



Research Paper

Level of Facebook Exposure and Its Relationship to the Level of Environmental Awareness In Barangay Bubukal, Santa Cruz, Laguna

A Thesis Presented to the Faculty of COLLEGE OF ARTS AND SCIENCES
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Jean Rose R. Batocabe
Lea Abigail T. Espela
Justine Jammille L. Manipol

ABSTRACT

This study aimed to explore the residents' Facebook exposure and its relationship to their environmental awareness. Objectives included determining the socio-demographic profile of the respondents in terms of age, sitio, educational attainment, internet access, and Facebook account, the study also determined the respondents' preferred Facebook content. Finding the relationship of the level of Facebook exposure to the level of environmental awareness in Barangay Bubukal, Sta. Cruz, Laguna was the main objective of this research. The study employed quantitative research utilizing correlation analysis and chi square analysis at Barangay Bubukal, Santa Cruz, Laguna. The population consisted of 351 residences in the Barangay Bubukal, Santa Cruz, Laguna with age ranging from 18 to 59 years old from the seven sitios of barangay. The research instruments included described survey questionnaire through Google form. Chi square was used in data treatment. The findings revealed that Facebook can be used as a tool and platform to disseminate environmental knowledge. However, users of Facebook tend to favor entertaining content, which is the only thing they frequently see on the social media site. Nevertheless, a significant portion of respondents believe that Facebook can be used as a platform to disseminate environmental knowledge considering it is more readily available. Based on the data gathered and the statistician's assessment, the study conclude that there was no significant association between the communities' Facebook exposure and their level of environmental awareness.

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I. INTRODUCTION

Since its establishment in 2004, Facebook has been used as a platform for people to connect, enabling users to share lives with people all around the world. Each day, 500 million users logged into Facebook and created 100 million “likes” on Facebook pages. In fact, on a daily basis, there were 2 billion posts liked and commented on and 250 million photos uploaded. Facebook allowed users to connect with friends, family, and the things they cared about the most. Facebook is a cultural, economic, and social phenomenon with more than 1 billion users. Users around the globe spent countless hours on the site, and Facebook had become an important tool for obtaining information about not only their friends and families but also about global events. It was not clear if the site was good or bad, but its impact was undeniable (Doretha, 2022).

Although various social media platforms were available to young people for free use, Facebook constituted the most popular and attractive social networking site with almost 2 billion daily active users worldwide (Facebook, 2022). Compared to other social networking sites, such as Instagram, Twitter, and TikTok, the platform of Facebook offered users more opportunities for multidimensional interactive communication (e.g., posting detailed information about themselves on their “wall”, posting audio-visual material on their online friends’ profile, group chatting, and fan pages). These characteristics made Facebook,

compared to other social media, a fertile environment for intense social interaction in different ways (Kowal et al., 2020; Yeo and Ting, 2017).

According to Narayanan (2023), when we speak online—when we shared a thought, wrote an essay, posted a photo or video—who would hear us? The answer was determined in large part by algorithms. These algorithms were the engine that made Facebook and YouTube what they were, with TikTok more recently showing the power of an almost purely algorithm-driven platform. In debates about the effects of social media, discussion of algorithms tended to be superficial. They were often assumed to be black boxes that were too complicated to understand. This was unfortunate. In fact, much was known about how these algorithms operate. But this knowledge remains broadly inaccessible to the public.

According to Lang (2023), Facebook's goal was to make ensure that users saw posts from the people, interests, and ideas that they found valuable, whether that content came from people they were already connected to or from those day may not have known. Moreover, Facebook knew which side users were on politically based on posts they liked and friends they interacted with. So Facebook fed them more of that content (Tucker, 2021).

It was reported that preminent use of Facebook develops addiction which was seen prominent in overenthusiastic undergraduates that tried to portray their personalities as tempting as they can. In addition, though Facebook is an interactive platform for the students to share their life with their friends and peers, its excessive use has implications, not only on their academics but also on their personal life (Khan et al., 2018).

A study published in the journal Nature (2023), reported that reducing Facebook users' exposure to content from politically "like-minded" sources had no measurable effect on their political beliefs or attitudes during the 2020 U.S. presidential election.

On a global scale, the interconnected nature of global challenges such as climate change, the research findings resonated with similar concerns in other parts of the world. This connection to global issues emphasized the relevance and potential applicability of the study beyond the local context, positioning it within the larger framework of addressing environmental challenges on a worldwide scale. The study contributed to the ongoing discourse on the impact of social media on environmental awareness.

Expanding the scope to a national level, the findings offered insights into broader challenges faced by the Philippines in terms of environmental awareness and conservation. Understanding the role of social media exposure in shaping perceptions and behaviors towards environmental issues could have implications for nationwide campaigns and policies aimed at addressing environmental concerns.

At the local level, the research study, "Level of Facebook Exposure and Its Relationship to the Level of Environmental Awareness in Barangay Bubukal, Santa Cruz, Laguna," addressed a specific concern within the Philippines. By investigating the relationship of Facebook exposure to the environmental awareness in the mentioned barangay, the study shed light on the intersection of digital media and community engagement, making it pertinent to local environmental issues.

In connection to this research study, Laguna University's Communication Department involved highlighting its relevance to communication processes, information dissemination, and media influence, integral components of the department's academic focus. Moreover, the research provided practical insights applicable to students, fostering skills in digital communication and social media management. By emphasizing interdisciplinary connections with departments like Environmental Science or Sociology, the study demonstrates the potential for comprehensive insights. The findings could be integrated into existing courses, fostering a nuanced understanding of digital media, social media analytics, and environmental communication. This community-focused research in Barangay Bubukal supported the university's commitment to community engagement, while collaborative research opportunities with students and faculty members enhance the department's academic standing. Overall, the study contributed to Laguna University's mission of producing socially responsible graduates by aligning with its goals and emphasizing the practical applications within the Communication Department.

Background of the Study

Facebook reigned supreme as the most widely used social media platform in the Philippines. The platform led every social media platform, boasting an impressive 96% market penetration among internet users aged 16 to 64 (Admin, 2019). From the report of We Are Social, the Philippines ranked 6th among the countries with the highest Facebook users and 67,000,000 to 14,000,000 of these users are from Quezon City. They also estimated that Filipinos spent at least 3 hours and 57 minutes on Facebook alone (Admin, 2023).

Independently of their activity, users showed a tendency to follow a very limited number of pages. On the other hand, users tended to interact with almost all the topics presented by their favored pages. The tendency of users to consume information adhering to their preferred narratives-could be a major driver in their consumption patterns (Cinelli et al., 2020). Facebook exposure employed a multifaceted approach to determine

the extent of how much users consume and are exposed to the content. It took into account factors like user engagement, post popularity, relevance, and preferred content. Being exposed to Facebook not only contributes to individual experiences on the platform, but it also had profound implications for the dissemination of environmental content. The impact of Facebook exposure on environmental awareness was multifaceted, with both positive and negative consequences.

According to Earth Reminder (2022), if you were not environmentally aware it could lead to environmental degradation, resulting in serious consequences for humans and the environment, such as climate change, habitat loss and resource depletion. There were people who were largely unaware of the biodiversity crisis. This was often due to a lack of education.

Two years ago, Facebook's mission changed from "Making the world more open and connected" to "Give people the power to build community and bring the world closer together". The idea behind this shift from connection to closeness was to create more meaningful interactions and, if possible, resulting in positive outcomes (Roth, 2019). The user's exposure to Facebook could help to promote awareness about the environment. However, based on the pre-survey conducted by the researchers, the residents in Barangay Bubukal, Santa Cruz, Laguna were not engaging much in environmental content, since environmental content was the least seen on their feed with the percentage of 15%.

The researchers conducted a pre-survey in Barangay Bubukal, Santa Cruz, Laguna to determine what content was mostly and least viewed on Facebook. Based on the results, it showed that "Entertainment content" had the largest percentage, at 80%, while "Environmental content" had the lowest, at only 15%. This implies that the Facebook users are among the selected residents in Barangay Bubukal, Santa Cruz, Laguna are more engaged with entertaining contents than environmental contents.

Barangay Bubukal, Santa Cruz, Laguna is one of the barangays in Sta. Cruz, Laguna. The researchers chose the residents in Brgy. Bubukal, Sta. Cruz, Laguna as their respondents for the study due to its existing problem. The researchers gathered data from Barangay Bubukal, Santa Cruz, Laguna, Laguna and it showed that this Barangay had a problem regarding proper waste disposal. One of their problems was dealing with mixed wastes, piled-up garbage, illegally dumping waste and waste scrappers which indeed posed significant challenges for barangays. If the wrong disposal of garbage was not effectively addressed, it could lead to a range of negative consequences affecting the environment, public health, and overall community well-being.

To address the problem, the researchers formulated credible and validated questions that tracked the respondents' Facebook exposure. This allowed the researchers to determine whether the respondents' exposure to contents had significant effects on and relationship with their level of environmental awareness. The questionnaire focused on their level of environmental awareness as well as how extensively they had been exposed to Facebook.

This research aimed to know the level of Facebook exposure and its relationship to the level of environmental awareness in Barangay Bubukal, Santa Cruz, Laguna. It aimed to dissect the multifaceted relationship of the Facebook exposure on environmental awareness. Through this exploration, the researchers sought to understand how exposure shapes one's perception.

