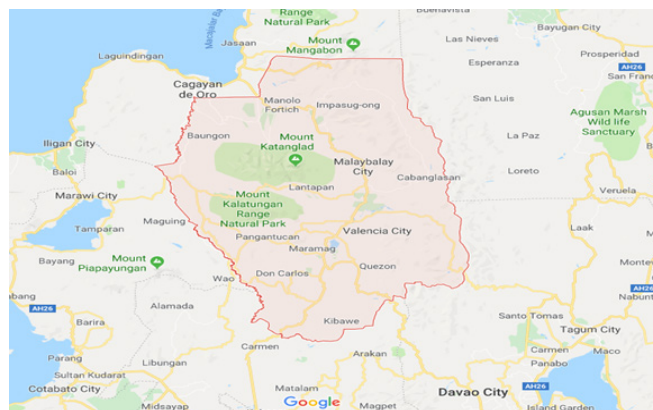


Figure 1. The Map of Bukidnon

## RESULTS AND DISCUSSION

Bukidnon is home to 1,415,226 inhabitants. The land-locked province situated in North Mindanao measures 8,294 square kilometers. Cebuano-Bisayan is the province lingua franca today with 65.9% using the language, 13.3 % are speaking the Binukid while the remaining population speaks other Filipino languages like Ilocano, Ilonggo, etc. The Bukidnons have always been farmers, with 95 percent still living in rural areas. They produce rice, corn, camote, gabi, cassava, nangka, beans, banana, coconut, coffee, and abaca. Swidden agriculture, plow agriculture, and slash and burn are the most common farming method. Few farmers, however, are using mechanized means. Likewise, many young Bukidnons have gained employment with mining and logging companies in the province as guards.



Bukidnon is rich in natural resources. However, behind its rich and grand appearance, Bukidnon represents an impoverished and marginal economic group. Aside from a few affluent businessmen and big farmland operators, only its civil servants enjoy a better quality of life.

Bukidnon is divided into four legislative districts. It has 22 municipalities with two-component cities, Malaybalay and Valencia. Valencia has a land area of 587.29 square kilometers and has a population of 192,993. **Malaybalay**, the provincial capital, has a land area of 969.19 square kilometers, and has a population of 174,625. **Quezon** has a land area of 626.86 square kilometers, with a population of 104,116. **Manolo Fortich** has a land area of 413.60 square kilometers with a population of 100,210. Of the four areas of study, Valencia has the highest population density at 329 per square kilometer, followed by Manolo at 242, Malaybalay at 180, and Quezon at 166.

The province has an elderly population of 139,263, of which 71,847 (52%) are females, and 67,416 (48%) are males. There are more female elderly than males.

### Biographical Information

Most of the respondents are ages 60 -64 years old; 55.8% in the rural and 50.7% in the urban belong to this age group. There are more female than male respondents. Likewise, it is observable that as the age group increases, the number of respondents decreases. There are very few respondents belonging to the 75+ age group. This age bracket is already very old and may no longer be capable of taking care of their grandchildren. Most (35.7 in rural and 29.15 in urban) have stepped elementary only. Only very few (4.1% in rural and 14.55% in urban) have finished college. Most respondents in both rural and urban communities are married (64.9% and 74.3 % respectively)

with 4-7 children, and 4-7 grandchildren. However, there are (13.5% in rural and 5.55% in urban) having 16 and more grandchildren. A great percentage (85.45%) are Christians, while 14.55 % are Muslims (see Table 1).

### A. The Situations behind Grand-parenting

Most grandparents in urban areas (57%) are attending to 1-2 children, while 50% of the grandparents in rural areas are attending to 3-4 children. Based on the study, it was found out that the elderly in the urban areas become grandparents at a younger age. Most (48%) were at ages 35-44, while most respondents in the rural areas (47%) become grandparents only at ages 55-64. The children of the respondents in the urban areas got married at younger ages, while some were impregnated when only teenagers.

One of the objectives of the study is to unveil the factors behind grand-parenting. They are enumerated and described below.

#### *Financial Instability of Parents*

One of the factors behind grand-parenting is the financial instability of the grandchildren's parents (the children of the respondents). The children, who are either married, living in, or are single parents, cannot afford yet to build their own houses and live independently. Hence they are compelled to live with their parents. On the other hand, though most grandparents are impoverished, they have at least a humble abode where they, together with their children and grandchildren, may reside. Data show most of the grandparents (78% in the rural and 77% in the urban) are living in their own houses. This means that it is their children who are clinging to them, not the other way around.

