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About the Editors

Mr. Arvin Glo pursued a degree in Communication at Emilio Aguinaldo College in Cavite and currently pursuing his Master in Communication degree at the Polytechnic University of the Philippines. Aside from teaching Research to Senior High School Students, he is also the Research Coordinator at Unida Christian Colleges.

Mr. Raineir Amparo has finished a degree in Secondary Education, majoring in English at the National College of Science and Technology. He teaches Research to Senior High School Students at Unida Christian Colleges. He is also the current Research Associate.

Ms. Rubelyn M. Pagasartonga has finished a degree in Secondary Education Major in English at the National College of Science and Technology. She is currently teaching research to Senior High School students at Unida Christian Colleges.

Table of Contents

Perception of Selected Cafe Owners on Using Wooden Utensils as Alternatives in Coffee Shops to Reduce Plastic Waste 1
Xarieth Jane M. Bautista, Jameela Mae M. Tingkao, Mark Yohan P. Sabangan, Audrey Claire D. Alviso, Joshua B. Reyes, Renante N. Tiquin

Perception of Small Business Owners Towards Business Planning in Imus, City Cavite 14
Renzel Joy R. Abadiano, Andrea R. Agnes, Jun Clyde D. Ayaton, Angel Mae C. Balaba, Mario O.Lubiano, Rain Chloe A. Ramirez, Queen G. Villar

Influence of Drama and Arts to Personal Development of Grade 11 Performing Art Students of Unida Christian Colleges S.Y 2022-2023 30
Abaja Edsel, Cabauatan Chelsy, Delos Reyes Cedrick, and Machitar Guenevere

Effects of Computer Shortage to Selected Grade 11 TVL-ICT Students at Unida Christian Colleges for the A.Y 2022-2023 45
Arabaca, C., De Chavez, J., Mendoza, J., Tanjay, E.

AB Organic Household Fire-Extinguishing Spray Using Banana Peel Powder and Powdered Eggshell as the Main Agent 60
Kate Abegail S. Revise, Asher Daniel M. Tibayan, Irene Mariz S. Dalion, Nicole P. Calauad, Maria Katrina D. Dipaling, and Whayen Ashley C. Saludo

Satisfaction Level of Bagel Kings within Anabu 1-F, Imus City, Cavite 71
Irish Ashley A. Salvador, Catherine C. Abla, Sandara M. Basadre, Irish A. Martinez, Shayme Faith V. Sanico, and Paul Heaven I. Sumera

Social and Emotional Loneliness: Selected Factors Affecting Young Teachers at Unida Christian Colleges for the A.Y. 2022-2023 97
Madelene A. Camet, Ericha Mae A. Jazmin, Althea M. Mandapat, Shekinah Leane G. Sarreal, Ma. Quincy Nicole M. Trinidad, Luis Phillip Viña

Level of Acceptability of Using Galunggong Tinapa as an Alternative Filling in Siopao Among the Selected Residents of Imus City Cavite 114
Aldave, Aldwyn O., De la Cruz, Ma. Yzavel S., Diwa, Hanah Fate M., Gaid, Reynant Dave A., Gipulan, Nash Q., Polinario, Crystal Shayne, Soreño, Shamei.; Soria, Isaiah James C.

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Perception of Selected Cafe Owners on Using Wooden Utensils as Alternatives in Coffee Shops to Reduce Plastic Waste

Xarieth Jane M. Bautista[1], Jameela Mae M. Tingkao[2], Mark Yohan P. Sabangan[3], Audrey Claire D. Alviso[4], Joshua B. Reyes[5], Renante N. Tiquin[6]

Senior High School Student-Researchers

ABSTRACT

The usage of plastic has been useful for everyone's daily needs. However, it has come to attention that plastic usage has become a large percentage risk to the environment. This study focuses on obtaining the perception of selected cafe owners regarding the utilization of wooden utensils as substitutes, as well as determining eco-friendly utensils to help minimize the plastic waste problem. Upon doing this research, it aims to identify the factors that helped encourage the informants to switch from single-use plastic to wooden utensils, including the benefits acquired by it. The purpose of this study was to determine the benefits of using wooden utensils as alternatives, how it assists the informants in their shop, along with lessening the issue of plastic in Cavite, and what reasons persuaded them to switch. The cafe owner, representative, or senior barista was aware of the wooden utensils as an alternative because of its benefits and the positive impact it brought to the environment. Based on the findings of this study, wooden utensils have encouraged coffee shops to have an eco-friendly setting. Wooden utensils as a substitute may bring a possible invitation and influence to other coffee shop businesses as an initiative action in reducing the plastic waste in Cavite and promote ways to have a sustainable and environmentally friendly community.

Keywords: *Alternative, Eco-Friendly, Reduce Plastic Waste, Substitute, Switch to Wooden Utensils, Wooden Utensils*

INTRODUCTION

Plastics have been a part of our daily consumption. It is used by folk due to its material that is easy to handle and conveniently available for large-scale consumption. Plastics have a high strength-to-weight ratio, can be easily shaped into various forms, are impermeable to liquids, and are highly resistant to physical and chemical degradation. Plastics can also be produced at a relatively low cost. It is these properties that have led to the substitution of traditional materials (e.g., concrete, glass, metals, wood, natural fibers, and paper) by plastics in many applications ("Improving Plastics Management: Trends, policy responses, and the role of international co-operation and trade," 2018). Every individual has their way of using plastics, as they can be utilized in any manner needed. Moreover, when the pandemic hit, the rise of new cafe shops boomed, especially in today's situation of post-pandemic, wherein businesses come back to work, as it developed a trend that most people are into. Coffee shops play a big role in contributing to the usage of plastic.

However, overuse and waste of plastic have also been one of the major problems that our world is currently dealing with, and many studies have been made to find potential solutions that could help decrease plastic use, yet the plastic waste issue continues to go uphill. Plastic utilization continues to expand due to poor handling, which is a serious matter in advanced countries. In 2018, Cavite generated an average of 1,514 tons of waste

daily – 22% of which was still recyclable, according to the Environmental Management Bureau (EMB), as stated in a study by Mirasol (2022). There was data collected regarding the waste situation in one targeted locale of the study, which shows that human beings are not exercised to practice methods that could help reduce plastic waste. In addition to the recent research of Mirasol (2022), the average volume of waste generated within the Calabarzon region, where Cavite is located, is about 5,694 tons a day. A lot of plastic waste can still be recycled or reused, but a lack of knowledge and practices are possible reasons for the rising plastic waste population expands. In addition, as cafe shops continue to emerge, plastics also arise, as most cafes use plastic cups and utensils to serve their uniquely brewed coffee and sweet pastries.

There is a jump up happening in the widespread use of plastic waste that results in unending inconveniences daily for individuals affected by it. Excessive use of plastic also influences many factors, such as greenhouse gas emissions and plastic pollution. These factors include threats that can harm living things and habitats. Plastic pollution also poses risks to human health. The presence of plastic in seafood, including fish and shellfish, and their subsequent consumption by the public has led to concerns about chemical bioaccumulation in the food chain. However, empirical evidence for this is currently limited ("Improving Plastics Management: Trends, policy responses, and the role of International Co-operation and Trade," 2018). It is a concern that a lot of people do not focus on the consequences of enlarging usage of plastic wherein health risk factor is included.

As stated in a study by Gozum (2021), The current literature shows that plastic straws and stirrers are among the top plastic items that end up in oceans, together with another plastic packaging such as wrappers, bottles, and containers. In response, many individuals who care for the environment tried to come up with a solution, including reusable cutleries. Gozum (2021) added that while the Philippines has yet to pass a law banning plastics, several bills are already pending before the Senate and the House of Representatives seeking a ban on single-use plastics in restaurants. None of them were approved up to this day as the sudden transition may be hard to bear for the consumers and business owners. That is why enterprises are making adjustments slowly, although the climate is rapidly changing for the worst, and the action for reducing plastic waste should be immediate. The researchers aim to find out the perception of cafe owners in selected cities in Cavite, which is a relevant and convenient locale to the study, by using wooden utensils in coffee shops and how open they are to change their lifestyle for the betterment of the community.

This study strives to examine the possible ways or outcomes of the increasing plastic waste problem in terms of cafe owners' insights which is one of the main providers of plastic as of the current generation, and whether they are available in using alternatives as initiatives that could assist plastic waste to go down and may influence other people. The researchers' goal was to observe the awareness and viewpoint about this huge issue of plastic and unfold the potential methods in which the cafe owners could help to enlighten their customers into using wooden utensils to decrease the plastic problem in certain cities of Cavite. As the cafe culture continues to expand, resources should also be maximized because the probable influence of numerous plastic waste will also go up, which could lead to many elements such as health issues, way of living, etc. This research also provides insights and narratives of the cafe owners that are significant in the future studies of future researchers.

As an approach to this ongoing phenomenon, this descriptive-narrative study aims to assess the cafe owners' take regarding using wooden utensils as alternatives to single-use plastic.

The key informants of this study were chosen by specific criteria made by the researchers, wherein it is selected within the cities of Cavite only to obtain the quality responses to reach the objectives of the study. The researcher evaluated the common attributes of each informants' answer to the questions after the interview. The key informants were selected according to the informants' validation to be conducted by the researcher. The main goal of this study is to analyze the cafe owner's perception of replacing disposable plastic with wooden utensils.

To critically describe the result of the study, this study seeks to get the insights of selected cafe owners about using substitutes which are wooden utensils to be utilized in coffee shops to reduce plastic waste. Specifically, answer the following questions. **(1)** What reasons influence cafe owners' use of wooden utensils as alternatives in coffee shops? **(2)** What challenges and obstacles of the cafe owners in reducing plastic waste, and how do they overcome that situation? **(3)** How can using wooden utensils aid in waste reduction?

Primarily, the phenomenon is derived from a certain experience. This study was based upon assumptions and beliefs of the researchers who aim to locate the perception of selected cafe owners around the cities of Cavite that utilizes wooden utensils as substitutes to disposable plastic utensils in their coffee shop. The researchers will be guided in deciding what research questions must be asked, along with how the data will be gathered to answer the research questions. **(1)** The cafe owners were influenced by using wooden utensils as alternatives in coffee shops to assist in aiding the waste problem in plastics. **(2)** The cafe owners experienced difficulties in possible cost addition and customer preferences when switching to wooden utensils from single-use plastics; thus, canvassing and feedback acknowledgment were done to still help in reducing plastic waste. **(3)** Wooden utensils are environmentally friendly, wherein they produce less waste than single-use plastic and fewer resources which can be initiated in utilizing coffee shop businesses.

In addition, to maintain the quality and uniqueness of the study, this research is limited to the chosen cafe owners that are qualified with at least three months of experience using wooden utensils in the cafe industry. If the owner is not available, at least the informant has a high position in the business in the selected location in Cavite, wherein four participants are needed for the data collection of the study. The study applies solely to the key informants' take and insights, such as factors and regulations contributing to their perception of using alternatives. The researchers are limiting this study to those with the characteristics needed to obtain quality answers.

This research provides information on how cafe consumers are open to making small changes to improve cafe shops businesses and the environment by using eco-friendly utensils to help minimize the plastic waste problem.

Specifically, **(1)** the cafe owners who wish to implement sustainability in their business by replacing their single-use plastic utensils with non-polluting materials, such as wooden utensils that could spread awareness and initiative to other cafes, **(2)** the cafe consumers may change their perception in using disposable plastics and encourage customers to normalize and adapt the use of eco-friendly utensils. **(3)** lastly, the future researchers may be used as an instrument, reference, or guide for future researchers who are planning to conduct a similar study.

RELATED STUDIES

Plastics are utilized in many routines on a daily basis, such as for food packaging, furniture, appliances, etc. However, the overuse of plastic could destroy ecosystems and living systems, as it contains chemicals

that cannot be degraded easily. It certainly brought serious concern to the environment. Waterways and drainage systems quickly become clogged by waste runoff, threatening the livelihood and sanitation of residents (Braganza, 2017).

The Philippines is the third largest contributor, with an estimated 0.75 million metric tons of mismanaged plastic entering the ocean every year (World Bank Group, 2021). In the chosen locale of the study, which is Imus, reported by PEMSEA (2022), that the sources of plastic waste and areas of expected high levels of plastic waste generation were mapped in the Imus River Watershed in the Province of Cavite, in the Philippines. Plastic pollution is rampant in the Philippines and dominating the world.

Most of the plastics are not used in recycling but end up in the ocean affecting marine and aquatic life, including landfills. Boracay, a popular tourist island in the Philippines known for its pristine beaches and water activities, was closed for six months in 2018 to allow a period of rehabilitation from high levels of pollution (GAIA, 2019). Government projections were made to mitigate plastic pollution, resulting in revenue loss because of rehabilitation and closure. Additionally, the Filipinos' way of disposing of trash is through the collection of garbage men known as 'basureros' together with their garbage trucks that come by weekly. The collected trash is not segregated and just goes straight to landfills. This practice of getting rid of waste led the Philippines to be the third largest contributor of mismanaged plastics, meaning it is ineffective, causes harm to the environment and public health, and only contributes to the increase of the plastic problem.

There are many contributors to the plastic issue, especially the big brands that use and manufacture plastic and those in food businesses, such as coffee shops, that became popular after the pandemic because of the influence and promotion in social media. This has made them a popular spot for younger generations who enjoy documenting their expenses and sharing them with their followers. Nowadays, a lot more coffee shops are still popping up all across Metro Manila, as well as in the more urbanized regions and provinces. Filipino consumers prefer going to coffee shops to relax and enjoy their favorite beverages. Many of these customers are students doing their homework, digital nomads working from home, especially during this epidemic, and those who just want to decompress (Mingoy, 2022). Due to this phenomenon and relevancy, it can be considered one of the top plastic polluters today.

Many individuals and organizations are trying to come up with a solution to overcome this issue. Still, even though many are trying, anyone has yet to come up with a solution that will definitely reduce plastic pollution. However, using alternatives is useful for humans and our environment. Adapting to using alternatives may assist the environment by reducing plastic waste. There are currently a lot of alternatives, and one of those is wooden utensils which can be seen utilized by coffee shops. Alder-Tek Manufacturing (2020) explained they use fewer resources, produce fewer byproducts, and create less waste than single-use plastics. Adjusting to involving it in our day-to-day routines can be valuable to the climate, as it lessens squandering and eco-accommodating. Wooden utensils have a lot of benefits and can be continually made as they come from fast-growing trees such as birch and bamboo. Because of this, its benefits played a significant role in encouraging more customers to use it.

Wooden utensils are not new to our country since we have used wooden kitchen wares for cooking. According to Eco Bravo (2021), wooden utensils have a lot of benefits, such as they do not scratch, are strong, and are assured of safety from bacteria. There are a lot of advantages that are beneficial for the users and economy since it can be recycled or used

again. Using wooden spoons will not only reduce the numerous amounts of plastic waste but will also help our country to be sustainable and encourage individuals to use environmentally friendly alternatives once spread across the country. Traditional wooden cutlery contributes environmental, financial, and health benefits to the planet. It is also less energy for processing; it is more sustainable than plastic and can be decomposed. Nowadays, many people use wooden straws to support the environment. Wood is reusable and has zero waste which contributes to reducing thousands of junk (Elevera et al., 2021).

In the Philippine food industry, coffee shops could invite a lot of people to engage in using substitutes for single-use plastics for the sustainability development of our environment.

RELATED THEORY

Sustainable Consumption was the most appropriate theory to support the study. This theory described in Quoquab and Mohammad (2020) that various authors have defined sustainable consumption differently, yet, it generally suggests a consideration of basic human needs and an avoidance of excessive consumption. It also focuses on caring for environmental welfare and fulfilling the needs of future generations. Additionally, it also considers quality of life over material standards of living (UNEP, 2010). At this point, this illustrates that bringing initiatives which are alternatives in our daily necessities in order to promote sustainability enhances efficiency and living quality as well as minimizing waste that assists to resolve the current issue of plastic. It is evident that the desire to reach and provide for the betterment of the environment could be executed by implementing the usage of wooden utensils that help develop in the economic growth at the same time influencing the cafe establishments to switch due to its incentives.

SYNTHESIS

In this paper, the researchers reviewed some significant issues relevant to the usage of wooden utensils among coffee shop owners. The literature review indicated that coffee shops are an integral part of Filipino society, offering a warm and inviting setting for individuals to socialize, conduct business, and savor delicious coffee and food. Studies have shown that coffee shop ambiance increases creativity, alertness, and learning ability. Thus, making it an absolute locale for our research study. The Philippines is the third largest contributor of mismanaged plastics, with an estimated 0.75 million metric tons entering the ocean every year (World Bank Group, 2021). To reduce plastic waste, consumers are finding alternatives such as wooden utensils, which use fewer resources, produce fewer byproducts, and create less waste than single-use plastics. Wooden utensils have been used in cafes to reduce plastic waste and are environmentally friendly. Whereas plastic utensils are flimsy and harmful to the environment, wooden utensils are safer than plastic and stainless steel utensils, as they do not scratch cookware and can be used for years without the risk of scratches or blemishes. Cutleries made of wood are durable and can withstand daily use, and last a lifetime. Traditional wooden cutlery contributes environmental, financial, and health benefits to the planet. Bamboo is also beneficial due to its flexibility and fast-growing features. Wooden utensils have natural qualities that make them safer and more sanitary. They also have antibacterial properties that help trap and eliminate germs and bacteria, making them safer to use and more sanitary. Additionally, they can be composted, making them environmentally friendly and durable. The Sustainable Consumption Theory was selected as making use of alternative strategies can increase productivity, improve living conditions, and decrease plastic waste. The use of wooden

utensils can boost the economy and motivate cafe businesses to adopt sustainable practices.

DEFINITION OF TERMS

Alternative **-** Usage of other things that are available for replacing something that may be more convenient for everyone.

Eco-friendly/Environmentally friendly **-** Safe for the environment.

Substitute **-** Term used to replace something instead of the other one.

Sustainability **-** Exercise on how long and how strong something is to stand.

METHODOLOGY

RESEARCH DESIGN

This research is a Descriptive-Narrative Research Study. The purpose of descriptive-narrative is to reflect on collected ideas and stories from the key informants in detail. These stories will be used to describe the outcome of the study Creswell, J. W. (2013).

Descriptive-narrative research design is relevant to this study as the researchers' goal was to perceive the alternatives that were used and the key informants' experiences and perceptions after changing to alternatives. This research was conducted in the cities of Imus, Bacoor, and Dasmariñas in Cavite. The population for the study was cafe owners or those with a high position in the business. To reach the needed informants, the researcher provided a permission letter to serve as consent to show their willingness to participate in the study.

CONCEPTUAL FRAMEWOR

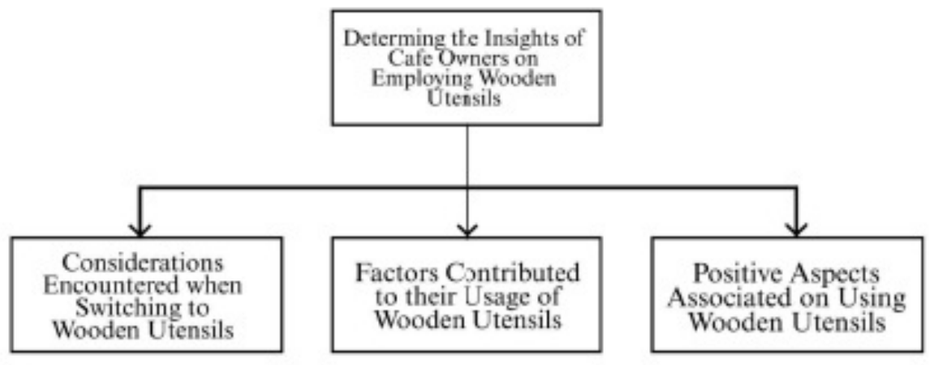

Figure 1*: Wooden Utensils Utilized in Cafe Shops to Reduce Plastic Waste*

In Figure 1, the researchers gathered the experiences of participants in cafe shops, which are the cafe owners, representatives, or senior baristas who had insights about wooden utensils in coffee shops. In this framework, the key informants could explain their findings of how wooden utensils affected them. It presents the impact of wooden utensils on the cafe owners when switching, which includes factors that persuaded them. Hence, it is helpful to the researchers in answering the research questions as this paradigm comes with the benefits of using wooden utensils.

According to Lindwall (2020), reducing plastic use is the most effective way to avoid this waste (and the impacts of plastic production and use). Instead of investing in quality goods that will last, individuals often prioritize convenience over durability and consideration of long-term impacts. Consequently, the responses of the chosen participants in this study could affect the general outturn of this study in regard to the proposed alternative to reduce plastic waste.

RESEARCH INSTRUMENT

To reach the goal of the study, the researcher used a semi-structured interview to fulfill the needed data from the selected informants of the study. This type of interview is ideal for acquiring the informant's views about a phenomenon (DeJonckheere et al.,

2019). In this matter, the researcher formulated a set of questions and met the target informants both through face-to-face interaction and online, using either Google Meet or Zoom application. Informant validation was done at the beginning of the interview to ensure that all chosen informants would be the most qualified for the study. After the interview, transcripts were evaluated using thematic analysis. Lastly, the researcher ensures that all gathered information will remain confidential.

RESEARCH INFORMANTS

The researcher selected a total of four (4) informants using a purposive sampling technique, comprising the chosen cafe owners and representatives of cafe shops. These target informants are from the cities of Imus, Bacoor, and Dasmariñas in Cavite.

The researcher provided a set of criteria to use in selecting the informants for the study in order to guarantee the validity of responses. **(1)** The participant must have a high position (owner, representative, senior barista) in the coffee shop he/she is working at. **(2)** They must have at least three (3) months experience of using wooden utensils in the coffee shop. Lastly, **(3)** The participant must have the ability to understand and acknowledge the interview questions in a quality manner.

RESEARCH PROCEDURES

The researcher formally dispatches a physical letter or e-mail containing an invitation to be part of the research study. This letter serves as a consent form for the potential informants of the study. For validation purposes, the researcher provided the informants with the option to decline the invitation or withdraw the agreement. If it happens, all information the informant gives will be pulled out from the study.

The researcher scheduled an interview after verifying the qualified informants. The researcher used a semi-structured interview in gathering the data to willingly
informants in sharing their experiences either through virtual or face-to-face communication. Follow-up questioning would only be possible if the informants agreed after the probing questions. The goal of this semi-structured interview is to establish a casual conversation between the interviewer and interviewee to avoid possible barriers that will hinder the informants from sharing more about their personal experiences.

Following the Republic Act 10173 - Data Privacy Act, all gathered information will remain confidential, and an assurance that the research study is free from any plagiarism, falsification, and other legal matters, including copyright.

ORGANIZING DATA

The data was gathered through the analysis of patterns in order to be familiarized with the data, which includes coding and detecting themes.

THEMES AND PATTERNS

The interview transcript was evaluated and transcribed by detecting necessary themes, recurring ideas, and patterns of belief, including the facilitated results. The dissection of steps involves the noting of patterns and codes in the analysis of participants that illustrates the similarity, distinctions, and gaps of each lived experience. Both the pattern and coding used will be disclosed.

TESTING OF EMERGENT ANSWERS

To evaluate the reliability of data, the actual experiences of the informants are classified thematically. It was demonstrated using a data sheet and informed them about the right to withdraw in cooperation. The chosen informants have the right to participate voluntarily and are not required to disclose any detailed or personal information. The contract is presented along with the audio recordings to assure that all given responses are well

documented. All with the approval of the participants.

DATA ANALYSIS

The researcher transcribed the collected data using thematic analysis, which is used in arranging all information according to its theme, labels, and codes (Kiger & Varpio, 2020). Verbatim from the recorded interview was properly transcribed with the help of a research validator. After in-depth checking of the transcript and organizing the ideas based on themes, the researcher began to check the relevance of the gathered data and interpret it according to the comparison and generated summary of the documentation. The process includes checking of comprehensive structure and analysis of the result comparison.

ROLE OF THE RESEARCHERS

The researcher ought to fulfill an academic study in continuous progress with no signs or any form of bias. The researcher broadened the data collected to have an in-depth understanding of the pattern utilized. This process released all the information and excluded the unnecessary verbatim not needed in the study. All detected patterns will be merged as one idea to develop the general viewpoint and identify the lived experiences of the participants involved.

RESULTS AND DISCUSSION

The findings from the study will be presented in this section.

Research Question 1: What reasons influence cafe owners' use of wooden utensils as alternatives in coffee shops?

The informants have distinct motives on what driving force persuaded them to use wooden utensils as alternatives in their coffee shops. The purpose of this research question is to dissect what is the most effective and suitable way to influence other business establishments, especially coffee shops, to start switching to environmentally friendly and biodegradable utensils.

Presented are the following themes and sub-themes in data analysis. The topics described in the table below are represented by bold letters, whereas italics represent the sub-themes. The statements below are the participants' responses regarding their perception of using wooden cutleries as substitutes for single-use utensils. The table provided also includes a summary of themes and sub-themes together with a discussion of the result.

The first theme that emerged was about an understanding of context. Participants mentioned that social media are one of the factors that influenced them to start using eco-friendly alternatives.

"Sa social media. Oo, tsaka aesthetic din." (Informant B)

Participants mentioned plastic utensils being one of the most kinds of plastic that are being disposed of and only contributing to the increasing plastic problem issue in the province of Cavite.

"It's wooden, among straws, I would assume na plastic utensils ang isa sa pinakamaraming dinidispose." (Informant A)

Motives in Switching From Single-Use Plastic to Wooden Utensils

The informants' shared the distinct circumstances which influenced them in using wooden utensils, and the cafe owners, cafe representatives, and or senior barista mentioned that convenience, social media, peers, consumer preferences, and eco-friendly were the motives in changing

non-biodegradable to biodegradable utensils. From a technical perspective, in this 21st century, social media are the topmost factor that can easily influence business infrastructures.

"Lets say vision mission nila na ang ipupush nilang products is eco-friendly so 'yung mga binibili namin na lets say paper wrap is for pastries ganon, we get it from the same place so might as well utensils nila which is wooden doon na lang rin namin kunin." (Informant A)

"Uhh, para maano na rin, ano tawag dun? Recycled yung ano, mareduce mo yung gamit ng plastic." (Informant B)

"Peer, social media, and consumer preferences were motives for switching to wooden utensils." (Informant C)

"Wooden utensils kasi, 'di ba pagkagamit mo syempre ididispose mo na, so mas earth friendly siya since wooden nga siya hindi siya plastic. Nakaka reduce ng waste sa environment natin." (Informant D)

Research Question 2: What challenges and obstacles of the cafe owners on reducing plastic waste and how do they overcome that situation?

As our participants' job positions are business owners, cafe representatives, and or senior baristas, they bear a huge responsibility when it comes to managing their coffee shops and being environmentally aware. In having such an immense duty to keep everything in place, cafe owners and others have already seen and handled worse-case scenarios. They already have experience using single-use plastics and weigh the advantages and disadvantages of serving products with non-biodegradable material. They overcome this situation by being sensible of materials, therefore using wood.

"If I'm not mistaken hindi na sila nangongolekta kapag hindi naka segregate ang garbage mo, so I think that's big deal din atsaka malaking bagay rin na kung 'yung n—L— LGU's natin mismo sila na 'yung maglabas ng policies and possibly siguro umm.. incentives para 'yung mga businesses establishments nila is mag-switch na to wooden utensils from plastic." (Informant A)

Considerations to Settle When Using Wooden Utensils as Alternatives

Informants said that the price difference when it comes to plastic and wooden material does not have that much difference and might as well use the one that is more environmentally safe to use. Other considerations to settle were customers' preferences; whether they are comfortable using it.

"Especially now na pinupush na rin naman 'yung eco friendly items so it's not like yung wooden utensils is ganon na kalayo 'yung price point niya as opposed to plastic." (Informant A)

"Si owner as much possible gusto niya talaga hindi nakakasira sa environment. Siya lang talaga. Choice niya." (Informant D)

"May mga feedback kami na okay daw na ang ginagamit namin is mga wooden utensils." (Informant D)

Research Question 3: *How can using wooden utensils aid in waste reduction?*

Observing the data gathered, the informants have come up in sharing their experiences and thoughts regarding the usage of wooden utensils as substitutes. This research question

aims to identify what are the positive consequences of using wooden utensils as alternatives in reducing plastic waste according to the cafe owner, representative, or senior barista's answers. Based on the interview responses, the key informants have described the application and attributes that wooden utensils possess compared to single-use plastics. They also consider how wooden utensils could assist in quality living. These experience-based explanations help the informants to illustrate the advantages of using wooden utensils.

"I think less likely siyang masira compared sa plastic utensils." (Informant A)

Obtained Utility from Wooden Utensils

The informants were able to express their encounters when switching from single-use plastic to wooden utensils which helped in encouraging other business establishments to be influenced. Along with this, they have stated as a response to the interview questions the benefits of using wooden utensils. These include easy segregation, sustainability, and less harm to the environment, which are among the frequent and quality traits when using wooden utensils.

"I think it's a good advantage na since ngayon mas nabibigay na ng emphasize ang gobyerno sa segregation, kapag nag wooden utensils ka, you can just put it all in one place." (Informant A)

"Nakakatulong yan pag-ano, depende sa ano kasi kung nagsesegregate ka talaga ng ano, ng trash mo. Pero ano naman, uhh, good din naman na kasi na dito sa Mambog, nagsesegregate sila dito eh." (Informant B)

"Having fewer harmful buy-products and ability to be composted basically provides all the solutions to the drawbacks that single-use plastics have introduced." (Informant C)

"Kasi nga mas mura (plastics), unang una mas mura siya tapos tinatapon na lang kung saan-saan, atleast yung wooden utensils itapon man natin safe." (Informant D)

Table 1: Themes and sub-themes generated after coding and analysis of interview extracts.

Themes	Sub-Themes
Motives in Switching from Single-Use Plastic to Wooden Utensils	Convenience Influence by Others Environmentally Friendly
Considerations to Settle When Using Wooden Utensils as Alternatives	Almost Same Price with Plastic Owner Preferences Customers Feedback
Obtained Utility from Wooden Utensils	Easy Segregation Less Harmful Sustainable

The table presents the collected patterns from the analysis of interviews conducted with selected cafe owners, representatives, or senior baristas in cities of Cavite. It shows how the informants were persuaded in using wooden utensils, how it benefits them and the plastic waste issue in Cavite, and what considerations they have to visualize when switching from disposable plastic to wooden utensils that affect the perception of the key informants.

The key informants shared their perceptions regarding the utilization of wooden utensils as alternatives in their coffee shops. The good points are: (1) The informants were encouraged to switch because of who or what influenced them. (2) The advantages of wooden utensils are a lot more beneficial to the informants as well as to decrease the plastic problem in Cavite. (3) The price point

of wooden utensils as opposed to plastic is almost the same. (4) The preferences and feedback from the owner itself including from the customers were motivations and contributed to the shift. With the experiences perceived, the informants were knowledgeable about the topic, specifically the wooden utensils as alternatives including its positive impact on their coffee shop and its promotion as initiatives in reducing the plastic waste in Cavite. This study stated that the informants have an understanding of the ongoing plastic issues in Cavite and their assistance and initiation in switching is a potential way to lessen the waste.

An in-depth acknowledgment of the usage of wooden utensils as alternatives should be discussed in order to provide enlightenment to invite other cafe owners to participate in the action plan. Improvement in sharing this act enables the environment to spread awareness on how switching to wooden utensils could support managing the plastic waste in Cavite.

CONCLUSION

The study's findings and analysis led the researchers to conclude that wooden utensils as an alternative have successfully promoted selected coffee shops to create an eco-friendly environment that can accommodate various conditions such as owner preferences, customer feedback, pricing, and impacts. The cafe owners, representative, or senior barista have their own factors with switching to alternatives and are environmentally aware of the said phenomena. Due to the influence and social media trends, wooden utensils as alternatives were introduced. Moreover, the selected informants have not encountered any hindrances to utilizing wooden utensils as alternatives to single-use plastic, but they are considerations to sort out. Assessing its effectiveness and customer preferences helped the informants to determine its benefits before using the wooden utensils as a substitute. Its advantages make it more accommodating to the informants as it helps in their coffee shop as well as in reducing the plastic waste in Cavite.