Statement of the Problem and Objectives of the Study

In general, this study aimed to answer the question: "What is the relationship of Facebook exposure to the respondent's level of environmental awareness?"

In particular, this study aims to address the following objectives:

1. To determine the socio-demographic profile of the respondents in terms of:
 - 1.1 age;
 - 1.2 sitio;
 - 1.3 educational attainment;
 - 1.4 internet access; and
 - 1.5 Facebook account
2. To determine the respondents' preferred Facebook content;
 - 2.1 entertainment;
 - 2.2 news; and
 - 2.3 environmental
3. To determine the respondents' Facebook exposure;
4. To determine the relationship of the level of Facebook exposure to the level of environmental awareness in Barangay Bubukal, Santa Cruz, Laguna; and To provide recommendations for community driven environmental initiatives

Significance of the Study

Social Action. This study is a valuable educational tool for students, providing insights into Facebook exposure and its relationship to environmental awareness, especially with frequent Facebook use. The results aim to inform students about the effect of social media on their environmental interests, fostering a heightened awareness of this relationship. Additionally, the study's findings can serve as a foundation for future research, offering a basis for other researchers to explore the same variables and contribute to the understanding of how the level of exposure affects environmental awareness.

Policy. This study can be used by community and environmental advocacies to design targeted social media campaigns, leveraging insights into Facebook exposure and its relationship to environmental awareness in Brgy. Bubukal, Sta. Cruz, Laguna, to effectively reach and engage a wider audience and promote sustainable practices.

Practice. The researchers chose this topic to raise awareness about how the Facebook exposure affects online activities, particularly in relation to environmental awareness in Brgy. Bubukal, Sta. Cruz, Laguna, aiming to make people more informed and conscious about exposure impacts on their online experiences.

Environmental Activists. It offers practical insights into how social media exposure impacts the reach and reception of environmental messages. Armed with this knowledge, activists can optimize their social media campaigns, tailor content for better engagement, and advocate for fair exposure that prioritize environmental awareness. The findings empower activists to strategically collaborate with tech companies, educate the public on how exposure affects, and influence policy discussions for transparent and ethical algorithmic practices. This research equips environmental activists with tools to amplify their messages and foster greater public engagement with critical environmental issues.

Scope and Limitations of the Study

This quantitative study focused on Facebook exposure and its relationship on the environmental awareness among the Facebook users in Barangay Bubukal, Santa Cruz, Laguna. The researchers limited the study within Barangay Bubukal, Santa Cruz, Lagunadue to its existing problem. This data collection targeted 351 respondents that were equally divided within the seven (7) sitio in Barangay Bubukal, Santa Cruz, Laguna. The respondents were selected according to the age ranging from eighteen (18) to fifty-nine (59) years old. Recent studies and researchers about Facebook exposure used as reference.

The primary data gathering method used was a survey questionnaire in Google form utilizing stratification method in order to measure the respondents' level of Facebook exposure and its relationship to the level of environmental awareness. Each of the respondent was given the same questionnaire to answer. The main source of data was the survey questionnaire in Google form, prepared by the researchers. The gathered data were treated as confidential.

Definition of Terms

The following terms were operationally defined to aid the readers in understanding this study:

Facebook – This is one of the most used types of social media in the country. It is used for entertainment, communication, business, advertisement, and so on and so forth.

Exposure – This refers to how long users are expose to Facebook content.

Engagement – This pertains to the views, likes, shares, and comments of users regarding a certain content they are interested in.

Influence of Environmental Awareness – This refers to the consciousness of the users regarding the environment and how much they are aware of it as they use Facebook frequently.

Newsfeed – This refers to the place in their Facebook account where they will be able to see different content just by scrolling.

II. REVIEW OF LITERATURE

This chapter contained the related literature and studies that had significance and relevance to the study. The ideas presented in these written materials helped the researchers to have a deep understanding of different important aspects of Facebook exposure and its relationship on the level of environmental awareness.

Related Studies

Facebook

Bucher's (2021) study delved into the concept of Facebook, arguing that it is distinct from mere social media or an internet synonym. Recognizing Facebook independently, the study suggested, proved more productive than relying on metaphors or comparisons. The research emphasized Facebook's significance not only due to its global corporate influence but as a unique concept, challenging categorizations like platform or infrastructure. It also discusses Facebook's evolving definitions and conceptions, indicating a need for clarity about its true essence, and notes its initial launch at Harvard in 2004.

In line with this, Statista Research Department (2023) reports Facebook's dominance in the Philippines, with 96 percent usage and an average of four hours spent online. Beyond social media, Facebook serves as a primary news source and an e-commerce platform. Its popularity shapes the country's digital landscape, influencing online communication, content sharing, and information dissemination across demographics.

Expanding on Facebook's roles, the article "Pretending to be States: The Use of Facebook by Armed Groups in Myanmar" by Tonnesson et al. (2021) highlights its multifaceted roles in communication, armed struggle, and outreach. This poses concerns about potential misuse violating community standards and having real-world implications in conflict settings.

Ulla et al. (2021) statement in "Teaching on Facebook in a University in Thailand During the COVID-19 Pandemic" underscores the role of Facebook groups in facilitating interactive remote learning, aligning with Facebook's definition as a platform for communication, collaboration, and community building.

In summary, Facebook's diverse applications in virtual communities, communication, and learning illustrate its multifaceted societal impact. From connecting expats in Asia to serving as a tool for armed groups in Myanmar, Facebook's influence is broad and complex, offering opportunities for connectivity and educational engagement while raising concerns about potential misuse.

According to the study conducted by Hitlin et al., (2019), Facebook plays a crucial role in understanding user behavior, preferences, and characteristics to deliver personalized content and advertisements. The introductory statement from the research entitled "Facebook Algorithms and Personal Data" asserts user discomfort with how Facebook categorizes them and the perceived inaccuracy of the platform's classifications directly relates to Facebook. This implies that when users express discomfort with the categorization and feel that the classifications do not accurately represent them, it reflects potential challenges or discrepancies in how Facebook interprets and categorizes user data. This user sentiment highlights the significance of transparency, user control, and accuracy in Facebook's processes to ensure that users feel comfortable and accurately represented within the platform's ecosystem.

In addition to shaping the daily lives, emotions, and viewpoints of millions of Internet users, Facebook's personalization of the News Feed wields profound influence. According to the research abstract by Hargreaves et al. (2018) on "Biases in the Facebook News Feed: A Case Study on the Italian Elections," Facebook's customization of the News Feed significantly impacts the lifestyle, mood, and opinion of countless users every day. Like other platforms offering personalized content, Facebook collects data on users' reading habits and general location. Utilizing this information, Facebook constructs profiles of users' interests, allowing for the delivery of more relevant content tailored to individual preferences. This personalized approach to the News Feed has the potential to greatly influence online experiences, shaping users' lifestyle choices, moods, and opinions.

Moreover, as cited by Brodsky, J. E. et al. (2020), students were more aware of Facebook's classifications for online shopping. Compared to those who watched a video on Internet storage, students who watched a video on Facebook's classifications showed greater understanding of how search results are personalized.

To add, Bucher (2019) concluded that to understand the spaces where people and Facebook meet, this article develops the notion of the algorithmic imaginary. It is argued that the algorithmic imaginary – ways of thinking about what Facebook is, what it should be and how it functions – is not just productive of different moods and sensations but plays a generative role in molding Facebook itself by understanding how user interactions affect Facebook content delivery.

Furthermore, as maintained by Dwyer and Martin (2017), Facebook makes decisions based on profiles created by matching “registration and location details, with viewing and sharing data as well as metadata such as content keywords”.

In summary, Facebook plays a crucial role in personalizing content and advertisements based on user behavior, preferences, and characteristics. User discomfort with categorization indicates potential challenges in Facebook's interpretation of data, underscoring the need for transparency and accuracy. Facebook also shapes the News Feed, influencing users' daily lives, emotions, and viewpoints. Research emphasizes its impact on lifestyle, mood, and opinions. In the context of democratic elections, Facebook significantly influences users' exposure to news, shaping narratives and perspectives and playing a vital role in shaping public opinion during crucial periods.

a. Facebook's Relationship to the Decision of Its Users

In accordance with Balasudarsunet. al. (2018), Facebook is powerful and almost essential for any business in this digital India. Moreover, they also stated that when Facebook is able to know where we are located, it can customize marketing to the geographical location. When members post exact details of themselves on Facebook, the site can match the right information with the right product or service and allow it to be marketed to the right customer. This shows the significance of Facebook in India. This means that in the context of Facebook's influence on user decisions, the statement highlights the platform's essential role for businesses in digital India. Facebook's powerful mechanisms determine the visibility of business content, advertisements, and promotional posts, shaping the decisions of its users.

As businesses rely on Facebook to connect with their target audience, the platform plays a pivotal role in influencing user decisions by showcasing tailored content, thereby emphasizing its significance and impact in the digital business landscape of India.