Biographical Data	Rural					Urban				
	Male		Female		R %	Male		Female		U %
Age Bracket	F	%	F	%		F	%	F	%	
60-64	8	47.1	24	55.8	51.45	11	45.8	20	55.6	50.7
65-69	6	35.3	13	30.2	32.75	5	20.8	14	38.9	29.85
70-74	2	11.8	1	2.3	7.05	5	20.8	1	2.8	11.8
75-79	1	5.9	3	7	6.45	3	12.5	1	2.8	7.65
80-84	0	0	2	4.7	2.35	0	0	0	0	0
Total	17	100	43	100	100	24	100	36	100	100
<b>Educational Attainment</b>										
Elementary Level	7	41.2	13	30.2	35.7	6	25	12	33.3	29.15
Elem. Graduate	0	0	8	18.6	9.3	5	20.8	6	16.7	18.75
High School Level	3	17.6	17	39.5	28.55	5	20.8	9	25	22.9
HS Graduate	6	35.3	4	9.3	22.3	2	8.3	3	8.3	8.3
College Level	0	0	0	0	0	1	4.2	3	8.3	6.25
College Graduate	1	5.9	1	2.3	4.1	5	20.8	3	8.3	14.55
Total	17	100	43	100	100	24	100	36	100	100
<b>Civil Status</b>										
Married	11	64.7	28	65.1	64.9	19	79.2	25	69.4	74.3
Widow/Windower	4	23.5	13	30.2	26.85	5	20.8	9	25	22.9

Separated	2	11.8	2	4.7	8.25	0	0	2	5.6	2.8
<b>Total</b>	<b>17</b>	<b>100</b>	<b>43</b>	<b>100</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>36</b>	<b>100</b>	<b>100</b>
<b>Number of Children</b>										
0-3	3	17.6	14	32.6	25.1	6	25	12	33.3	29.15
4-7	11	64.7	24	55.8	60.25	13	54.2	23	63.9	59.05
8-11	3	17.6	5	11.6	14.6	5	20.8	1	2.8	11.8
<b>Total</b>	<b>17</b>	<b>100</b>	<b>43</b>	<b>100</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>36</b>	<b>100</b>	<b>100</b>
<b>Number of Grandchildren</b>										
0-3	2	11.8	11	25.6	18.7	5	20.8	5	13.9	17.35
4-7	7	41.2	13	30.2	35.7	8	33.3	16	44.4	38.85
8-11	3	17.6	10	23.3	20.45	5	20.8	8	22.2	21.5
12-15	2	11.8	5	11.6	11.7	4	16.7	6	16.7	16.7
16+	3	17.6	4	9.3	13.45	2	8.3	1	2.8	5.55
<b>Total</b>	<b>17</b>	<b>100</b>	<b>43</b>	<b>100</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>36</b>	<b>100</b>	<b>100</b>
<b>Religion</b>										
Christianity	17	100	41	95.3	97.65	19	79.2	33	91.7	85.45
Islam	0	0	2	4.7	2.35	5	20.8	3	8.3	14.55
<b>Total</b>	<b>17</b>	<b>100</b>	<b>43</b>	<b>100</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>36</b>	<b>100</b>	<b>100</b>

**Table 1.** Biographical Data

### *Broken Relationships vis-a-vis. Financial Dreams*

Likewise, parents who are breaking up with their spouses were leaving their children to the care of the grandparents. Data show that among the respondents (26.95% in the rural and 11.4% in the urban areas) are taking care of their grandchildren because their parents abandoned them or because the parents are aiming for a better income, hence are going abroad. One grandparent said, *"Ako may gabantay kay gihatud man na sa amahan diri kay ang inahan nanarbaho. Tua sa Cotabato ang amahan, ang inahan nanarbaho sa gawas. Ambot, pero murag gabulag man siguro sila"* (I am the one attending. The father brought her here because the mother is finding a job. The father is in Cotabato and the mother is working abroad. I do not know, but I guess they are breaking up). This not an isolated case in Bukidnon. This usually happens to couples who are marrying at a young age. They are not yet mature to handle responsibilities, and they do not have enough income to support the family. Stricken with poverty, many of them are giving up their marriage.