It was also mentioned that wooden utensils assist easy segregation and sustainability which creates less harm to the environment. Accordingly, utilizing wooden utensils and spreading the awareness to change to wooden utensils will be valuable to reduce plastic waste which cafe owners, representatives, or senior baristas could perform. Hence, it is important to explore the desirable features of wooden utensils and explore other alternatives that are suitable and available in the food industry to commence reducing plastic waste in Cavite.

RECOMMENDATIONS

To have a further comprehension of a variety of perceptions among selected cafe owners on using wooden utensils as substitutes in coffee shops to reduce plastic waste, below are the researcher recommendations:

- Cafe owners should evaluate all waste management strategies in their business premises to be able to develop more effective solutions that can combat the value of multiple uses of plastic.

- Cafe owners must make use of platform recommendations for plastic waste management and biodegradable alternatives which are wooden utensils by avoiding single-use plastic to help decrease the rate of overuse of plastic in the province of Cavite.

- Cafe owners should prioritize decreasing the use of plastic and preventing it from being used, as well as making sure to encourage their customers to do the same.

- Implementation and practices initiated by the government such as LGU that comes with great incentives can provide a positive capacity to preserve natural resources and maintain ecological balance in our natural environment for the benefit of present and future cafe premises if this act requires all of them to join.

- Future researchers should not limit the number of participants and start researching a huge population and area in the entirety of Cavite to assess the perception of the selected cafe owners on utilizing wooden utensils as alternatives in coffee shops. The addition of informants allows the researchers to obtain precise data and clear outcomes.

- Future researchers should make a comparative analysis of alternatives used by the cafe shops in Cavite to assist in reducing plastic waste.

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Perception of Small Business Owners Towards Business Planning in Imus, City Cavite

Renzel Joy R. Abadiano, Andrea R. Agnes, Jun Clyde D. Ayaton, Angel Mae C. Balaba, Mario O. Lubiano, Rain Chloe A. Ramirez, Queen G. Villar

Accountancy, Business and Management

ABSTRACT

This study focuses on analysing the perceptions of small business owners towards business planning and its significance for achieving success and long-term sustainability. By understanding small business owners' viewpoints, strategies can be developed to enhance their planning practices and overall business performance. The purpose of this study is to gain insights into business owners' views and ideas about business planning, as well as to identify the problems and barriers they encounter during the development and execution of business plans. Understanding their perceptions about business planning can give useful insights into their planning processes, highlight areas for improvement, and aid in the development of plans to boost business success. This study contributes to existing literature by providing a comprehensive understanding of small business owners' perceptions towards business planning. Based on the research findings, small business owners perceive business planning as crucial and valuable for their operations. It enables them to establish goals, strategies, and key aspects like target markets, budgeting, informed decision-making, and adaptability to challenges.

Keywords: *small business owners, business planning, perception, challenges, benefits, factors*

INTRODUCTION

BACKGROUND OF THE STUDY

Studies have shown that business owners generally have a positive perception towards business planning. For instance, a survey conducted by the Small Business Administration (SBA) found that 64% of small business owners believe that having a business plan is important for their success (SBA, 2021). A business plan is a written document by the entrepreneur that describes the relevant external and internal elements involved in starting that new business (Zimmerman, 2014). A well-crafted business plan is a critical tool for any entrepreneur looking to successfully reach their goals. In fact, statistics show us that 71% of fast-growing businesses have written plans that they refer to often, while only 35% of smaller businesses take the time to create them. Each business has a particular field of focus, and a business plan expands a more intensive map towards the success of the business (Yaqub, 2023). According to Jetley (2020), entrepreneurs who take the time to fully develop their business plans before starting up are much more likely to bring their vision to fruition. With a 260 percent greater likelihood of launching their business, the value of patience and planning is clear.

A business plan not only helps an already established business grow, but it can also help increase your chances of success

when starting up a business from scratch. If you're looking for growth or want to launch a new product or service, consider using a business plan – it just might make all the difference (Yaqub, 2023). Overall, these findings suggest that business owners generally recognize the importance of business planning and that it can have a positive impact on their company's success.

Creating a business plan is an essential first step for aspiring entrepreneurs to determine whether their venture is viable before spending too much time or money. This will give you something concrete by which to monitor and assess the progress you make. A business plan is meant to help you clearly express your startup approach. Various statistics expose the atrocious rates of business failure and people cannot help to wonder why many businesses are so bound to fail. Several studies mention "lack of business planning" as one of the reasons. Nonetheless, it is not only newly established businesses that greatly benefit from a business plan, long-standing companies and large conglomerates also need to modify their business plans to adapt to current business environments and uncertain market changes (Simplilearn, 2023).

According to studies, business plans are included in roughly 71% of the fastest-growing businesses, suggesting that even established companies can gain from updating their plans. And some companies with plans expand 30% quicker than those without (Nationwide, 2022). Building or creating a business must provide a clear goal that can be seen in the business plan. Wherein, it must be as detailed as possible since it will become your road map to effectively achieve the ambitions that you want in your business. That's why in order to have a viable venture you must determine all the needs of the business through critical thinking and brainstorming of innovative ideas, your perspective towards financial and plan in a problem that might arise when executing to build your business (Tillotson, 2022). Business plans can also help explain why an idea is good or bad for your company. The primary importance of a business plan is that they help you make better decisions (Lindzon, 2022).

The purpose of this study is to better understand business owners' views and ideas about business planning, as well as to obtain insight into the problems and barriers they face while developing and executing business plans. Understanding business owners' perceptions about business planning can give useful insights into their planning processes, highlight areas for improvement, and aid in the development of plans to boost business success.

RESEARCH QUESTIONS

This study helped the researchers to determine the perceptions of small business owners towards business planning to selected business owners.

The research guided by the following questions:

1. What are the perceptions of business owners towards business planning?
2. What are the challenges or struggles they face during business planning?
3. How business planning contributes to the success of a business?

RESEARCH ASSUMPTIONS

These assumptions helped the researchers determine what research questions needed to be asked, what studies

and theories would guide the research, and how data would be gathered to answer the research questions. This study is based on the following assumptions:

1. Business planning is essential for the success of any business.

2. Without a well-thought-out plan, businesses are likely to fail.

3. Business owners who engage in effective business planning are more likely to experience business success compared to those who do not engage in planning.

4. Without a business plan, it is difficult to make informed decisions and track progress.

5. Business planning is not only for start-ups – but established businesses should also have plans in place to ensure continued growth and success

SIGNIFICANCE OF THE STUDY

The following will be the beneficiaries of this study:

Future business owners can gain from learning more about how businesses work and what factors contribute to their success.

Existing business owners can benefit from knowing the importance of creating and following a plan. It also covers common mistakes made during the business planning process and how to avoid them.

Investors will be able to gain an understanding of the importance of business planning, which can help them make better decisions about which companies to invest in.

Business coaches and consultants can benefit by understanding the importance of creating and following a plan. This knowledge can help them more effectively advise their clients on how to grow.

Future researchers will benefit from this study by acquiring a reference for conducting a similar study, which will be useful in identifying possible research directions.

SCOPE AND DELIMITATION

This study is focused on determining and understanding the perception of small business owners towards business planning in Imus, City of Cavite. The key informants of this study are only five (5) small business owners in Imus, Cavite. The study conducted through individual interviews collected data on the business owners' perceptions towards business planning, the challenges or struggles they face during business planning, and the factors that influence their attitudes towards planning. However, this study does not cover large corporations, the methods of starting a business, or the perceptions of business planning among employees or other stakeholders.

REVIEW OF RELATED LITERATURE

Knowing what Business Plan is

A business plan is a practical tool for entrepreneurs to use in designing their ventures. This tool helps entrepreneurs to plan a business idea before taking action (Katz & Corbett, 2016).

The most crucial component of starting a business, according to Haag (2013), is a business plan. When a company owner starts their own venture, potential investors take into account how knowledgeable and prepared they are, and this affects whether they decide to provide funding. A persuasive business plan not only explains the business

concept, but it also demonstrates the author's expertise in their line of work by going through the crucial specifics of how the idea will be implemented.

Business Planning Contributions to a Business

Business planning is necessary for business ventures. It helps businesses see possible issues and provide workable solutions. Making important decisions is facilitated by it. This is a sensible approach that helps the business over the long haul. The ability to help identify both short-term and long-term goals is another crucial aspect of a company strategy. It creates a vision and sets objectives (Business Plan in Entrepreneurship, 2022).

Alexander (2022) states that having a distinct vision from the beginning guarantees that your firm has a sense of direction and purpose. With the help of this vision, you will be able to spot gaps in a variety of areas, including consumer wants, your target market, short- and long-term objectives, and financial needs. Your chances of success and financial benefits will improve the earlier you plan to overcome failure.

Moreover, assessing possible risks and developing strategies to reduce them are both essential components of successful business planning. The development of a risk management plan is one strategy. By doing so, a business might be better prepared to handle risks before they have major financial consequences (Ward, 2019).

Utilizing Strategy, Overcoming Weaknesses, and Taking Opportunity into Consideration

A strong business plan, according to SimpliLearn (2023), may be a game changer for entrepreneurs wanting to acquire financing to expand and scale. It persuades investors in the future that the initiative will be profitable and presents a realistic forecast of how much profit may be expected and when it will be accomplished. A business plan, however, is beneficial to more than just new businesses. Established businesses and massive conglomerates must also modify their business plans to change business circumstances and unexpected market shifts.

Also According to Adalia (2022), while planning your business, you should know how much funds you have to launch the business and whether you can continue its daily operations, especially in the early months.

Setting defined company goals is the key to effective growth. However, intelligent management entails putting in place a strategic strategy based on a solid company model. Monitoring the development of this strategy enables you to make the appropriate decisions at the appropriate moment (Chisom, 2021).

Furthermore, by means of simulation, a business plan overcomes some of its traditional flaws while strengthening its strengths and opportunities. It may also be used as a training tool in public-sector entrepreneurship initiatives. The business plan may be more complete and give more information about the environment in which the start-up must play the game by combining forecasting, planning, and simulation models. As a result, the business plan is transformed into "not just an evaluation of a project's profitability, but also the future story of an idea, in which people are the central point of success." (Mariani et al., 2019).

Influence on Business Planning Engagement

Brinckmann and Kim (2015) inform business owners and managers that their cognition and experience impact their probability of engaging in business planning, regardless of the benefits business planning may give to their businesses. As a result, when faced with the issue of whether and how to undertake business planning, decision makers should critically reflect on their perceptions. It also implies that those with higher academic degrees are more likely to engage in business planning.

Those who would most likely learn and benefit from informal and formal business planning (i.e., those with low entrepreneurial self-efficacy or entrepreneurial persistence) may refrain from engaging in this activity. Individual cognition, such as belief in one's own potential, may lead to planning activities and experiential learning that can aid in the development of businesses (Brinckmann & Kim, 2015).

Furthermore, Brinckmann and Kim (2015) said that a sense of skills might be a crucial factor leading to engaging in potentially value-creating activities, whereas a perceived lack of abilities may drive individuals to avoid or delay important activities.

Previous experience and knowledge influence whether and how a person engages in planning behaviour, just as prior understanding influences the outcomes of business planning (Dencker et al., 2009).

Exposure to business planning will most certainly increase their understanding, knowledge, and talents in business planning over time (Dencker et al., 2009). Entrepreneurs with previous managerial experiences can also better access information and insights that aid in business planning.

THEORETICAL FRAMEWORK

This study presents the theoretical framework for the perception of small business owners towards business planning. According to Edwin Locke's Goal Setting Theory which states and suggests that effective business planning involves setting specific, measurable, achievable, relevant, and time-bound (SMART) goals. According to this theory, setting clear goals increases motivation and focus, provides direction for decision-making, and helps to align resources and activities towards achieving desired outcomes. Wherein it involves following steps such as identifying the overarching mission, vision, and values of the business. Set specific and measurable objectives that align with the mission and vision. Establish a timeline for achieving the objectives. Identify the resources needed to achieve the objectives. Develop strategies to allocate resources effectively. Monitor progress towards achieving the objectives and make adjustments as needed. To further comprehensive a business plan that not only relies on outlining the steps needed to achieve success but also provides a framework for monitoring progress and making adjustments along the way.

Furthermore, this theory highlights the importance of setting clear and specific goals that are aligned with the overall mission and vision of the business and emphasizes the need for ongoing evaluation and adaptation to ensure that the business remains on track towards achieving its objectives. It also emphasizes the importance of feedback and evaluation in achieving goals. Businesses must continuously monitor their progress towards their goals, make necessary

adjustments, and provide feedback to employees. This approach ensures that employees remain motivated, focused, and aligned with the company's objectives.

In conclusion, the Goal Setting Theory is relevant to business planning as it provides a framework for setting and achieving objectives effectively. By setting specific, challenging, and measurable goals, businesses can develop effective strategies for achieving success, improving performance, and maintaining employee motivation

Another theory is the Self-Efficacy Theory by Bandura. Bandura (1977) stated that self-efficacy is an individual's confidence in their capacity to complete a specific task. Self-efficacy is seen as an essential component for the development of intentions. Individuals who feel they have the potential to reach a goal are more likely to have the desire to achieve the objective.

According to self-efficacy theory, entrepreneurs will only undertake an entrepreneurial endeavour if they think they have the skills and capacities to face the problems that a certain opportunity brings. If the potential entrepreneur believes the endeavour is too difficult, he or she may examine other alternatives, such as salaried employment.

Self-efficacy can impact a business owner's ability to engage in business planning activities such as goal setting, business plan creation, and resource and assistance seeking. Business owners who have prominent levels of self-efficacy are more likely to be confident in their abilities to overcome entrepreneurship's hurdles and to take initiative-taking efforts to develop and build their businesses.

Business owners with poor self-efficacy, on the other hand, may be less inclined to engage in business planning activities, which could hinder their business's development and success. They may also be more prone to emotions of self-doubt and uncertainty, which can have a negative effect on motivation and performance.

SYNTHESIS

In conclusion, a business plan is an essential tool for entrepreneurs to design and plan their ventures effectively. It highlights the entrepreneur's expertise and preparedness, increasing the likelihood of securing funding from investors. Business planning contributes to the long-term success of a business by helping identify goals, creating a vision, and developing strategies to mitigate risks. It also enables businesses to adapt to changing circumstances and seize opportunities in the market.

A strong business plan not only attracts investors but also serves as a roadmap for growth and expansion. It provides a realistic forecast of profits and guides decision-making. Proper financial planning is crucial, considering the funds required for launching and sustaining the business. Strategic planning based on a solid business model allows for intelligent management and timely decision-making. Simulation and forecasting models enhance the traditional business plan by providing comprehensive information about the business environment, enabling entrepreneurs to create a compelling story for success.

Engagement in business planning is influenced by factors such as cognition, experience, and perceived skills. Decision-makers should critically reflect on their perceptions and recognize the benefits that business planning can bring. Academic

degrees and prior entrepreneurial self-efficacy play a role in determining engagement in planning activities. Exposure to business planning and prior managerial experiences contribute to increased knowledge, skills, and access to valuable information, improving the effectiveness of business planning efforts.

Overall, a well-crafted business plan not only helps entrepreneurs secure funding and navigate challenges but also provides a strategic framework for achieving long-term goals and maximizing success. It is a dynamic tool that evolves with the business and supports informed decision-making, enabling entrepreneurs to seize opportunities and drive growth.

METHODOLOGY

RESEARCH DESIGN

Descriptive - Narrative is the research design used in this study. This type of approach is all about accumulating and telling a story or stories exhaustively wherein the researchers describe individual experiences, write narratives about them, and talk over the meaning of the experience with the individual (Juillion, 2019). Therefore, descriptive- narrative will be extremely useful in this research. This approach is relevant and accurate in this study because researchers want to describe the participants' experiences with how business planning contributes to the success of a business and gain some insights into their planning processes.

CONCEPTUAL FRAMEWORK

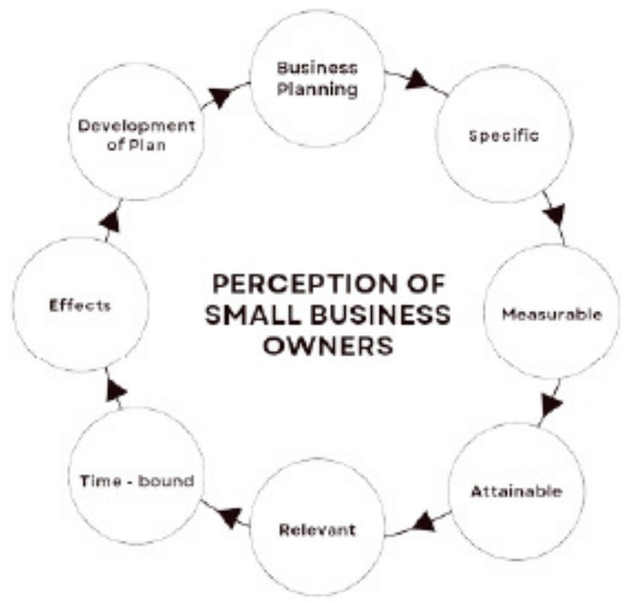

Figure 1.1 This conceptual framework represents the variables of the study Perception of Small Business Owners Towards Business Planning in Imus, City Cavite. These shows the distinct factors that affect the perceptions of business owners towards business planning.

RESEARCH INSTRUMENT

A semi-structured interview was used as the research instrument in this study. The researchers prepared a list of questions and modified them during the interview process in order to explore specific replies or follow up on lines of questioning. A semi-structured interview is appropriate when the researcher aims to acquire thorough information about a certain topic from the perspective of the participants. The questions are aimed at gathering information on the participant's experiences, beliefs, and views; the interviewer has the opportunity to go deeper if necessary, and the researchers are able to obtain rich, detailed data that can be used to develop a deeper understanding of the topic being studied. Upon the completion of the interview questionnaire's construction, our instrument undergoes a process of validation by an expert related to our research topic before its utilization in data gathering.

RESEARCH INFORMANTS

The researchers selected a total of five informants. These informants are five small business owners located in Imus, Cavite. The selection criteria for the informants required that they possess (1) owner of a small business, (2) experience in business planning and (3) must have their business operates in Imus, Cavite.

PROCEDURE

The researcher conducted a semi-structured interview with five (5) small business owners in Imus, Cavite to gather information about their perceptions towards business planning. A semi-structured interview is appropriate when the researcher aims to acquire thorough information about a certain topic from the perspective of the informants.

The questions were aimed at gathering information on the participant's experiences, beliefs, and views, and the interviewer has the opportunity to go deeper if necessary, so the researchers were able to obtain rich, detailed data that can be used to develop a deeper understanding of the topic being studied.

The researchers arranged an appointment first with the selected business owners in order to start the interview. Then, during the interview, we prepared the needed materials, such as pen and paper, a voice recorder, and/or a digital notes app, to record the whole interview and be able to review and discuss the answers of the key informants that will be the basis for our data analysis.

In order to obtain the necessary and desired information for our study, the researchers asked follow-up questions throughout the interview based on the responses of the key informants. The researcher transcribed the statements and analysed the information after the interview to identify themes or patterns. This analysis can then be utilized to get a better understanding of the study that is being conducted.

ORGANIZING DATA

The data was gathered through interviews conducted in person. The information was obtained by analysing patterns to identify data familiarity, which involved coding and identifying themes.

THEMES AND PATTERNS

Our process for analysing the interview transcript involved identifying significant themes, recurring concepts, and patterns of beliefs experienced by each participant. We observed these patterns to assign appropriate codes for analysis purposes that highlighted similarities, differences, and gaps within their shared experiences.

TESTING OF EMERGENT ANSWERS

The participants' life experiences are thematically classified to assess data reliability. Participants were informed about their right to decline participation at any time while findings were recorded in a comprehensive data sheet format. Selected individuals joined voluntarily without obligation or disclosure of classified information; a consent form was provided for thorough documentation alongside audio recordings with consent.

DATA ANALYSIS

The researchers transcribed the collected data using thematic analysis. It is utilized in arranging everything in accordance with its theme, labels, and codes

(Kiger & Varpio, 2020). The exact words from the recorded interview were used to transcribe the data. After a thorough review of the transcript and after categorizing the ideas into themes, the researchers started assessing the relevance of the data that was gathered and interpreting it based on comparisons and descriptions of the themes.

ROLES OF THE RESEARCHERS

The researcher must conduct an academic investigation in constant progress without indicating any biases of any kind. The researcher elaborates the data gathered to fully comprehend the pattern used. This procedure will extract all the data and exclude any information that is unnecessary for the study. Each and every pattern found will be merged into one idea to develop the general viewpoint and determine the lived experiences of the participants involved.

RESULTS AND DISCUSSION

This section provides the formulated research findings.

Presented are the following themes and sub-themes in data analysis. Bold letters are the themes presented in the table below. The statements below share the participant's lived experiences about their perceptions towards business planning. The table also presented the summary of themes and sub-themes along with a discussion of the result.

Research Question 1: *What are the perceptions of business owners towards business planning?*

The informants mostly mentioned that business planning is considered crucial and essential for starting and running a business. All the key informants strongly emphasize the importance of business planning in providing clarity, setting goals, and developing strategies for their business. This type of research question aims to understand and explore the opinions, attitudes, and perspectives of business owners regarding business planning. The objective is to gather insights into how business owners perceive the role of business planning in starting, operating, and growing their businesses.

The first theme that emerged was about the importance of business planning. Informants mentioned that business planning is important as it gives them greater clarity in all aspects of business.

"Yes, of course because by having business planning it gives us a greater clarity in all aspects of our business, we are able to set our goals and the strategies that can help us achieve din." (Key Informant 1)

Informants mentioned that business planning helps them to identify their target market aligned with their business and emphasizes that without a plan, it is difficult to know where the business is heading. The informant recognizes the need to align the business with the preferences and needs of the target market.

"Oo, syempre. Kase kapag wala kang plano ka pag ka nag business ka hindi mo alam kung saan patutungo ung business mo... So kailangan yon, yun ang important planning kahit sa daily lives naten." (Key Informant 3)

"Uh for business planning kasi yun yung pinaka major niyo na kailangan kung mag start kayo ng business... for business planning kasi yun kasama yon para at least alam niyo kung kailan niyo agad mababawi yung puhunan niyo." (Key Informant 4)

Importance of Business Planning

The common views that the informants were sharing are that business planning is considered important and necessary. They emphasized that business planning provides clarity, sets goals, and develops strategies necessary for achieving success. Business planning is likened to a reference or a roadmap that guides decision-making, helps in resource allocation, and provides a step-by-step structure for the business. The informants highlight the importance of analysing the business environment, identifying the target market, and conducting research to align with customer preferences. Overall, business planning is viewed as essential for defining objectives, making informed decisions, and achieving desired outcomes in business.

"I see business planning as a roadmap to success na makakahelp samin na mag define ng mga goals for my business and how can we attain them. It is important for any company to have business planning so it can serve as a guide in our decision making." (Key Informant 1)

"For me, business planning is a must, especially when you want to start your business. Even kahit small business lang... Eto yung magiging guide mo... and ito den yung a plan on how to execute things" (Key Informant 5)

Factors Considered in Business Planning

The key informants mentioned the importance of considering factors such as the target market, pricing, marketing strategy, and goals in business planning. They highlight the significance of aligning the marketing strategy and prices with the target market's affordability and preferences. They also consider the creativity and uniqueness to have a competitive advantage against their competitors.

"The factors that we consider in business planning, I think it is good to have something unique or you must have some competitive advantage against everyone in the market." (Key Informant 1)

"Ah sa planning kase ang first na lagi naming tinitingnan is kung gugustuhin ba yun ng target market namin, since ang target market namin is kabataan." (Key Informant 3)

"Factors, pag nag bi-business planning ka yung area mo, target market, pricing, marketing strategy, tsaka yung goal mo... ano yung makakapag hikayat na pumunta ng mga customer niyo sa inyo." (Key informant 4)

Continuous Operations

The key informants emphasized the importance of continuous development, adjustment, and flexibility in the business planning process. They highlight the need for ongoing planning, consideration of different scenarios, and the inclusion of contingency plans to navigate challenges, seize opportunities, and ensure the success and growth of the business.

"For me feeling ko as long as na nag ooperate yung business mas maganda na continuous niyo siyang i developed yung business plan like hindi lang dapat kayo mag istay sa kung ano yung business plan niyo nung una." (Key informant 1)

"Yes, oo. Like hundred percent ng lahat ng nagb-business, they also need to plan kung ano yung gagawin nila on a daily

basis, kung maglalabas kayo ng bagong design, merch, color, lahat yun kailangan mo pagplanuhan, hindi pwedeng bara bara." (Key Informant 3)

"Oo, sobra yon kasi don nga as I've said don kayo magrerely nung ROI niyo kung kailan balik at strategic plan yung gagawin niyo kung ano yung plano niyo for the future yung contingency plan niyo." (Key informant 4)

Research Question 2: *What are the challenges or struggles they face during business planning?*

Challenges and Strategies

The informants mostly mentioned that they faced different challenges and created strategies for them to overcome those challenges when they started and ran a business. All the key informants shared the various kinds of challenges by providing their lived experiences and developing strategies in their businesses.

"Yung pandemic... so hindi mo inaasahan na darating yan, biglang tumama lang sa'tin tapos lahat ng negosyo bagsak so wala kang form of income para makapag generate... so ang ginawa ko non nag decrease ako ng manpower, decrease ng expenses... water tsaka ng electricity tapos nag bawas din ako ng mga overhead expenses" (Key Informant 4)

The informants mentioned the uncontrollable factors; they explained that their business faces challenges related to equipment and employee reliability, as well as other factors, such as the decisions made by staff or workforce. The informant recognizes the need for strategies so that their business will not fail.

"...so for example the machine that we use in filtering the water or the vehicle that we use in the delivery that's broken so we make sure that we are always ready to have a someone repair it another is we cannot avoid some employees who don't show up in work so we do our best to hire competent people who really values their work." (Key informant 1)

The common struggles that the key informants face when they run their businesses are the seasons. There are challenges in business that are beyond one's control, such as the occurrence of rainy seasons or unexpected events like the pandemic. To address these, it is important to have a backup plan in place that can sustain the business during challenging times.

"Mga challenges diyan minsan hindi mo kontrol e like yung pag may mga rainy season tapos like yung naging problema natin nitong pandemic so kailangan meron kang backup plan na magsusustain nung business mo." (Key informant 4)

"So what is our minimum was not applicable in all seasons so as you can see wala kami menu na pang pang rainy season... So yung season." (Key informant 5)

Informants also mentioned the challenges in terms of budget when they are starting their business, they mention that when starting a business, it is common for the budget to be limited and not all businesses immediately become successful or profitable. However, unexpected expenses can arise, which can further strain the budget and create difficulties in managing the business effectively. As a result, they were unable to release new products to their market and needed to consider their priorities.

"So far I think the main challenges or failures of having a business is one is the sales or budget related so like for example, your budget is limited for opening a business and then unexpected our budget, so we need to consider the priorities" (Key Informant 2)

"Oo nung nagstart kame, syempre lahat naman ng business pag nagstart ka, hindi lahat yan boom. so kapos, kapos yung magiging profit namen, kapos yung tubo namen, hindi kami agad makakalabas ng bago." (Key Informant 3)

Research Question 3: *How business planning contributes to the success of a business?*

Benefits of Business Planning

The key informants are expressing their belief in the benefits of having a business plan. They highlight that a business plan provides a sense of direction and increases productivity by outlining step-by-step processes and strategies. They also acknowledge that starting and running a business comes with struggles and challenges but having a business plan helped them navigate those difficulties and make necessary adjustments for success. The informants emphasize that without a plan, a business may struggle and lack direction, while having one provides focus and increases the chances of success.

"I think the benefit of having a business planning it can give you a sense of direction and it can also help you to be productive in your business... will allow you to make better decisions for your business..." (Key Informant 1)

"Business planning basically gives us the step-by-step process in operating in our business. I think it helps us so that we know what to do and it gives us a clearer vision on the different strategies that can help us achieve our goals." (Key informant 1)

Informants mentioned reflecting on their previous unsuccessful business ventures and the lessons they learned from those experiences. Despite their initial efforts to make those businesses work, they eventually realized that they were not profitable or sustainable. Instead of viewing these failures negatively, they used the lessons they learned to inform their decision to recognize the demand for such a service. They emphasize the value of learning from past experiences and using that knowledge to make informed decisions and overcome obstacles in entrepreneurship.

"Actually before opening our water station we had already tried different businesses... but when we finally realized that it is no longer profitable and working, we already decided to end it and instead of seeing it as a failure we used our learnings there to open up a business where we know that everyone. " (Key Informant 1)

"...with the help of business plan natulungan talaga kami... and we were able to get through those things with the help of our business planning." (Key Informant 5)

Table 1: Themes and sub-themes generated after the analysis of interview extracts.

THEMES	SUB-THEMES
Importance of Business Planning	Business Planning as Roadmap to Success
Factors Considered in Business Planning	Innovative Marketing Approach Marketing Strategy and Target Market

	Segmentation
Continuous Operation	Contingency Plan
Challenges and Strategies	Uncontrollable Factors Business Seasonality Business Budget
Benefits of Business Planning	Learning From Failures

The table shows the collected patterns in the interview conducted with selected small business owners. It describes the importance of business planning, challenges and strategies, factors considered in business planning, continuous operations, and benefits of business planning affects the perceptions of small business owners.

After interviewing the key informants, we observed that the majority of their responses to our first interview question described the importance of business planning in their business and how business planning serves as their guide and roadmap to success in their business, just as the informants noted that through business planning, they are able to identify their target market, develop strategies, make informed decisions, and set objectives.

There are factors that the informants pointed out that they considered in business planning, such as their goals, the location of their business, and the preferences of their target market. Considering there are so many established businesses, they believe that being innovative and distinctive will help them stand out from competitors. They also analysed their marketing strategy and target market segmentation based on their target market's capabilities and advantages. Moreover, business planning is a continuous procedure that has to be developed depending on the situation and conditions. According to one informant, you must prepare what you will do on a daily basis and thoughtfully plan whether you will offer new products to the market. Having a contingency plan in place whenever any of your business ideas do not work out is part of the continuous procedure.

The informants also experienced problems and struggles in their business planning, such as uncontrollable factors like the stability of their supply in their food businesses or the equipment from a water station. Another uncontrollable component is the employees. A few responses stated that they had no influence over their workers' decisions or competence. It is also essential for the business to be available and relevant at all times, which presents difficulties for some of them. One of our business owners suffered since they did not have a suitable menu for the rainy season, while another stated that they don't have a lot of demand in some months due to consumers' budget. Budgeting is a common challenge that organizations face since it is so important. They stated that they were unable to offer latest items due to lack of funds or a constrained budget.

According to the informants' experiences, business planning provides a sense of direction, aids in decision-making, allows them to identify principal factors, and lets them know whether they are still on track. It also enables them to learn from their mistakes and apply what they have learned to grow their businesses.

CONCLUSION

Based on the research findings, small business owners perceive business planning as crucial and valuable for their operations. It

enables them to establish goals, strategies, and key aspects like target market, budgeting, informed decision-making, and adaptability to challenges. They consider several factors in the business planning, some of them stating the significance of creativity to differentiate from competitors, goal setting, target market analysis, and strategy formulation. Challenges such as uncontrollable factors like labour and material quality, as well as business seasonality and limited budgets, hinder sustainable profitability and product releases. However, these business owners highlight the importance of backup plans to overcome obstacles. Business planning provides them with direction, identifies business needs, and enables them to evaluate if they are still on track.

The research findings align with Edwin Locke's theory of SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goal setting. Small business owners in the study recognized the importance of business planning as they perceived it as crucial for their operations. This corresponds to the "Specific" aspect of SMART, as they identified specific goals and strategies for their businesses. Additionally, they emphasized the need to set goals and strategies that are "Measurable," allowing them to track progress and evaluate their business's performance. By considering factors such as creativity, uniqueness, target market, and strategies, they ensured their goals were "Achievable" and "Relevant" to their business environment. Moreover, the recognition of challenges, such as seasonal fluctuations and limited budgets, demonstrates their awareness of the "Time-bound" nature of goal setting, requiring adaptation and prioritization.

These findings also align with Bandura's Self-Efficacy Theory, as owners' positive perception of business planning demonstrates belief in their abilities to execute plans. They exhibit confidence in decision-making, identifying crucial business aspects. Acknowledging challenges reveals realistic understanding, while backup plans indicate confidence in overcoming obstacles. Overall, the research emphasizes the influence of self-efficacy in small business owners' perception of effective business planning.