In connection to that, Facebook can influence user decisions due to its role as a computer-mediated communication (CMC) environment. Diverging from traditional face-to-face contexts examined in past social comparison research, Facebook's affordances as a social media site may impact social comparison activity and consequences (Cramer et. al., 2016). Unlike traditional face-to-face contexts, the affordances of Facebook as a social media platform can impact social comparison activity and its consequences. The content and features driven by Facebook may shape users' perceptions, leading to potential influences on their decisions and behaviors based on the comparisons they make within the platform.

The majority of participants in Bucher (2017) admitted to changing the content they post, based on what they believe Facebook favors to get maximum reach for their posts.

Lastly, the Hauge Journal of Diplomacy states that Facebook, and digital media generally, can provide multiple small opportunities for outreach, if due consideration is given to audiences' needs and motivations (Spry 2019). This implies that Facebook, which determines the content shown to users, can influence their decisions based on the outreach and engagement strategies employed by the platform. By understanding the needs and motivations of its users, Facebook can better tailor its approach to serve and influence the decisions of its audience.

b. Facebook and Environmental Awareness

In the investigation carried out by Hamid et al. (2017), the focus was on exploring the role of Facebook in community-based organizations (CBOs) for generating environmental awareness through community education in Kenya. Utilizing a non-probability sample of nine CBOs in Nakuru City, the study delved into activities centered on environmental issues. Through data collected from 98 respondents in an online survey, the findings revealed minimal use of Facebook for environmental awareness in CBOs, with identified potential as a social learning environment for fostering such awareness. To enhance the use of Facebook, the study recommends capacity building and open online communication within community education programs.

Furthermore, Facebook emerges as a powerful tool in fostering local citizens' environmental awareness, as highlighted by Karaca et al. (2020). Their research indicated a strong correlation between public perception of tap water quality and personal experiences. Emphasizing the role of technology, the study suggests that data analysis and smart monitoring systems can offer accurate information about tap water quality, dispelling misconceptions rooted in personal experiences. Facebook can also contribute to designing targeted awareness

campaigns, aiding informed decision-making about tap water consumption and promoting environmentally conscious practices. Notably, Facebook is identified as influential in shaping public perception, offering an avenue for environmental organizations to share information and amplify awareness about tap water quality.

Adding to the discussion, Sinha et al. (2020) draw attention to the challenges faced by Asia Pacific countries in achieving Sustainable Development Goals (SDGs), particularly in maintaining environmental quality. The text underscores the potential of data-driven approaches for enhancing environmental awareness, providing valuable insights for policymakers to make informed decisions and formulate sustainable strategies. It further suggests that Facebook can play a role in raising awareness about environmental challenges in the Asia Pacific region. In conclusion, the text highlights the significant potential of data-driven approaches and social media platforms, particularly Facebook, in advancing environmental awareness and garnering support for addressing environmental challenges in Asia Pacific countries.

Related Literature

Facebook

As stated by Kim and Yang (2017), Facebook uses a system that gives different weight to each behavior to determine what to show on users' screens, suggesting that the strategic implication of each behavior may differ from the other. In addition to that, according to Levy (2021), Facebook is less likely to supply individuals with posts from counter-attitudinal outlets, conditional on individuals subscribing to them.

a. Facebook and Human Behaviour

According to the journal *Computers in Human Behavior*, researchers have been increasingly focusing on the conceptualization of problematic Facebook use and its associations with individual characteristics (Marino et al., 2018). This suggests that Facebook and the content it prioritizes could potentially influence user decisions and behaviors, especially concerning the individual characteristics that researchers are studying. By understanding how the platform may contribute to problematic use and its associations with users' traits, it becomes evident that Facebook's influence on user decisions is a subject of growing interest and concern within the research community.

Synthesis

The synthesis of literature and studies, spanning various aspects of Facebook, provides a nuanced understanding of the platform's multifaceted impact. Bucher's study (2021) challenges simplistic interpretations, asserting Facebook's unique identity, while Zuckerberg's early description and Abram & Karasavas' instructional guide (2021) highlight its diverse roles in connecting people and facilitating learning. The platform's dominance in the Philippines, as depicted by the data of Statista Research Department (2023), extends beyond social interaction to encompass pivotal roles in news dissemination and e-commerce. From Myanmar's armed groups to Thailand's educational settings, Facebook's versatility in societal dynamics is evident, serving as both a communication tool and a virtual learning space.

In the realm of Facebook, the research of Hitlin et al. (2019) emphasizes the platform's pivotal role in personalizing content, with user discomfort underscoring the need for transparency. Facebook's influence extends to shaping daily lives and emotions, as revealed by the findings of Hargreaves et al. (2018) and the observation of Brodsky et al. (2020). Decision-making, particularly in the business context, is heavily influenced by Facebook in regions like India, as highlighted by Balasudarsun et al. (2018). Insights of Marino et al. (2018) delve into problematic Facebook use, linking individual characteristics to its impact. The potential for outreach and audience engagement, as emphasized by the *Hauge Journal of Diplomacy* (2019), signifies the broader societal implications of Facebook's reach. Environmental awareness emerges as a significant theme, with studies by Jakmongkolchai (2020), Hamid et al. (2017), Karaca et al. (2020), and Sinha et al. (2020) collectively showcasing Facebook's role in shaping perceptions and promoting informed decision-making in the environmental context. In essence, this synthesis underscores Facebook's dynamic influence across education, connectivity, decision-making, and environmental consciousness.

Theoretical Framework

The theoretical framework for this study is grounded in the interplay of Facebook exposure, environmental awareness, and Cultivation Theory particularly in the context of Brgy. Bubukal, Sta. Cruz, Laguna.

Cultivation Theory

In accordance to Suyasa, I. M., et al., (2022), the importance of understanding cultivation theory, we can analyze how the mass media work in forming opinions and be able to turn those opinions into public opinion so that the mass media are able to create homogeneous thoughts on situations or world realities. In other words, Cultivation Theory states that prolonged exposure to media content shapes individuals' perceptions of reality. In other words, the more time individuals spend consuming media, the more likely they are to adopt the beliefs, attitudes, and values presented in that media. In addition, with the results of their study, they have concluded that the mass media significantly shape the perspectives of individuals who initially hold diverse perceptions, leading them to converge towards a homogeneous viewpoint as a result of the cultivation process. Moreover, factors such as age, gender, socioeconomic status, and education level are identified as influencing individuals' expression of opinions within this framework. With that being said, by applying Cultivation Theory to this study, researchers can gain insights into how exposure to environmental content on Facebook shapes individuals' environmental awareness, contributing to a broader understanding of the role of social media in influencing attitudes towards environmental issues.

According to Jeffrey Weiss' Capstone Showcase in the year 2020 entitled *The Cultivation Theory and Reality Television: An Old Theory with a Modern Twist* where he applied George Gerbner's Cultivation Theory, "New forms of television programming, such as reality television, have ushered in a new way of cultivating messages, thoughts and feelings." He also stated, "Television's constant visual and auditory stimulation on a person made it easier to cultivate certain messages, thoughts and feelings into a person, making it a powerful media source." This means that the theory suggests that prolonged exposure to television content, including images, characters, and narratives, shapes viewers' understanding of the world around them. With television becoming a ubiquitous presence in households, family viewing habits contributed to the dissemination of messages that influenced each viewer differently. Television's ability to continually present visual and auditory stimuli facilitated the cultivation of specific messages, beliefs, and emotions, establishing it as a potent medium of influence. In connection to this study, while the abstract discusses Cultivation Theory in the context of television, its principles can be applied to understand the relationship between Facebook exposure and environmental awareness in your study. Both forms of media influence individuals' perceptions and attitudes, highlighting the importance of examining the effects of social media exposure on environmental consciousness.

a. Facebook

Applying Cultivation Theory to Facebook involves paralleling the effects of social media on body image perceptions with its potential influence on various attitudes and behaviors, including environmental awareness. This is as discussed by Stein, J. P., Krause, E., & Ohler, P. in their article entitled *Every (Insta) Gram counts? Applying cultivation theory to explore the effects of Instagram on young users' body image in the year 2021*. They stated that "Recent research suggests that social networks have replaced traditional media as the main channel by which beauty ideals are conveyed—often resulting in body dissatisfaction and reduced self-esteem among users." Their article highlights how social networks, particularly Instagram, shape body image perceptions through prolonged exposure. Similarly, the researchers' study focuses on understanding how exposure to environmental content on Facebook influences environmental awareness, systematically exploring changes in attitudes and behaviors. With that said, applying Cultivation Theory to Facebook, with the research of Stein, J. P., Krause, E., & Ohler, P., offers valuable insights into how social media exposure shapes individuals' perceptions and behaviors regarding environmental issues, enhancing our understanding of media effects on societal concerns.

b. Personal Communication

Cultivation Theory's connection to personal communication allows a deeper understanding of how interpersonal interactions shape individuals' attitudes and behaviors, particularly regarding health-related topics. This is in accordance to Dutta, M. J., Kaur-Gill, S., & Tan, N. (2017) in their article named *Cultivation in health and risk messaging* in *Oxford Research Encyclopedia of Communication*. They stated that "Cultivation theory examines the effects of the media, mainly television on viewer perception over an extended period of time." The said

researchers also said “Understanding the health effects of television is pivotal, considering that television and the structures that constitute television content set the agendas for many health topics, often disseminating negative and positive messages that can impact society, especially the young and impressionable.” Meaning that the Cultivation Theory offers a framework for understanding how personal communication channels reinforce certain norms and values within communities since they said that media content set agendas that could disseminate both positive and negative messages that have an impact to the society. This also means that by exploring the roles of personal communication in different cultural and community contexts, researchers can uncover new avenues for understanding the cultivation effects on environmental awareness and develop strategies for promoting positive environmental messages within communities especially within Brgy. Bubukal of Sta. Cruz, Laguna.