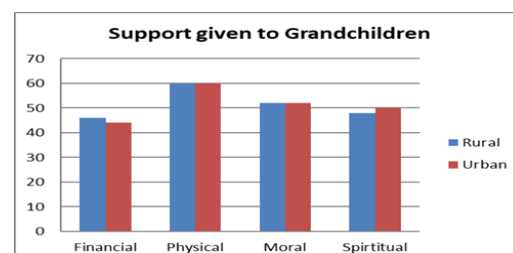
### *Personal Choice vs. Compulsion*

Likewise, there are some elderly who serve as caregivers because they love to. They are happy taking care of their grandchildren. But they could have the option to live independently. However, they see living alone to be lonely, hence they prefer to live with their children and take care of their grandchildren. The other situation is "compulsion." There are some elderly who are left with no options because they are in a disadvantaged position. They are financially handicapped, and they just rely on their children for their food and shelter. Hence, they serve as care-givers.

## **B. Support Extended to Grandchildren**

The primary role of the respondents as child-

minders is to assist their grandchildren physically. This refers to cooking for their food, dressing them up, and in many cases, bring them to school. Data shows that 60% of the respondents (both rural and urban) extend physical support to their grandchildren. To most grandparents, however, performing this task is not a burden. They are happy performing their tasks. One grandmother says, *"Okey ra man hinuon, kay isip usa ka apohan trabaho man naku ang pag-atiman sa akong mga apo. Malipay ko nga nakita sila nga maayo ang panglawas ug kahimtang"* (It is just but fine. Taking care of them is my responsibility. I am happy to see them healthy and in good condition). One respondent also said, *"Naay uban nga mga apohan dili mobantay, pero lahi ko, dili ko pareha sa uban nga dili mobantay. Okey kayo ako mga apo. Sa ako mga anak wala ko ka hatud-hatud sa eskwelahan, pero sa ako mga apo, lahi ra jud"* (Other grandparents do not take care of their grandchildren. But I am different, I do take care of them. I didn't bring my children personally to school, but for my grandchildren, I do). Most grandparents are happy taking care of their grandchildren. *"Mas palitan pa ug gatas ang mga apo, kay sa mga anak sa una."* (I buy milk more often for my grandchildren than I did for my children before," said one respondent. Aside from physical support, grandparents are also extending moral and spiritual support for their grandchildren. They are teaching them good values so that they will succeed in life and become good citizens.



**Figure 2.** Support Extended to Grandchildren

### C. Responsibility to Raise Grandchildren: The Grandparents' Perspectives

In both rural and urban communities, most grandparents consider raising their grandchildren their responsibility. Data show that 42% of the respondents in the rural areas and 50% in the urban areas strongly agree, while 45% in the rural and 42% of the urban respondents agree to the premise that it is the responsibility of the grandparents to raise their grandchildren. Only very few (10% in the rural and 8% in the urban) do not consider raising grandchildren their responsibility. From the narratives of the respondents, it shows that, in general, the elderly see a happy old age as one spent with grandchildren. One respondent said, "*Malipayon ko nga nakaabot ko ani nga edad ug nagkaapo.*" (I am happy to have reached this age and have grandchildren). Another respondent said, "*Makahatag sila ug kalipay*" (They give joy). Another respondent said, "*Akong mga apo, akong kinabuhi. Akong gilaan akong kinabuhi sa ila. Alimahan naku sila hangtud ako mamatay.*" (My grandchildren are my life. I intend my life for them. I will take care of them until I die). This is how the elderly perceive old age, one spent with grandchildren. Life would be lonely without grandchildren around the house.

On the other hand, grandparents are expecting that their grandchildren will also take care of them in return when they are already very old, weak, and incapable. "*Maayo ng naay mga apo para naay kalingawan ug bantay. Mingaw pud kaayo kung ikaw ra isa. Maayo na lang ug magluya ko, simbako lang, naay bisag usa nga moalima sa akoo*" (It is good to have grandchildren to take care. It is lonely to be living alone. If I get sick, God forbids, I believe there will be one among my grandchildren who will take care of me). This expectation is common among the respondents.

Most grandparents perceive caregiving positively. They see grandparenting as a part of life, a stage to welcome and to appreciate. Likewise, they view living alone and independently to be a lonely state. Grandparenting gives the elderly the energy and vigor to perform their daily tasks, and other chores related to caregiving. In addition, it gives them the avenue to socialize. They have the time to talk to other people when they bring their grandchildren to school.