RECOMMENDATION

To profoundly understand the variety of perceptions among the small business owners towards business planning, below are the researcher recommendations:

- Business Owners should have a business planning to have a clear direction for their business' future such as in their decision-making, identifying their target markets, and strategies.

- Business Owners should continuously develop their business plannings and have back-up plans in order to overcome challenges and be able to adjust and adapt.

- Investors should know and understand the importance of business planning so that they would evaluate and make informed investment decisions.

- Business coaches and consultants should understand business planning because it forms the foundation for guiding and advising their clients effectively.

- Future researchers should broaden their scope by exploring other areas

that are relevant to this study. Including the large corporations, also understanding the perceptions of the employees and other stakeholders towards business planning, and the methods of starting a business.

- Future researchers should focus on providing different solutions if the existing business planning fails or does not work out.

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Influence of Drama and Arts to Personal Development of Grade 11 Performing Art students of Unida Christian Colleges SY 2022-2023

Abaja Edsel, Cabauatan Chelsy, Delos Reyes Cedrick, and Machitar Guenevere

Senior High School Student - Researchers

ABSTRACT

The researcher will focus on the selected learners' perceptions of drama and arts, as well as their positive influence on personal growth. The researchers conduct an interview with students to collect data on how the students are growing themselves through drama and arts. Since creative expression offers individuals a secure opportunity to explore their feelings, ideas, and experiences, the goal of this study is to promote and boost student self-esteem. Participation in theatre and art can also improve important skills such as effective communication, problem-solving abilities, empathy, and self-confidence.

The problem with this study is how a student's poor self-esteem can have a negative impact on them and, as a result, prevent them from developing personally. The final findings demonstrate the feedback provided by the selected informants about the contribution of drama and the arts to their own development.

This study examines how involvement in drama and the arts might improve important abilities including effective communication, problem-solving abilities, empathy, and self-confidence.

Keywords: *Drama and Arts, Performing Arts, Personality,*

INTRODUCTION

BACKGROUND OF THE STUDY

The performing arts play an important role in the education, growth, and maturation of students. Arts contribute to achievement and success in life, according to evidence. Arts programs provide academic, basic, and comprehensive benefits for students. By supporting students who lack confidence and self-esteem. In order to help Unida Christian Colleges' students who are in the performing arts, the researchers are conducting this study. When it comes to a student's ability to control their emotions, which is essential for building and maintaining effective interpersonal connections, self-esteem plays a crucial role in development. Low self-esteem students may lack confidence, yet a performing arts strand can improve and enhance student self-esteem. Creative expression provides individuals with a safe outlet to explore their emotions, ideas, and experiences. Further, participation in drama and art can enhance crucial skills such as effective communication, problem-solving skills, empathy, and self-confidence.

Self-confidence is increased through arts activities. Students will develop confidence and

self-assurance by participating in performing arts lessons in a variety of ways, from improvisation to stage performances. Students will get knowledge on how to step outside of their comfort zone, evaluate novel circumstances, think creatively, express their views and ideas in a secure setting, solve difficulties, deal with performance and presentation anxiety, and develop trust and self-reliance. They can use all of these helpful tools in school, on the social scene, in their future professions, and in other aspects of their lives.

The Relevance of Performing Arts Learning music, dance, and drama equips students with the skills they need to be innovative, think creatively, and appreciate people from all walks of life. Nord Anglia claims that students benefit greatly from learning music, dance, and drama because it teaches them to think creatively, invent, and respect people of all cultures and origins. Our culture and society depend on the performing arts, which are present in both official and informal settings. There are many places to experience music, dance, and musical theatre, including live performances in enormous arenas, our favorite songs and recordings, television shows, community theater productions, and unofficial dance halls. We value the chance to listen to or dance to our favorite music while watching our favorite songs. The performing arts have a significant role in how we live, communicate, and express ourselves. The process of experiencing, studying, watching, or performing a piece of music, a script, or choreography are some examples of the various settings that assist the artists to give a better performance.

Students are encouraged to express their emotions, use their imagination, and find their own voice through the performing arts. Each of the arts—music, dance, and drama—engages a student's mind, body, and emotions in different ways to boost self-esteem and encourage self-expression.

RESEARCH QUESTIONS

The primary aim of this study is to identify the Influence of Drama and Arts to Personal Development of Grade 11 Performing Art students of Unida Christian Colleges sy 2022-2023

Specifically it sought to answer the following questions: **(1)** How does exposure to drama and arts influence the personal development of Grade 11 performing art students in Unida Christian Colleges? **(2)** How can drama and arts promote empathy and emotional intelligence among Grade 11 students in Unida Christian Colleges? **(3)** In what ways can drama and arts contribute to the personal growth and development of Grade 11

students in Unida Christian Colleges beyond their academic pursuits?

The phenomenon derived from a particular experience. The researcher based this study on the assumption that Drama and art will help to address and deal in personal development of students involving their lack of self-esteem and self-expression. These experiences will affect the researcher's decision in choosing methods to apply, theories to include, and alignment of the study to the collected data. The following experiences are the possible causes of how this lack of self-esteem and self-expression phenomenon exists: **(1)** Lacking of self-Acceptance and trust in their own capabilities **(2)** Having negligent and Unsupported parents in their child's passion.

Additionally, to maintain the quality and uniqueness of the study, the study mainly focuses on the particular people who are best suited to be a participant of the study. The scope of this study is to find the influence of drama and arts on the personal development of grade 11 performing art students at Unida Christian Colleges in the school year 2022–2023. The target informants are limited to Grade 11 students who are currently studying the Performing Arts strand curriculum. These selected participants are the focus of the study since they are amateurs with little or no capabilities. The researchers excluded the grade 12 performing arts students since they had greater experience and exposure than the grade 11 performing arts students.

SIGNIFICANCE OF THE STUDY

The influence of drama and arts on the personal development of Grade 11 Performing Art students of Unida Christian Colleges in the school year 2022-2023 holds significant importance for several reasons.

Firstly, drama and arts can play a crucial role in promoting emotional intelligence, creativity, and critical thinking skills. These skills are essential for students to navigate and succeed in various academic and social settings. Additionally, these skills can also contribute to their overall well-being, helping them manage stress and anxiety more effectively.

Secondly, drama and arts can boost students' confidence, social competence, and empathy, allowing them to build meaningful relationships with their peers, teachers, and family members. These skills are crucial for their future success in their personal and professional lives.

Thirdly, incorporating drama and arts into the academic curriculum can provide students with an

alternative form of learning that complements traditional teaching methods. It allows students to explore different modes of learning and can enhance their academic engagement and motivation.

Fourthly, drama and arts can also provide opportunities for students to develop their cultural literacy, appreciate diversity, and learn about different historical and social contexts. These skills are crucial for promoting social justice and a more inclusive society.

Overall, the significance of the influence of drama and arts on the personal development of Grade 11 performing art students of Unida Christian Colleges in the school year 2022-2023 lies in its potential to enhance students' emotional, social, and cognitive skills, providing them with a more holistic and well-rounded education.

Undoubtedly, every person in the world has a personality, but not all personalities are endearing and conducive to good behavior. People with attractive personalities attract and have an influence on others without even recognizing it. A person with a positive demeanor can easily persuade others and get them to work. No matter how intelligent, attractive, or persuasive a person is, without a strong personality, they will not succeed.

RELATED STUDIES

Considering the fact that Drama and art gives entertainment as well as to provide meaningful performance to the audience, The performers themselves also gain various benefits from it, by enhancing their skills, learning how to express themselves, improving communication, as well as to build their Self-esteem. We cannot deny that drama and arts are crucial for their personal development. According to Ines Cortoda (2020), Performing arts programs are valuable and important to children since they contribute to their overall development. It implies that involvement in arts-related programs is important for one's growth because performance affects their maturing such as confidence, communication, academic, concentration as well their emotional-social skills that aid to their development. As per Nord Anglia (2022), Children can gain a variety of advantages from learning music, dances, and drama as it allows a child to explore their emotions, imagination and develop their distinctive voices as well as to engages a child's mind, body, and emotions in unique ways to boost their self esteem and help them to enjoy their self-expression. It shows how a person may benefit from this curriculum that affects their personal growth by participating in a variety of artistic disciplines. The performing arts students who serve as our informants have something to contribute to this

study, Since the strand they took includes music, dances, and drama. This enables the researchers to look into how they develop as soon as they enter as performing arts students.

Through the experiences of performing, drama and arts will teach many life lessons to individuals who will be retained and applied to their lives in order to grow themselves, as stated by Andreia Vibe (2016), Children who participate in performing arts programs will achieve better academic performance. It demonstrates the connection between the arts and academic success by showing how engaging in arts education improves and boosts reasoning, critical and creative thinking, as well as problem-solving, all of which indicate that art education has an academic impact. According to Mary Ibyemi (2019), Through aspects of arts everybody will be able to grow and develop their own character and become the better version of themselves. Personal Development is the inward of self, this is the process focusing on ways to become a better version of one's self which participating in performing arts can be one of the most effective ways to promote personal development. It suggests how every field of arts affects the maturing and growth of an individual since performing arts will improve their inner self effectively as they take part in this kind of curriculum.

As mentioned by Aubrey Rose Bea-Decloedt (2022), Children can develop their creativity and artistic aptitude by creating masterpiece arts which also help themselves to build their focus, discipline, creativity, and the capacity to interact effectively with other children. Drama and arts also deal with social interaction; they help people become sociable since it involves bonding, teamwork, and cooperation as well as to become more confident in their ability to communicate with others. Participating in this kind of program will also assist students in developing their interpersonal skills since it enables them to comprehend the role that the character they are portraying plays, which allows them to deeper understand and relate to the people's situations, feelings, and emotions. According to a study done by Lis Fortun (2018), Communication is the primary goal of any performance. And you'll need confidence to become an effective performer. After all, you're on stage to tell a story to an audience. The performing arts will help persons who are lacking in communication to overcome it. Through this kind of program, it improves one's ability to communicate, either verbally or nonverbally. They will practice and get used to their articulation, tone of voice, vocal progression, as well as their body language and facial expression that will be useful and beneficial to them in the future.

A study published by the Learning Links Academy (2021), Arts education provides children with a way to express themselves in a classroom setting, which is important for developing their self-esteem and mental resilience. When students work together to achieve a common goal, they feel heard and understood, creating a sense of secure acceptance that is essential for their confidence and self-improvement. Confidence enables individuals to face everyday challenges, through performing arts aid to overcome shyness and build confidence that will have an impact on their personal improvement and also develop their unique self.

Based on Dr. Jane N. Cariaga and Jonathan Molina (2016), Participating in performing arts, enables the performer to effectively express their emotions which contributes to their personal development. Everyone has the opportunity to express their emotions through drama and arts. It will enable them to step outside of their comfort zone and express themselves freely and effectively through the experience of portraying different roles of characters which will expand their imagination.

SYNTHESIS

The chosen related literature focuses on the discussion about the impact of performing arts for the personal development of individuals. Drama and arts have several advantages for people that aid and contribute to their development, particularly in boosting Self-esteem which is necessary and crucial to ourselves since it allows us to be more resilient as well as to be prepared to face everyday challenges. Throughout performing arts, Self-esteem will develop and grow as soon as they take part in, which enables them to become a better version of themselves. Therefore, Drama and arts play a vital role for their personal development. The theories and literature that were used in the study shows connection to the narrative experiences of the chosen people who are involved and experienced the phenomena. The descriptive-narrative approach was used to investigate the students' experiences in the performing arts strand that influenced their personal development.

RELATED THEORY

1902-1987 - Carl Rogers' Theory of Personality Development was the best theory to support this study. This theory believed that humans in their daily lives are creative and active people who stay in the present and are concerned with situations, interpersonal relationships and perceptions, only in the present. Roger's theory of personality development gives emphasis to human potential and free will for goodness.

DEFINITION OF TERMS

Empathy- the capacity to understand and share the emotions of others, putting oneself in their

place and experiencing the world from their perspective.

Emotional Intelligence- refers to the ability to recognize and understand emotions, both in oneself and in others, and to effectively manage and respond to them.

Falsification- the act of deliberately lying about or misrepresenting something.

Interpersonal Relationships- a social association between two or more persons.

Resilient- able to recover quickly after something unpleasant such as shock, injury, etc.

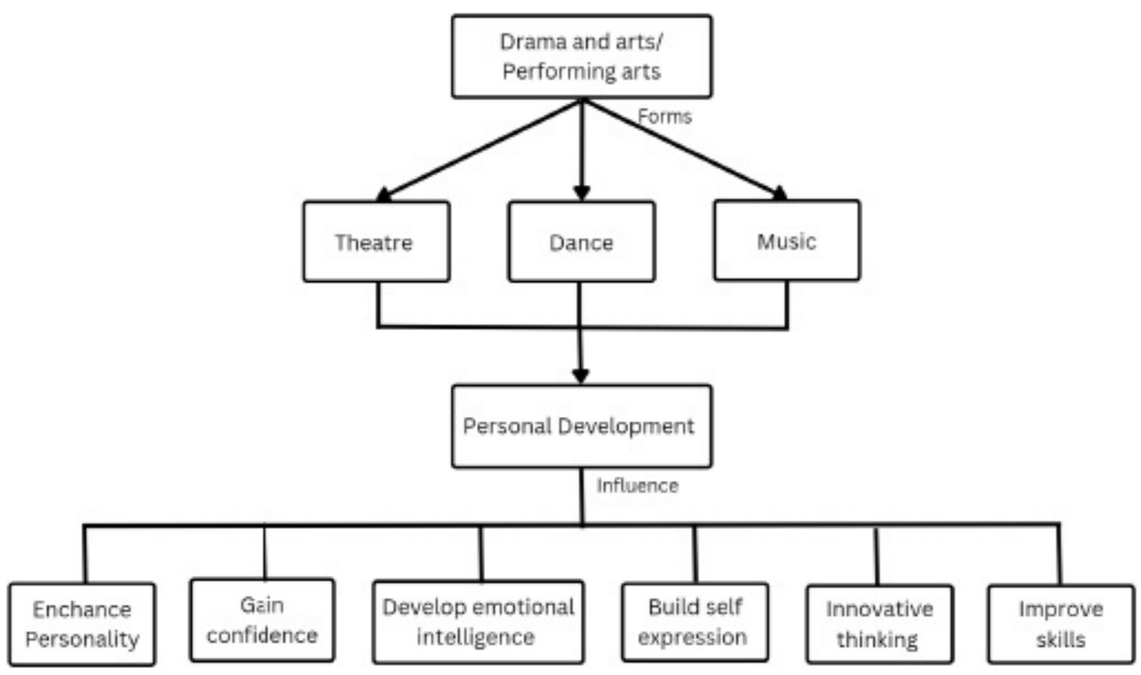
METHODOLOGY

RESEARCH DESIGN

This research is a Descriptive-Narrative Research Study. The purpose of descriptive-narrative is to reflect in collected ideas and stories from the key informants in detail. These stories will be used in describing the outcome of the study Creswell, J. W. (2013).

The researcher will target the perception of the selected learners in Drama and Arts and its positive influence of personal development to the selected learners. The aim is to analyse how the learners could possibly Develop themselves personally through Drama and Arts. This research is conducted in Unida Christian Colleges located in Anabu Imus, Cavite. The population for the study was Grade 11 learners. To reach the needed informants, the researcher wrote a permission letter to serve as consent to show their willingness to participate in the study.

CONCEPTUAL FRAMEWORK



The illustration shows the significance of music, dance, and theater under the performing arts that contribute to the development of an individual. Participating in performing arts allows one to explore different forms, including music, dance, and theater, where in these three forms are the most recognized and highly engaged by everyone in the way that they use it to enhance their talent in singing, dancing, and acting, as well as their stage presence. Throughout these forms of performing arts, it influences and takes advantage of their

personal development, such as enhancing the personality of person, increasing their confidence, developing emotional intelligence, building self-expression, and improving innovative thinking and skills which is vital to one's development since it promotes priceless life skills that will beneficial for them throughout their lives. This presents the important relationship between the performing arts and personal development of an individual.

RESEARCH INSTRUMENT

The researcher will conduct a semi-structured interview as a research instrument in order to gather data from the chosen informants. This instrument is the most effective method for learning the informant's views and personal experiences about a specific phenomenon. It enables the researcher to have a casual conversation and add follow-up questions, which can avoid interruptions or other possible barriers that may hinder informants from sharing their own experiences during the interview. In this part, the researcher will provide an open-ended questionnaire for the semi-structured interview, which can be done both online, such as using Zoom or the Google Meet app, and through face-to-face cooperation. The information and data they provided will always be kept private and confidential to ensure the informant's privacy. According to Republic Act 10173, the Data Privacy Act guarantees that all information is kept secure and that the research study is free of copyright violations, plagiarism, and other legal issues

RESEARCH INFORMANTS

The researcher will select a total of five (5) informants, The participants will be Performing Arts students that introduce drama and arts into their curriculum and how it affects their personal development. The researcher set a criterion to utilize the selection of informants for the study. **(1)** The participants must be a senior high school student in Unida Christian Colleges. **(2)** The participants should be a part of the performing arts strand. **(3)** They must have the qualities and qualifications of having interest in pursuing arts.

RESEARCH PROCEDURE

After confirming the qualified informants, the researcher will schedule an interview. The researcher will use a semi-structured interview in gathering the data to freely encourage the informants in sharing their experiences either through virtual or face-to-face communication. Follow-up questioning will only be possible if the informants agreed after the probing questions. The goal of this semi-structured interview is to introduce casual conversation between the interviewer and interviewee to avoid possible barriers that will hinder the informants from

sharing more about their personal experiences. Following the Republic Act 10173 - Data Privacy Act, all gathered information will remain confidential, and an assurance that the research study is free from any plagiarism, falsification, and other legal matters including copyright.

ORGANIZING DATA

The information was collected by examining familiarity with coding patterns for data and looking for themes.

THEMES AND PATTERN

By identifying significant themes, recurrent concepts, and belief patterns in addition to the facilitated outcomes, the interview transcript was assessed and transcribed. In the participant analysis, which reveals the similarities, differences, and gaps among each lived experience, the division of steps entails recording patterns and codes. The coding utilized as well as the pattern will be disclosed.

TESTING OF EMERGENT ANSWERS

The informant's actual experiences are categorized thematically to assess the accuracy of the data. They will be informed of their right to refuse participation, which will be conveyed to them via a data sheet provided by the researcher. The selected informants are free to participate whatever they choose; they are not forced to provide any specific or confidential information. The contract will be presented along with the audio recordings to make sure every response is accurately transcribed. This is all with the informant's consent.

DATA ANALYSIS

The researcher will transcribe the collected data using thematic analysis, which is used in arranging all information according to its theme, labels, and codes (Kiger & Varpio, 2020). Verbatim from the recorded interview will be carefully transcribed with the help of a research validator. After in-depth checking of the transcript and organizing the ideas according to themes, the researcher will start checking the relevance of the gathered data and interpret it based on the comparison and generated summary of the documentation. The process includes checking of comprehensive structure and analysis of the result comparison.

ROLE OF THE RESEARCHER

The researcher should complete a scholarly research that is ongoing and showing no indications of stopping. any prejudices of any kind. The scientist will elaborate the information gathered to have a thorough knowledge of the employed pattern. This method will retrieve each

and every information and leave out the extraneous verbatim not needed for the research. Each and every pattern found will be merged as a single concept to develop the broad perspective and ascertain the experiences of the concerned parties.

RESULTS AND DISCUSSION

This section will provide the formulated research findings.

Research Question 1: *How does exposure to drama and arts impact the academic performance of Grade 11 students in Unida Christian Colleges?*

The informants mostly mentioned that they are improving through drama and arts and that they are developing skills such as innovative thinking skills since they are mostly starting to get involved in a field where they use they're creativity. This type of research question aims to see how a certain phenomenon affects the growth of each learner and provide a new concept in coming up with any pedagogical approaches that will certainly assist student development.

Presented are the following themes and sub-themes in data analysis. Bold letters are the themes presented in the table below and the italics represent the sub-themes. The statements below share the participant's lived experiences in class while they're in the drama and arts (performing arts). The table also presented the summary of themes and sub-themes along with a discussion of the result.

The first theme that emerged was about the positive influence for personal development. Participants mentioned that the exposure to drama and arts helped them overcome their stage fright which helped them to gain more of their confidence in performing.

"I think for me naovercome ko yung pagiging ah.. pagiging takot ko magperform sa harap ng maraming tao and I gained some confidence and tiwala na rin sa sarili yun." (Informant A)

Participants mentioned they've gained confidence; particularly by being more exposed on stage and by having an opportunity to perform in front of the crowd. Participants' main point is that even though they have a stage fright, they still overcame it with the help of exposure on stage that even helped them gain more confidence and self-trust.

"Uhm the impact cause me, impact niya sakin it uh shows my creativity din na even though na not in just in drama or like either in arts it shows my creativity in academic din kasi parang it helps me explore na kaya ko pala 'tong ito na even though in science na aapply ko pala siya kasi it's just not about everything in science parang it shows yung creativity din na your ideas." (Informant B)

POSITIVE INFLUENCE FOR PERSONAL DEVELOPMENT (Theme #1)

The common experiences that the participants are sharing were the positive influence that the Drama and Arts are providing them. Most of the students say

that they've improved the skills that they currently have by being involved in performances. In that situation, of course the learners are still in training which proves that their skills are not yet completely developed. Technically speaking, through drama and arts the learners also grasp how they could possibly widen their skills as they get more exposed to each performance they experience. In relation to performing, participants shared that they are fond of presenting themselves to the crowd while enjoying their performances. The only problem is that some are still facing their stage fright which they are currently resolving as they get more exposure as well as improving themselves through all the productions that they are in. This strategy shows that despite the learners having their fears, they still are gaining confidence and skills through Drama and Arts which shows the positive influence of it.

"Para sakin ano... nsa point pa ako ng ano... pag.. tawag dito.. pag iimprove ng sarili ko yun.." (Informant A)

"ano well for me, nakakatulong siya kasi.. ano marami akong natututunan pag nakikinig ako tas na aapply ko yun sa mga performance natin ganon.. " (Informant B)

"para sakin pag mas madamimg performances mag kakaroon ka.. ano tawag dito.. mag- mag kakaroon ka ng aral sa mga experiences na yun na pag nag perform ka ngayon alam mo na yung dapat mong.. dapat mong.. iimprove sa next na mga performances mo ganon." (Informant C)

"ano for me, involve yourself lang like... if gusto mong ano.. if you want to improve yourself then practice, try it ano.. ito.. mag experiment ka kung anong gagawin dito ganito ganiyan.. ganorn" (Participant D)

Research Question 2-3: *How can drama and arts promote empathy and emotional intelligence among grade 11 students in Unida Christian Colleges? and In what ways can drama and arts contribute to the personal development and development of Grade 11 students in Unida Christian Colleges beyond their academic pursuits?*

The informants mostly mentioned that they are exploring a lot about themselves through drama and arts and it becomes a pathway to their self expression and in building their personality. This type of research topic aims to determine how a certain phenomena impacts the development of each learner and to provide a new idea in developing any pedagogical method that is certain to promote student's personal development.

Presented are the following themes and sub-themes in data analysis. Bold letters are the themes presented in the table below and the italics represent the sub-themes. The statements below share the participant's lived experiences in class while they're in the drama and arts (performing arts). The table also presented the summary of themes and sub-themes along with a discussion of the result.

The first theme that emerged was about developing oneself. Participants mentioned that they are building

and developing their personalities because it's a crucial part in engaging in drama and arts.

"Ano let's say kunvari yung sinasabi ni sir na "work ethics" uhmm diba dapat ganto ka, parang.. collaborative ka sa iba kasi kung ano, ang pangit ng ugali mo edi syempre hindi ka masyadong kukunin ng mga.. like.. production." (Informant C)

Participants mentioned that when it comes to work ethics, you should be collaborating with others; if you have a bad attitude, you're not going to be hired for any production.

"Ano.. for i think ano.. makakatulong siya kasi mas ano.. lumalawak ang kaalaman ko yung interest ko parang nadadagdagan so parang in that way parang .. ahh gusto ko 'tong itry kasi interesting siya kaya yun i think nakakatulong nga lalo na sa pag build ng personality ko." (Informant A)

DEVELOP ONESELF (Theme # 2)

The common experiences that the participants are sharing are those of "developing oneself," wherein they are exploring more of themselves in the program of drama and arts and they are developing their personalities while their knowledge and interest are being enhanced through the use of drama and arts. Technically speaking, these learners have a diversity of backgrounds in this program of how they view themselves and what is their way to build their personality. In relation to development, participants shared that they are fond of fostering their self-discovery. The only problem is they must acquire emotional intelligence by promoting empathy and understanding since drama and arts often involve collaborative works; they quite mentioned that they always have misunderstandings when it comes to performance because they lack of communication and understanding so they need to work on developing their emotional intelligence to be able to recognize and empathize with the experiences and feelings of others. Overall, drama and arts provide a powerful means for personal development, enabling individuals to explore their creativity, express themselves, build confidence, develop emotional intelligence, and enhance various essential life skills.

"Ano.. for i think ano.. nakakatulong siya kasi mas ano.. lumalawak yung kaalaman ko yung interest ko parang nadadagdagan so parang in that way parang .. ahh gusto ko 'tong itry kasi interesting siya kaya yun i think nakakatulong nga lalo na sa pag build ng personality ko." (Informant A)

"para sakin yung drama and arts parang makakatulong siya sa self expression natin yun, sa mga pag labas nung [nautal, inaudible] yung bawat cast natin parang malalabas natin yung ano yung emotions ganon.. na nasa atin." (Informant B)

"Ano let's say kunvari yung sinasabi ni sir na "work ethics" uhmm diba dapat ganto ka, parang.. collaborative ka sa iba kasi kung ano, ang pangit ng

ugali mo edi siyempre hindi ka masyadong kukunin ng mga.. like.. production." (Informant C)

"to be honest uh even though lalo na marami kami misunderstanding when it comes sa performance namin as communication talaga to work it better and uh the confidence kasi even though magkamali ka you know there is someone." (Informant F)

Table 1: Themes and sub-themes generated after the analysis of interview extracts.

Themes	**Sub-Themes**
POSITIVE INFLUENCE FOR PERSONAL DEVELOPMENT	DEVELOP INNOVATIVE THINKING SKILLS
	SELF GUIDED IMPROVEMENT
	GAINED CONFIDENCE
DEVELOP ONESELF	TO BUILD PERSONALITY
	SELF EXPRESSION

The table represents the patterns that were uncovered during the interview with the chosen participants. It describes how influences on personal development and self-development affect learners' perspectives.

Drama and the arts have several advantages that can contribute to their growth. The researcher came up with the theme of positive influence for personal development, and one of its sub-themes is innovative thinking skills, which is the ability to create or think about something. Individuals' creativity occurs when they participate in this type of program because it allows them to explore their imagination more beyond their limits, which they can apply in different ways. Another thing is self-guided improvement. This is how people in theater and the arts develop skills that improve their skills by learning new things from their past experiences as they perform better and ultimately gaining skills. Lastly, they gain confidence; this is the feeling of self-assurance based on their capabilities. It affects their confidence in the sense that they are exposed to large audiences; hence, they will get practiced and used to it. Aside from positive influences for personal development, we also have developing oneself as theme 2, which focuses on the way individuals express themselves, such as their feelings, thoughts, and ideas, without feeling fear. Drama and the arts give opportunities to practice one's self-expression in the way that they stand as a medium to convey messages and emotions, and at last, to build personality, the development of one's individuality can be achieved through the pursuit of drama and the arts. These endeavors have a profound impact on an individual's personality, influencing the development of one's characteristics throughout their engagement with these fields.

CONCLUSION

Personal Development

According to the data in the results and discussion, the researcher came to the conclusion that drama and arts plays a crucial role for individuals as a way of improving and developing themselves. Innovative thinking or being creative in many ways is one of the factors which supports that drama and arts aid in personal development. Another thing is the self guided improvement, which can enhance one's skills as they learn from their past experiences, it also deals with confidence since participating in this kind of curriculum exposes to additional opportunities to practice their self-esteem, it was also mentioned that it helps to enhance self expression in the way that they used it as the medium to convey messages and emotions, and lastly is to build their personality, since drama and arts can also help to promote better characteristic and personality. This demonstrated that drama and arts have several advantages that aid in personal development.

In relation to the theory of personality development (Carl Rogers 1902-1987) learning about the participants' actual experiences can help to have better understanding on how drama and arts can be used to develop one's personality. It shows that with the help of drama and arts aid to build personality in the way that it influences their general characteristics on how they develop throughout these fields.

RECOMMENDATIONS

To profoundly understand the variety of perception among Grade 11 Senior High school learners in Drama and Arts, below are the researcher recommendations :

- Performing Arts students must start to explore more on their interest while they're in Drama and Arts so that they could grow and express more of themselves.
- The school should begin offering more drama and arts programs so that students may completely develop themselves.
- Performing Arts students should grab every opportunity that their Drama and Arts' teacher is giving them so that they would get more exposure as well as grow as a performing arts student.
- Teachers should examine all sorts of students and design an activity that would spark the students' interest in drama and the arts.
- Future researchers should depend on the number of participants that are currently enrolled in Unida Christian Colleges to assess the perception of the students in Drama and Arts that can be utilized in time.

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Effects of Computer Shortage to Selected Grade 11 TVL-ICT Students at Unida Christian Colleges for the A.Y 2022-2023

Arabaca, C., De Chavez, J., Mendoza, J., Tanjay, E.
Senior High School Student-Researcher

ABSTRACT

In today's digital world, computer resources are an absolute must-have for ICT students. Having access to computer resources are essential for the educational process, as studying ICT necessitates a thorough understanding of tech-related topics. Students need access to computer tools to develop in the modern digital environment. This study focuses on analyzing how Unida Christian Colleges' Grade 11 ICT students acquire knowledge during the academic year 2022-2023 as a result of computer shortages. It tries to comprehend how a shortage of computer resources affects these students' ability to acquire and develop technical skills and competencies. The data was acquired using semistructured interviews, informant validation, and thematic analysis. These techniques, along with the researcher's respect for confidentiality, are meant to effectively accomplish the study's goal and provide an in-depth understanding of the informants' perspectives. The aim of this study was to investigate how computer shortages affect the learning results and experiences of ICT students. Research identifies challenges and limitations of computer resource shortages, offering suggestions for improving ICT learning environment, closing digital divide, and ensuring equal opportunities for all students. According to the results of this study, a lack of computers negatively affects ICT students' ability to learn and succeed. Lack of computer resources presents practical difficulties, forcing students to rely on substitute techniques like watching YouTube videos. Students' engagement and progress in ICT education are hampered by a lack of practical application and scheduling challenges. Insufficient computer resources have a negative effect on students' motivation, academic results, and general well-being, leading to delays and worries about potential future careers. To lessen the negative effects of computer shortages on students' accomplishments and learning, proactive actions are required, such as increasing computer accessibility, providing replacement learning materials, and incorporating real-world experiences into the curriculum.

Keywords: *ICT Students, Computer resources, Computer shortage*

INTRODUCTION

One of the most significant transformations in modern culture has been fuelled by technology. In a research from Raja and Nagasubramani (2018), Technology has impacted different facets of life and redefined living. Undoubtedly, technology plays an important role in every sphere of life. Several manual tasks can be automated, thanks to technology. The capacity of ICT learners to gain the knowledge and skills required to succeed in today's technologically advanced world can be substantially impacted by their lack of access to computers.

The study of ICT needed a thorough understanding of networking and computer operations and access to computer resources are a crucial part of the educational process. Students must have access to computer tools

that help them develop these abilities in the modern digital world. Access to computer resources are now more crucial than ever because of the shift to remote learning, where students are depending more and more on technology to support their education.

Getting access to computer resources as a student in this subject are a big advantage over those who rely only on school resources. According to research published in the International Journal of Advanced Research in Computer Science and Software Engineering, students who had access to computers performed significantly more effectively in the classroom.

Computer resources must be used by ICT students. Success in this sector depends on having access to digital resources as students continue to adjust to remote learning. Students will be better equipped to compete in the job market and succeed in their future employment if they are given the tools, they need to grasp computer operations and networking.

Success in today's modern environment requires having a solid understanding of computers. information and communication technologies (ICT) are widely seen as enhancing learning, this hope fuelling their rapid diffusion and adoption throughout developed societies (Livingstone, 2012).