c. Direct Experiences

Cultivation Theory offers a framework for understanding how both social media exposure and direct experiences influence the cultivation of environmental awareness. This is with regards to the dissertation of Si En Yap in the year 2023 named Cultivation theory: The effects of prolonged exposure to k-idol on impressions of k-culture among Malaysian university students. The said researcher said that “Interestingly, even with exposure falling short of the "heavy viewer" criteria as per Cultivation Theory, modest exposure to K-idol media content significantly shapes beliefs and attitudes.” In connection to that, with direct experiences’ role to Cultivation Theory in the context of this study on Facebook exposure and environmental awareness, researchers can gain a comprehensive understanding of how various factors influence individuals' attitudes and behaviors regarding environmental issues, informing strategies for promoting positive environmental messages within the research locale. The statement highlights the importance of direct experiences. In the context of this study, this means participating in environmental activities or witnessing environmental degradation firsthand, in shaping individuals' perceptions and attitudes towards environmental issues. By exploring the roles of both social media exposure and direct experiences in shaping attitudes and behaviors related to environmental issues, researchers can gain insights into the complex interplay between media exposure, direct experiences, and environmental consciousness.

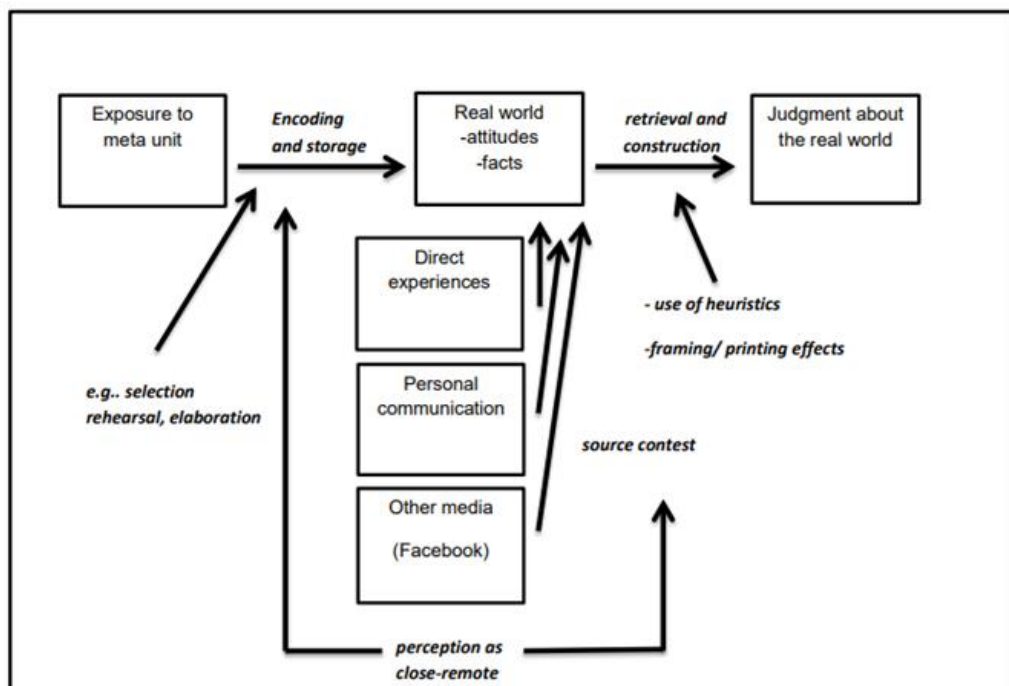


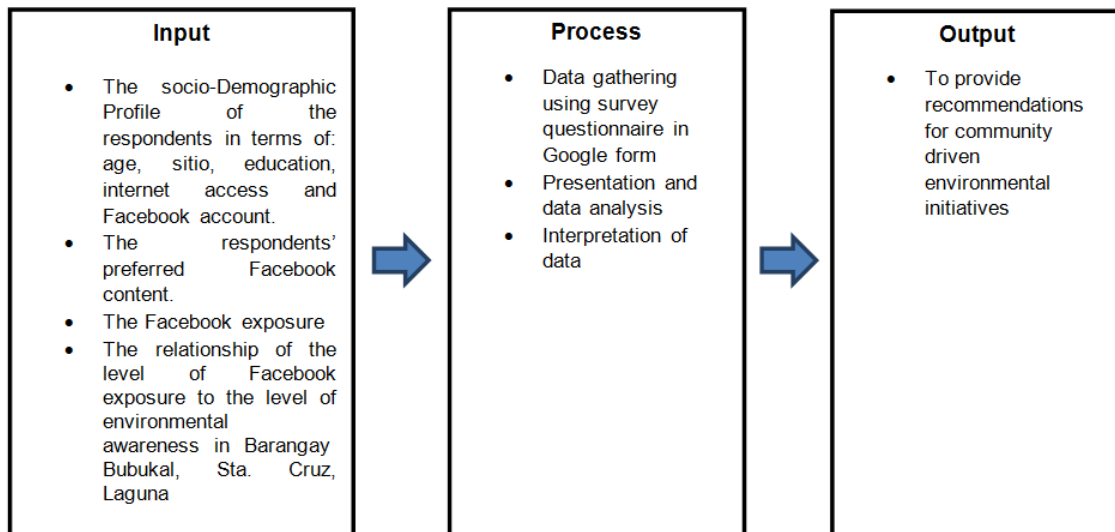
Figure 1
Cultivation Theory Framework

Conceptual Framework

Figure 2 illustrates the pivotal role of the Facebook exposure in shaping the visibility and exposure of environmental content for users. The algorithm's targeting and prioritization mechanisms increase the likelihood of individuals coming across environmental content. Enhanced visibility and exposure to such content on

Facebook have the potential to foster heightened levels of environmental awareness among users. Additionally, factors related to the content itself may directly impact an individual's environmental awareness, irrespective of the relationship of Facebook's exposure.

Figure 2
Conceptual Framework of the study



III. RESEARCH METHODOLOGY

This chapter discussed the methods and procedures of measuring the level of environmental awareness of the community in which the study “Level of Facebook Exposure and Its Relationship to the Level of Environmental Awareness in Barangay. Bubukal, Santa. Cruz, Laguna” had been utilized. The research design, locale, population of the study/sampling design, research instrument, data procedure, and treatment of data were included in this chapter.

Research Design

The study used a quantitative research on the community of Barangay. Bubukal, Santa. Cruz, Laguna. The quantitative method was employed, where correlational research design was used.

The researchers investigated and analyzed the possibility that there was a relationship between the variables in the study alongside what the factors are. According to the Grand Canyon University (2021), a correlational study can also establish whether this relationship has a positive or negative direction. A positive correlation means that both variables move in the same direction. In contrast, a negative correlation means that the variables move in opposite directions.

As cited by Bhandari (2021), a correlational research design investigated relationships between variables without the researcher controlling or manipulating any of them. A correlation reflects the strength and/or direction of the relationship between two (or more) variables. The direction of a correlation can be either positive or negative.

The study was augmented by conducting a survey questionnaire using a Google Form. Additionally, the respondents' responses served as the sources of data for interpretation and analysis. The survey questionnaire via Google Form was implemented by the researchers to collect additional data required for the study.

The procedure of the study was a quantitative method as the researchers were required to gather data from numerous respondents from the population to analyze and measure.

Research Locale

This research was conducted in Barangay Bubukal, Santa Cruz, Laguna. Bubukal is a barangay in the municipality of Santa Cruz, the capital of the province of Laguna within Region IV-A CALABARZON. This

town has been led by Florindo Del Mundo Damitan Jr. since 2018, serving his second term in office. The barangay consists of seven (7) sitios with a total population of 6, 512. Moreover, in order to obtain data on environmental issues in the barangay, the researchers composed a letter addressed to the barangay. According to the information gathered, the barangay faced an environmental issue related to proper waste segregation.

Population of the Study/ Sampling Design

The researchers conducted a pre-survey in the barangay on "Community Development: Facebook's Algorithm Influence on Public Opinion of Barangay. Bubukal, Santa. Cruz, Laguna". There are 20 individuals who answered the pre-survey gathered using Google Form. The pre-survey was conducted by the researchers to generate a topic and title before conducting the actual research, as the researchers found out that there was an environmental problem in the barangay.

95% of the respondents were under 25 years old while the remaining 5% were around 35 to 44 years old. The survey revealed that the respondent frequently use Facebook, with 80% indicating they use Facebook "Daily", 45% of them use Facebook for more than 1 hour, 20% for 30 minutes to 1 hour, 20% of the respondents answered "I don't keep track", and 15% take 15 to 30 minutes to use Facebook.