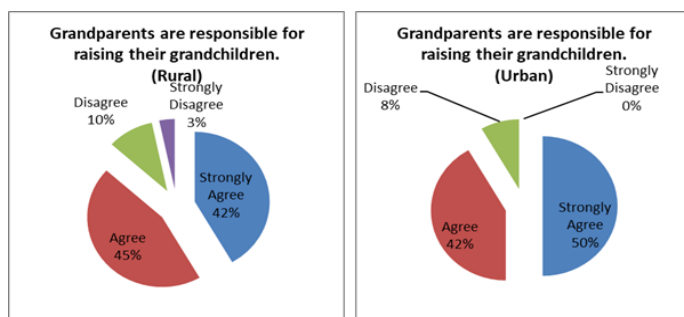


Figure 3: Grandparents' Perception of Grand-parenting

### D: The Issues on Grand-parenting

As presented in the previous discussion, the study

revealed that most grandparents are happy in taking care of their grandchildren. This premise, however, does not mean that grandparents do not experience issues and challenges as they perform their roles as caregivers or as second parents to their grandchildren.

### Health and Financial Concerns

Being already old, most of the respondents (67.75% in rural and 76.4% of the urban) suffer from health problems. These include arthritis, diabetes, hypertension, cough and cold, asthma, eye problem, body pain, goiter, and prostate cancer. These are age-related diseases. Nevertheless, it could not be undermined, that grand-parenting may have also contributed to the persistence of health problems among grandparents. Grand-parenting may have given joy to most grandparents, but such is also a stressful task. The study of Leder *et al.*, (2007) showed an inverse correlation between parenting stress and the physical, social, and mental health of grandparents. Those who have higher parenting stress were reported to have lower levels of physical, social, and mental health. On the other hand, the study of Di Gessa, *et al.*, (2016) showed a positive association between grandchild care provision and better physical health among grandmothers. Those who were looking after grandchildren intensively and non-intensively had significantly higher physical health scores than grandmothers who did not provide any childcare.

Likewise, financial and provision of basic needs are issues behind grand-parenting. The grandparents are already old. They have retired from casual employment or are old enough to do farming or peddling, but they are compelled to work to support themselves and their grandchildren. They have to continue earning a living. Some engage in farming, peddling, and others run a sari-sari store.

On the other hand, some elderly (grand-parents) are supported by their children. Their children are working either as part-time or full-time workers in plantations or industries. A few are working abroad. The respondents said their needs are relatively addressed like simple food, composed of rice or corn paired with dried fish, salted fish, or vegetables. They do not have the caprices over ornaments and lucrative dresses. They live a simple life.

Nevertheless, the respondents admit that caregiving largely affects their budget (73 % in the rural and 50% in the urban (Figure 4). Most of them provide for their grandchildren's food, clothing, education, and medicine when the grandchildren get sick. It is apparent that the budget of the grandparents in rural areas is more affected. This is because they have lower income.

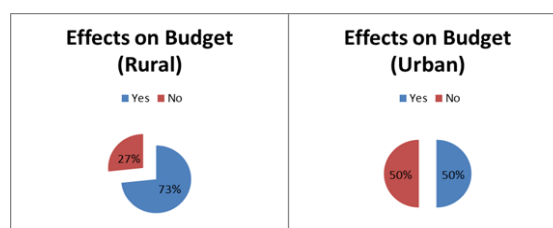


Figure 4: Effect on Budget

## Generation Gap

The generation gap is a challenge felt by grandparents. Grandparents and grandchildren belong to different generations. Most grandparents belong to the "Baby Boom" era, while the grandchildren belong to generation Z. A generation gap exists. The values and behavior of the grandparents are no longer be the things observed by the grandchildren. According to Manheim (as cited by Pilcher, 1993), generations connote certain definite modes of behavior, feelings, and thought. People within the delineated population who experience the same significant event will have the same set of values, modifying what had been observed by the previous generation. Culture is seen to be dynamic. Observing the set of rules prescribed by the older generations (i.e. parents and grandparents) makes sense for it implies stability of the social order, but change, as influenced by many events, is seen to be inevitable. Hence, the generation gap is a fact. Manheim considers a society with no generations as "imaginary" and a "utopia."

Most grandparents (57% in both rural and urban areas) experience a generation gap between them and their grandchildren. They notice some behavioral problems on their grandchildren like spending much time on gadgets, television shows, and friends. They said that their grandchildren observe a different lifestyle as compared to them in olden times. Descriptions like "*badlungon*" or "*gahi ug ulo*" (hard-headedness), "*lisod*" (hard), "*labad*" (causing headaches) were common comments from the grandparents. "*Usahay mabikil lang ko sa pamatasan nila, pero akoo man ng mga apo, wala koy mabuhay*" (Sometimes I am offended of their behavior, but they are my grandchildren, I can do nothing). These statements imply a generation gap. The same statements show that grandparents are trying to understand their grandchildren. They love their grandchildren despite the stress and headaches they bring.