As a student studying computer systems maintenance field, computer resources are needed for our studies. Global investment in ICT to improve teaching and learning in schools have been initiated by many governments. Despite all these investments on ICT infrastructure, equipment's, and professional development to improve education in many countries, ICT adoption and integration in teaching and learning have been limited (Buabeng-Andoh, 2012).

The lack of computers for students of information and communication technology has had consequences. It constitutes an obstacle for every learner and teacher and has greatly affected them. Students who take Information communication and technology students who are affected by having limited resources for their learning was the one involved in this study.

In Unida Christian Colleges, ICT students were having struggles and difficulties understanding their studies, since most of the works on this strand are performing computer operations and students may have a hard time understanding to do such tasks.

This study intends to investigate how information and communication technology students learn and overcome obstacles brought on by insufficient computer resources.

Based on the researcher's validation of the informants, the researchers will select their informants. The major objective of this study was to evaluate how the dearth of computer resources influences ICT trainees' learning results. The study would investigate how learners' abilities to comprehend and use ICT ideas and skills are impacted by their limited access to computer resources.

SPECIFIC QUESTIONS

To addressed the impact of the computer shortage on the chosen learners, this researched focuses on their personal experiences. Answered the following inquiries in detail .

1. What strategies can be implemented to lessen the negative effects of a computer shortage on ICT students' learning and success in learning?
2. What are the specific effects of computer shortage on ICT students' learning outcomes?
3. How does a lack of access to computers impact the ability of ICT students to acquire and develop important technical skills?
4. What are the possible recommendations based on the assessment given to the selected learners at the end of the study?

RESEARCH STATEMENT AND ASSUMPTIONS

This study was based on the assumptions of the researchers that focuses on determining the effects of the lack of computer resources in the learning of the ICT Students in Unida Christian Colleges for Academic Year 20222023. The researchers had discussed this assumption to help in formulating questions that need to be addressed. The study was based on the following assumptions:

- Students who don't have as much access to computers will be less proficient in ICT skills than those who do.
- Low-income learners will be significantly impacted by the digital gap brought on by a lack of computing resources.
- Students' motivation and interest in learning ICT may decline because of a lack of computer resources.

To maintain the quality and uniqueness of the study, the research only focuses on the specific people who are best to be part of the study. this study will focus on students in Grades 11 Senior High School learners who have chosen information and communication technology as their strand. These students were well-suited to be participants in this research because they were already studying in this field and have relevant knowledge and experiences. The researcher did not include the lower year levels as this study was mainly focuses on Senior High School Strand which was not suitable for the said level.

Researchers studied on the effects of computer shortages on 11th grade students emphasizes how important technology was to modern education and how quickly resource gaps must be filled to guarantee equal access to information and communication technologies.

Specifically, **(1)** The Students at Unida Christian Colleges in grade 11 will get knowledge from the study about the effects of computer shortage on education, which will help them understand the value of technology in learning. **(2)** The study's conclusions can help school administration prioritize resources to alleviate computer shortages and identify areas for improvement, which will increase academic achievement and student satisfaction. **(3)** The study's findings can be used by teachers to create engaging teaching strategies that account for the scarce supply of computers and other technical resources, enhancing the caliber of instruction. **(4)** The study's findings can assist other educational institutions and future researchers dealing with comparable issues by illuminating the effects of computer shortages and suggesting solutions.

RELATED STUDIES

The integration of Information and Communication Technology (ICT) in education has become increasingly important in recent years. With the shift towards digital learning, access to computers has become a crucial component of education, particularly for students in the Information and Communication Technology strand.

According to Gorra V. C. (2012), The Issue of unintended consequences of use of technology in classroom is important because unintended consequences can cause disruption in class room and negate the institutional policies regarding strategic direction and intervention in teaching and learning process. The statement emphasizes how crucial it is to be mindful of any unexpected consequences that could result from the usage of technology in the classroom. Unintended consequences can have a negative impact on the learning process, such as creating disruptions in the classroom, because they are results that those who use, or owners of a technology failed to foresee or anticipate.

It is crucial to be aware of any unintended repercussions that can arise from the use of

technology in the classroom. It implies that these unintended effects may interfere with learning and undermine institutional policies pertaining to strategic direction and intervention in teaching and learning.

Unintended effects may had an impact on institutional policies, including strategic directions and interventions in the teaching and learned process. For instance, it could been against institutional rules intended to improved the quality of education if the usage of a technology in the classroom caused disruptions that had a negative influence on the learned process. It raises the possibility that the lack of computers may had unforeseen implications that could harm the process of teaching and learned. For instance, because students might had to waited their time to used the computers that were accessible, the lack of computers could caused disruptions in the classroom. Additionally, it could caused students to lost interest in class and limit their capacity to learned critical digital skills

ICT must be used and taught in powerful and meaningful ways. With its rapid development, educators should find ways to integrate technology in the learning process. ICT should not drive education, rather, educational goals and needs must drive its use in schools. Targeting holistic growth for learners is a crucial factor in realizing the need to develop ICT curriculum standards for K-12 schools in the Philippines. (Bonifacio, A.,
2013)

It said that for many educators in developing countries liked the Philippines, integrating information and communication technology or ICT into teaching and learned, had became a top priority. ICT must been used and taught in effective and relevant ways. Teachers should found ways to incorporate technology into the learned process given its rapid development. ICT used in schools must been guided by educational goals and needed rather than the other way around. A key element in realizing the necessity of creating ICT curriculum standards for K–12 schools in the Philippines was focusing on the holistic growth of learners

In his study from 2013, Bonifacio emphasized the value of utilizing ICT in effective and meaningful ways and incorporating it into the educational process. The study also emphasized how educational objectives and needs had to steer ICT use in schools. This was relevant to the study as a lack of computers made it more difficult for teachers and students to effectively use ICT and accomplish their academic objectives. The development of ICT skills, which were becoming more and more crucial in the digital era, could potentially have been constrained by a lack of access to technology.

According to Lachica (2015), ICT for them was a driver for change, a conduit for learning, a modern technology, and an instrument for effective teaching and learning. ICT integration in classroom communication was interpreted to have helped teaching, to be a new medium of instruction, and a marriage or partnership between classroom communication and ICTs.

The integration of ICT in teaching and learning significantly transformed the traditional learning environment and improved the quality of education. However, adequate computer resources were necessary to fully achieve this transformation. The absence of sufficient hardware and software resources in the classroom created challenges or barriers in integrating ICT, which limited students' access to modern technology and negatively impacted their ability to learn and acquire new knowledge and skills.

This remark implied that the lack of computers limited the potential advantages of ICT integration in classroom communication in the context of the study. For instance, a shortage of computers made it more difficult to teach and learn effectively, restricted the use of ICT technologies as a teaching tool, and limited the chances for students to acquire digital skills.

Most students underscored the importance of education. With ICT, they believed it can facilitate and improve their learning achievements. Students indicated that they be given more responsibility for their learning. Their problems are primarily on lack of computer, time, internet, and software.

Students' awareness in the relevance of ICT to their future employment is very high. The benefits of ICT have not trickled in the classroom. ICT integration remains to be learning about, rather than learning with ICT tools. A policy review is needed for equitable distribution of sparse ICT resources across all learning areas. (John, T. M. H., 2012)

ICT have potentially powerful tool for extending educational opportunities. ICT have the potential for increasing access to and improving the relevance and quality of Education. The impact of ICT for teaching and learning process has become pertinent as it facilitates teaching and learning process, create conducive learning environment, and help learners develop creative thinking and selfconfidence. ICT has opened new challenges for quality education. It has changed many aspects of the lives (Das, K. 2019)

According to the study, information and communication technology (ICT) had a huge potential to improve educational possibilities by enhancing access to high-quality instruction, boosting its relevance, and fostering a positive learning environment. It went on to say that ICT's impact on teaching and learning was crucial since it fostered both activities, encouraged learners to think creatively, and built their self-esteem. The phrase also implied that ICT had altered many facets of our life and presented fresh difficulties to high-quality education.

This study implied that the lack of computers had a detrimental effect on the standard of instruction given to those students, which was relevant to our study. It made it harder for them to access digital resources, made studying more difficult, and prevented them from developing crucial skills for the digital age.

In this digital era, ICT use in the classroom is important for giving students opportunities to learn and apply the required 21st century skills. Hence studying the issues and challenges related to ICT use in teaching and learning can assist teachers in overcoming the obstacles and become successful technology users. Overall, the key issues and challenges found to be significant in using ICT tools by teachers were limited accessibility and network connection, limited technical support, lack of effective training, limited time, and lack of teachers' competency. (Ghavifekr, S. 2015)

According to the 2015 study by Ghavifekr, ICT use in the classroom was necessary in the then-current digital world for providing students the opportunity to acquire and apply the necessary 21st century skills..

Thus, understanding about the problems and difficulties associated with applying information and communication technologies to teaching and learning helped teachers get through such challenges and become proficient technology users. It was determined that the following critical concerns and challenges prevented instructors from effectively using ICT tools: limited accessibility and network connection, limited technical support, inadequate training, time constraints, and a lack of teacher competency.

Those problems and difficulties described in the study applied to our research as well. Lack of computers restricted students' access to online resources and prevented them from acquiring 21st-century skills. For both teachers and students, the poor network connection and accessibility were problems. Additionally, it was difficult for teachers to successfully incorporate ICT tools into their teaching due to a lack of technical assistance and inadequate

training, which had a negative influence on the standard of education offered to the students.

The adoption and integration of ICT into teaching and learning environment provides more opportunities for teachers and students to work better in a globalized digital age. ICT has the potential to play an increasingly important role in education be it in classroom, administration and online instruction or other activities. There is tremendous potential for teachers and students to harness the power of ICT to improve the quality of teaching and learning in the classroom. (Lawrence, J. E., & Tar, U. A. 2018)

According to Lawrence and Tar's 2018 research, it showed that incorporating technology (ICT) into education could be advantageous for teachers and students, even if they had limited computer resources. This was because ICT could improve teaching and learning, providing more opportunities for collaboration, creativity, and engagement. By leveraging technology, educators and learners could work more efficiently in the modern, digital era, regardless of resource constraints.

The study showed that using technology (ICT) in education was helpful for both teachers and students. It improved the quality of teaching and learning, even if there weren't enough computers or other resources available. The potential advantages that ICT tools might have for teaching and learning were highlighted in this statement, which applied to their study. The statement specifically highlighted how crucial it was to incorporate and integrate ICT tools into the teaching and learning environment to enhance the caliber of education given to students.

In the context of the study, the statement implied that the lack of computers restricted the adoption and integration of ICT tools into teaching and learning activities, which had a detrimental effect on the standard of instruction given to Unida Christian Colleges' Grade 11 students.

In-service teachers cited concerns with the building-support levels in terms of seamless technology integration in the classrooms that related to adequate web-based interconnectivity to make use of available educator tools for their discipline, proper acclimation of equipment tools adopted by the school district, and lack of computer resources to implement seamless technological innovations in the classrooms. (Williams, M.
E. 2017)

Limited access to technology, less possibilities for hands-on learning, limited exposure to digital resources, and potential difficulties in developing technological skills are only a few of the effects of a computer limited supplies. It might hinder students' capacity to make the most of the educational materials and tools available, which might have an influence on their academic performance and readiness for postsecondary education and occupations that demand knowledge of information and communication technologies.

The study by Williams, highlights the issues expressed by in-service teachers regarding the level of building support for seamless technology integration in classrooms. The study on the effects of computer shortage for Grade 11 students in Unida Christian Colleges may also be pertinent to these issues, such as poor web-based interconnectivity, improper acclimation to equipment tools, and a lack of computer resources. For ICT to be used in education effectively, these issues must be addressed, and sufficient resources and support must be provided for technology integration in the classroom.

RELATED THEORY

The digital divide theory is particularly applicable to the subject of the study. The unequal access to technology and the internet, known as the "digital divide," can result in differences in educational opportunities and outcomes.

The lack of computers that Unida Christian Colleges' ICT grade 11 students experienced was an example of the digital divide in the context of that study. Those students might not have had the same technology resources at their disposal as their peers, which could have affected their capacity for learning and academic achievement. Additionally, according to the digital divide idea, those students were potentially at a disadvantage in terms of acquiring technological proficiency and digital literacy, both of which were becoming more and more crucial in the workforce at that time.

The digital divide theory also emphasizes the role of structural and systemic variables in generating and maintaining differences in access to technology. For instance, institutional norms and procedures, location, and socioeconomic class can all affect who has access to technology and the internet. The lack of computers that Unida Christian Colleges' ICT grade 11 students suffer may be caused by the same issues, and it may be important to address these structural obstacles to successfully address the effects of the computer deficit on student outcomes.

These connected studies focused on the issues that instructors and students encountered while incorporating Information and Communication Technology (ICT) into the classroom. The studies demonstrated that while ICT had the potential to transform teaching and learning, its effective application necessitated significant web-based interconnectivity, good acclimation of equipment tools used by the school district, and ample computer resources. To ensure that ICT advantages were realized in the classroom, the studies highlighted the necessity of policy revision and equitable deployment of scarce ICT resources across all learning areas.

According to the findings, adopting and integrating ICT into the teaching and learning environment could give teachers and students greater opportunity to collaborate more effectively in the globalized digital age. It could make the teaching and learning process easier, foster a positive learning atmosphere, and support students' growth in imaginative thinking and self-assurance. However, educators had to develop effective ways to incorporate technology into the learning process that were in line with educational objectives and goals. To prevent disruptions to institutional policies on strategic direction and intervention in the teaching and learning process, the topic of unintended consequences of technology use in the classroom also had to be addressed.

DEFINITION OF TERMS

Computer resources – Materials and Objects which have connection to technology.
Digital Age – *Period in our life characterized by the widespread use of digital technologies, such as computers, internet, and smartphones.*
ICT – *Information and Communication Technology. A strand in senior high school which focuses on using technology.*
ICT Integration – *the use of information and communication technology (ICT) to enhance the learning experience for students.*
Networking – *A topic in ICT-CSS where students learn and perform network operations such as network configuration and network connectivity.*
Technology – *is the application of scientific knowledge for the design, construction, and use of computers.*

METHODOLOGY

RESEARCH DESIGN

This research was a Descriptive-Narrative Research Study. The purpose of descriptive narrative was to reflect on collected ideas and stories from the key informants in detail. These stories were used to describe the outcome of the study (Creswell, J. W., 2013).

The researcher targeted the perception of the selected learners on how the computer shortage affected their learning and success. The aim was to understand and know those experiences and find ways to mitigate those effects. This research was conducted in Unida Christian Colleges located in Anabu Imus, Cavite. The population for the study was Grade 11 students who chose ICT as their strand. To reach the needed informants, the researcher requested permission in writing, which served as consent, indicating their willingness to take part in the study.

CONCEPTUAL FRAMEWORK

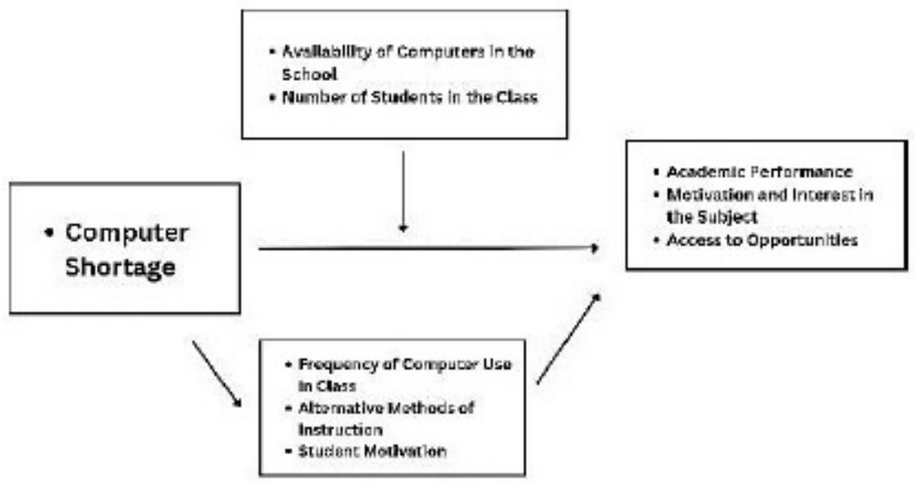

Figure 1: *Exploring the effects of Computer Shortage on ICT Education*

The figure 1 shows the effects of a computer limited availability on ICT students in grade 11 which is represented by the diagram. There are four different sorts of variables included in it: independent, dependent, mediating, and moderating.

The lack of computers was the independent variable, and it could influence the dependent variables, such as academic achievement, exposure to computers, motivation and interest in the field, and access to opportunities. The association between a lack of computers and the dependent variables could be influenced by mediating factors such as the frequency of computer usage in class, the significance of computer uses in the curriculum, alternative means of instruction, and student motivation.

The effect of a computer shortage on the dependent variables could be modified or amplified by moderating factors such as , the number of students in the class, and the availability of computers in the school.

Overall, the graphic offered a visual illustration of the connections between the factors and the potential effects of computer shortages on the academic success and possibilities of ICT grade 11 students.

RESEARCH INSTRUMENT

The researcher conducted a semi-structured interview to collect the necessary data from the study's chosen informants with the goal of achieving the study's objective. This type of interview was ideal for acquiring the informant's views about a phenomenon

(DeJonckheere et al., 2019). In this case, the researcher created a list of questions and arranged face-to-face meetings with the target informants as well as online meetings utilizing the Google Meet or Zoom applications.

To ensure that every informant selected was the best suitable for the study, informant validation was conducted. Thematic analysis was used to assess interview transcripts thereafter. The researcher also guaranteed the confidentiality of all data collected.

RESEARCH INFORMANTS

The researcher selected a total of five (4) informants from the strand TVL-ICT CSS and Animation. The researchers set a criterion to utilize the selection of informants for the study. (1) The students had to be officially enrolled as Senior High School students. (2) The students

had to have a passing grade on ICT related specialized subjects. (3) The students had to possess sufficient computer proficiency to do such works related to ICT.

RESEARCH PROCEDURES

A formal request to participate in the research study was sent through a physical letter or email by the researcher. This letter acted as the study's prospective informants' permission form. The researcher provided the informants the choice to refuse the invitation or withdraw the consent to conduct validation. If that occurred, the informant's entire contribution to the research was deleted.

The researcher organized an interview once they had verified that the informants were qualified. The informants were encouraged to freely share their experiences via face-to-face or virtual communication by the researcher using a semi-structured interview to collect the data. Only if the informants consented following the probing questions was further interrogation allowed. This semi-structured interview aimed to break down potential obstacles that might have prevented the informants from sharing more about their personal experiences by introducing casual dialogue between the interviewer and interviewee.

Following the Republic Act 10173 - Data Privacy Act, all gathered information remained confidential, and an assurance was given that the research study was free from any plagiarism, falsification, and other legal matters, including copyright.

ORGANIZING DATA

The data was gathered through the analysis of patterns for data familiarity which included coding and detecting themes.

THEMES AND PATTERNS:

The evaluation and transcription of the interview transcript involved identified significant themes, recurrent concepts, and belief patterns in addition to the facilitated findings. Identifying patterns and codes in participant analysis that highlighted the similarities, differences, and gaps between each lived experience was part of the step-bystep process. The pattern and coding were both made public.

TESTING OF EMERGENT ANSWERS

The actual experiences of the informants were classified thematically to evaluate the reliability of data. They were presented using a data sheet and informed about their right to refuse cooperation. The chosen participants had the right to participate voluntarily and were not required to disclose any detailed or personal information. The contract was presented along with the audio recordings to assure that all given answers were well documented. All of this was done with the approval of the participants.

DATA ANALYSIS

The researcher transcribed the collected data using thematic analysis, which was used in arranging all information according to its theme, labels, and codes (Kiger & Varpio, 2020). A research validator assisted in the careful transcription of the verbatim from the recorded interview. The researcher began assessing the significance of the collected data and interpreted it based on the comparison and generated summary of the documentation after thoroughly reviewing the transcript and grouping the thoughts into themes. The procedure comprised examining the overall structure and comparing the results.

ROLE OF THE RESEARCHER

The researcher was supposed to accomplish an academic study in a constant progress with no signs or any form of biases. The researcher expanded the data collected to have an indepth understanding of the pattern used. This process extracted all the information and omitted the unnecessary verbatim not needed in the study. All detected patterns were integrated as one idea to develop the general viewpoint and determine the lived experiences of the participants involved.

RESULTS AND DISCUSSION

This section will provide the formulated research findings.

Research Question 1: *What strategies can be implemented to lessen the negative effects of a computer shortage on ICT students' learning and success in learning?*

The informants mostly mentioned their coping mechanisms on how they overcame the challenges made by the computer shortage to them. The research question aimed to investigate and identify strategies that could be implemented to minimize or counteract the adverse impacts of a computer shortage on the learning and success of students studying information and communication technology (ICT). The focus was on finding ways to mitigate the negative consequences that arose when there was a lack of access to computers, which hindered students' ability to engage effectively with their coursework, practical exercises, and overall educational experience in the field of ICT.

The following data analysis themes and subthemes were presented. The topics listed in the table below were in bold, and the subthemes were in italics. The statements that followed described how the participants had personally been impacted by the computer shortages. Along with a discussion of the outcome, the table also included a breakdown of the themes and sub-themes.

The first theme that emerged was about the practical challenges. Most participants talked about their personal experiences with how the lack of computers had affected them.

"Kung meron man akong strategy na ginagawa ngayon is nanonood ako ng videos sa youtube gusto ko kasi matuto at maabot ung pangarap ko kaya nagsisipag ako at nagtatiyaga na manood sa youtube."
(Informant A)

The response given was an example of a strategy that a person was presently doing to learn and accomplish their objectives. Although the example given specifically involved watching educational videos on YouTube, it demonstrated the person's want to learn and readiness to utilize readily accessible tools, such as online platforms, in the lack of adequate computer access. By highlighting the significance of utilizing alternate resources and technology to minimize the adverse effects of computer shortages on the learning and achievement of ICT students, this was related to the study question. It implied that utilizing online learning resources, such as YouTube videos, could be a successful way to get over the constraints given by a lack of computers while still enhancing learning outcomes.

"Inuunahan ko sila sa computer, kung sila bukas mag dedemo, ginagawa ko ngayon na ako magdedemo kahit na wala pa ako alam, papaturo nalang ako kay teacher. Kaysa kinabukasan wala ako magamit. Uunahan ko nalang" (Informant B)

PRACTICAL CHALLENGES

The common experiences that the participants shared were their challenges in the more practical side of their ICT education. Many participants expressed a loss of motivation and enthusiasm as they encountered

a shortage of computers in their learning environment. The inability to access computers for essential tasks and hands-on practice significantly hindered their progress and engagement with the subject matter. Moreover, the impact of this issue went beyond mere frustration, as some participants shared feelings of breakdowns and emotional distress. The computer shortage not only limited their ability to learn and excel but also had a profound effect on their overall wellbeing. The inability to access necessary resources and engage in practical activities caused them to question their academic pursuits and contemplate the feasibility of achieving their educational goals.

"Actually, nakaka walang gana siya. Kapag ganun ung ano nacocompare mo ung sarili na bat ung iba pc may laptop ng ayos" (Informant A)

"First of all, don sa motivation, nakakawala ng motivation kasi nga tinatamad ka na wala kang gagamitin" (Informant B)

"Most of my experiences is that kailangan pa magpa schedule, what if hindi ka available at that time, then mahihirapan ka" (Informant C)

Research Question 2: *What are the specific effects of computer shortage on ICT students' learning outcomes?*

The question aimed to investigate the specific effects of a computer shortage on ICT students' learning outcomes and compare them to the experiences of students who had access to computers. By examining these effects, the research sought to understand the unique challenges faced by ICT students without sufficient computer resources and how these challenges differed from the experiences of their peers who had adequate access to computers.

"Siyempre ano malaking advantage talaga pag uh kaklase ko ay may reegular access sa computer kasi siyempre mas malawak ung kaalaman nya don kasi meron siyang access sa computer…. Nalilimitahan ung kaalaman ko sa pagdating sa computer since di ako nakakaaccess sa computer and limited lang din ung time ko na i access ung laptop." (Informant A)

"Marami kanang hindi magagawa, hindi mo na natututunan ang ganong bagay na dapat mong matutunan, hindi tulad sa may reghular na nakakagamit ng computer, marami silang natututunan at marami silang nalalaman kaysa saiyo" (Informant B)

TECHNICAL CHALLENGES

Technical challenges were more prevalent as technology continued to play an increasingly important part in students' learning. The responses provided by the study's participants highlighted their personal encounters and explained how having little access to computers hampered their academic progress. As more and more students relied on technology for many parts of their academic endeavors, its significance in the field of studies became obvious.

The responses received from the participants highlighted the crucial role that technology and computers played in promoting efficient learning and knowledge acquisition. They underlined how having limited access to computers prevented them from effectively utilizing the readings, activities, and online tools that were essential to their ICT education. Without adequate computer access, students faced challenges that hampered their development, limited their exposure to crucial software and tools, and prevented them from gaining practical skills.

Lack of Computer Resources in Learning

"Lumang luma na ung ginagamit kong device kaya talagang umm nakakasagabal siya sa pagkatuto ko sa ict lalo na ung nga kailangan sa strand namin na magkaroon ng skills." (Informant A)

"Nalilimitahan ung kaalaman ko sa pagdating sa computer since di ako nakakaaccess sa computer" (Informant B)

"We have preferred to have our own devices at home talagang kailangan nga naman since computer yung tinatackle natin sa ict." (Informant C)

Research Question 3: *How does a lack of access to computers impact the ability of ICT students to acquire and develop important technical skills?*

Most participants' experiences on how being without access to computers affected them mostly centered on their knowledge and a lack of understanding where they had trouble learning and adjusting their situation.

"Mas nakakaimpact siya na marami kang hindi matututunan, dahil sa kakulangan na hindi ka pwede gumamit ng computer." (Informant A)

LEARNING CHALLENGES

It analyzed the challenges and obstacles experienced by ICT students when they ran into a computer shortage. Participants in this study revealed their own experiences, revealing the considerable effect that having less access to computers had on their academic development. They expressed their intense frustration and the challenges they encountered when it came to their educational opportunities, the growth of their talents, and even their potential future careers.

"Mahihirapan ako kasi ung learning experience mo kapag kulang ka sa computer talagang sobrang sagabal at ang hirap" (Informant A)

"Pag mag cocollage ka na, parang onti lang ung skills na ma pepresent mo, and may possible chance ka na hindi ka agad maka enroll, more on magtatagal pa yung process mo sa pagkakaroon ng trabaho" (Informant B)

"Un nga ung limited ung computer na nagagamit namin and nakaka affect siya sa studies namin kasi hindi agad ako.. hindi ko agad na aapply ung lesson na ginagawa ni sir." (Informant C)

Research Question 4: *What are the possible recommendations based on the assessment given to the selected learners at the end of the study?*

Examined the data gathered, the best recommendation for future researchers was to expand the participants and seek a larger locale to enhance the generalizability and external validity of the findings. The study's current limitations, focusing solely on Unida Christian Colleges' Senior High School students, restricted the ability to draw broad conclusions and apply the findings to a wider population.

Table 1: Themes and sub-themes generated after the analysis of interview extracts.

Themes	Sub-Themes
Practical challenges	Limited practical application Scheduling difficulties Loss of motivation Device availability

Technical challenges	Device dependency Limited access to computers Limited knowledge Lack of resources
Learning challenges	Causes learning delay Self adjustment More computer supplies

The table shows the collected patterns in the interview conducted with selected learners. It describes how the Practical, Technical, and Learning challenges affects the perception of learners.

Under practical challenges, students faced limitations in applying theoretical knowledge practically due to limited access to computers, scheduling difficulties in securing computer usage time, loss of motivation resulting from insufficient computer availability, and the scarcity of computer devices. Technical challenges revolved around students' dependency on devices for ICT education. Limited access to computers, inadequate knowledge and skills, and a lack of necessary resources hindered their effective engagement with ICT learning. Learning challenges arose from limited computer access, causing delays in learning ICT subjects. However, students also demonstrated self-adjustment by finding alternative learning methods, and there was a strong need for more computer supplies to improve ICT education outcomes.

These findings highlighted the multifaceted consequences of computer shortages in ICT education. They emphasized the importance of addressing practical, technical, and learning challenges to enhance students' practical application, technical proficiency, and overall learning experience. By understanding these challenges, educators and policymakers could develop strategies to mitigate the impact of computer shortages and ensure a more inclusive and effective ICT learning environment.

CONCLUSION

The researcher concluded that the data in the results and discussion shed light on the difficulties ICT students confronted owing to computer shortages and their impact on learning and achievement. The issue of practical challenges exposed the use of other methods by students to make up for a lack of knowledge brought by the shortage, such as watching YouTube videos. However, students' participation and development in ICT education were severely hampered by a lack of enthusiasm and frustration brought on by limited practical application and scheduling issues. The issue of technological challenges emphasized the significance of computers in ICT learning as well as the negative effects of access restrictions. Participants discussed the gaps in their skill and knowledge growth, highlighting the need for having enough computing resources for effective learning outcomes. Similarly, the learning problem's theme highlighted the significant negative effects computer shortages had on students' motivation, learning outcomes, and general well-being.

There were delays, insufficient knowledge, and worries about future career opportunities as a result of being unable to access critical resources and participate in practical activities. The study also underlined the requirement for proactive actions to lessen the negative impact of computer shortages on students' achievement and learning. These steps could entail expanding computer accessibility, offering substitute learning materials, and integrating real-world experiences into the curriculum.

The results of the study aligned with the idea of the "digital divide theory," which described the discrepancy between those who had access to digital technologies and those who did not. The digital gap was a direct cause of the practical issues, technical challenges, and learning challenges mentioned in the study. Students with restricted computer access experienced challenges in implementing their

theoretical knowledge in practice, scheduling issues, motivational decline, and a lack of resources. These difficulties impeded the development of technical skills and contributed to differences in learning outcomes. The digital divide was maintained by the unequal allocation of computer resources, which prevented students from participating fully in their coursework and practical exercises. Additionally, students who had infrequent access to computers struggled to gain technical knowledge and abilities, which slowed their development in comparison to peers who regularly used digital technology. The digital divide also affected students' overall learning experiences and future chances by causing learning delays and limiting access to essential software and tools.

RECOMMENDATION

To profoundly understand the variety of perceptions among Senior High School learning experiences on how the computer shortage affects them, below are the researcher's recommendations:

- Students should begin paying more attention to and comprehending the lessons in ICT-related courses.
- When access to computers is restricted, students must use internet resources, instructional videos, and mobile applications to complement computerbased learning.
- Teachers must promote cooperative learning environments that enable students with limited computer access by encouraging students to cooperate and share resources.
- Allow students with restricted computer access to participate in computer-based activities on flexible times, maximizing their use of the resources at hand.
- For students studying information and communications technology (ICT), schools must invest in the improvement and extension of their computer facilities.
- Form collaborations with corporations, non-profits, and community organizations to give students access to more computers or resources.
- To improve the generalizability and external validity of the findings, future researchers could include more people and look for a more expansive location.

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AB Organic Household Fire-Extinguishing Spray Using Banana Peel Powder and Powdered Eggshell as the Main Agent

Kate Abegail S. Revise, Asher Daniel M. Tibayan, Irene Mariz S. Dalion, Nicole P. Calauad, Maria Katrina D. Dipaling, and Whayen Ashley C. Saludo

Senior High School Department, Unida Christian Colleges

ABSTRACT

As the world becomes advanced, the traditional things that people used have been modified and made portable and convenient for people, like the fire-extinguishing spray. The standard fire extinguisher spray in the market was specialized for vehicles but can also be used at home. However, it is not guaranteed that the chemical inside is safe. Therefore, the researchers conducted an experiment creating a fire extinguisher using organic waste, which is banana peels and eggshells. Both materials contain chemicals that can extinguish fires. Banana peels have ammonia, which is used in making fire extinguishers, while eggshells contain calcium carbonate that is non-combustible in fires. The researchers tested the effectiveness by mixing the two organic materials in extinguishing class fire A and B. The Fire Triangle Theory had been utilized to take out the fire's oxygen. After several tests, the findings showed that banana peel powder must be dominant to extinguish the fire quickly. As a result, the researchers came up with a perfect ratio which is 1:9, which is effective in putting out Class Fire A and B. The product is incomparable with the original fire Extinguishing spray, for it is more effective in putting out a fire quicker than the original, and it is refillable, which makes it cost less. Overall, it is a great alternative to fire extinguishing agents. The researchers suggest researching further on organic waste and to further modify the receptacle, for it has small storage and a narrow nozzle.