The survey revealed that 80% of respondents were interested in content about entertainment, while 50% were interested in news and current issues content, and 45% of respondents were interested in content about education, academic, food, and cooking, 35% in sports, 20% in personal development, while the same 25% answered technology, science, health, and wellness, and content about the environment and travel and leisure got the same 15% where only three people have interest in them.

The researchers opted for the category with the lowest percentage, which pertains to the environmental content as a topic and necessitate a solution, which was very concerning and crucial in modern times due to the potential impact on the environment and the community.

As for the population, the respondents of the study were randomly selected citizens within the seven (7) sitio in Barangay Bubukal, Santa Cruz, Laguna with ages ranging from eighteen (18) to fifty-nine (59) years old. The researchers selected the three hundred fifty-one (351) respondents using the stratified random sampling method in the barangay.

As cited by Simple Psychology (2023), stratified random sampling is a method of selecting a sample in which researchers first divide a population into smaller subgroups, or strata, based on shared characteristics of the members and then randomly select among each stratum to form the final sample.

The material that the researchers used in gathering data was a survey questionnaire through Google form that was answered by the respondents to measure the level of Facebook exposure and its relationship to the level of environmental awareness. This method proved convenient and sufficient for meeting what the study required.

Research Instrument

The study utilized Google Form in creating the survey questionnaire. This tool was used to collect the best data from the set participants in order to investigate the relationship of Facebook exposure to the level of environmental awareness of Barangay Bubukal, Santa Cruz, Laguna.

The advantages of Google Forms are numerous, from the ability to distribute surveys to a large audience, editable and customization forms to align with any brand, combining various arrangements using texts and images, and many more (Kayode-Sanni, 2022). The use of Google Forms eliminates the need for paper-based responses and manual data entry, saving time and effort.

The questionnaire was created with the idea of strongly referencing the researcher's thorough reading of numerous papers, books, and other examples of questionnaires. Dichotomous was the type of questionnaire that served as the foundation for the respondents' responses. The researchers developed the initial draft of the questionnaire with assistance from the content knowledge specialists and research associates. After modifying the content, structure, and format, the manuscript was given an expert in the field of education and research for validation and reliability.

The survey questionnaire was self-made and also adapted by the researchers based on some related studies of Dellarmelin (2020), entitled, "The Influence of Social Networks on Environmental Awareness and the Social Responsibility of Generations."

Considering the survey questionnaire was also self-made, the researchers sought validation from three experts in the field of this study and questionnaire validation: Meg-Ryan S. Reonal, LPT, Kim David C. Ritardo, and John Calvin D. Sandoval

The survey questionnaire was divided into three (3) sections: the first section was about the respondent's demographics, the second section was comprised with questions about the level of Facebook exposure which was the independent variable of the study, and the final section was all about measuring the level of environmental awareness pertained to be the dependent variable of the study. The survey questionnaire was divided into three (3) sections to assist the researchers to identify and analyze the variables and problems that must be addressed in the study. Each section's contents addressed the problem assertion and coincide with the research's objective. The questions in each section must be answered to determine whether there was a relationship between the two variables in the study.

Data Gathering Procedure

The researchers collected data using a stratified random sampling method in order to assess the community of Barangay Bubukal, Santa Cruz, Laguna on their level of Facebook exposure and its relationship to the level of environmental awareness. Respondents between the ages of eighteen (18) to fifty-nine (59) years old were selected to participate in this study. The three hundred fifty-one (351) respondents were randomly selected and equally divided into seven (7) sitios using a stratification method from Barangay. Bubukal, Santa. Cruz, Laguna.

In the previous pre-survey that the researchers conducted through Google Form, 95% of the respondents were under 25 years old while 5% were around 35 to 44 years old. The survey revealed that they use Facebook frequently. 80% of the respondents often use Facebook which is "Daily", thus we selected the respondents from the aforementioned barangay in the data gathering process as our population.

The researchers conducted another pre-survey before conducting the actual survey portion of the study to guarantee that the residents of the barangay were able to respond to the survey questionnaires. This pre-survey stated the percentage, particularly how many individuals have a mobile phone with internet access, a Facebook account, how long they use Facebook, and whether they use their mobile phone for social media. The majority of respondents in Barangay Bubukal have internet-connected mobile phones and use them to access social media. A large portion of respondents have Facebook accounts and use them frequently.

Researchers generated quantitative sets of questions that answered the level of Facebook exposure and its relationship to the level of environmental awareness through Google form. Dichotomous was the type of questionnaire that served as the foundation for the respondents' responses. The sitio, age, education, internet access, and Facebook account are included in the questionnaire and must be answered because it is necessary for the interpretation and quantifying of the data results. It is vital to include age in the questionnaire because people of various ages have different interests and perspectives. Sitio is necessary to be included as the researchers equally distributed the questionnaire. It is also important to include education in the questionnaire given that people have varying levels of knowledge and awareness about various topics. The internet access of the respondent has a bearing on purchasing access to social media. A Facebook account is necessary as the researchers have to know if they have access to Facebook and experience the use of the application, consequently it is also significant to include it in the questionnaire.

The initial phase before the data collection was the examining of the questionnaire with an expert for the validity, credibility, and its reliability. The survey questionnaire through Google form was self-made and adapted by the researchers based on some related studies. Following the questionnaire's validation by the three validators, the survey questionnaire underwent pilot-testing before proceeding to the data gathering process.

The following phase was getting the total number of population and there were 6, 512 residents in the barangay. The researchers' statistician calculated the total population size to get the reliable sample size required to get the reliable data thus, the researchers got the total sample size of 351 respondents. Followed by this, the researchers' statistician calculated as well the reliable sample size of each seven (7) sitios as the survey questionnaire should

be equally distributed. Subsequent to the finalization of the necessary forms and letters regarding the data gathering process, the researchers started the data gathering using Google form. The researchers respectfully messaged some of the respondents who lived in the barangay. The researchers also visited the barangay to collect the remaining respondents. The respondents were selected using the stratification according to their sitios and age range of eighteen (18) to fifty-nine (59) years old. The researchers asked for the respondents' permission to participate in the data gathering by the provided consent form. Prior to providing the survey questionnaire in Google form to the respondents, the researchers stipulated a comprehensive explanation of the purpose of the research and topic matter under the questionnaire. Following this, the researchers assisted the respondents with their responses as well considering some of the questions needed additional clarification.

The questionnaire's sole topic was all about analyzing the level of Facebook exposure and its relationship to the level of environmental awareness of the residents in the aforementioned barangay.

Following the data collection procedure, the researchers collected it in order to proceed with data encoding, which was subsequently given over to the research statistician. The collected data and information was used exclusively for the purpose of the study.

Treatment of Data

One of the correlational analysis was used to quantify and analyze the results of the data gathered by the researchers. The research' statistician applied the Chi-Square test, Biswal (2023) stated, it is a statistical procedure for determining the difference between observed and expected data. This test can also be used to determine whether it correlates to the categorical variables in our data. It helped to find out whether a difference between two categorical variables is due to chance or a relationship between them.

The data that was collected by the researchers are tabulated and presented in the form of tables. This figure assisted the researchers to understand the analysis, measures, and outcome of the data by showing whether there is a significant relationship between the variables.

IV. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results that were yielded from the treatment of the data that was gathered in this study. The following tabular presentations and discussions will further characterize the association of Facebook exposure among residents of Barangay Bubukal, Sta. Cruz, Laguna to the residents' level of environmental awareness.

Socio-demographic Profile of the Respondents

Table 1. Socio-demographic Profile of the Respondents In terms of Age

Age	Frequency	Percentage
25 below	202	58%
26 - 34	66	19%
35 - 43	31	9%
44 - 52	35	10%
53 and above	17	4%
Total	351	100%

The socio-demographic profile of the respondents, as outlined in Table 1, reveals a varied distribution across different age groups. Among the surveyed population, the largest cohort consists of individuals aged 25 and below, comprising 58% of the total respondents. Following this, the age group of 26 to 34 years old constitutes a notable portion, representing 19% of the respondents. As the age brackets progress, the number of respondents decreases, with 35 to 43-year-olds making up 9%, 44 to 52-year-olds representing 10%, and those aged 53 and above comprising 4% of the total respondents.

This breakdown provides valuable insights into the age composition of the surveyed population, highlighting the importance of considering age demographics when tailoring strategies or making decisions that cater to the diverse needs and preferences of different age groups.

In our thesis study on the correlation between Facebook exposure and environmental awareness, understanding the socio-demographic profile of our respondents, particularly in terms of age, is crucial. According to Statista Research Department (2024) "the highest share of Facebook users in the Philippines were between the age of 18 and 24, followed by those aged 25 to 34 years as of December 2023. Facebook is the leading social media platform in the country, with a market share of over 90 percent." With Facebook reigning

as the dominant social media platform, boasting over 90 percent market share in the country, these age demographics with minimal adjustments likely represent a substantial portion of our survey participants. This information underscores the importance of examining how these age groups engage with Facebook and how it may influence their environmental awareness levels.