### Effect on Over-all Activities

While the health of the grandparents is not significantly compromised with their tasks and responsibilities of being caregivers to their grandchildren, their budget, and over-all activities are greatly affected. Figure 5 shows that 75% and 70% of the respondents in the rural and urban areas respectively say that grandparenting affects their over-all activities. They have less time for themselves because they have grandchildren to attend. They cook, dress up their grandchildren, bring them to school, and attend to their grandchildren when they are sick. However, despite this predicament, grandparents remain thankful. "*Nalipay ko nga naa koy apo bisan apike kos financial*" (I am happy that I have grandchildren though I am financially hard-up). Generally, the respondents are happy because they consider their grandchildren as "*gasa sa Dios*" (a gift from God).

In general, the grandparents in Bukidnon are in an abject situation. They are poor. They are compelled to work to support themselves and their grandchildren. Serving as caregivers and minders to their grandchildren make their situation worse. Their budget and their over-all activities are affected. Most grandparents are seen to be

more than caregivers; they serve as second parents. They play the role of parents, for they are the ones providing their grandchildren's basic needs. They give economic, physical, spiritual, and moral support.

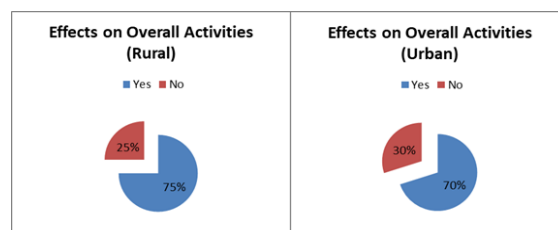


Figure 5. Effect on Over-all Activities

## CONCLUSIONS

Grand-parenting in the places as mentioned above in Bukidnon, is an issue. Most grandparents are in an abject situation. They are poor, whose health is fragile and delicate. Old and weak, they are compelled to work to support themselves and their grandchildren, extending physical, financial, moral, and spiritual support. The presence of their grandchildren is adding financial burden. Care-giving makes the financial situation of grandparents worse. Their budget and over-all activities are affected. The financial instability of parents, broken relationships, financial dreams, personal choice, and compulsion are the factors behind grand-parenting.

The role of grandparents as second parents and as caregivers to grandchildren is overwhelming, but the elderly in Bukidnon view caregiving positively. They consider grand-parenting as a part of life, a stage to welcome and to appreciate. Likewise, they view living alone and independently to be a lonely state. Though burdened, their perceptions on grand-parenting and the meanings they attach to it, give them a lively spirit to perform their tasks. Their situation and experiences put into context the principles of Activity Theory.

## RECOMMENDATIONS

Grand-parenting has two faces: the grandparents are happy because they are blessed with grandchildren, but they are also financially hard-up, struggling to survive with their grandchildren. Hence, the study has the following recommendations to the following persons and institutions:

### 1. Parents of the Children

Rearing the children is not the responsibility of the grandparents. If the situation is inevitable, when the parents cannot be around for their children, they should at least give regular financial support.

### 2. Grandparents

Taking care of grandchildren is a norm and a gesture expected from grandparents in the context of Philippine culture. But the welcoming gesture of grandparents may develop a sense of dependency on the part of the children. The parents of the children may be asked to give regular financial support to their off-springs. It is their responsibility.



### 3. Young People

Teenage pregnancy and broken relationship are a factor behind grand-parenting. Teenagers who are still young and financially unstable often resort to bringing their children to grand-parents' care. This may be a warning to young people not to engage in pre-marital sex, which often leads to teenage pregnancy.

### 4. LGUs

The grandparents are seen to be in the abject situation. They need help from institutions. Any gesture of kindness from the LGUs may be of big help to them. They could be prioritized in livelihood projects, health care programs, and medical missions.

### 5. Senior Citizens Federation

This organization is the best agency that could help the plight of the elderly and the grandparents. Some grandparents are not beneficiaries of senior citizen pensions. The 500Php (9.8 USD) pension a month may somehow help augment the situation of the elderly. It is asked that the grandparents be prioritized in senior citizen's pension.

### 6. DSWD

The department may prioritize the elderly and the grandparents in its programs. The department can help the elderly avail for livelihood programs that may help augment their income so that they can have money to buy for their food and other necessities.

### 7. Municipal Health Office

Most grandparents are suffering from age-related health problems and chronic diseases. The MHO may prioritize them in their health programs like giving them free check-ups and provide them with medicines and vitamins.

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