Keywords: *Fire Extinguisher, Banana, Eggshell, Organic Waste*

INTRODUCTION

The invention of fire extinguishers made a huge impact on people's lives because of their capability to help people put out fires. Not only is it efficient, but it is also accessible as it can be seen wherever we go, such as in malls, restaurants, schools, small shops, etc. Due to this, many manufacturers made several modifications to make it much more effective and efficient for people to use. One of them is the fire-extinguishing spray. It is commonly a liquid fire-fighting chemical that is placed inside a typical spray container. It can put out a fire by simply standing a few meters from the fire and directly spraying it to extinguish the fire. Nonetheless, despite its excellent effectiveness, the researchers found that the majority of the market's currently available sprays are quite expensive and difficult to get because they are not frequently marketed in the nation. Also, the item is intended for single use. Thus, people may only utilize it once before having to buy a new one because it has been completely consumed. But, after exploring, the researchers discovered a similar product that is both accessible to and reasonably priced for Filipinos in the country. The spray, however, takes a while to put out flames, as the researchers discovered when they watched a video of the product in action. Therefore, the researchers conducted an experimental study to develop an organic AB Fire Extinguishing Spray using food wastes, particularly banana peels and eggshells.

The Philippines is the second largest exporter of bananas in the world (Arcalas, 2022). In accordance with this, the study conducted by Acevedo et al. (2021) shows that there is 60% waste left of banana biomass. There are about 114.08 metric tons of banana waste-loss produced worldwide. It solely shows that there are several bananas out there that are being consumed and are left as waste after. It leads to and contributes to the current environmental problem- excessive greenhouse emissions. Egg shells, in addition to banana peels, are frequent household waste. After being broken in half, they most likely end up being thrown away. Eggshells do, however, possess some qualities that can be employed to withstand flames. Egg shells contain calcium carbonate, which releases carbon dioxide and helps put out flames. Moreover, it contains minerals such as calcium carbonate, zinc, nitrogen, potassium, and phosphorus that are resistant to fire (Arwizar & Sobri, n.d.).

The main agents chosen by the researchers are banana peels and egg shells, both of the organic materials contain abilities that can be utilized in many ways, including their capacity to extinguish fires. Banana peel is said to have a tartaric acid that could release carbon dioxide when added to sodium bicarbonate and water. The produced CO2 removes the oxygen from the fire, which results in stopping the fire ("Peels as Alternative Raw Materials in Making Fire Extinguisher Research Paper," 2017). In terms of eggs shells, calcium carbonate makes up the majority of eggshells and emits carbon dioxide when burned, which depletes the air's oxygen and puts out fires that are justified by McClelland et. al. (2021). This study serves as a guide to chosen individuals in inventing a fire extinguisher that doesn't only extinguish the fire but also helps in restoring the earth by using food waste.

The product was only tested in class A and class B fires in this study. The other fire classifications weren't covered, notably class C fires since they include electrical wiring and equipment that might hurt the researchers physically. The study also exclusively focuses on putting out medium-sized house fires, according to the researchers. The research group wants to focus on home fires, therefore they didn't include fires that occurred in commercial structures in their paper. Future researchers will be able to utilize the findings of this study as a foundation for their own research, which will make the study's findings important. Also, people would benefit from it since it enables them to keep a fire extinguisher at home. Manufacturers of fire extinguishers can also be beneficiaries as they can have the option of creating organic fire extinguishers. Local Government Units (LGU) may also gain from the study since it may be utilized to reduce biodegradable trash and ensure that every family has a fire extinguisher in their houses in case of fire emergencies.

After finishing the study, the researchers determined the most effective ratio of banana peel powder and powdered eggshells in putting out fires. The researchers also identified the effectiveness of the product in putting out class fires A, B, and the combination of both fires. Lastly, they determined the difference between organic fire-extinguishing sprays to the existing ones in terms of cost and duration of extinguishing fires. In doing so, the researchers was able to test their hypothesis; Banana peel powder and powdered eggshells are excellent agents in developing an organic household fire-extinguishing spray, and the Banana peel powder and powdered eggshells are not excellent agents in developing organic household Fire-extinguishing spray.

METHODS

Design

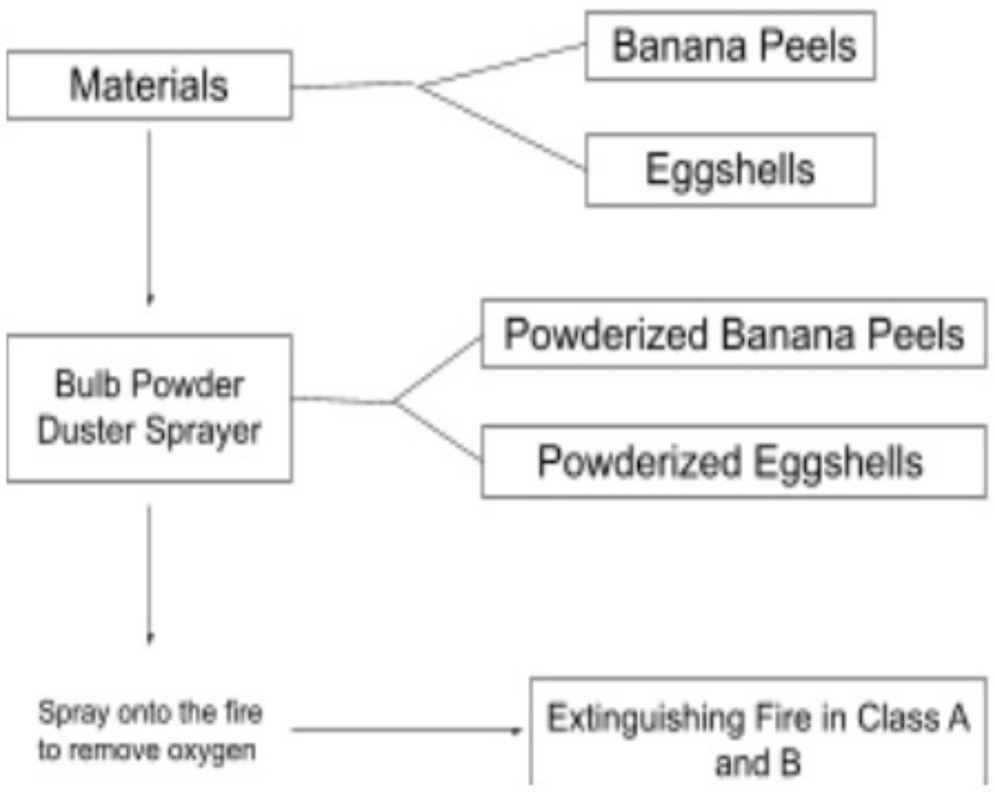
The researchers chose to use an experimental research design, which was a type of quantitative research approach, in this study. An experimental research design employs scientific methods. It establishes protocols that allow the researcher to test a hypothesis and investigate causal relationships between variables methodically and objectively (Grand Canyon University, 2021). The researchers chose this approach because it aided them in their goal of developing a fire extinguishing spray that uses organic materials as its main agent. This allowed the researchers to determine the efficiency and effectiveness of the product in

putting out class A and B fires by using banana peel powder and powdered eggshells as the alternative.

Conceptual Framework

Figure 1

The Process of Fire-Extinguishing Spray Study



Note.

The banana peels and eggshells were powdered and used as the main agent to extinguish the fire. It was put in a bulb powder duster sprayer that is made of rubber and bronze to eliminate flames in classes A and B. Oxygen was removed in the fire triangle. The release of ammonium that came from the banana peels and the potassium carbonate of eggshells is the main agent that extinguishes the fire. The researchers tested and observed the most effective amount of organic materials that is effective in decimating fires in classes A and B.

Materials

Documentation	Name	Description
	100 pcs. Banana Peels	One of the key ingredients used to make an AB organic fire extinguisher.
	50 pcs Eggshells	Another important component that is used as an alternative in the creation of AB organic fire extinguisher spray.
	Oven	Used to cook and dry the banana peels, transforming them into black and hardened banana peels.
	Aluminum Foil	Aids in the cooking and hardening of banana peels.

	Food Containers	Used to hold and store the primary agents.
	Food Chopper	A tool used to grind and crush banana peels and egg shells into fine powder
	Sifter	Large particles of banana peels and eggshells are sieved through this
	Spray Bulb	Serve as a container for the ideal ratio of banana peel powder and powdered eggshells.
	Measuring Spoon	Used to determine the amount of banana peel powder and powdered egg shells.

Instrument

The researchers utilized the observation checklists in testing the credibility of the proposed product to extinguish the fire in classes A and B. Observation checklists contain a set of inquiries. Using the aforementioned test, the effectiveness of the product to extinguish the fire and a comparison of the organic fire extinguisher sprayer to the original fire extinguisher spray were done to address the shortcomings of this study. During the test, the fire-extinguishing spray was showered onto the fire to see if it indeed puts out the different types of flame. As a result, the researchers were exposed to Class A fires, such as papers and wood, and Class B fires, such as alcohol. Numerous trials were done to locate the perfect ratio of organic materials. Only materials found in homes have been tested by the researchers since the proposed product is specialized in households to substitute the traditional fire extinguisher. Large fires, such as those that occurred in commercial structures, were excluded from the investigation.

Also, this test answered the phenomena of the research study. In fact, according to Ossian (2022), an observation checklist is a written guide with a series of questions that assists the observer in focusing on specific aspects of what they observed. The researchers used it in this experiment by developing a question or criteria that were focused while testing the product.

Procedure

1. **Preparation for Banana Peel Powder and Egg Shell**

Begin to gather decomposed banana and egg shells. Separate the banana's skin from the flesh. After gathering the peels, set them out in the sun to dry. When the banana peels have dried, people can proceed to the cooking stage. Preheat the oven to 300°C, then increase to 350°C, and put the banana peels on a sheet of aluminum foil. Bake for 15 to 20 minutes, or until the banana skins are burnt and hard.

Gather all of the eggshells gathered after the banana. Place it in a humid environment after cleaning it with water. Allow it to dry until parched. When it reaches a parched state,

transfer it to a food processor and grind it. Stop when there are no chunky bits left and continue until it reaches a powdered consistency. If they don't have a food processor, you can use a mortar and pestle instead.

2. The Receptacle

The Fire-Extinguishing Spray bottle is made from rubber and copper tubes that can be bought in the market. It has a nozzle on the inside that acts as a lock to prevent leakage. It is made of copper and silica gel on the inside. The marketer guarantees that the materials used will not corrode easily. Length of the sprayer is approximately 12.4 inches long.

3. Making the Organic Fire-Extinguishing Spray

The organic material proportion was determined by the extinguishing ratio that can put out a fire in classes A and B. Since multiple trials have occurred, the ideal organic material ratio is correctly indicated. When all of the organic components and the sprayer are ready, remove the copper tube and nozzle. Pour the agents gently through the funnel. After the transfer, properly enclose it, and individuals are now ready to use the fire-extinguishing spray in their home.

4. The Comparison

After the researchers made the organic fire-extinguishing spray, they bought a commercially available fire-extinguishing spray to compare their alternative product and was able to find their comparison in terms of cost and duration of extinguishing fires.

Data Analysis

In answering the first question, which is determining the most effective ratio of banana peel powder and powdered eggshells, the group provided three (3) tables, wherein the 3 classes of fire have one table each. Inside the table, five (5) ratios are organized as powdered eggshells to banana peel powder and are measured in tablespoons. The following ratios are 1:9, 2:8, 3:7, 4:6, and 5:5, with banana peel powder being dominant in almost all of those ratios. Furthermore, each proportion contains five (5) trials to get the meantime, which serves as the basis in getting the perfect ratio for each class. Also, the meantime aids in determining the standard deviation to get the range of each perfect ratio. The range is utilized to address the second research question.

Meanwhile, the researchers used an observation checklist in answering the effectiveness of the organic fire-extinguishing spray. Using the range of the perfect ratio in class A and B fire, the researchers set criteria that will be compared to the perfect ranges in other class fires. The criteria states that the developed product is ineffective if it is above the range, effective if it is within the range, and extremely effective if it is below the range. Furthermore, the researchers also provided a table on this research subject.

For the third question, the researchers used a table to determine the comparison between the developed product and the commercial fire-extinguishing spray in terms of cost. Also, the researchers used the average total cost formula to determine the value. However, it was only applied to the organic spray as the commercial ones are provided already. On the other hand, to get the difference between the organic fire spray and the existing ones in terms of duration, the researchers put the two in tests in class A and B fire only to obtain the data. Overall, the researchers conducted three (3) trials each on the organic fire spray and commercial fire-extinguishing spray. For the organic one, the researchers used the perfect ratio that was previously determined in the first research question, which is the ratio of 1 tablespoon of powdered eggshell to 9 tablespoons of powdered banana peel. Meanwhile, the commercial fire spray was directly tested in combined class A and B fire. Furthermore, the researchers put it in a table to organize the data obtained.

Here's the formula for the average total cost:

$$\text{Average Total Cost Formula} = \frac{\text{Total Cost of Production}}{\text{Number of Units Produced}}$$

RESULTS

1. What ratio of banana peel powder and powdered eggshells is the most effective out of all the samples?

Ratios (Eggshells:Banana Peel) Note: Table spoon (Ex: 1 tablespoon of egg:9 tablespoons of banana peel)

Table 1.1. *Perfect Ratio for Class A Fire*

Ratio	Trial 1	2	3	4	5	Mean Time	Standard Deviation	Range
1:9	7	8	10	7	9	8.2	1.3	6.9 to 9.5
2:8	8	10	9	12	10	9.8	1.5	8.3 to 11.3
3:7	10	13	13	17	15	13.6	2.6	11 to 16.2
4:6	18	16	19	18	19	18	1.2	16.8 to 19.2
5:5	did not extinguished	-	-	-	-	-	-	-

Note:

The table shows the time needed for each ratio to extinguish a Class A fire. After several tests conducted, the data shows that the ratio of 1:9 can quickly extinguish fires in a span ranging from 6.9 to 9.5 seconds with a mean time of 8.2 seconds. It also shows that the ratio 5:5 is not very reliable for it doesn't extinguish the fire.

Table 1.2. *Perfect Ratio for Class B Fire*

Ratio	Trial 1	2	3	4	5	Mean Time	Standard Deviation	Range
1:9	19	17	19	18	18	18.2	0.8	17.4 to 19
2:8	28	30	27	28	29	28.4	1.1	27.3 to 29.5
3:7	36	37	35	37	35	36	1	35 to 37
4:6	7	8	9	8	6	7.6	1.1	6.5 to 8.7
5:5	did not extinguished	-	-	-	-	-	-	-

Note:

The table shows the time needed for each ratio to extinguish Class B fire. After several tests conducted, the data shows that the ratio of 4:6 extinguished the fire quickly, with a mean time of 7.6 seconds and a span ranging from 6.5 to 8.7. It is followed by the ratio of 1:9, which is also effective in putting out Class A fires. However, it doesn't come close to the ratio 4:6, for it has a mean time of 18.2 seconds. In addition, Table 1.2 also shows the same results as Table 1.1 in testing the ratio of 5:5 as it did not extinguish.

Table 1.3. *Perfect Ratio for Class A and B Fire*

Ratio	Trial 1	2	3	4	5	Mean time	Standard deviation	Range
1:9	12	11	10	12	12	11.4	0.9	10.5 to 12.3
2:8	18	20	21	18	19	19.2	1.3	17.9 to 20.5
3:7	50	53	56	58	55	54.4	3	51.4 to 57.4
4:6	30	33	35	30	29	31.4	2.5	28.9 to 33.9
5:5	36	40	38	38	33	37	2.6	34.4 to 39.6

Note:

Table 1.3 shows the time needed for each ratio to extinguish Class A and B fires combined. After several tests, the data shows that the ratio of 1:9 quickly extinguishes the fire with a mean time of 11.4 and a span ranging from 10.5 to 12.3. Unlike the results in Table I. And III, the ratio of 5:5 can finally extinguish fires. However, it is still not reliable because it takes too long for it to put out fires.

2. What is the effectiveness of fire-extinguishing spray in putting out:

a. Class A Fires
a. Class B Fires
b. Both Class A and B Fires

CRITERIA:

1: Ineffective - above the range

2: Effective - within the range

3: Extremely - below the range

Note: The range that serves as the basis is from the perfect ratio of class A and B fire, which is 1:9 and has a range of 10.5 to 12.3 seconds

Table 2.1 *The Effectiveness of Fire-extinguishing Spray in Putting Out Class A Fires*

Effectiveness	**Class A Fire (Range: 6.9 to 9.5 seconds)**
Extremely Effective	✔
Effective	
Ineffective	

Note

In knowing the effectiveness of the spray in putting out class A fires, the researchers used the range of it that can be found in the perfect ratio of class A, which is the 1:9 ratio. Furthermore, they compared it to the perfect range of class A and B fire, which is 10.5 to 12.3 seconds. Since the range of 6.9 to 9.5 seconds is lower than the 10.5 seconds, it indicates that the fire-extinguishing spray is extremely effective in putting out class A fires.

Table 2.2 *The Effectiveness of Fire-extinguishing Spray in Putting Out Class B Fires*

Effectiveness	**Class B Fire (Range: 6.5 to 8.7 seconds)**
Extremely Effective	✔
Effective	
Ineffective	

Note

The researchers followed the same procedure they used for class A fires to assess the product's efficacy in putting out class B flames. The 6.5 to 8.7 seconds range will be utilized and compared as the 4:6 ratio is ideal for class B fires. As the range is lower than those in class A and B fires, the effectiveness of the spray is extremely effective on class B fires.

Table 2.3 *The Effectiveness of Fire-extinguishing Spray in Putting Out Class A and B Fires*

Effectiveness	Class A and B Fire (Range: 10.5 to 12.3 seconds)
Extremely Effective	
Effective	✔
Ineffective	

Note

For determining the effectiveness of the fire spray, the researchers also utilized the range in the perfect ratio, which is 1:9. Since this is the range that serves as the basis for effectiveness, the product turns out to be effective as it is within the range of 10.5 to 12.3 seconds.

3. What is the difference between the organic fire-extinguishing spray and the existing ones in term of:

a. Cost

a. Duration of Extinguishing Fires

Table 3.1. *The Comparison in Terms of Cost*

Organic Household Fire-Extinguishing Spray	The Existing Fire-Extinguishing Spray
Computation: Average Total Cost = 317/1 = 317	
The cost of production will only rely on the container as agents come from wastes.	The fire stop brand retail price in online stores is 260 pesos.
The fire-extinguishing agents are made up of banana peels that came from the market and the egg shells that come from street food stalls that sell quail egg waffles.	Ingredients are not properly indicated.
Refillable	Not refillable

Note:

Since the organic materials are waste, the cost of production was only determined by the container. The egg shells come from street food vendors that offer quail egg waffles, while the banana peels come from the market. The retail cost of the bulb sprayer is ₱317, but it is refillable. As a result, the expenses were dispersed. Additionally, the material has a bronze sprayer and is made of thick rubber. To powderize the organic materials, the researchers used a mortar and pestle and a non-electric vegetable chopper. Meanwhile, fire stop brand retail price in online stores costs ₱260. The said statements justifies that organic fire extinguisher sprayers cost less since organic materials came from waste and the receptacle are refillable.

Table 3.2 *The Comparison In Terms of Duration of Extinguishing Fires*

Class A and B Fires	Organic Household Fire-Extinguishing Spray (using the golden ratio: 1 tbsp eggshell:9 tbsp banana peel)	The Existing Fire-Extinguishing Spray
Trial 1	11 seconds	16 seconds
Trial 2	10.8 seconds	16 seconds

Trial 3	11.5 seconds	16 seconds

As seen in the table above, the researchers tested three (3) trials to see the difference in duration of the organic fire extinguisher and the non-organic or the commercial fire extinguisher in terms of extinguishing the fire. The data shows that while the commercial fire extinguisher is consistently extinguishing the fire at 16 seconds the organic fire extinguisher is still able to extinguish the fire quicker.

DISCUSSION

After numerous tests and observations, the researchers found out that powdered banana peels must be a dominant agent rather than the eggshells for them to successfully extinguished class fires, given that the perfect ratio for class A is 1 tablespoon of eggshells to 9 tablespoons of banana peel powder, 4 tbsp of powdered eggshells to 6 tbsp of powdered banana peels for class B, and a ratio of 1 tbsp of eggshells to 9 tbsp of banana peels for the combination of both class A and B fires. If the proportion of powdered banana peels and powdered eggshells is equal, the organic materials tend to contradict each other. Thus, it happened that fire could not be eliminated.

Meanwhile, comparing the cost of the product to one in the market, the developed fire-extinguishing spray appears to price less as it is refillable compared to the existing one that is not refillable. Therefore, the price was spread out. In terms of duration, the organic spray extinguished the fire more effectively and quickly than the fire extinguisher.

Overall, the researchers conclude that powdered banana peels and eggshells are a great alternative to fire-extinguishing agents in households. It is not just for extinguishing fires, but the collision of organic materials can also be used as plant fertilizers. This product foresees by researchers that it has the potential to replace the chemicals in traditional fire extinguishers. The researchers came up with the thought that further research in organic waste, especially fruits, will allow people to make a functional product that can be used as an alternative to the chemicals inside the fire extinguisher. In that way, the waste will be lessened, and it will alleviate pollution.

The following recommendations are developed by the researchers for future related studies:

- **Modification of Receptacle-** The researchers suggest that the receptacle needs to be further modified for the organic materials to be released more quickly because the results already show a good sign of quickly extinguishing fires even though the receptacle has a narrow nozzle. It would create more excellent results if the sprayer releases the organic materials more quickly. In that way it would lessen the time needed in order to extinguish the fire. Also, the product has a shallow storage. As a result, users have to refill the receptacle with the organic materials again once they run out. Therefore, the researchers recommend looking for a sprayer that has a big storage capacity and the nozzles should be wider.
- **Longevity of the Agents-** The researchers failed to determine the longevity of the product's agent because the experiment is conducted within a short period. Therefore, the researchers suggest that future researchers observe the organic fire extinguisher's longevity to make it certain for people when to stop using the product or how long it will last.
- **Look for the Product's Health Effects-** The researchers also suggest looking more into the product's

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- **Look for the Product's Health Effects-** The researchers also suggest looking more into the product's effects and seeking assistance from professionals to determine if the spray affects people with asthma or if it has any underlying effects on people's well-being to further assure the user of the safeness of the product.

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Satisfaction Level of Bagel Kings within Anabu 1-F, Imus City, Cavite

Irish Ashley A. Salvador, Catherine C. Abla, Sandara M. Basadre, Irish A. Martinez, Shayme Faith V. Sanico, and Paul Heaven I. Sumera

Senior High School Department, Unida Christian Colleges

ABSTRACT

This study concentrated on the satisfaction level of Bagel Kings and has a purpose of substituting malunggay to *alugbati* which intend to innovate the bagel. Also, due to the availability of the *alugbati* vegetable crop. The researchers used descriptive research design to explain the problem being studied. The respondents in this study are individuals within Anabu 1-F, Imus City Cavite, with a total of 115 respondents, and will be chosen based on the stratified sampling method. To obtain the necessary information, the researcher will conduct an online survey through Google Forms and printed surveys and use a 4-point Likert Scale as the researchers' instrument enables respondents to rank their level of product satisfaction. The researchers used verbal interpretation to interpret the mean of the survey questionnaire prepared by the researchers on the level of satisfaction of Bagel Kings within Anabu 1-F. The data gained by the researchers show that the mean of all the variables and the satisfaction level in terms of age and sex are not lower than 3.26, which means that the respondents in this research were highly satisfied with Bagel Kings. For the recommendation, *alugbati* can be incorporated into other types of bread and pastries, and it can be used as another reference for future studies. In conclusion, the respondent's satisfaction level of Bagel Kings was highly satisfied. Which indicates that the *alugbati* can serve as an alternative for malunggay in the baking industry.

Keywords: *Bagel, Basella Alba, Baking Industry, Bread-making Business, Alugbati Bagel*

INTRODUCTION

Alugbati (Malabar Spinach), or the scientific name Basella alba L., a well-known tropical leafy green vegetable that is frequently cultivated in home gardens. Alugbati has good marketing possibilities for farmers and consumers seeking more unique, local, and ethnic vegetables (Ernst, 2017). Due to its marketing and health benefits, the researchers find a way to incorporate alugbati with bagels. Bagel is a European ring-shaped bread characterized by its crisp crust yet dense interior (Rogers, n.d.). Moreover, the researchers chose this vegetable as it is a great choice due to its mild flavor and availability.

The bread-making business has an excessive market potential as it is a daily consumable food product with a good market demand. Bagels have also outperformed other center store bread and roll categories such as bread, muffins, flatbreads, and pitas (Commercial Baking, 2022). Dispensing such astonishing Alugbati bread is a huge upper hand in selling it out, for it can be nourishing and fulfilling.

Bagel Kings is a partnership business that gets their capital from a partner's initial

investment. It was primarily formed in fulfillment for the requirements in research in Accountancy, Business and Management. The name Bagel Kings came from the product name itself and the Kings were derived from the section of the researchers. According to a survey conducted by the
Department of Science and Technology's Food and Nutrition Research Institute, vegetable consumption decreased from 145 grams to only 110 grams per day. The National Nutrition Council stated that the reason for this is that Filipinos dislike eating vegetables for their texture and taste. Therefore, the researchers created a way for them to consume the Alugbati bread by mixing butter with honey. Butter and honey can help students who are not fond of vegetables consume the Alugbati bread as it gives more flavor.

A recent study has shown that Alugbati is an ideal crop for farmers' marketing opportunities at smaller-volume wholesale marketplaces, particularly seasonal restaurants and grocers, ethnic, and local products (Ernst, 2017). According to the study by Chaurasiya et al. (2021), For both food and non-food applications, Malabar Spinach, also known as Alugbati, is a great source of nutrients and a biologically active compound (Khan et al., 2015). Pharmacognosy and biochemical studies of Malabar Spinach wherein the Malabar Spinach has been known as a local medical plant besides consumptions of its creeping stem, leaves, and young flower sprouts in the countries where it is cultivated. It can be used to make medications and ingredients (Acikgoz and Adiloglu, J Hortic 2018, 5:3). Alugbati fruit extract can be used as a substitute counter stain for safranin in the gram staining of Escherichia coli (Cebrian et al., n.d.). A study by Borja et al. (2013) was carried out on flour prepared from the leaves of Alugbati as Alugbati is a Glucosinolate-Rich Vegetable. In Soriano et al. (2019) study, the researchers utilize the Alugbati leaves powder to increase the Vitamin A content of Fresh Egg Noodles.

According to BCcampus (n.d.), demographic factors are crucial when obtaining to understand and satisfy consumers. Consumer behavior can be significantly affected by factors including age, sex, income, education, marital status, and mobility.

The study's scope is to determine individuals' satisfaction levels upon buying the Alugbati Bagel Bread. The researchers' main objective is to create an original recipe expected to satisfy students' taste and appetite uniquely, to use Alugbati instead of malunggay as a main ingredient to try something new and unique, sustaining the benefits and taste of a bread. This can aid the knowledge gap regarding the product in which no previous studies have been conducted.

The results of this study will be helpful to people who want to start a business with a huge marketing potential and a unique and consumable product. Furthermore, future researchers who conduct the same study, will be able to use this study as a reference and guide.

Lastly, this will add new perspectives and information to significantly improve the existing literature on Alugbati as a marketing product.

This study concentrated on the satisfaction level of Bagel Kings within Anabu 1-F and has a purpose of substituting malunggay to Alugbati. This research will be guided by the following questions:

1. What is the demographic profile of the respondents in terms of:
    a. Sex; and,
    b. Age?
2. What is the level of satisfaction of the customers in terms of:
    a. Product;
    b. Promotion;
    c. Price, and;
    d. Place?

3. What is the level of satisfaction in terms:
    a. Sex, and;
    b. Age?

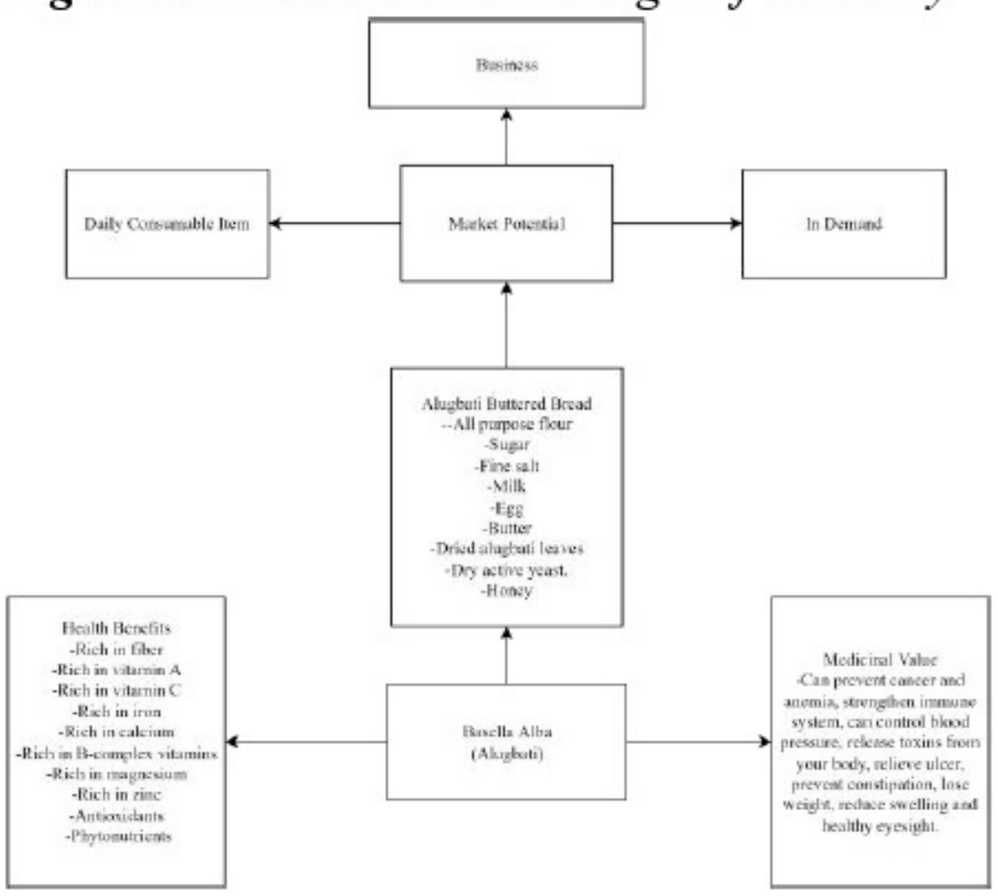
METHODS

Design

McCombes (2022) stated that the descriptive research is guided to help uncover the how, what, when, and where. When conducting a study, researchers often look for an explanation for a phenomenon's existence. Descriptive research guided the researchers to explain the problem that is being studied in an orderly manner so that it can be better understood as to what the study is all about. This also discussed the making of bread mixed with Alugbati, which is full of nutrients. Moreover, it discussed the importance of Alugbati Bagel Bread to the livelihood and how it can benefit the marketing side.

Conceptual Framework

Figure 1. *The Research Paradigm of the Study*



The researchers got the idea to innovate the malunggay bread with Alugbati and butter combined with honey to give more flavor and balance the taste. To create a unique and new way to enjoy the Alugbati benefits, the researchers will sell the final product called Alugbati Bagel Bread within the Anabu 1-F. The bread industry has a huge market potential, as bread is one of the most consumable food products with good demand in the market. The researchers believe that Alugbati has health benefits (fiber, vitamin A, vitamin C, iron, calcium and antioxidants, magnesium, zinc, and B-complex vitamins. phytonutrients) and medicinal value (Can prevent cancer and anemia, strengthen the immune system, can control blood pressure, release toxins from your body, relieve ulcer, prevent constipation, lose weight, reduce swelling and healthy eyesight.) that is on par or even greater than other vegetables.

Instrument

A forced scale, such as the 4-point Likert scale, forces respondents to express an opinion in either direction. When a user's opinion is crucial without being unbiased on a particular topic, market researchers use a 4-point Likert scale. It is typically used to evaluate the respondents' thoughts by asking them how much they agree or disagree with a given issue or statement. A typical scale might be Highly Dissatisfied, Dissatisfied, Satisfied, and or Highly Satisfied.