To connect with, Linh Nguyen Ba Tue (2018) stated that “The research results demonstrated that Facebook users' motivation environmental issues is positively related with the respondents' environmental awareness.” This sentence directly addresses the relationship between Facebook users' motivation on environmental issues and their environmental awareness, which is the focal point of this thesis study. It indicates a correlation between Facebook exposure and environmental consciousness, which aligns with the objectives of your research. With that being said, this connection provides insights into how different age groups shown within the socio-demographic profile may vary in their levels of environmental awareness, depending on their motivation towards environmental issues on Facebook. By analyzing this relationship, we can discern how age influences the extent to which individuals are engaged with environmental content on Facebook, thereby contributing to a deeper understanding of how social media exposure, specifically Facebook exposure, shapes environmental consciousness across different age demographics.

Table 2. *Socio-demographic Profile of the Respondents in terms of their Sitio*

Sitio	Frequency	Percentage
Bougainvilla	59	17%
Camia	50	14%
Dama De Noche	56	16%
Gumamela	45	13%
Ilang Ilang	32	9%
Rosal	53	15%
Sampaguita	56	16%
Total	351	100%

Table 2 presented the socio-demographic profile of respondents categorized by their respective Sitio or location. Among the Sitios surveyed, Bougainvilla comprised the largest portion, with 59 respondents, accounting for 17% of the total. Following closely behind is Rosal, with 53 respondents, representing 15% of the total. Camia and Dama De Noche each contribute 50 and 56 respondents, respectively, making up 14% and 16% of the total surveyed population. Gumamela and Sampaguita both have 45 and 56 respondents, contributing 13% and 16%, respectively, to the total. Ilang-Ilang had the fewest respondents, with 32 individuals, representing 9% of the total.

This breakdown highlights the distribution of respondents across different locations, providing valuable insights into the geographic representation of the surveyed population. Understanding these location-specific demographics can inform targeted interventions or strategies tailored to the unique characteristics and needs of each Sitio.

Considering the immense number of monthly active users on Facebook, which currently stands as the most utilized social network globally, it's evident that our study, focusing on the correlation between Facebook exposure and environmental awareness, holds significant relevance. This data becomes even more pertinent when placed aside with the respondents' socio-demographic profile, particularly their sitio. In accordance to Stacey McLachlan's blog of the year 2024 entitled 45 Facebook Statistics Marketers Need to Know in 2024, considering that Facebook has over two billion users, “With that number of monthly active users, it's probably no surprise to learn that Facebook ranked as the most-used social network in the world currently. The runner-up, YouTube, has a mere 2.4 billion monthly active users in comparison.” By understanding the distribution of Facebook users across different demographic segments, including geographical locations like sitio, researchers gained deeper insights into how this influential platform impacts environmental consciousness within these specific communities.

In addition, according to Alghizzawi, et al., (2019), the outcome of the study showed that the advantages of Facebook, advertising and demographic variables have a favorable effect on the (PEOU) of the tourist and the PU in the adoption of tourism behavior, in addition to the (PU) and (PEOU) (ATT), which led to the adoption of behavior around therapeutic tourism destinations in Jordan. The statement mentioned of demographic variables influencing tourist behavior through Facebook aligns with our investigation into how factors like sitio residence might influence individuals' environmental awareness via Facebook exposure. By analyzing how demographic variables, including geographical location like sitio, interact with Facebook

exposure to impact behavior, we can gain insights into how environmental consciousness varies across different community segments, contributing to a nuanced understanding of the relationship between Facebook usage and environmental awareness within specific locales like sitio.

Table 3. *Socio-demographic Profile of the Respondents in terms of their Educational Attainment*

Educational Attainment	Frequency	Percentage
Post-graduate	51	14%
College	156	44%
Senior High School	73	21%
Junior High School	65	19%
Elementary	6	2%
Total	351	100%

Table 3 provides a breakdown of the socio-demographic profile of respondents based on their educational attainment. The data reveals a diverse range of educational backgrounds among the surveyed population. The largest proportion of respondents, comprising 44% of the total, have attained a college education. Following this, 21% of respondents have completed senior high school, while 19% have finished junior high school. A smaller percentage, constituting 14% of the total, have achieved post-graduate qualifications. The smallest group consists of individuals who have completed only elementary education, representing 2% of the total respondents. This distribution underscores the importance of understanding the educational landscape of the surveyed population, which can inform tailored approaches to address educational needs and opportunities for further development within the community.

As Facebook continues to be widely embraced by students across various educational levels, understanding how their engagement with the platform influences their environmental awareness becomes crucial. According to Mahendra (2022), one of the most popular social networking platforms among students is Facebook. Given the status Facebook's as one of the most popular social networking platforms among students, the correlation between Facebook exposure and environmental awareness in this thesis study gains further significance, especially when considering the socio-demographic profile of respondents in terms of their educational attainment. This connection underscores the importance of examining the relationship between Facebook exposure and environmental consciousness within different educational attainment, offering valuable insights into how social media usage intersects with levels of environmental awareness among previous and current students.

According to the article of Smutny&Schreiberova (2020), the findings provide tips for teachers to integrate chatbots into classroom practice and advice what types of chatbots they can try out. This sentence, although focused on educational chatbots, reflects the broader theme of utilizing technology and digital platforms for educational purposes. In the context of this thesis study, it suggests the potential for leveraging Facebook, as a widely-used digital platform, to disseminate environmental information and raise awareness among users. It hints at the possibility of integrating Facebook exposure into educational initiatives aimed at enhancing environmental consciousness, thereby highlighting the relevance of this study into the relationship between Facebook exposure and environmental awareness.

Table 4. *Socio-demographic Profile of the Respondents in terms of Internet Access*

Internet Access	Frequency	Percentage
With (YES)	350	99%
Without (NO)	1	1%
Total	351	100%

Table 4 presents a comprehensive overview of the socio-demographic profile of respondents concerning their access to the internet. The data reveals an overwhelmingly high percentage of individuals, accounting for 99% of the total surveyed population, who report having internet access. This widespread availability of internet connectivity underscores the increasing importance of digital technology in today's society. However, it's noteworthy that a small minority, representing only 1% of respondents, reported not having access to the internet.

This information is pivotal for policymakers, organizations, and service providers to ensure inclusivity and accessibility in the design and implementation of digital initiatives, recognizing both the opportunities and challenges associated with the digital divide within the community.

According to Dean (2024), the average Facebook user over the age of 18 will spend nearly 8 days a year on the platform. With that being said, access to the internet serves as the gateway to engaging with platforms like Facebook, and this research delves into how this access influences environmental consciousness. By examining the socio-demographic data regarding internet access among the respondents, we can discern how varying levels of connectivity may impact individuals' exposure to environmental content on social media platforms like Facebook, shedding light on the dynamics between internet access, Facebook usage, and environmental awareness.

Moreover, according to Vu, H. T., et al., (2021), highlighting the examination of content on Facebook, a social media platform, produced by climate nonprofits to frame discussions on climate change, analyzing Facebook content produced by 289 global climate nonprofits from 18 countries, this study investigates these NGOs' framing of climate change. This underscores the broader context of how environmental issues, such as climate change, are communicated and framed on Facebook. It suggested the potential for Facebook exposure to influence environmental awareness by analyzing the framing of environmental content on the platform considering their internet access, thereby emphasizing the relevance of your investigation into the relationship between Facebook exposure and environmental consciousness.

Table 5. *Socio-demographic Profile of the Respondents in terms of Facebook Account*

Facebook Account	Frequency	Percentage
With (YES)	350	99%
Without (NO)	1	1%
Total	351	100%

Table 5 provides insights into the socio-demographic profile of respondents based on their possession of a Facebook account. The data indicates a remarkably high prevalence of Facebook usage among the surveyed population, with 99% of respondents reporting having a Facebook account, totaling 350 individuals. This overwhelming adoption of Facebook highlights its significant role as a primary social media platform within the community. Additionally, a mere 1% of respondents reported not having a Facebook account, comprising only one respondent.

Understanding the widespread presence of Facebook among respondents is essential for organizations and policymakers looking to leverage social media for communication and outreach initiatives. However, it's imperative to acknowledge the need for diverse communication channels to ensure inclusivity for individuals who may not use or have access to Facebook.

According to the blog of Dean (2024) entitled, "Facebook User and Growth Statistics", Facebook currently has 3.049 billion monthly active users (MAUs). Understanding the distribution of Facebook accounts among our participants provides valuable insights into how widespread Facebook usage is within our sample population. By analyzing this data, we can explore how varying levels of engagement with the platform may influence individuals' environmental awareness, shedding light on the role of Facebook in shaping environmental consciousness among different segments of users.

In addition, according to Zafar, A. U., et al., (2021), "Drawing on a sample of 693 experienced respondents analyzed using structural equation modeling, this study reveals that social media usage and browsing have a significant positive association." It underscores the importance of examining the relationship between social media usage, including Facebook, and attitudes towards sustainability. It also suggests that understanding the socio-demographic profiles of respondents, particularly in terms of their Facebook accounts, can provide insights into how social media exposure influences attitudes towards sustainability, including environmental responsibility. By analyzing the association between social media usage and sustainable attitudes, your study can uncover how different demographic groups engage with Facebook and how it impacts their environmental awareness.