To obtain the necessary information, the researcher will conduct an online survey through Google Forms and printed questionnaires through face to face.

A 4-point Likert scale offers a force scale survey question that enables respondents to rank their level of product satisfaction. Due to its limiting response, the respondent is unable to justify their response.

Respondents

The respondents in this study are individuals within Anabu 1-F, Imus City, Cavite. The respondents were chosen based on the stratified sampling method. According to

McCombes (2019), a stratified sampling method involves dividing the population into subpopulations that differ in important ways. With this, the participants within the Anabu 1-F will be divided into subgroups; based on the age range and based on the relevant characteristics the respondents possess. The respondents should be in the age range of 15-59 years old and currently within Anabu 1-F.

The following calculations indicate the stratified sampling method used to gain the number of respondents to be surveyed:

Stratified Random Sampling
N = 1699
Confidence level = 91%
error of margin = 0.09
Slovin's Formula: n= N / $1+Ne^2$ n= 1699 / 1 + 1699 $(0.09)^2$ n= 115

Table 1. *The Sample Size of the Research Participants*

Age Group	Population	Age Group Percentage	Sample
15-19	293	17.25	20
20-24	309	18.19	21
25-29	223	13.13	15
30-34	221	13.01	15
35-39	128	7.53	9
40-44	160	9.42	11
45-49	168	9.89	11
50-54	104	6.12	7
55-59	93	5.73	6
TOTAL	1699	100	115

Table 1 represents that a total number of 115 respondents are needed in this study.

Procedure

The researchers first gathered related studies regarding the Alugbati as a product. This can provide the necessary information to study products made out of Alugbati. Afterward, the researchers prepared the survey questions to be utilized in data gathering. The questionnaire was validated by a topic expert so that the validity and reliability of the questionnaire would be evident.

Consequently, the researchers provided a printed survey form and distributed it to each of 115 respondents within Anabu 1-F to get information about the satisfaction of each respondent with the product. If the respondent were unavailable onsite due to time constraints, the respondents would answer the instrument through a Google Forms survey. This form of surveying allowed the researchers and respondents to know if the existing product was ready for purchase and how satisfied they were with the product sample.

The objective of the instrument or the survey form is to gather information and preferences of the respondents about their satisfaction level with Alugbati Bagel Bread and how the respondents' responses help the researchers to improve the product.

Lastly, the researchers evaluated the overall responses through data analysis with the help of a statistician.

Data Analysis

One class of data exists within this survey: data that measure the satisfaction level of the

customers. The topic used to address their satisfaction is comparing and measuring if they are satisfied. The researchers can use the result of this data to look for the success of the product by gathering the satisfaction of the respondents.

The researchers used Frequency and Percentage Distribution during the data collection to assess respondents' satisfaction levels. The researchers could measure each problem and respondents' satisfaction using this formula. Use the standard deviation to understand how far the data are from the mean. A higher standard deviation number indicates a greater spread in the data.

In order to gather data for the statement of the problem questions, the researchers will use the Frequency and Percentage Distribution

Figure 2. *Formula*

Frequency and Percentage Distribution

Formula:

$$\% = \frac{f}{N} \times 100$$

Where: % = Percent
f = frequency
N= Number of cases

To interpret the mean of the survey questionnaire prepared by the researchers on the level of satisfaction of Bagel Kings within Anabu 1-F, the researchers used the verbal interpretation of 4-point Likert Survey that consist: Highly Dissatisfied(1); Dissatisfied(2); Satisfied(3); Highly Satisfied(4). The verbal interpretations for the scale range of the 4-point Likert survey are shown in Figure 3.

Figure 3*. Scale Range of Likert*

3.26 - 4.00	*Highly Satisfied*
2.51 - 3.25	*Satisfied*
1.76 - 2.50	*Dissatisfied*
1.00 - 1.75	*Highly Dissatisfied*

RESULTS

Table 1.1 *Frequency and Percentage Distribution of the Respondents based on Biological Sex*

individuals. Therefore, female respondents outnumbered males, being the majority in this research.

Table 1.2 *Frequency and Percentage Distribution of the Respondents based on Age Group.*

Age Group	Frequency	Percentage
15 to 19 years old	20	17.40
20 to 24 years old	21	18.30
25 to 29 years old	15	13.00
30 to 34 years old	15	13.00
35 to 39 years old	9	7.80
40 to 44 years old	11	9.60
45 to 49 years old	11	9.60
50 to 54 years old	7	6.10
55 to 59 years old	6	5.20
Total	115	100.0

Table 1.2 represents the age bracket of the respondents.The respondents were chosen based on the stratified sampling method. Individuals between 15 to 19 years old represent 17.4 percent of the total population of the respondents. Respondents aged 20 to 24 years are 18.3 percent of the population. Respondents between 25 to 29 and 30 to 34 years are equal to 13 percent of the total respondents needed. Age brackets 35 to 39 comprise 7.8 percent of the total sample needed. Respondents between 40 to 44 and 45 to 49 years old age bracket are equal to 9.6 percent each. Respondents with an age bracket of 50 to 54 years old comprise 6.1 percent of the total respondents. Lastly, respondents of 55 to 59 years old represent

5.2 percent of the population.

Table 2. *Level of satisfaction in terms of the product*

Sex	Frequency	Percent
Male	53	46.10
Female	62	53.90
Total	115	100.0

Table 1.1 illustrates the sex distribution of 115 respondents in total. The male respondents comprised 46.1 percent of the sample size, equivalent to 53 individuals. 53.9 percent of the total respondents were female, that is 62

Statements	N	Min.	Max.	Mean	Std. Dev.
S1 - I am satisfied with the taste of the Bagel.	115	2	4	3.63	0.54
S2 - I am satisfied with the size of the Bagel.	115	2	4	3.39	0.6
S3 - I am satisfied with the appearance of the Bagel	115	2	4	3.72	0.49
S4 - I am satisfied with the quality of the Bagel in terms of texture.	115	2	4	3.74	0.5
S5 - I am satisfied with the packaging of the product.	115	2	4	3.53	0.57

Table 2 shows the data on the satisfaction level of the 115 respondents within Anabu 1-F in terms of the product. With a mean of not lower than 3.26 in each statement, it shows that the respondents were highly satisfied with the product's taste, size, appearance, quality, and packaging, as shown from S1 to S5. If the mean of each statement were lower than 3.26, then the respondent's satisfaction level would fall out as satisfied, dissatisfied, or highly dissatisfied.

Table 2.1 *Level of satisfaction in terms of the place*

Statements	N	Min.	Max.	Mean	Std. Dev.
S6 - The location/seller is accessible	115	2	4	3.73	0.48
S7 - The ambience of the place	115	2	4	3.68	0.52
S8 - The cleanliness of the place.	115	3	4	3.74	0.44
S9 - The booth/place is presentable (presentable booth location).	115	2	4	3.75	0.47
S10 - The overall experience in the place/booth.	115	2	4	3.78	0.43

Table 2.1 shows the satisfaction level of the 115 respondents within Anabu 1-F in terms of the place. It shows that the respondents were highly satisfied regarding the place where the business stands. The respondents were highly satisfied with the accessibility of the place, the ambiance, the cleanliness, the presentability of the place, and the overall experience in the place, as shown from S1 to S5, as the mean of each statement was not lower than 3.26. If the mean of each statement were lower than 3.26, then the

respondent's satisfaction level would fall out as satisfied, dissatisfied, or highly dissatisfied.

Table 2.2 *Level of satisfaction in terms of the price*

Statements	N	Min.	Max.	Mean	Std. Dev.
S11 - The affordability of the Bagel.	115	2	4	3.69	0.48
S12 - The price of the product is reasonable among variances	115	2	4	3.67	0.52
S13 - The product is cheaper among other brands (Industry).	115	2	4	3.61	0.44
S14 - The product is cheaper among other products (Direct Competitors).	115	2	4	3.59	0.47
S15 - The quality of the bread is appropriate to its price.	115	2	4	3.70	0.43
S16 - The service rendered by the sellers	115	2	4	3.83	0.48
S17 - The promotion through social media platforms	115	2	4	3.72	0.52
S18 - The professionalism of the sellers.	115	2	4	3.78	0.44
S19 - The sellers practice food safety hygiene.	115	3	4	3.82	0.47
S20 - The advertising of the Bagel through commercials	115	2	4	3.72	0.43

Table 2.2 shows the satisfaction level of the 115 respondents within Anabu 1-F regarding the price. With a mean higher than 3.26 in each statement, the respondents were highly satisfied with the price. The respondents were highly satisfied with the affordability of the Bagel, its reasonable price among other variances, cheaper among other brands, cheaper among other products, and the appropriateness of the bagel to its price. If the mean of each statement were lower than 3.26, then the respondent's satisfaction level would fall out as satisfied, dissatisfied, or highly dissatisfied.

Table 2.3 *Level of satisfaction in terms of the promotion*

Statements	N	Min.	Max.	Mean	Std. Dev.

Table 2.3 shows the data of the satisfaction level of the 115 respondents within Anabu 1-F in terms of the promotion. It shows that the respondents were highly satisfied in terms of the way the researchers promoted the product as the mean of each statement was not lower than 3.26. The respondents were highly satisfied with the service rendered by the sellers, promotion through social media platforms, professionalism of the sellers, the sellers practiced food safety hygiene, and the advertising of the bagel through commercials as it shows from S1 to S5. If the mean of each statement were lower than 3.26, then the satisfaction level of the respondent will fall out as satisfied, dissatisfied, or highly dissatisfied.

Table 3. *Level of satisfaction of the respondents in terms of Sex-Male*

Statements	N	Min.	Max.	Mean	Std. Dev.
S1 - I am satisfied with the taste of the Bagel.	53	2	4	3.75	0.48
S2 - I am satisfied with the size of the Bagel.	53	2	4	3.55	0.54

S3 - I am satisfied with the appearance of the Bagel	53	2	4	3.72	0.5
S4 - I am satisfied with the quality of the Bagel in terms of texture.	53	3	4	3.81	0.39
S5 - I am satisfied with the packaging of the product.	53	3	4	3.6	0.49
S6 - The location is accessible	53	3	4	3.77	0.42
S7 - The ambience of the place	53	2	4	3.74	0.49
S8 - The cleanliness of the place.	53	3	4	3.77	0.42
S9 - The booth/place is presentable (presentable booth location).	53	2	4	3.75	0.48
S10 - The overall experience in the place/booth.	53	3	4	3.83	0.38
S11 - The affordability of the Bagel.	53	2	4	3.74	0.52
S12 - The price of the product is reasonable among variances	53	2	4	3.74	0.49
S13 - The product is cheaper among other brands (Industry).	53	2	4	3.64	0.52
S14 - The product is cheaper among other products (Direct Competitors).	53	2	4	3.6	0.57
S15 - The quality of the bread is appropriate to its price.	53	3	4	3.79	0.41
S16 - The service rendered by the sellers	53	3	4	3.87	0.34
S17 - The promotion through social media platforms	53	2	4	3.79	0.45
S18 - The professionalism of the sellers.	53	3	4	3.79	0.41
S19 - The sellers practice food safety hygiene.	53	3	4	3.81	0.39
S20 - The advertising of the Bagel through commercials	53	2	4	3.7	0.5

Table 3 shows the data of the satisfaction level of the 53 male respondents within Anabu 1-F. It shows that the respondents were highly satisfied in terms of the way the researchers presented the product in male respondents from S1 to S20. The table provides the mean of each statement which was not lower than 3.26. If the mean of each statement were lower than 3.26, the respondent's satisfaction level would fall out as satisfied, dissatisfied, or highly dissatisfied.

Table 3.1 *Level of satisfaction of the respondents in terms of: Sex-Female*

	N	Min.	Max.	Mean	Std. Dev.
S1 - I am satisfied with the taste of the Bagel.	62	2	4	3.53	0.56
S2 - I am satisfied with the size of the Bagel.	62	2	4	3.26	0.63
S3 - I am satisfied with the appearance of the Bagel	62	2	4	3.73	0.48
S4 - I am satisfied with the quality of the Bagel in terms of texture.	62	2	4	3.68	0.57
S5 - I am satisfied with the packaging of the product.	62	2	4	3.47	0.62

S6 - The location is accessible	62	2	4	3.69	0.53
S7 - The ambience of the place	62	2	4	3.63	0.55
S8 - The cleanliness of the place.	62	3	4	3.71	0.46
S9 - The booth/place is presentable (presentable booth location).	62	2	4	3.74	0.48
S10 - The overall experience in the place/booth.	62	3	4	3.74	0.48
S11 - The affordability of the Bagel.	62	2	4	3.65	0.58
S12 - The price of the product is reasonable among variances	62	2	4	3.61	0.58
S13 - The product is cheaper among other brands (Industry).	62	2	4	3.58	0.53
S14 - The product is cheaper among other products (Direct Competitors).	62	2	4	3.58	0.56
S15 - The quality of the bread is appropriate to its price.	62	2	4	3.61	0.52
S16 - The service rendered by the sellers	62	3	4	3.79	0.41
S17 - The promotion through social media platforms	62	2	4	3.66	0.54
S18 - The professionalism of the sellers.	62	2	4	3.77	0.46
S19 - The sellers practice food safety hygiene.	62	3	4	3.82	0.39
S20 - The advertising of the Bagel through commercials	62	2	4	3.74	0.51

Table 3.1 shows the data of the satisfaction level of the 62 female respondents within Anabu 1-F. It shows that the respondents were highly satisfied in terms of the way the researchers presented the product in female respondents from S1 to S20. The table provides the mean of each statement which was not lower than 3.26. If the mean of each statement were lower than 3.26, the satisfaction level of the respondent will fall out as satisfied, dissatisfied, or highly dissatisfied.

To sum up, female respondents are greater than male respondents as shown in Table 7 compared to Table 8 and are both highly satisfied in terms of the business's product, place, price, and promotion.

Table 3.2 *Level of satisfaction of the respondents in terms of the age bracket*

	Mean			
Age Bracket	**Product**	**Place**	**Price**	**Promotion**
15 to 19 years old	3.58	3.82	3.72	3.75
20 to 24 years old	3.67	3.77	3.68	3.73
25 to 29 years old	3.67	3.61	3.70	3.80
30 to 34 years old	3.53	3.63	3.66	3.75
35 to 39 years old	3.70	3.82	3.69	3.71
40 to 44 years old	3.49	3.84	3.49	3.87
45 to 49 years old	3.54	3.76	3.62	3.78
50 to 54 years old	3.68	3.8	3.66	3.89
55 to 59 years old	3.57	3.47	3.50	3.77

Table 3.2 shows the age range of every respondent from 15 years old to 59 years old. 35 to 39 years old has the highest satisfaction level in terms of product satisfaction with that, it shows that age brackets 35 to 39 years old are more satisfied than those other age brackets. The highest satisfaction level in terms of the place is the age gap between 40 to 44 years old, with that, it shows that 40 to 44 years old are more satisfied in the place than those other age gaps in the table. The highest satisfaction level in terms of the price are 15 to 19 years old, as a result, the age bracket 15 to 19 years old are more satisfied than those other age brackets. Lastly, in terms of promotion the age bracket 50 to 54 years old were highly

satisfied than those above-mentioned. In conclusion, 50 to 54 years old are highly satisfied in overall categories with a mean of 3.76. While the other age groups mean, are ranging from 3.58 to 3.73.

DISCUSSIONS

The purpose of the study is to determine how satisfied respondents are with the product, place, pricing, and promotion of Bagel Kings. It resulted in having highly satisfied customers. The end outcome in cases where the researchers met their objectives was "highly satisfied" with regard to the 4Ps variable as well as the sex and age of the participants. However, there are consumers who are dissatisfied since there is a minimum of two in the data gathered as presented in the tables aforementioned.

While the gap of the study lacks knowledge, the similarities discovered in the review of related literature are the beneficial intake of Alugbati as the main ingredient for a product. Additionally, the product also gained popularity with the general public which conforms to the Healing Bread public business of online selling of Alugbati Pandesal by using Facebook as a medium. It also links to another article in which Malunggay Pandesal is popular among bakeries (Davebakes, 2017). By seeing the similarity of being a household crop, these vegetable crops clearly define that it is a cost-effective main ingredient to incorporate for a particular product. Whereas, the only difference observed and discovered was the use of Alugbati instead of Malunggay ingredients and the different products made among others.

The study has a great impact on society as it aims to describe the satisfaction of customers. It might also be used by businesspersons, farmers, the baking industry, and future researchers. Individuals who have read this research will enable them to understand the information about Alugbati's health and marketing benefits. Furthermore, this study would also be a huge help in developing Alugbati products to market on a larger scale and help distribute and spread the popularity and good benefits of Alugbati locally and might as well internationally. In the sale of the farmers' goods in Alugbati, this study can benefit them by gaining an income from selling it. Lastly, to future researchers as it can serve as another reference for indicating this in their study or might as well continue the conduct of it.

Moreover, it can provide knowledge of which Alugbati and malunggay can both be incorporated into bread. It could be a substitute vegetable that is advantageous and nutritive. The study would greatly provide additional knowledge regarding the Alugbati crop with the health and marketing benefits, and its functions and uses. The current study can be viewed as the start of a research regarding the alugbati bread industry. At the same time, the results of this study should be treated with caution due to the lack of related literature regarding the use of Alugbati to form a much cheaper and healthier version of bagel bread. Future researchers could further examine the use of Alugbati in the bread industry by making another variety of bread such as Nutribun, Churros, and more. It can also be used as another related literature in the Alugbati bread industry. In conclusion, the satisfaction level of Bagel Kings within Anabu 1-F, Imus Cavite resulted in high satisfaction. It is also with the purpose of substituting Alugbati over Malunggay as a main ingredient.

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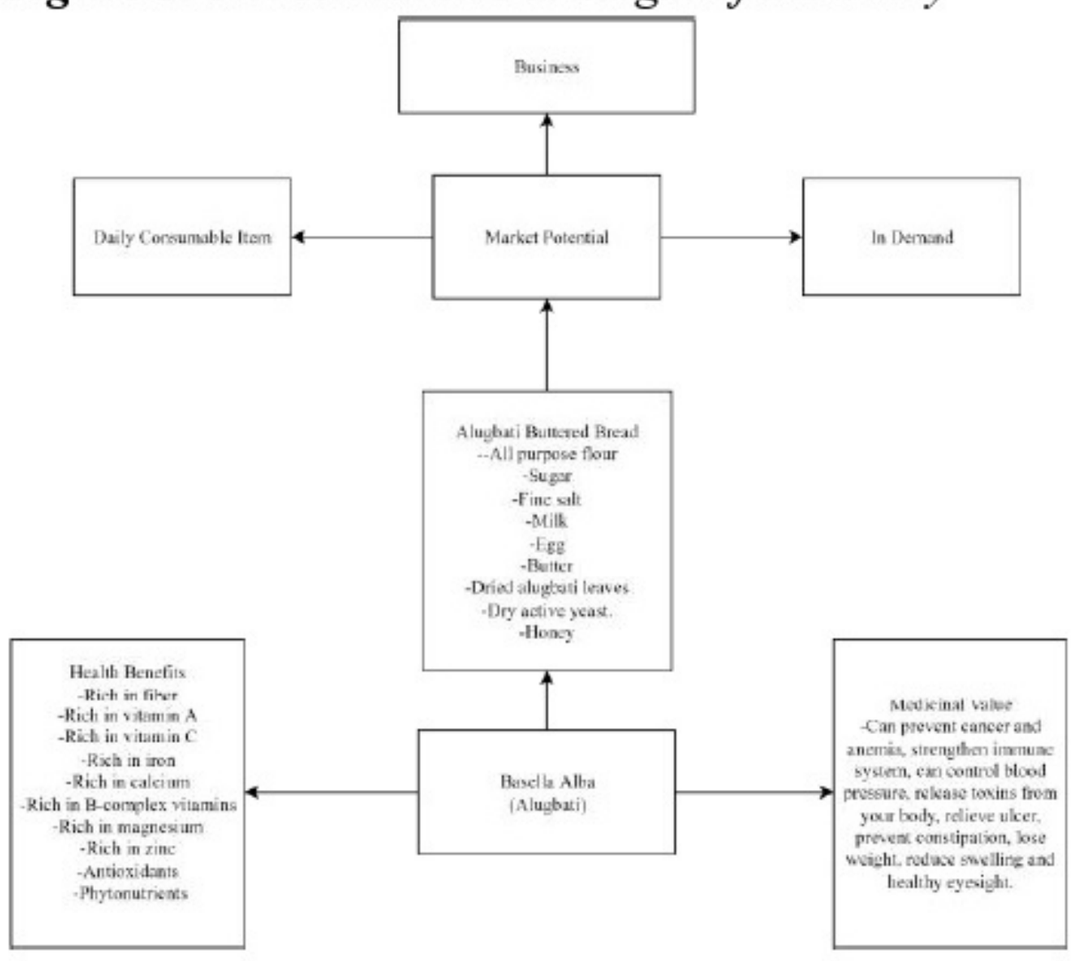
Appendices

The following figures and tables are listed in this section.

Conceptual Framework

Figure 1. *The Research Paradigm of the Study*



Ingredients and Procedures

33 ⅛ cup	bread flour
2 packs	brown sugar
4 ⅛ tsp.	fine salt
4 ½ cup	lukewarm milk
3 pcs.	egg
3 cups	milk
15 tbsp.	dried Alugbati leaves
1 1/2 tsp.	instant dry yeast
4 tbsp.	honey
2 bar	butter
1 pack	cocoa

Methods:

1. In a big bowl mix together yeast, warm milk and sugar.
2. Mix thoroughly until well blended. Ensure that the milk is only warm, not hot.
3. Add the all purpose flour and mend until sticky.
4. Place the dough on a floured surface and knead for about 25 minutes, or until it becomes smooth and elastic.
5. Form the dough into a ball, place it in a bowl, cover it with plastic wrap or a kitchen towel, and set it somewhere warm to rise for 60 minutes, until it has doubled in size.
6. Let the dough sit for a while and divide into sizes using a knife or dough slicer. Shape into donut form.
7. Boil water and add honey.
8. Poached the formed dough into the boiling water, 25 sec. each side.
9. Let it sit for two minutes before putting it into the baking tray. Brush the egg wash at the top of the bread.
10. Put into a preheated oven at 210°C for 50 mins.

Figure 3. *Step by step documentation*

In a big bowl mix together yeast, warm milk and sugar.

Add the all purpose flour and mend until sticky.

Mix thoroughly until well blended. Ensure that the milk is only warm, not hot.

Let the dough sit for a while and divide into sizes using a knife or dough slicer. Shape into donut form.

Survey: The Satisfaction Level of Bagel Kings
Poached the formed dough into the boiling water, 25 sec. each side.

Place the dough on a floured surface and knead for about 25 minutes, or until it becomes smooth and elastic.

Form the dough into a ball, place it in a bowl, cover it with plastic wrap or a kitchen towel, and set it somewhere warm to rise for 60 minutes, until it has doubled in size.

Survey Form

Let it sit for two minutes before putting it into the baking tray. Brush the egg wash at the top of the bread.

Put into a preheated oven at 210°C for 50 mins.
within Anabu 1-F, Imus City Cavite

I. Introduction

Greetings! Group 4 researchers from 12-Kings ABM have conducted a research about the satisfaction level of individuals in Anabu 1-F towards the Alugbati Bagel Bread. We humbly request for your honest compliance and participation that will help the researchers fulfill their objectives. All information gathered will solely be used for research academic purposes and will remain confidential with the guidance of Mr. Raineir Amparo, the research adviser. Answering this survey will take approximately 10-15 minutes of your time. We look forward to your cooperation and thank you for your kind consideration! Research Adviser: Mr. Raineir M. Amparo

Researchers:

Salvador, Irish Ashley A.

Abla, Catherine C.

Basadre, Sandara M.

Martinez, Irish A.

Sanico, Shayme Faith V.

Sumera, Paul Heaven I.

II. Survey Questionnaire

A. Demographics (Fill in the necessary information needed.)

Name: _____

Sex (Biological): Check one that apply

- Male
- Female

Age: Check one that apply

- 15 to 19 years
- 20 to 24 years
- 25 to 29 years
- 30 to 34 years
- 35 to 39 years
- 40 to 44 years
- 45 to 49 years
- 50 to 54 years
- 55 to 59 years

B. Satisfaction Level

Instruction: Put a check (✓) in the box aligned with the statements based on your satisfaction level from the Bagel from Highly Dissatisfied to Highly Satisfied.

Statements	Highly Dissatisfied	Dissatisfied	Satisfied	Highly Satisfied
1.) I am satisfied with the taste of the Bagel. (*Kaaya-aya ang lasa ng Bagel na tinapay.*)				
2.) I am satisfied with the size of the Bagel. *(Kaaya-aya ang laki ng Bagel na tinapay.)*				
3.) I am satisfied with the appearance of the Bagel. *(Kaaya-aya ang panlabas na kaanyuan ng Bagel na tinapay.)*				
4.) I am satisfied with the quality of the Bagel in terms of texture. *(Kaaya-aya ang kalidad ng Bagel na tinapay base sa tekstura nito.)*				
5.) I am satisfied with the packaging of the product. *(Kaaya-aya ang hitsura ng produkto.)*				
6.) The location is accessible. *(Madaling puntahan ang lugar na pinagbebentahan.)*				
7.) The ambience of the place. *(May kaayusan ang kapaligiran na pinagbebentahan.)*				
8.) The cleanliness of the place. *(Nakikita ang kalinisan sa lugar na pinagbebentahan.)*				
9.) The booth/place is presentable (presentable booth location). *(Kaaya-aya ang lugar.)*				
10.) The overall experience in the place/booth. *(Kabuuang karanasan sa lugar na pinagbebentahan.)*				
11.) The affordability of the Bagel. *(Abot kaya ang presyo ng Bagel na tinapay.)*				
12.) The price of the product is reasonable among variances. *(makatwiran ang presyo ng produkto sa iba't ibang pagpipiliang variant.)*				
13.) The product is cheaper among other brands (Industry). *(Mas mura ang produkto kaysa sa iba.)*				
14.) The product is cheaper among other products (Direct Competitors). *(Mas mura ang Bagel na tinapay kaysa sa ibang produkto.)*				
15.) The quality of the bread is appropriate to its price. *(Tama lang sa presyo ang kalidad ng Bagel.)*				
16.) The service rendered by the sellers. *(Serbisyong naranasan sa mga nagbebenta.)*				
17.) The promotion through social media platforms. *(Gumagamit ng social media platforms ang promosyon ng produkto.)*				
18.) The professionalism of the sellers. *(Mahusay ang ipinakita ng mga nagbebenta.)*				
19.) The sellers practice food safety hygiene. *(Nagsasagawa ng ligtas at malinis na kaparaanan sa paggawa.)*				
20.) The advertising of the Bagel through commercials. *(Anunsyo ng Bagel na produkto.)*				

III. Thank you note

You have reached the end of the survey. Thank you very much for your time answering with honesty and integrity!

Figure 4. *Business Logo*

Figure 5. *Organizational Chart*

Figure 5 shows the illustration of the organizational chart of the Bagel Kings. At the top is the General Manager Officer (GM), Irish Ashley Salvador, the highest position within the organization and is responsible for the company's business decisions, including those in operations, increasing business profit, while managing the business overall operations, finance marketing, business development, etc. Assistant Manager (AM) Sandara Basadre. She is the first in command in the organization, focusing more on daily business operations that includes handling customer orders regarding the product and to assist each manager at the chart. The Production Manager (PM), Catherine Abla is the one who oversees the production process, provides enough resources on hand, and coordinates to all managers for product production. The Finance Manager (FM), Paul Heaven Sumera is responsible for overseeing and managing the financial condition of the company. The Marketing Manager (MM), Irish Martinez is responsible for planning and carrying out different marketing strategies to attain more sales and managing advertisements through social media. And lastly, the Sales Manager (SM), Shayme Faith Sanico is the one who plans sale goals to meet sale targets, motivating the managers to improve performance, and builds customer needs and relationships.

Figure 6. *Business Poster*

Figure 7. *Business Brochure*

CATEGORY	ITEM	QUANTITY or MEASUREMENT	UNIT PRICE	TOTAL AMOUNT
Ingredients and preparation	Alugbati	10 strings	P10.00	P100.00
	Bread Flour	5 kg	P53.00 (1kg)	P265.00
	Instant Dry Yeast	33 g	P26.00 (11g)	P78.00
	Butter	400 g	P46.75 (200g)	P93.50
	Fresh Milk	4 L	P85.00	P340.00
	Egg	3 pcs	P8.00	P24.00
	Iodized Salt	30 g	P13.00	P13.00
	Honey	250 mL	P100.00	P100.00
	Brown Sugar	460 g	P46.75	P46.75
	Cocoa Powder	250 g	P18.00	P18.00
	Dark Chocolate Bar	2 bars	P55.00	P110.00
	Tube Ice	3 pk	P35.00	P105.00
	Coffee	50 pk	P112.00 (10pk)	P560.00
	Cling Wrap	2 rolls	P40.00	P80.00
	Parchment Paper	1 whole	P12.00	P12.00
Miscellaneous	Disposable Plastic Gloves	100 pcs	P12.00	P12.00
	Paper Napkins	2 pk	P20.00	P40.00
	Small Paper Plate	200 pcs	P20.00 (50pcs)	P80.00
	Plastic Cup	200 pcs (8oz)	P40.00 (50pcs)	P160.00
	Sauce Dispenser	2 pcs	P28.00	P56.00
	Poster	1 pc	P20.00	P20.00
	Brochure	1 page	P5.00	P5.00
	Tray Plate	2 pcs	P64.85	P64.85
Transportation	Public Jeepney	6 persons for 3 days	P10.00 (P60/day)	P180.00
				Total: Php2563.10

Business Costing

Figure 8. *Estimated Capital needed for the Business*

to public transportation, specifically, jeepney, were calculated. The estimated expense for the said product is Php 2563.10 in total which is allocated and planned for the upcoming opening of the pop up store of Bagel Kings. Variances that will be sold include Alugbati Buttered Bagel, Alugbati Chocolate Bagel, additional chocolate syrup, and iced coffee.

Figure 9. *Estimated Costing and Projected Sales Income*

TYPE	Buttered Bagel Bread	Chocolate Syrup	Iced Coffee
Expenses	P1514.00	P224.00	P825.00
	Php 2563.10		
Projected Sales Income	2400.00	400.00	1200,00
	Php 4000.00		
Projected Profit Margin	885.90	176.00	375.00
	Php 1436.90		

Formulas:

Original Price Formula: Original Price = Total Expenses ÷ Total Pieces Made

Basis of the Rate of Mark-up Formula:

The Figure 8 cited above is the illustration of the estimated cost for the overall preparation of the Alugbati Bagel Bread that will produce over 200 pieces of bread. From the food ingredients and preparation expenses: Alugbati, bread flour, instant dry yeast, butter, fresh milk, egg, brown sugar, iodized salt, honey, cocoa powder, dark chocolate bar, tube ice, coffee, cling wrap, and parchment paper, to miscellaneous expenses: disposable plastic gloves, paper napkins, small paper plate, plastic cup, sauce dispenser, poster, brochure, tray plate,

Selling Price = [(Total expenses × 50%) ÷ Total Pieces Made]

Selling Price Formula: Selling Price = Original Price + Mark-up

Mark-up Formula: Mark-up = Selling Price Original Price

Mark-up Percentage Formula:

Mark-up Percentage = (Selling Price - Original Cost) ÷ Original Cost × 100%

Expected Sales Formula: Sales = Total Pieces Made × Selling Price

Profit Margin Formula: Profit Margin =

Total sales - Total cost *Calculations:*

<u>For the BREAD ONLY:</u>

Total Expense = P1514.10

Original Price Calculation = 1514.10 ÷ 200 = 7.5705 (Round off) = P8.00

Basis of Mark-up Calculation = [(1514.10 × 0.50) ÷ 200] = 3.78525 (Round off) =P4.00

Selling Price Calculation = 8.00 + 4.00 = P12.00

Mark-up Value Calculation = 12.00 – 8.00 = P4.00

Mark-up Percentage Value Calculation: Rate = (12.00 – 8.00) ÷ 8.00 × 100% = 50%

Projected Sales Income Calculation = 200 × 12.00 = P2400.00

Projected Profit Margin Calculation = P885.90

For the ADDITIONAL FEES (Chocolate Syrup) ONLY:

Total Expense = P224.00

Original Price Calculation = 224.00 ÷ 200 = P1.12

Basis of Mark-up Calculation = (224.00 × 0.5) ÷ 200 = P0.56

Selling Price Calculation = 1.12 + 0.56 = 1.68 (Round off) = P2.00

Mark-up Value Calculation = 2.00 – 1.12 = P0.88

Mark-up Percentage Value Calculation: Rate = (2.00 – 1.12) ÷ 1.12 × 100% = 78.57%
Projected Sales Income Calculation = 200 × 2.00 = P400.00

Projected Profit Margin Calculation = 400.00 – 224.00 = P176.00

For the ICED COFFEE ONLY:

Total Expense = P825.00

Original Price Calculation = 825.00 ÷ 200 = P4.125

Basis of Mark-up Calculation = (825 × 0.5) ÷ 200 = P2.0625

Selling Price Calculation = 4.125 + 2.0625 = 6.1875 (Round off) = P6.00

Mark-up Value Calculation = 6.00 – 4.125 = 1.875 (Round off) = P2.00

Mark-up Percentage Value Calculation: Rate = (6.00 - 4.125) ÷ 4.125 × 100% = 45.45%

Projected Sales Income Calculation = 200 × 6.00 = P1200.00

Projected Profit Margin Calculation = 1200.00 – 825.00 = P375.00

Figure 9 illustrates the total expenses or initial capital of the sellers, the estimated sales income, and estimated profit margin. Overall, it indicated that the business could gain up to Php 1436.90 or 1437.00 margin along with different variances to be sold. Specifically, the Alugbati Buttered Bread costs 12 pesos per piece, however, if one wishes to have chocolate syrup on his or her bagel, one needs to pay an additional fee for it. Additionally, the Bagel Kings will also serve iced coffee, which can also have chocolate syrup in it, therefore paying an additional fee for it as well. Above all, the business is expected to incur income that amounted to Php 4000.00.

Figure 10. *Actual Costing for the Business Operations as of March 18-31, 2023*

Date	*Item*	*Purpose*	*Quantity / Units*	*Price*	*Total Amount*
March 18, 2023	*Small Notebook*	*For recording transactions in the business*	*1 pc*	*14.00*	*14.00*

	Acrylic Paint	*For designing the booth*	*1 pc*	*61.00*	*61.00*
	Red Marker	*For designing the booth*	*1 pc*	*26.00*	*26.00*
	Brown Coffee		*2 pk (20 pcs)*	*112.00*	*224.00*
	Paper Napkins		*2 pk*	*16.00*	*32.00*
	Melaware Tray		*2 pcs*	*38.41*	*38.41*
	Plastic Wrap		*1 pc*	*69.00*	*69.00*
	Toothpick		*3 pk*	*6.00*	*18.00*
	Trash Bag		*1 roll*	*15.00*	*15.00*
	Red Apron		*2 pcs*	*50.00*	*100.00*
	White Cartolina	*For designing the booth*	*4 pcs*	*10.00*	*40.00*
	Print		*1 whole*	*20.00*	*20.00*
	Butane	*for cooking another variant of bread, churros*	*2 pcs*	*100.00*	*200.00*
March 20, 2023	*Meal allowance*			*114.00*	*114.00*

	Butter Knives		*1 pk*	*90.00*	*90.00*
	Parchment Paper		*2 pcs*	*12.00*	*24.00*
	Bread Flour		*3 kg*	*53.00*	*159.00*
	PB L		*1 pk*	*35.00*	*35.00*
	Dark Chocolate Bar		*1/4 bar*	*80.00*	*80.00*
	Butter		*2 bars*	*42.00*	*84.00*
	Instant Dry Yeast		*1 pk*	*65.00*	*65.00*
	Fresh Milk		*2 L*	*85.00*	*170.00*
	Bread Flour		*3 kg*	*53.00*	*159.00*
	Brown Coffee		*2 pk*	*112.00*	*224.00*
	Aluminum Foil		*1 roll*	*50.00*	*50.00*
	Egg		*3 pcs*	*10.00*	*30.00*
	Double sided Tape		*1 pc*	*40.00*	*40.00*
	Tube Ice		*1 pk*	*10.00*	*10.00*

Satisfaction Level of Bagel Kings

	Tape	For designing the booth	1 pc	10.00	10.00
	Thumbtacks	For designing the booth	1 pk	10.00	10.00
	Metallic Foil	For designing the booth	2 pcs	25.00	50.00
	Small Paper Plates		2 pk	20.00	40.00
	Plastic Cups		2 pk	43.00	43.00
	Red Face Mask	For color coding theme of the booth	3 pk	50.00	50.00
March 21, 2023	Gasoline Expense	To transport the needed materials in the booth (back and forth)	1 L	69.00	69.00
	Egg		1 pc	10.00	10.00
	Oil		1 bottle	30.00	30.00
	Print and others	for materials needed in the booth		150.00	150.00
	Mineral Water		1 gal	20.00	20.00
March 23, 2023	Butter		1 bar	42.00	42.00
	Parchment Paper		1 whole	12.00	12.00
	Transportation	The fare accounted for travelling (back and forth)	6 persons	10.00	120.00
March 24, 2023	Fresh Milk		2 L	85.00	170.00
	Dark Chocolate Bar		2 bars	75.00	150.00
	Piping bags		6 pcs (1 pk)	35.00	35.00
	Egg		2	20.00	20.00
	Oil		1 bottle	20.00	20.00
March 31, 2023	Utilities	To record the electricity usage of e-oven and clip fan	1 day	7.29	21.86

	Tube Ice		*1 pk*	*10.00*	*10.00*
March 22, 2023	*Fresh Milk*		*2 L*	*85.00*	*170.00*
	Butter		*2 bars*	*42.00*	*84.00*
	Dark Chocolate Bar		*1/4 bar*	*80.00*	*80.00*
		as well as the water consumption			
	Partner's Drawing	*Share to partners*	*6 persons*	*100.00*	*600.00*
					TOTAL ***₱4,208.27***

The actual costing for the business operation of the Bagel Kings as of March 18-31, 2023 is shown in the Figure 10 above. The business incurred a total of 4,208.27 pesos for the overall expenses: raw ingredients and preparation, miscellaneous, travel expenses, and the share or withdrawal of partners.

Figure 11. *Forecasted Versus Actual Amount*

Particulars	Budget Amount	Actual Amount	Variance
Units	200.00	400.00	100%
Sales	4,000.00	4,856.00	21.40%
Profit Margin	1,436.90	1,556.00	8.29%
Expenses	2,563.10	4,208.27	64.19%

Financial Statements

Figure 12. *Statement of Profit and Loss of Bagel Kings*

Bagel Kings
Statement of Profit and Loss
As of March 18 - 31, 2023

Sales			₱	4,856.00
Less: Cost of Goods Sold				
Beg. Inventory	₱	0.00		
Purchases		2,812.41		
Less: Ending Inventory		110.00		2,702.41
Gross Income				2,153.59
Less: Operating Expenses				
Gasoline Expense		69.00		
Meal Expense		114.00		
Transportation Expense		120.00		
Utilitiies Expense		21.86		324.86
Net Income			₱	**1,828.73**

The above financial statement is the statement of profit and loss of the Bagel Kings as of March 2023. It illustrates if the business organization is profitable or not. Through analysis and computation, the business net sales amounted to 4,856.00 pesos from which the Cost of Goods Sold were subtracted equivalent to 2,702.41 pesos. With that, the gross income resulted in 2,153.59 pesos deducting the

operating expenses of 324.86 pesos. As a result, the business incurred profit to a total of 1,828.73 pesos which is favorable for the business.

Figure 13. *Statement of Changes in Equity of Bagel Kings*

Bagel Kings Statement of Changes in Equity As of March 18 - 31, 2023				
Beg. balance, March 17, 2023			₱	3,000.00
Add:				
Additional cash funds	₱	300.00		
Net Income		1,828.73		2,128.73
Total				5,128.73
Less:				
Salvador's, Drawing		100.00		
Abla's, Drawing		100.00		
Basadre's, Drawing		100.00		
Martinez's, Drawing		100.00		
Sanico's, Drawing		100.00		
Sumera's, Drawing		100.00		600.00
Ending balance, March 31, 2023			₱	**4,528.73**

Figure 13 shows the statement of changes in equity of the Bagel Kings. It illustrates the capital and withdrawal of the owners of the business. The beginning cash balance was equivalent to 3,000.00 pesos, adding the partner's additional cash fund contribution of 300.00 pesos and the net income of 1,828.73 pesos which equals to 2,128.73 pesos. Deducting the withdrawals of the partners afterwards. Having a total of 4,528.73 pesos being the ending cash balance for the month of March year 2023.

Figure 14. *Cash Flow Statement of Bagel Kings*

Bagel Kings Cash Flow Statement As of March 18 - 31, 2023			
Cash flow from Operating Activities:			
Cash	₱	4,856.00	
Cost of goods sold		(2,812.41)	
Cash paid for gasoline expense, meal expense, and other expenses		(324.86)	
Net cash inflow from Operating Activities			₱ 1,718.73
Cash flow from Financing Activities:			
Partnership capital contribution		3,000.00	
Additional cash funds by the partners		300.00	
Cash withdrawn by the partners		(600.00)	
Net cash inflow from Financing Activities			2,700.00
Cash flow from Investing Activities:			
Purchase of supplies		(471.00)	
Net cash inflow from Investing Activities			(471.00)
Net Cash Inflows			3,947.73
Cash balance, March 1, 2023			0.00
Cash balance, March 31, 2023			₱ **3,947.73**

The above financial statement is the cash flow statement of the Bagel Kings as of March 2023. It illustrates the cash inflows and outflows within the business organization. Through analysis and computation, the business received cash from customers amounting to 4,856.00 pesos deducting the cost of goods sold equivalent to 2,812.41 as well as the payment for expenses that is 324.86 pesos. As a result, a total of 1,718.73 pesos net cash inflow came from operating activities. The partnership capital contribution amounted to 3,000.00 pesos, adding the additional cash fund invested that is 300.00 pesos which equals to a total of 3,300.00 pesos net cash inflow from financing activities. Whereas the purchase of supplies were equivalent to 471.00 pesos net cash inflow recorded in investing activities. Overall, the net cash inflows resulted in gaining 3,947.73 pesos, being the ending cash balance for the month.

Figure 15. *Sales Forecast of Bagel Kings*

	2024	2025	2026	2027	2028	Five-Year Total
Units Sold	13,778	22,500	24,600	29,400	34,200	124,478
Sales	136,430.00	276,900.00	304,200.00	366,600.00	429,000.00	1,513,130.00
Gross Profit	66,960.00	114,750.00	203,400.00	145,800.00	167,400.00	698,310.00

Figure above shows the sales forecast of the Bagel Kings. For the year 2024, the annual unit sold of the product is 13,778 with a total sales of Php. 136,430.00. The gross profit for the year 2024 is amounting to Php. 66,960.00. For the year 2025, the annual unit sold of the product is 22,500 with a total sales of Php. 276,900.00. The gross profit for the year 2025 is amounting to Php. 114,750.00. For the year 2026, the annual unit sold of the product is 24,600 with a total sales of Php. 304,200.00. The gross profit for the year 2026 is amounting to Php. 203,400.00. For the year 2027, the annual unit sold of the product is 29,400 with a

total sales of Php. 366,600.00. The gross profit for the year 2027 is amounting to Php. 145,800.00. For the year 2028, the annual unit sold of the product is 34,200 with a total sales of Php. 429,000.00. The gross profit for the year 2028 is amounting to Php. 167,400.00. In five years, the summation of units to be sold is 124,478 with a total sales of Php. 1,513,130.00. The gross profit within 5 years is amounting to Php. 698,310.00.

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Social and Emotional Loneliness: Selected Factors Affecting Young Teachers at Unida Christian Colleges for the A.Y. 2022-2023 Madelene A. Camet, Ericha Mae A. Jazmin, Althea M. Mandapat, Shekinah Leane G. Sarreal, Ma. Quincy Nicole M. Trinidad, Luis Phillip Viña

Senior High School Department, Unida Christian Colleges

ABSTRACT

This study utilized quantitative approaches to identify factors that lead to the social and emotional loneliness of working young adults at Unida Christian Colleges. Data were collected from 80 teachers using three questionnaires. To hand out the preliminary and main questionnaires to all respondents, the researchers stopped by each faculty several times. In the UCLA Loneliness Scale (1), 39 out of 80 teachers have been found to have a moderate degree of loneliness, making them suitable to respond to the primary assessments of this study. Furthermore, on the De Jong Gierveld Loneliness Scale, it was found that most teachers tend to feel more emotional (4.46) than social loneliness (2.64). In the researcher-made questionnaire (3), the researchers distinguished the most and least affecting factors. Under social loneliness, "anxiety" ranked highest (3.00) and "socioeconomic status" ranked lowest (2.15). In emotional loneliness, "death" came highest (3.62) while "bullying" placed lowest (2.49). Overall, “death” (3.62) ranked highest under social and emotional loneliness factors. These results emphasized every individual's desire to belong. The highlighted factors can serve as a basis for future research to lessen loneliness in people's wide and intimate interpersonal relationships, which ultimately contribute to the fulfillment of their sense of belonging.

Keywords: *Social Loneliness, Emotional Loneliness, Young Adults, Teachers, Working Young Adults*

INTRODUCTION

An emotion is a personal mental state. It may be responses to internal stimuli like memories, ideas, or environmental occurrences (GoodTherapy, 2019). In reality, every individual's emotions vary and change daily depending on the circumstances. For the past two years of the pandemic, countless people have been stuck in each other’s homes due to COVID-19. They are completely unsure of what will transpire. The University of the Philippines Population Institute (UPPI) reports that depressive symptoms climbed from 7% in 2013 to 9.8% in 2021, suicide ideation rates went from 8% in 2013 to 17% in 2021 as well as an increase in suicide attempts among young people from 3% to 7.5%. Loneliness became a dominant emotional aspect at this time, especially for the youth. The subjective assessment of the circumstances in which people find themselves is what loneliness is all about. It is characterized by either a lesser number of relationships with friends and coworkers than is ideal. This caused many young adults to have mental problems, and loneliness is one of them.

However, most of the conducted studies focused merely on students, older adults (65 years and above), or adults across the different stages. Hence, this allows the researchers to have young adults as their focal point. But instead of students, they will consider those who are already employed. By the time the early adults or young adults reach that stage of adulthood, mostly the physical maturation is complete. However, their height and weight may increase slightly, as well as their responsibilities in life (Maricopa Community Colleges, 2023).

In this study, the researchers focused on the emotional aspect of loneliness, specifically social and emotional loneliness. Social loneliness originates from lacking a broader group of contacts or an engaging social network. In contrast, emotional loneliness originates from the absence of an intimate figure or a close emotional attachment (Weiss, 1973, as cited in Van Tilburg, 2021). The researchers identified the factors that Unida Christian Colleges (UCC) teachers possess. Aside from that, they also discovered the range of their social and emotional loneliness, knowing that they are likely more exposed and prone to social and emotional loneliness because of various situations or transitions in their life now and even from their past experiences or traumas are still unsettled. Therefore, the aim of this study is to distinguish the dominant and least factors associated with social and emotional loneliness in the life phases of the young working adult lifespan (22-30 years old).

This study aims to identify the factors influencing the social and emotional loneliness of young teaching staff in Unida Christian Colleges for the academic year 2022–2023—generally referred to as those between the ages of 22 and 30. The researchers considered the youth because they are more likely to feel various emotions, specifically negative ones such as emotional and social loneliness. In particular, 80 (eighty) teachers will participate in the study. Since many respondents are required and beneficial to acquire quantifiable data, all 80 teachers were included as respondents. On the other hand, teachers who are already above 30 years of age were not involved. Additionally, the researchers did not include teachers who were terminated in the first questionnaire, which is the preliminary assessment of loneliness, because that signifies that they are not qualified for our research on measuring social and emotional loneliness.

This study aimed to understand the collected information from respondents' answers to create a purposeful solution in addressing young working adults' social and emotional loneliness. The following groups of people were the beneficiaries of this research.

First and foremost, this study can help teachers better understand themselves and actively try appropriate approaches to uplift their co-teachers social and emotional well-being, even in academic situations. Consequently, this study raised awareness among all young adults concerning social and emotional loneliness and its effects on people's lives. By understanding this, people can better manage their own and others' health. The third one is the guidance office because it can serve as a guide for implementing programs to assist teachers in becoming efficient social and emotional learners. In addition, the Department of Education can also help educators establish impactful teaching practices and foster deep learning and positive social and emotional development. Finally, this is equally important to future researchers since they can utilize this study to comprehend social and emotional loneliness and its factors profoundly.

According to an internet article, interactions between families, classmates, friends, at work, within groups, and within organizations gave rise to social structures that emerge from dyadic connections. People develop opportunities for and

barriers to health and well-being within this web of relationships (Simmel, 1950; Wasserman and Faust, 1994; Wellman and Berkowitz, 1997, as cited in Breiner et al., 2014). People prefer to adopt other people's habits when they are tightly connected to others within the same network, which serves as a one-way social influence function. The process by which people share characteristics, attitudes, actions, and other personality traits with one another is difficult, as shown by similarities.

Loneliness is an unpleasant emotion associated with loss and discontent, according to Van Tilburg's study (2021). It arises from the process of evaluating what one's ideal personal connections might be. Regarding partnerships, a person has social expectations as well as personal preferences. Additionally, when social networks are too small or interactions are of poor quality, people commonly feel lonely (De Jong Gierveld, 1978; Perlman & Peplau, 1981; as cited in Van Tilburg, 2021). This is the idea of loneliness that has been studied the most frequently. One of the most prevalent causes of social and emotional loneliness is a decline in social interactions (Aartsen & Jylhä, 2011, as cited in Van Tilburg, 2021) or the death of a partner (Utz et al., 2014, as cited in Van Tilburg, 2021). But the primary causes of emotional loneliness are sensations of seclusion, emptiness, and abandonment. Furthermore, loneliness is not something that people intentionally seek out; it is a social and emotional state that affects someone. These types of loneliness may manifest as social discomfort or distress (Cacioppo et al., 2006, as cited in Van Tilburg, 2021).

Further, as people become conscious of the discrepancy between their current social relationships and what they desire, loneliness develops as a negative state. It claims that despite the fact that there are many different ways to define loneliness, they all have one thing in common: loneliness agonizes people. It also asserts that if a person is content with a select group of relationships, they are unlikely to feel lonely. On the other side, even if one has a huge group of friends, the desire for new and more meaningful relationships might make one feel lonely. Burger, 2006; Eskin, 2001; Peplau and Perlman, 1982; as cited in Kutlu & Pamuk, 2016).

Understanding how the absence of a sense of community and belonging affects a person's experience of the outside world is necessary for addressing the biology of loneliness. In order to develop social and psychological therapies to address it, Steve Cole (n.d., cited in National Institute on Aging, 2019) concentrated on discovering the physiological pathways of loneliness, which have an impact on how one's mind and body function in numerous ways. When someone feels scared and untrustworthy of others, as they do when they are constantly alone, a biological defense mechanism is activated. People in this type of position sometimes are already in the middle-age phase because they already have their goals and ambitions in life. People claim that their behavior changes as they get older, and some people prefer to be alone while others feel more comfortable socializing.

According to one publication, much research has been done on the impact of social support on depression in adults and the general population. The university population, however, faces particular difficulties and serves as an example of a unique developmental transition stage involving recently attained independence and social bonds (Robotham, 2008, as cited in Alsubaie et al., 2019). As an individual gets older, lifestyle changes from childhood to adulthood get tougher and worse and last longer. College is stressful because it demands students to adjust to changes in their community, relationships, and way of life (Bayram & Bilgel, 2008; Ibrahim et al., 2013; Steptoe, Tsuda, & Tanaka, 2007, as cited in Alsubaie et al., 2019). The

transition from adolescence to early adulthood comes with difficulties, including learning how to manage one's life and deal with roles that call for increased independence (Lenz, 2001 as cited in Alsubaie et al., 2019). Young people can discover and engage with their identities and aspirations during this transitory time. Many university students are living away from home for the first time for an extended period of time. This article offers details and recommendations to help readers learn more about this. This study has a connection to social loneliness because it also takes into account people's actions, attitudes, and other traits. It also provides social support, a vital tool for protecting students' mental health.

In the study of O'Silleabháin et al. (2019), emotional loneliness is linked to a higher risk of all-cause mortality in older adults who live alone. Functional status has been identified as one explanation for the detrimental effects of loneliness. Emotional loneliness, which can come from the loss or absence of a close emotional attachment figure, appears to be the toxic aspect of loneliness. As emotional loneliness climbed, the effective rate of functional status on mortality increased as well. In older people, functional status is a key measure of health, and a loss in functional status signals a decline in health. An association between functional status and loneliness has been found in a previous study. This study adds to the growing body of evidence that functional status may play a role in the link between emotional loneliness and mortality in people who live alone.

Studies show loneliness is a risk factor for depression, anxiety, cognitive distortion, suicide, alienation, despair, and other negative outcomes. However, loneliness is not just something that college students feel and go through; it may also affect young children, teenagers, and the elderly. In this case, there are two types of loneliness: social loneliness and emotional loneliness. Emotional loneliness is caused by a lack of close relationships, while social loneliness is caused by a lack of social integrity. On the other hand, emotional loneliness pushes people to look for close, honest connections while social loneliness encourages them to join groups or activities. Russell, Cutrona, Rose, and Yorka (1984, as cited in Kutlu & Pamuk, 2016) contend that emotional loneliness results from dissatisfaction with romantic relationships, while social loneliness results from dissatisfaction with friendship relationships. This proves that social and emotional loneliness does not differ according to gender.

In an article, Cherry (2023) stated that depression, a psychological condition, frequently leads to social withdrawal. Similarly, evidence indicates that loneliness may also add to the symptoms of depression. Moreover, internal problems like low self-esteem can be linked to loneliness. People who fear rejection often think they are undeserving of other people's attention or respect. Additionally, the personality trait of introversion may be relevant. Introverts may be less likely to create and seek out social ties, worsening loneliness. According to Fardghassemi and Joffe (2022), more women than men experience loneliness due to social comparison. On social media, social comparisons were made on a variety of topics, including accomplishments, physical beauty, and friendships. Because everyone else seemed to be making progress, the participants felt stuck or behind. Participants in the study believed they were not making improvements toward any of those goals, particularly the mention of everyone going to college, landing a job, getting married, purchasing a car, and traveling. They reported despair, bitterness, low self-worth, and inadequacy. According to statistics, roughly one out of every three young adults suffers from anxiety, making their life stage crucial (Newport Institute, 2020). Young adults' anxiety can be devastating as they deal

with the difficult task of building autonomy and selfhood. As a result, the pressures of the workplace, romantic relationships, and college coursework become too much to handle. Rey (2020) explained certain factors associated with lonely people, the most significant of which were a sense of low energy, irritability, higher levels of anxiety, a lack of motivation, increased mental health issues, an inability to concentrate, negative thoughts, sleep disturbances, procrastination, boredom, and the inability to accomplish personal or professional goals. In other words, insufficient motivation leads to loneliness over time. Nearly 50% of those who participated report being commonly or always exhausted as a result of their employment, according to Seppälä and King's (2017) analysis of the General Social Survey from 2016. It has grown by 32% since 20 years ago. This proves that feeling alone and being worn out at work are significantly correlated. The more exhausted individuals are, the more lonely they feel. Thus, loneliness is caused more by the emotional tiredness of workplace burnout than by social isolation.

Messelt (2022) claims that after a loved one passes away, people may feel completely absorbed by their sorrow and frequently lonely, especially if they had a close relationship with the deceased. The physical and emotional emptiness left by the person's death may be accompanied by an overpowering sense of loneliness, even if others may surround them. Every loss causes each individual's grieving to be different. Grief has its highs and lows, and while people mourn, their feelings of loneliness may grow before they subside. Moreover, friendships are sometimes forever; other times, they end because people change jobs and end relationships with intimate partners. Friendship breakups are especially tough to handle because mankind has no patterns for them (Guha, 2021). As stated by Brennan (2023), bullying's consequences linger as a child ages. According to research, young adults who experienced bullying as children are more likely to experience mental health issues in the future. On the other hand, a trauma that occurs during childhood or adulthood can also make it difficult for individuals to establish quality relationships with others, which may contribute to feelings of emotional loneliness (Deaton, 2023). In addition to the factors, the sudden absence of a partner creates a hole in a person's life. Suppose the relationship has been deteriorating for some time or has even been emotionally violent at times. In that case, there may be a sense of relief, but loneliness is likely to set in within a few days or weeks (Talbbl, 2018). These issues can affect relationships and often stem from childhood loss. In addition, environmental, physiological, genetic, and brain chemistry factors and losses might result in abandonment problems (WebMD, 2022). Lastly, family is the place for people's earliest and greatest emotional memories, and it is this setting that they repeatedly return to. However, interactions with the family can be filled with miscommunication, animosity, quarreling, and badgering (Segal, 2023).

Since adolescence and young adulthood are marked by significant sociodemographic, family, social, and personality changes, Von Soest et al. (2020) show that loneliness grows during these phases. They identified essential facets, correlations, and midlife outcomes of loneliness in Norwegians aged 13 to 31. While social aspects of loneliness eventually decreased and plateaued by the time adults reached their mid-20s, emotional aspects of loneliness grew from early adolescence to the mid-20s. Moreover, women of all ages were found to be more lonely than men. But in one type of loneliness, men commonly experience social loneliness. Increased loneliness was consistently associated with a higher likelihood of disability and reduced income in midlife. On the other hand, individuals who felt their parents were loving, had close friends, and did not leave the parental home before the age of 18 were linked to lower levels of loneliness across evaluation modalities. This is the

first study to offer a thorough overview of the multidimensionality and development of loneliness throughout the course of the second and third decades of life.

Matthews et al. (2022) examined the perceptions that others have of lonely young people in terms of their personalities, behaviors, and life circumstances. They believed that significant life events like finishing school, going to college, leaving the parental home, starting a job, and developing long-term romantic relationships all present major challenges that, if not properly negotiated, could deprive people of social connections and make them feel excluded from those around them. Most of the data are derived from others' views of the participants based on their interactions with them rather than directly from the participants themselves. It revealed that among 2,232 people born in the United Kingdom in the mid-1990s, loneliness was linked to lower levels of reported conscientiousness, agreeableness, extroversion, and neuroticism. The three themes that emerged from the loneliest 5% of participants were "uncomfortable in my own skin," "clustering of risk," and "difficulties accessing social resources."

According to Franssen et al. (2020), some studies encompass wide age groups and give insufficient insight into the factors influencing the various stages of the adult life span (19–65 years). In order to reduce the gap, they used a large dataset to investigate if there were differences in the relationships between demographic, social, and health-related factors and loneliness for young adults (19–34 years), early middle-aged adults (35–49 years), and late middle-aged adults (50–65 years). Based on the findings of this study, various factors were connected with loneliness across all age groups. Remarkably, psychological variables correlated more strongly with loneliness than physical health variables. Consistently linked with loneliness were living alone, frequent neighbor interactions, feeling excluded from society, psychological distress, and psychological and emotional well-being. To be more precise, only young adults showed a relationship between education and loneliness, only early middle-aged adults have a relationship between employment status and loneliness, and only late-middle-aged adults were lonely and perceived health-related. Furthermore, the connection between ethnicity and loneliness was greater among young and early middle-aged adults. The correlation between financial imbalance and loneliness gradually weakened from young to late middle-aged adults. Early and late middle-aged adults have a frequency of family interaction correlated with loneliness. Because loneliness differs among different age groups, there is no one solution that works for everyone regarding reducing it in adults. Instead, this study suggested that using a mix of interventions or an indirect strategy may be essential.

These related studies revealed that individuals are social beings regardless of their stage of life. Their social lives directly impact their conduct and well-being positively or negatively. In the case of the students, being socially active boosts their motivation. In addition, people are more inclined to adopt the attitudes of those around them if they interact with others. In the meantime, individuals may still feel lonely due to life transitions, adaptations, and isolation. Since loneliness develops over time across all age groups, studies have shown that if it is not appropriately addressed, it can result in issues with one's physical, social, and emotional health. Loneliness is one of these conditions, which has an implication on both the body and the mind.

However, most studies sought to identify the causes and consequences of loneliness. Only a few studies examined what specific type of loneliness people are experiencing along with its factors,

especially among individuals in early adulthood who are already working. In this quantitative study, the researchers are interested in knowing the factors of social and emotional loneliness among working young adults, particularly teachers at UCC. Identifying the degree and factors will be beneficial, especially for UCC, as it will assist the school staff in enriching each teacher's emotional and social life while teaching in classes and on school premises.

Baumeister and Leary's (1995) theory of "The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation" highlighted two key characteristics. First, people need frequent, conflict-free, positive, or enjoyable encounters with others in their personal lives. Second, every person must see that an interpersonal relationship distinguished by constancy, effective care, and continuity into the near future exists. This revealed that seeking out social connections and developing potential relationships with others with at least a minimum quantity of interpersonal contact and relatedness is vital. They claimed that while long-term intimate social contact might bring some satisfaction, especially a sense of belonging, interactions with strangers could also be the initial steps toward such relations. These two features are crucial for the need to belong to be satisfied.

However, if this is not achieved, it will result in feelings of loneliness because there is insufficient social contact (social loneliness) or a lack of worthwhile, close relationships (emotional loneliness), which is the focus of this quantitative study. Hence, they came to the conclusion that people have a need for simple social interaction as well as a separate desire for intimate connections, which will alleviate social and emotional loneliness in individuals.

Through this theory, the researchers understood that it is natural for individuals to feel and fulfill their sense of belongingness. Nevertheless, there may still be a barrier or difficulty in building relationships, leading to social and emotional loneliness. This theory provides the context and substance of placing a high value on each individual's social life. Because based on the evolutionary standpoint of this theory, relationships with both of the aforementioned aspects would be more valuable for survival and reproduction than those with only one of them. Therefore, it is essential to identify the particular causes of social and emotional loneliness among teachers in their early adulthood.

All things considered, this research aims to determine the social and emotional loneliness factors among young adults in the teaching personnel of Unida Christian Colleges. To obtain all of this information, the researchers provided the following questions to answer at the completion of this study:

1. What are the most and least affecting factors in the social and emotional loneliness of teachers in the following departments:
    a. Elementary
    b. Junior High School
    c. Senior High School
2. What are the overall most and least affecting factors for social and emotional loneliness across all departments?

METHODS

Design

The researchers used a specific type of quantitative design called descriptive quantitative research design. According to Bhat (2022), this quantitative research method attempts to collect quantifiable information for statistical analysis of the population sample. In the preliminary questionnaire, which is the UCLA Loneliness scale,

the researchers will only be able to know those who are qualified through the numerical scores of the respondents. Since each statement has a corresponding subfactor in the last questionnaire, the researchers based it on the weighted mean per item to ascertain the highest and lowest social and emotional loneliness factors among working young adults. To support this, they tallied the De Jong Gierveld Scale scores to determine which type of loneliness the majority experiences. All of these prove that descriptive research design is appropriate and beneficial in attaining the study's objective.

Instrument

Prior to the actual assessment for this study, the researchers used the UCLA Loneliness Scale Version 3 as the preliminary questionnaire. It is a 20-item scale designed to measure one's subjective feelings of loneliness and social isolation (Russell, 1996). The respondents scored each item from (1) never, (2) rarely, (3) sometimes, and (4) often. Since it has a high internal consistency of 0.96, it can assess young adults' loneliness status in their social lives. Furthermore, this is to ensure that the teachers who engaged in the study are experiencing loneliness at this time in their life so that both the respondents and the study's objective were relevant to one another. Then the total score of each respondent was categorized to the following degrees:

Score	Category
20-34	Low degree of loneliness
35-49	Moderate degree of loneliness
50-64	Moderately high degree of loneliness
65-80	High degree of loneliness

Whoever gets moderate to a high degree of loneliness proceeded to the subsequent assessments.