Table 6. Preferred Facebook Content

Preferred Facebook Content	Frequency	Percentage
Entertainment	291	83%
Environmental	5	1%
News	55	16%
Total	351	100%

Table 6 presented valuable insights into the types of content preferred by respondents on Facebook. The data reveals that a significant majority of the surveyed population, comprising 83%, express a preference for entertainment content. This suggests that the majority of Facebook users within the community are primarily interested in content that offers enjoyment, relaxation, or amusement. Additionally, a smaller percentage of respondents, totaling 16%, indicate a preference for news-related content on the platform. However, it's notable that only a negligible portion, representing 1%, express a preference for environmental content.

Understanding these preferences is crucial for content creators, organizations, and advertisers aiming to engage with the community effectively on Facebook. Tailoring content strategies to align with these preferences can enhance user engagement and satisfaction while also providing valuable insights into the interests and priorities of the target audience.

According to the article of Leap Comms (2023), one of the most effective ways is to share videos and infographics that provide information about environmental issues and their impact on the planet. These visuals can be shared on various social media platforms to reach a broader audience. It is essential to make the content engaging and informative to capture the audience's attention." With that said, by analyzing the types of content that resonate with Facebook users, such as visually appealing and informative videos and infographics, researchers gain insights into how to effectively leverage Facebook as a tool for promoting environmental awareness. This connection underscores the importance of crafting engaging content tailored to the preferences of Facebook users to maximize its impact on fostering environmental consciousness.

To add with, in accordance to the article of Sultan, M. T., et al., (2020), hence, this paper aims to explore travelers' responsible environmental behavior towards coastal tourism within the social media user-generated content paradigm. It underscores the importance of exploring user-generated content (UGC) on social media platforms like Facebook in influencing responsible environmental behavior, particularly in the context of coastal tourism. While the researchers' study focuses on environmental awareness, this sentence highlights the broader context of how user-generated content on social media platforms can shape attitudes and behaviors towards sustainability. It suggests the potential for analyzing the preferred content of Facebook users, including environmental content, to understand its impact on environmental awareness and responsible behavior, thereby emphasizing the relevance of your investigation into the relationship between Facebook exposure and environmental consciousness.

Table 7. Level of exposure on Facebook in Barangay. Bubukal, Santa. Cruz, Laguna

Questions/Statements	Frequency		
	Yes	No	Total
1. Do you often use Facebook?	335 (83%)	16 (1%)	351
2. Do you use Facebook more than 4 hours per day?	280 (80%)	71 (20%)	351
3. The only content you see in a week on Facebook is the content you prefer	108 (31%)	243 (69%)	351
4. I often across a variety of content on my Facebook feed.	336 (96%)	15 (4%)	351
5. I feel that my Facebook feed exposes me to diverse perspectives and opinions.	332 (95%)	19 (5%)	351
6. I find that the content on my Facebook feed aligns with my interests and preferences.	326 (93%)	25 (7%)	351

Table 7 presents findings on the level of exposure to Facebook content among residents of Barangay. Bubukal, Santa. Cruz, Laguna.

Based on the responses gathered, it is evident that Facebook is widely used within this community, with a substantial 83% of respondents indicating that they often utilize the platform. Moreover, a significant majority, comprising 80% of respondents, reported spending more than four hours per day on Facebook, highlighting the considerable amount of time devoted to the platform. Interestingly, while a minority of respondents (31%) felt that they only encountered content they preferred on Facebook, the vast majority acknowledged exposure to a variety of content, with 96% reporting encountering diverse content on their feeds. Furthermore, the overwhelming majority expressed that their Facebook feed exposes them to diverse perspectives and opinions (95%), indicating an awareness of the platform's role in providing access to differing viewpoints. Additionally, most respondents (93%) felt that the content on their Facebook feed aligned with their interests and preferences, suggesting a level of satisfaction with the relevance of the content they encounter.

Overall, these findings shed light on the significant presence of Facebook within the community of Barangay. Bubukal, Santa. Cruz, Laguna, and the varied experiences users have with the platform, from exposure to diverse content to alignment with personal interests and preferences.

According to Leap Comms (2023), social media can be a powerful tool in raising awareness about environmental, social, and governance issues. It can create public awareness of those issues, encourage people to use eco-friendly practices, and inspire individuals to take action and make a positive change in their communities. Considering that, understanding the level of exposure to Facebook within this specific community provides insights into the extent to which social media platforms can be utilized to promote environmental consciousness. By leveraging Facebook to disseminate information and encourage eco-friendly practices, we aim to inspire individuals in Barangay Bubukal to take positive actions towards environmental sustainability, thereby fostering a greater sense of environmental awareness and activism within the community.

In addition, as of to Rustam, A., et al., (2020), the study outcomes indicate that firm’s sustainability exposure and environmental responsiveness act as game-changer for green consumption practices, which ultimately be the threshold for changing the rationality and customer’s green choices. This highlights the influence of environmental exposure and responsiveness, which can be analogous to the level of exposure on Facebook, on green consumption practices. While the researchers’ study focuses on environmental awareness among Facebook users, this sentence underscores the broader context of how exposure to environmental information, whether through corporate sustainability reporting or social media platforms like Facebook, can impact green consumerism. It suggests that analyzing the level of exposure on Facebook in specific localities, such as Brgy. Bubukal, Sta. Cruz, Laguna, may provide insights into how environmental awareness on social media influences individuals’ eco-friendly consumption behaviors, thereby emphasizing the relevance of your investigation into the relationship between Facebook exposure and environmental consciousness.

Table 8. Environment Awareness in Barangay Bubukal Sta. Cruz, Laguna

Questions/Statements	Frequency		
	Yes	No	Total
1. Do you often see environmental content on Facebook aside from the content you prefer?	273 (78%)	78 (22%)	351
2. Seeing environmental content on Facebook makes you more knowledgeable about environment.	316 (90%)	35 (10%)	351
3. Facebook is a great help to make you more aware about environmental issues.	332 (95%)	19 (5%)	351
4. You take similar action when you see environmental content on Facebook.	282 (80%)	69 (20%)	351
5. It is easier to get environmental information on Facebook.	318 (91%)	33 (9%)	351
6. I usually watch/see videos/photos/texts on Facebook about environmental contents.	281 (80%)	70 (20%)	351
7. I usually watch/see videos/photos/texts on Facebook about the use of clean and renewable energies.	173 (49%)	178 (51%)	351
8. I usually watch/see videos/photos/texts on Facebook about recycling and waste sorting.	206 (59%)	145 (41%)	351
9. After watching/seeing a video/photo/text on Facebook about environmental issues I feel motivated to adopt attitude	315 (90%)	36 (10%)	351
10. I usually watch/see videos/photos/texts on Facebook about volunteer work.	202 (58%)	149 (42%)	351
11. I use environmental practices I learned on Facebook at preserving natural resources for future generations.	325 (93%)	26 (7%)	351

Table 8 outlines the extent of environmental awareness and engagement among residents of Barangay Bubukal, Sta. Cruz, Laguna, focusing on their interaction with environmental content on Facebook

It revealed that a significant majority of respondents frequently encounter environmental content on the platform, with 78% reporting regular exposure. Moreover, a substantial proportion, constituting 90% of respondents, believes that exposure to such content enhances their understanding of environmental issues, indicating the educational value of Facebook in this regard.

Additionally, an overwhelming 95% of respondents perceive Facebook as a crucial tool for raising awareness about environmental issues, highlighting its effectiveness in promoting environmental consciousness within the community. Furthermore, the data suggests that exposure to environmental content on Facebook motivates behavioral changes, with 80% of respondents indicating a willingness to take action based on what they see on the platform. This aligns with the perception of Facebook as an accessible source of environmental information, with 91% of respondents finding it easier to access such content through the platform.

Notably, respondents also express a preference for multimedia content related to environmental topics, with 80% reporting regular consumption. While specific environmental themes such as clean energy and recycling are encountered to varying degrees, there is an overall inclination towards using Facebook as a platform for learning about and engaging with environmental issues.

Moreover, the data underscores the platform's role in inspiring proactive measures, as evidenced by 90% of respondents feeling motivated to adopt attitudes that contribute to environmental improvement after engaging with environmental content on Facebook.

Finally, the majority of respondents (93%) indicate a practical application of environmental practices learned on Facebook, demonstrating the platform's potential to facilitate tangible contributions to the preservation of natural resources.

Overall, the findings underscore Facebook's significance as a tool for fostering environmental awareness, education, and action within the community of Barangay Bubukal.

Emphasizing the pivotal role of social media, particularly Facebook, in creating public awareness of environmental issues, is essential in this thesis study examining the level of Facebook exposure and environmental awareness among respondents in Barangay Bubukal, Santa Cruz, Laguna. Also in accordance to Leap Comms (2023), one of the most significant benefits of social media is that it can create public awareness of environmental issues. With that statement, by understanding the impact of social media on environmental awareness within this specific community, this thesis study aims to gauge how effectively platforms like Facebook can contribute to shaping environmental consciousness. Through our research, we seek to uncover the extent to which residents of Barangay Bubukal are informed about environmental issues due to their exposure to Facebook, ultimately shedding light on the relationship between social media usage and environmental awareness in this locality.

Additionally, according to Sun & Wang (2020), this study enriches the research about the factors that influence consumers' purchases of green products in emerging countries in the social media marketing context. This underscores the importance of understanding factors that influence consumer behavior, including attitudes toward green products, in the context of social media marketing. While the researchers' study focuses on environmental awareness among Facebook users in a specific locality, this sentence highlights the broader context of how social media marketing may influence consumers' attitudes and intentions toward environmentally friendly behaviors, such as purchasing green products. It suggested that analyzing the level of environmental awareness among respondents in Barangay Bubukal, Santa Cruz, Laguna may provide insights into how social media exposure influences attitudes toward and intentions to engage in environmentally friendly practices, thereby emphasizing the relevance of your investigation into the relationship between Facebook exposure and environmental consciousness.

Table 9. *Significant Relationship between Level of Facebook Exposure and Environmental Awareness*

	χ^2	df	Phi effect (Φ)	P-value	Interpretation	Decision
Level of Facebook Exposure vs. Environmental Awareness	1.074	1	0.0391113	0.30004	Not Significant	Accept Hypothesis

Table 9 showed the potential relationship between the level of exposure on Facebook and environmental awareness.

A chi-square test of independence was employed to examine whether there was a significant association between these two categorical variables. The findings revealed a chi-square statistic of 1.074 with 1 degree of freedom. The Phi coefficient, which measures the strength of association for binary variables, was computed to be 0.0391113, indicating a very weak association. Additionally, the p-value associated with the chi-square statistic was found to be 0.300044.

Interpreting these results, it was determined that the p-value exceeded the conventional significance level of 0.05. Therefore, there was insufficient evidence to reject the null hypothesis, suggesting no significant relationship between the level of exposure on Facebook and environmental awareness. Consequently, based on the analysis conducted, it was concluded that the observed data did not provide convincing support for the hypothesis proposing a link between Facebook exposure and environmental awareness.

According to the article of Leap Comms (2023), with the widespread use of social media platforms such as Twitter, LinkedIn, Facebook, and Instagram, it has become easier to communicate and share information about critical issues with a broad audience. To connect with, as these platforms facilitate the dissemination of information to a wide audience, this research aims to uncover the significant connection between individuals' level of Facebook exposure and their environmental awareness. By analyzing how social media usage influences environmental consciousness, particularly through Facebook, we contribute to understanding the role of online platforms in shaping attitudes and behaviors towards environmental issues.

Moreover, according to Zafar, A. U., et al., (2021) in their research article, the growing adoption of social media has transformed consumption patterns. This sentence underscores the broader context of how social media usage influences consumption behaviors, including purchasing decisions. It suggests that analyzing the level of Facebook exposure among respondents may provide insights into how social media usage influences attitudes toward consumption and, consequently, environmental awareness. By understanding the transformative role of social media in consumption patterns, your study can shed light on the relationship between Facebook exposure and environmental consciousness.

V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter provided an overview of the findings from data collection, the conclusions drawn, and the recommendations developed as a natural outcome of the study.

Summary

The study measured the level of engagement of the residents of Barangay. Bubukal, Santa. Cruz, Laguna in social media, specifically Facebook. Alongside that, the study also drawing from the statistical outcomes outlined in Chapter IV, the inquiries raised in Chapter I were addressed specifically, leading to the following discoveries:

1. Socio-demographic Profile of the Respondents

1.1 Age

It showed a diverse socio-demographic profile of respondents, with 58% aged 25 and below, 19% aged 26-34, and 9% aged 35-43, 10% aged 44-52, and 4% aged 53 and above.

1.2 Sitio

The sitio of Bougainvillahad the largest proportion (17%), followed by Rosal (15%), Camia (14%), Dama De Noche (16%), Gumamela (13%), and Sampaguita (16%). IlangIlang had the fewest respondents (9%).

1.3 Educational Attainment

Showed a diverse socio-demographic profile of respondents, with 44% having a college education, 21% having senior high school, 19% having junior high school, 14% having post-graduate qualifications, and 2% having only elementary education. Understanding this distribution helps inform tailored approaches to address educational needs and community development.

1.4 Internet Access

99% of respondents have internet access, highlighting the growing importance of digital technology. However, only 1% reported not having internet access, indicating a small minority's lack of internet access.

1.5 Facebook Account

It showed the high prevalence of Facebook usage among respondents, with 99% having a Facebook account, indicating its significant role as a primary social media platform, and only 1% not having an account.

1.6 Preferred Content on Facebook

The study displayed that 83% of Facebook users prefer entertainment content, 16% prefer news-related content, and 1% prefer environmental content. The majority were interested in enjoyment, relaxation, or amusement.

2. Level of exposure on Facebook in Barangay. Bubukal, Santa. Cruz, Laguna

Facebook was popular platform among the community, with 83% of respondents using it frequently. A total of 80% spend over four hours daily on the platform, indicating a significant time commitment. While 31% only encounter content they prefer, 96% encounter diverse content on their feeds. The majority of respondents (95%) perceive their feed to expose them to diverse perspectives and opinions, indicating a willingness to access different viewpoints. Most respondents (93%) feel the content aligns with their interests and preferences, indicating satisfaction with the relevance of the content they encounter.

3. Environment Awareness in Barangay Bubukal Sta. Cruz, Laguna

The study showed that a majority of Facebook users frequently encounter environmental content, with 78% reporting regular exposure. 90% believe that exposure to such content enhances their understanding of environmental issues, indicating the educational value of Facebook. 95% of respondents perceive Facebook as a crucial tool for raising awareness about environmental issues, promoting environmental consciousness within the community. Exposure to environmental content motivates behavioral changes, with 80% of respondents willing to take action based on what they see on the platform. Facebook is also perceived as an accessible source of environmental information, with 91% finding it easier to access. Respondents express a preference for multimedia content related to environmental topics, with 80% reporting regular consumption. The data highlights Facebook's role in inspiring proactive measures, with 90% feeling motivated to adopt attitudes contributing to environmental improvement after engaging with environmental content on Facebook. The majority of respondents (93%) apply environmental practices learned on Facebook, demonstrating its potential to facilitate tangible contributions to the preservation of natural resources.

4. Significant Relationship between Level of Facebook Exposure and Environmental Awareness

The study used a chi-square test to determine the significant association between Facebook exposure and environmental awareness. The results showed a chi-square statistic of 1.074, a Phi coefficient of 0.0391113, and a p-value of 0.300044. The p-value exceeded the 0.05 significance level, indicating no significant relationship between Facebook exposure and environmental awareness. Therefore, the data did not provide convincing

support for the hypothesis of a link between Facebook exposure and environmental awareness. The findings suggest that Facebook exposure may not be a significant factor in environmental awareness.

VI. Conclusion

The data collected indicated that Facebook can be used as a tool and platform to disseminate environmental knowledge. However, users of Facebook tend to favour entertaining content, which was the only thing they frequently see on the social media site. Nevertheless, a significant portion of respondents believe that Facebook can be used as a platform to disseminate environmental knowledge considering it is more readily available. Based on the data gathered and the statistician's assessment, the study concludes that there is no significant association between the communities' Facebook exposure and their level of environmental awareness.

VII. Recommendations

1. Enhance Environmental Content Visibility on Facebook:

Increase the visibility of environmental content on Facebook by collaborating with local environmental organizations, government agencies, and community leaders to curate and share informative and engaging posts. Utilize targeted advertising and boost posts to reach a wider audience within Barangay. Bubukal, Santa. Cruz, Laguna, ensuring that environmental messages are effectively conveyed to residents across different age groups and socio-economic backgrounds.

2. Implement Educational Campaigns and Awareness Programs:

Develop and implement educational campaigns and awareness programs focused on environmental issues tailored to the specific interests and preferences of Facebook users in the community. Utilize multimedia approaches such as videos, infographics, and interactive content to capture attention and encourage active engagement. Collaborate with local schools, youth organizations, and influencers to amplify the reach and impact of these initiatives.

3. Foster Community Engagement and Participation:

Foster community engagement and participation in environmental initiatives by creating dedicated Facebook groups or pages where residents can actively discuss and share ideas, experiences, and solutions related to environmental conservation and sustainability. Organize virtual events, workshops, and challenges to encourage collaboration and collective action, empowering residents to contribute to positive environmental change within their locality.

4. Promote Pro-Environmental Behaviors and Practices:

Promote pro-environmental behaviors and practices through targeted messaging and campaigns on Facebook, emphasizing the importance of sustainable actions such as waste reduction, recycling, energy conservation, and eco-friendly transportation. Provide practical 45 tips, resources, and incentives to motivate residents to adopt environmentally friendly habits in their daily lives, fostering a culture of environmental stewardship and responsibility.

5. Evaluate and Adapt Strategies Based on Feedback and Data:

Continuously evaluate the effectiveness of environmental awareness campaigns and initiatives on Facebook by monitoring engagement metrics, feedback from the community, and changes in environmental attitudes and behaviors over time. Use insights from data analysis to refine and adapt strategies, identifying areas for improvement and optimization to maximize impact and sustainability of efforts in raising environmental awareness and promoting positive environmental action.

6. Conduct another study:

As the result of the conducted study, the researchers suggests for the future researchers of the same study to conduct a further research with a different variables, population, and objectives to a greater distance of the research.

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