The actual questionnaire comprises three significant parts. Part 1 covered the demographic profile of the respondents in terms of name (optional), age, sex, and length of work experience. Subsequently, part 2 consists of the De Jong Gierveld Loneliness Scale. It is an 11-item Likert scale with four choices per statement: rarely, some of the time, often, and all of the time. The researchers employed this to identify whether the respondents experienced social loneliness, emotional loneliness, or both. Finally, the self-constructed Likert scale is included in the third part of the questionnaire. This scale also has four options: strongly disagree, disagree, agree, and strongly agree. The selected subfactors of social loneliness are the following: socioeconomic status, social comparison, introversion, anxiety, depression, physical condition, fear of rejection, new environment, physically exhausted, and demotivation. On the other hand, emotional loneliness subfactors are friendship breakup, romantic breakup, trauma, abandonment, bullying, family situation, and death. These were randomly placed in the survey. All in all, these helped in determining the factors, specifically the highest and lowest, that affect the social and emotional loneliness of young people, which is the main goal of this study.

Respondents

Systematic sampling was used to conduct this study with 80 respondents from Unida Christian Colleges' teaching personnel during the academic year 2022–2023. As mentioned in the literature review, none of the studies specifically involved youth who are already working. Therefore, the researchers decided to choose teachers who are considered as young adults ranging from 22-30 years old. In this age range, the youth are still in the process of exploring, knowing, learning, acknowledging, and understanding their own emotions and others as well. Besides, they have

encountered transitions in their life even for the past few years.

Procedure

In a specific time frame, the researchers went to each faculty where they personally administered questionnaires. Adhering to the Data Privacy Act of 2012, the researchers politely asked for permission by giving printed consent forms to the respondents. To ensure accuracy and sincere responses, they briefly explained the survey's process before disseminating it. After answering the preliminary questionnaire, the researchers compiled and examined the data results. Then they categorized the results of each respondent into four degrees: low, moderate, moderately high, and high. The researchers got the names of the teachers who got a result of moderate to high degree of loneliness because they are the ones who are qualified to proceed. Following the first survey, the researchers distributed the last set of assessments to those teachers. In addition, they reminded the young adults that it could only be used for study purposes and will be handled with the highest confidentiality, not disclosing any personal information about the respondents. After collecting the answered survey, the researchers treated the scores in the De Jong Gierveld Loneliness Scale and the Likert scale about factors that answered the statement of the problem, which is the study's main objective.

Data Analysis

Since the researchers employed two questionnaires, they first calculated loneliness in the UCLA Loneliness Scale Version 3. The respondents rated each item on a scale from (1) never, (2) rarely, (3) sometimes, and (4) often. This scale had two kinds of statements: positive and negative. For the negatively worded items, they added the scores of the respondents' answers in each item. The higher the average score that they got, it indicated greater loneliness. Meanwhile, there were reverse-scored items or negatively worded items which were worded in the opposite direction of what the scale is measuring. These are marked by an asterisk "*" at the end of a statement.

The formula for reverse-scoring an item is ((Number of scale points) + 1) - and (Respondent's answer). After knowing the score of each respondent, the researchers categorized it into the following:

Score	**Category**
20-34	Low degree of loneliness
35-49	Moderate degree of loneliness
50-64	Moderately high degree of loneliness
65-80	High degree of loneliness

Through this categorization, the researchers only considered teachers who garnered a moderate to a high degree of loneliness as qualified to answer the following test.

For the main questionnaire, De Jong Gierveld Loneliness Scale has provided these step-by-step processes in analyzing the respondents' answers.

Step 1	Count the neutral and positive answers ("some of the time", "often", or "all of the time") on items 2, 3, 5, 6, 9, 10. This is the emotional loneliness score.
Step 2	Count the neutral and negative ("rarely", or "some of the time") answers on items 1, 4, 7, 8, 11. This is the social loneliness score.

Lastly, in the 18-item Likert scale about factors, the researchers tallied the number of

respondents who answered strongly disagree, disagree, agree, and strongly agree on every statement. Then, they computed the weighted mean on each item. Like the UCLA Loneliness Scale, every option has a corresponding score which is the following: (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree. Afterward, they determined the most and least affecting factors separately for social and emotional loneliness among the calculated weighted mean per statement. As this self-constructed questionnaire has 0.84 internal consistency in Cronbach's Alpha, knowing the result will be beneficial in fulfilling the research objective.

RESULTS

Table 1. *Result of UCLA Loneliness Scale*

Grade Level	Average Score	Degree
Elementary	38.5	Moderate Degree
Junior High School	40.33	Moderate Degree
Senior High School	40.56	Moderate Degree

In the Elementary department, four out of seven teachers were qualified while there were only three out of nine teachers in the Junior High School department. Lastly, the Senior High School department has 32 out of 64 teachers qualified for the next assessments. Overall, 39 out of 80 teachers were experiencing a moderate degree of loneliness. Table 1 shows that almost half of the respondents are above the average loneliness.

Table 2. *Result of De Jong Gierveld Loneliness Scale*

Grade Level	Social Loneliness Score	Emotional Loneliness Score
Elementary	2.00	4.75
Junior High School	3.00	4.33
Senior High School	2.69	4.44

Although some respondents have social loneliness as their highest and some have equal scores from both types of loneliness, table 2 evidently displays that emotional loneliness (4.46) is higher among the majority of the teachers across all grade levels than social loneliness (2.64).

Table 3. *Result of Social and Emotional Loneliness Factors in the Elementary Department*

Loneliness	Factor	Description
Social Loneliness	Anxiety (3.00)	Most Affecting Factor
Social Loneliness	Depression (1.75)	Least Affecting Factor
Emotional Loneliness	Death (3.5)	Most Affecting Factor
Emotional Loneliness	Romantic Breakup (2.00)	Least Affecting Factor

Four teachers from the elementary department had "anxiety" as the most affecting factor in social loneliness, while the other most affecting factor in emotional loneliness was "death." Table 3 also revealed that the least affecting factor in social loneliness was "depression" and "romantic breakup" in emotional loneliness.

Table 4. *Result of Social and Emotional Loneliness Factors in the Junior High School Department*

Loneliness	Factor	Description
Social Loneliness	Anxiety (3.33)	Most Affecting Factor
Social Loneliness	Socioeconomic Status (2.00)	Least Affecting Factor
Emotional Loneliness	Death (4.00)	Most Affecting Factor
Emotional Loneliness	Romantic Breakup (2.33)	Least Affecting Factor
Emotional Loneliness	Death (3.59)	Most Affecting Factor
Emotional Loneliness	Bullying (2.47)	Least Affecting Factor

In social loneliness, "anxiety" was the most affecting factor among the three teachers from the junior high school department, while "socio-economic status" was the least affecting factor. In emotional loneliness, "death" was the most affecting factor, while "romantic breakup" was the least affecting factor.

This table highlighted that "anxiety" continues to be the factor that had the greatest impact on the social loneliness of senior high school teachers. The least significant factor, however, became "socioeconomic status" and "social comparison." On the other hand, "death" continued to have the highest score on emotional loneliness whereas "bullying" had the lowest score, making it the least influential component.

Table 5. *Result of Social and Emotional Loneliness Factors in the Senior High School Department*

Loneliness	Factor	Description
Social Loneliness	Anxiety (2.97)	Most Affecting Factor
Social Loneliness	Socioeconomic Status & Social Comparison (2.19)	Least Affecting Factor

Table 6. *Result of Social and Emotional Loneliness Factors across all Departments*

Loneliness	Factor	Description
Social Loneliness	Anxiety (3.00)	Most Affecting Factor
Social Loneliness	Socioeconomic Status (2.15)	Least Affecting Factor
Emotional Loneliness	Death (3.62)	Most Affecting Factor
Emotional Loneliness	Bullying (2.49)	Least Affecting Factor

Just like the previous tables, "anxiety" remained as the most affecting factor in social loneliness and "death" in emotional loneliness. Despite having different least affecting factors

across all departments, "socioeconomic status" in social loneliness and "bullying" in emotional loneliness ranked lowest.

DISCUSSIONS

The study aimed to figure out the status and particular factors that cause the social and emotional loneliness of young adult teachers. Their skills, competencies, and performance at this stage are just as vital as their social and emotional well-being because, after all, they are still humans.

Based on the acquired data, it was found that approximately half of the respondents reported feeling a moderate degree of loneliness. The results established the validity of Baumeister and Leary's (1995) "need to belong" theory. The respondents feel a certain level of loneliness because of the quantity and quality of their relationships. Since it appears that most of them experience more emotional loneliness than social loneliness, various factors such as death, trauma, family problems, friendship breakups, romantic breakups, abandonment, and bullying impact the quality of their intimate relationships. Nevertheless, the factors do not differ due to the close proximity of their weighted mean.

Most of the study that was undertaken used and associated loneliness in general. Contrary to other studies, the current research focused on a particular form of loneliness: social and emotional. In fact, the completion of this study complies with the recommendation of Franssen's study, which states that "Future research should focus on causal relations between factors and loneliness in different age groups, using a longitudinal research design with, preferably, an even broader set of factors." Individuals in early adulthood were the only age group that this study specifically targeted. However, to be more specific in the focus group, the researchers chose young people who work as teachers because they are more likely to have experienced a variety of life transitions.

Meanwhile, knowing the factors will be helpful to raise awareness in the teaching field of UCC and even different schools. This can assist the Guidance Office or Human Resource department to be more purposeful in prioritizing the social and emotional health of teachers by initiating programs like team building where they may engage in more meaningful interaction. Additionally, it can help them stay inspired and joyful as they pursue their passion for teaching. A lack of connectedness in one's social network and close relations implies social and emotional loneliness. Due to COVID-19's widespread devastation over the past three years, the result demonstrated that death is the biggest contributor to loneliness aside from other health problems. Losing someone is incredibly difficult, especially if they are dear to one's heart. Therefore, that might increase emotional loneliness. On the other hand, it appeared that teachers' social loneliness resulted from anxiety. Despite their in-person interactions with students as well as fellow educators in the new normal, the majority of them still feel worn out and stressed, which causes anxiety. These serve as a warning that, if feelings of loneliness are not properly addressed early, they can eventually end up in serious mental health issues.

Nevertheless, it will be more effective to delve deeper into the mentioned factors by conducting interviews. It could be preferable to ask them additional questions about their survey responses in order to better comprehend their viewpoint and deal with their loneliness in a specific and applicable way. In other words, future studies may consider a mixed-method or qualitative-quantitative research design. Aside from a mixed-method study, future researchers can also use a qualitative method to directly know the social and emotional factors affecting the respondents.

The researchers provided the following recommendations. Conduct an evaluation of social and emotional loneliness wherein the teachers will answer the questionnaires at the end of each semester to promote self-awareness. Moreover, organize a retreat annually, before the end of the school year, about the fostering of the social and emotional well-being of educators where they can make connections and build relationships with one another that will eventually develop their companionship in the coming years.

Lastly, establish a care group and designate teachers in one care group every school year where they can meet at least twice a month and converse about topics in the school's Social and Emotional Learning (SEL) so they can also feel connected by openly sharing about their victories, challenges, and significant events in life, which will strengthen their relationship with others in the group.

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Level of Acceptability of Using Galunggong Tinapa as an Alternative Filling in Siopao Among the Selected Residents of Imus City Cavite

Aldave, Aldwyn O.; De la Cruz, Ma. Yzavel S.; Diwa, Hanah Fate M.; Gaid, Reynant Dave A.; Gipulan, Nash Q.; Polinario, Crystal Shayne; Soreño, Shamei; Soria, Isaiah James C.

Senior High School Department, Unida Christian Colleges

ABSTRACT

This study entitled "Level of Acceptability of Using Galunggong Tinapa as an Alternative Filling in Siopao Among the Selected Residents of Imus City Cavite" is created to deepen our knowledge in food innovation and product development. People will learn that the food we frequently taste or see can be transformed into something new that is more distinctive, healthy, and desirable for purchase by all. The product created in this study is not widely known and contains novel ingredients, so it also provides new insights and knowledge for those who plan to launch a new business. Lastly, the researchers want to find out the level of acceptability of using galunggong tinapa as an alternative filling in siopao and help future researchers to have references for their future study that is related to the topic investigated in this study. Furthermore, this study seeks to find the differences between the hedonic scale ratings and the level of sensory acceptability of Tinapa Siopao and other Siopao Filling in terms of Appearance, Aroma, taste, texture, and general acceptability. According to the results, the mean hedonic scale rating of pork siopao is 4.31 with the verbal interpretation of "Liked Very Much," while the Tinapa siopao depicts a mean hedonic scale rating of 4.09 with the verbal interpretation of "Liked Moderately." The results indicate that there are significant differences in the level of acceptability of Pork Siopao and Tinapa Siopao in terms of gender, age, and barangay, and therefore, the null hypothesis failed to be accepted. The residents accept the Tinapa siopao; however, there is still a need to improve not only the taste but also the texture, appearance, and aroma since many respondents evaluated the variables as "Liked Moderately." The respondents recommended that the researchers make the filling more tasteful, softer dough and add more aroma.

Keywords: *Novel Ingredients, Distinctive, Hedonic scale, Level of Acceptability, Alternative Filling*

INTRODUCTION

Traditional Filipino food includes siopao, a steamed bun with meat within. Although many different fillings are available, pork or beef are the most popular choices. The bun is often thick and starchy and served with flavorful sweet or spicy sauces during merienda (a mid-afternoon snack). However, it can also be eaten at any time of the day. (Groen, 2013). Siopao or Siu Bao literally means "hot bun" and is the indigenized version of the Fujianese "baozi", introduced to the Philippines by Hokkien immigrants during the Spanish colonial period (De Leon, 2016). Smoked Fish, locally known as Tinapa, is a Filipino term that means fish cooked or preserved through the process of smoking. Fish smoking is generally done for the unique taste and flavor imparted by the smoking process. It is a native delicacy in the Philippines, and it is often made from blackfin scad (Alepes melanoptera, known locally as galunggong), or from milkfish, which is locally

known as bangus. Smoked fish contains protein, omega-fatty acids, and other essential nutrients (Lama, 2019). While fish are also a good source of bionutrients, vitamins, and minerals in diets. Smoked fish, including salmon and mackerel, are high in Omega 3 fatty acids. These are highly beneficial to our heart health, helping to reduce inflammation, managing heart rhythm, and lowering triglycerides in our blood fats. These compounds also work to reduce the build-up of plaque in the blood vessels. But it can also be high in sodium because Smoked fish is cured with a huge amount of salt (Mayo Clinic, 2022).

According to Mollenhauer and Gabriel (2019), we can determine that, In the Philippines, siopao usually comes in two flavors such as asado and bola-bola. The list of favorites is topped by fillings made with pork. The classic variant siopao "asado" often uses grilled pork belly or pork spread with honey. Siopao "bola-bola" contains boiled minced pork. However, many Filipinos do not eat siopao because it contains pork. Most of them do not eat it because of the reasons that they do not like the taste, they are allergic to it, and others because of their religious or personal beliefs. Pork is a food taboo among Jews, Muslims, some Orthodox Christians, and some Christian denominations (Wikipedia Contributors, 2019b). According to Essig (2015), we can determine that, Today a quarter of the world's population does not eat pork; it consists of 14 million Jews and 1.6 billion Muslims. Therefore, the researchers created a way for them to consume and experience the ultimate Filipino snack which is the Siopao, although there are some existing ones that are consumable to those who do not eat pork, like the Tuna Cheese melt siopao of 7/11.

The researchers want to explore and add some variations of Siopao that are consumable for everybody. It is definitely possible that there is still room to improve Siopao to make it cheaper and healthier. Combining it with a very nutritious filling will produce a product that can be used to maintain a healthy lifestyle without having to limit one's diet (Peter et al., 2022).

One of the basic necessities for everyone to survive is food. Our body uses it as its primary source of energy to carry out a variety of daily tasks. This idea explains the significance of the study. It will be advantageous to our community to conduct a study on food and reimagine and reshape it. To assist people in discovering new things and developing new food items that they may utilize in their daily lives, research must be done on the creation of creative food products that are nutritious and beneficial to our community. People will be able to exercise their creativity by conducting research on food innovation that can benefit the community.

The significance and purpose of this study is to deepen our knowledge in food innovation and product development and to find out the level of acceptability of using galunggong tinapa as an alternative filling in siopao and help future researchers to have references for their future study that is related to the topic investigated in this study.

This study focuses on determining the level of acceptability of Tinapa Siopao among the selected residents of Imus Cavite. The subjects of this study are the selected residents of Imus Cavite. The study mainly identifies and measures the levels of acceptability of using Galunggong Tinapa as an alternative filling in siopao. The study's Literature review includes the Nutritional Composition of Smoked Fish, Measuring Levels of Acceptability, Palatability, Sensory Categories, Sensory Evaluation, and Theory of Food Choice. Where the researchers found out that the nutritional composition of smoked fish is essential in meeting human nutritional needs. Smoked fish is full of protein, omega-fatty acids, and other essential nutrients (Lama, 2019).

Fish is typically smoked because of the distinct flavor and taste that smoking imparts. 'Smoking' food has been a tradition for tens of thousands of years. Although the details of how this process was discovered are unclear, it is known that it was one of the first methods used to help preserve meat and fish.Throughout the Stone Age, many early human settlements were situated near bodies of water that provided an unending supply of fish. However, there would be periods when the fishing would be less abundant,

necessitating the need for a method of storing the catches.

Smoked mackerel was a traditional remedy for this issue. (Jack, 2020). According to Kiczorowska et al. (2019), heat effects resulting in reduced fish water activity allow better preservation causing microbial sterilization and thus minimize spoilage and increase the shelf life of fish products. They contribute to changes in the chemical composition and, hence, the nutritional value of processed food. The oldest and most fundamental method of fish preservation is wind drying. Early humans may have discovered that fish dried more quickly when hung up next to a fire and that fish would taste different and keep longer if the fire was smoky (Encyclopedia, 2019).

The palatability level of more nutritious food choices can be increased with skillful preparation and appropriate seasonings, and over time the palate may adjust to healthy alternatives. Thus, that is why the researchers conceptualize a product that can be developed which can give the people delicious food with many health benefits. While the sensory evaluation will help students to understand the process and develop their sensory vocabulary. It also means that students will record and generate evaluative feedback to support their work (Catapang, 2019). The researchers have also found out that Palatability is a food's ability to attract a sense of pleasure and enjoyment when eaten, which is also referred to as the hedonic reward. Based on the related literature that the researchers gathered, certain factors such as taste, texture, smell, and appearance also strongly influence whether a food is considered to be palatable. However, researchers have found that the most palatable foods are not always highly nutritious, which can present a challenge for those trying to eat healthfully.

Researchers discovered a knowledge gap because there is not yet existing research about Tinapa Siopao. This results in researchers diversifying the utilization of Tinapa, and developing alternative markets for Tinapa or smoked fish. Like producing delicious food with many health benefits that can be used to maintain a healthy lifestyle without having to limit one's diet and combining it with a pastry that can be eaten without utensils and can be purchased in distinctive areas at a fair price. This study aims to determine the level of acceptability of using Galunggong Tinapa as an alternative filling in Siopao among the selected residents of Imus City, Cavite. Thus, this study attempts to seek answers to the following questions:

1.) What is the demographic profile of the respondents according to:
- 1.1) Age
- 1.2) Gender
- 1.3) Barangay

2.) What is the level of sensory acceptability of Pork Siopao and Tinapa Siopao in terms of:
- 2.1.) Appearance
- 2.2.) Aroma
- 2.3.) Taste
- 2.4.) Texture
- 2.5.) General Acceptability

3.) Are there any differences between the hedonic scale ratings of Tinapa Siopao and Pork Siopao?

METHODS

This section explains and enumerates the research method used to conduct the study. This part presents the research design, research respondents with the necessary information on population and sample frames, the research instrument, the data gathering procedures, and the different statistical methods used for data analysis.

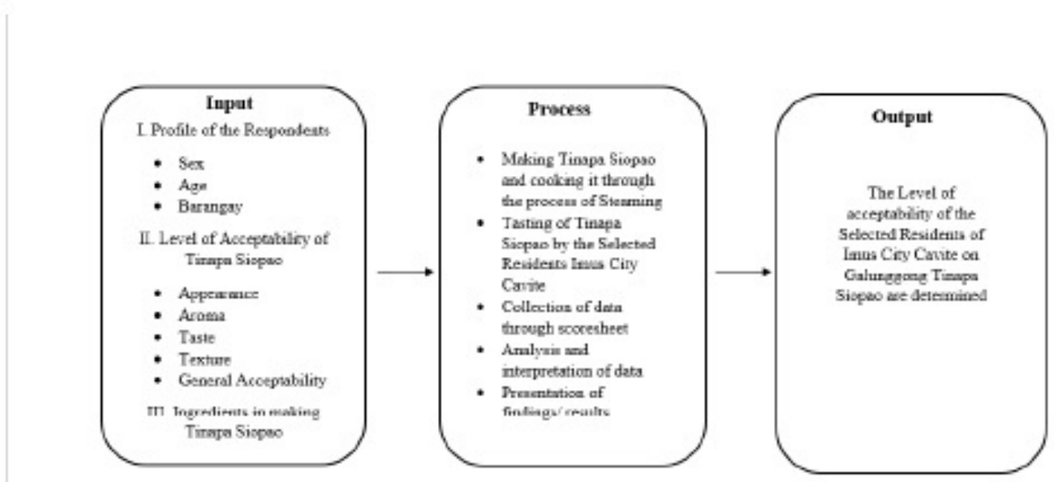
Design

To explore issues using numerical variables this study used Quantitative research and the descriptive method to obtain what was the Level of Acceptability of Using Galunggong Tinapa as an alternative filling in Siopao Among the Residents of Imus Cavite. According to Shields, Patricia, and Rangarajan, N. (2013), descriptive research is used to describe the characteristics of a population or phenomenon being studied. It answers questions about what, when, where, and how the traits occur. Instead, it does not address the “why” questions. The

researcher employed a descriptive method since the main objective of the study was to determine the sensory characteristics and acceptability level of the Tinapa Siopao. The researchers used a descriptive research design in the investigation to acquire the needed information. The variables listed above will only be seen and measured, not compared or altered, in order to complete the study because the researcher will employ a descriptive approach. According to McCombes (2019), this method aims to accurately and systematically describe a population, situation, or phenomenon. For this reason, the chosen research design is the most appropriate and well-suited design for this study.

Conceptual Framework

This framework presents the perspective of the researchers regarding the research phenomenon that is being explored



The first frame presents the input of the study that includes the profile of respondents such as Age, Gender, Barangay, and the level of acceptability of Tinapa Siopao with respect to appearance, aroma, taste, texture, and the general acceptability and the Ingredients needed in making the Tinapa Siopao. The second frame presents the process of the study that involves the making of Tinapa Siopao and cooking it through the process of steaming, then next is the tasting by the Selected Residents of Imus City Cavite. Collection of data is performed through the given scoresheet of the researchers, then the analysis and interpretation of data are performed, and last, the presentation of the findings/ results. The third frame presents the output of the study, which includes the level of acceptability of the Selected Residents of Imus City Cavite on Galunggong Tinapa Siopao are determined. The arrow from the input to the process and the output shows the connection and transformation of the profile and level of acceptability with the actions taken into the results that are considered as output.

Instrument

The research instrument that was used for this study is the Scoresheet-Hedonic rating scale. A hedonic scale is a tool for measuring food acceptability that has been used in place of the 9-point or 5-point hedonic scale that has been widely used for food and consumer product testing for over 50 years (Peryam and Girardot 1952 as cited in Wichchukit & O'Mahony, 2014). Sensory data was collected from consumers using traditional scales such as the nine-point or five-point structured hedonic scale. A self-administered sensory evaluation score sheet was utilized to retrieve data. The samples of Tinapa Siopao will be subjected to sensory evaluation using the score sheet and hedonic rating test. It has a score sheet with a 5-point hedonic scale type (5 = liked very much, 4 = liked moderately, 3 = liked slightly, 2 = disliked, 1 = disliked very much). These scores were assigned to assess the quality of the product's appearance, taste, aroma, texture, and general acceptability.

Part I - Demographic Profile

In this part, the researchers collect the information or characteristics of the respondents, such as their Name(optional), age, gender, and barangay.

Part II - Scoresheet

In this part, the researchers identified the sensory evaluation of the respondents' acceptance of Pork and Tinapa Siopao, to determine how much they like it when they are consuming it, which is measured by a Five-point hedonic scale ranging from (5) Liked very much, (4) Liked moderately, (3) Liked slightly, (2) Disliked, and (1) Disliked very much.

For validation and reliability purposes, To ensure the questions were appropriate and coherent, the researchers requested the help of an instructor from Unida Christian Colleges. After validating the copies of our questions, researchers spoke with the teacher to get their feedback on the instrument.

The final version of the questions is deemed to be the validator's suggestions. Then, since our instrument was self-administered, the researchers requested the assistance of a statistician to know if our instrument was reliable. The result of the pilot-tested research questionnaire with the Cronbach alpha coefficient of 0.864 with a verbal interpretation of "good" is certified by the researcher. This further attests that the research instrument(s) is/are reliable and can be used for the actual data collection. After that, the researchers gave the respondents their own copies of the questionnaire.

Participants/ Respondents

This study tapped 80 respondents who are residents of 8 selected barangays that are most populated in the City of Imus, Cavite. For defining the sample population, the researchers used two research sampling: Simple random sampling and stratified sampling.

Simple random sampling is a type of probability sampling in which the researcher randomly selects a subset of participants from a population. Each member of the population has an equal chance of being selected. Data is then collected from as large a percentage as possible of this random subset (Thomas, 2020). The researchers selected 80 random people to participate in our study with no limitations in any age or gender.

The next sampling that the researchers used is stratified sampling. It is a method of sampling in which a population is divided into smaller sub-groups known as "strata." In this sampling, the strata are formed based on members' shared attributes or characteristics, such as income or educational attainment (Hayes, 2021). The researchers defined the "strata" in this study as the 8 different barangays covered by the City of Imus, Cavite (Carsadang Bago 1, Carsadang Bago 2, Alapan 1-A, Malagasang 1-G, Malagasang 2-A, Malagasang 2-B, Pasong Buaya 2, and Buhay na Tubig). Researchers gather data from 10 random residents per barangay, making it a total of 80 residents.

The result indicates that the age of 43 and above constitutes most of the respondents. It also indicates that the Female constitutes the majority of the respondents, and it was executed in eight selected barangays that are evenly distributed with 10 participants.

Locale

The researchers chose these 8 barangays because they are the most populated barangays here in the City of Imus, Cavite. According to PhilAtlas (2020), Barangay Buhay na Tubig has the highest population among the eight (8) barangays selected by the researchers, with a total population of 39,010. This was followed by Carsadang Bago 2, with a total population of 27,716. Barangay Pasong Buaya 2 has a total population of 27,006. Malagasang 1-G has a total population of 25,847, and Carsadang Bago 1 has a total population of 17,844. Barangay Malagasang 2-B has a total population of 17,572, While Malagasang 2-A has a total population of 16,146. Lastly, Barangay Alapan 1-A has a total population of 14,097.

The researchers chose this City because it has enough population to gather data, considering this is where most of the researchers reside and where their school is located, the Unida Christian Colleges. Imus is a landlocked component city in the coastal province of Cavite. It serves as the provincial capital. The city has a land area of 171.66 square kilometers or 66.28 square miles, constituting 11.25% of Cavite's total area. Its population, as determined by the 2020 Census was 496,794. This represented 11.43% of the total population of Cavite province or 3.07% of the overall population of the CALABARZON region (PhilAtlas, 2020). The place was selected by the researchers to determine the level of acceptability of Using Galunggong Tinapa as an Alternative Filling in Siopao Among the Selected Residents of Imus City, Cavite.

Procedure

To gather information, the researchers first formulated and constructed the scoresheet with a 5-point hedonic scale type, and then consulted a professional for the reliability and validity of the

scoresheet. After the researcher-made scoresheet is validated and approved, the researchers then proceed to the making of the tinapa and pork siopao before they conduct the survey. In making Galunggong Tinapa Siopao, and Pork Siopao researchers will perform the following:

Phase I. *Steps in making Siopao dough*
Siopao Dough Ingredients:
Evaporated milk, Baking Powder, All purpose flour, Instant active yeast, White sugar, Baking powder, Salt, Cooking oil.
Step 1: In the mixing bowl put the flour, sugar, salt and mix it all together.
Step 2: After mixing all the dry ingredients, put the instant yeast in a warm evaporated milk and mix it, after that mix it with the dry ingredients.
Step 3: If the mixture of dough becomes thicker, use your hands to knead it until the dough becomes smooth. When the dough is smooth, shape it into a ball and grease it with oil.
Step 4: Place the dough into a huge bowl and cover it with plastic wrap or cloth, and let it rise for an hour. After resting it for an hour, cut the dough into 30 grams and next shape the dough into balls and flatten it before putting the filling.
Step 5: After putting the filling, let the dough rest for 30 mins before steaming.
This recipe was cited in Vanjo, M., (2020)

Phase II. *Steps in making the Galunggong Tinapa filling*
Galunggong Tinapa Filling Ingredients:
Galunggong Tinapa, Soy sauce, Oysters sauce, Pepper, Salted Egg, Garlic, Onion, Carrots, Potato, Cooking oil.
Step 1: Deboned the Galunggong Tinapa, after deboning it cut the carrots and potato into dice and also the garlic, onion, and salted egg
Step 2: After cutting and preparing all the ingredients, heat the pan and put in the cooking oil and sauté the garlic and onions.
Step 3: If done sautéing the garlic and onions, put the carrots, potato, and Galunggong Tinapa and mix it all together. After mixing all the ingredients, add a small amount of ground pepper, soy sauce, and oyster sauce, lastly put the salted egg and let it cook for 5 to 10 mins.
Step 4: Let the filling cool first before putting it into our dough. Flatten the dough and put the filling and let it steamed for 10-15 mins
This recipe was cited in Antonina's, K., (2020)

Phase III. *Steps in making the Pork asado filling*
Pork Asado Filling Ingredients:
Ground pork, Cooking oil, Garlic, Onion, cornstarch, Soy sauce, Sugar, Oyster sauce, Water.
Step 1: Heat the pan and put in the cooking oil and sauté the garlic and onion. After sautéing, put the ground pork and sauté it until it becomes slightly brown.
Step 2: If the pork is slightly brown, add some soy sauce and oyster sauce. After that put the brown sugar and ground pepper and stir it until the pork is coated by the condiments.
Step 3: If the pork is already coated, put a cup of water and cover it and let it simmer for 40 to 60 mins, After that put a mixture of cornstarch and water and stir it until the sauce becomes thicker.
Step 4: Let the filling cool first before putting it into our dough. Flatten the dough and put the filling and let it steam for 10-15 mins
This recipe was cited in Vanjo, M., (2020)

After making the Pork and Tinapa Siopao, the researchers will proceed to the tasting by the respondents. Then the collection of data is performed through the scoresheet given by the researcher to the respondents. With the use of printed scoresheets, the researchers will go to the 8 selected barangays to conduct the survey. Using this technique, the respondents will find it simpler to complete the researchers' provided scoresheet because it does not need internet for those residents who do not have access to technology. Furthermore, the researchers' anonymity and protection of data by the subject under the Data Privacy Act of 2012 will reassure the respondents that their answers will be kept private at the outset of any method of delivering a survey questionnaire.

The researchers ensure that any personal data, viewpoints, and responses will only be used for educational purposes and that they will never exploit the offered information for their own gratification or gain. The disclosure of any additional information will harm no participant in

this study. To allow respondents to respond to their copies of the survey questions, the researchers using this distribution method will need to select a certain time, day, and place. In order to share the study's findings with the public, the researcher and the statistician specialists they chose will collect and examine the data from the respondents' responses.

Data Analysis

The Frequency, Percentage, Mean, and Standard deviation were used by the researchers to present the data from the sample. The researchers used a dependent sample t-test to analyze the data gathered from the respondents. This statistical tool assisted the researchers in evaluating the data collected concerning Level of Acceptability of Using Galunggong Tinapa as an Alternative Filling in Siopao Among the Selected Residents of Imus City Cavite.

Figure 1: *Formula of Percentage*

$$\text{Percentage} = \frac{f}{N} \times 100\%$$

Wherein:
% - Percentage
f - Frequency
N - the size of population

The researchers choose percentage frequency distribution since it will play a significant role in determining distribution of each respondent to the demographic profile and level of acceptability of using galunggong tinapa as an alternative filling in Siopao

Figure 2: *Formula of Mean*

$$\overline{X} = \frac{\sum x}{N}$$

Through the statements made and under the guidance of the interpretation table and scale, it was used to calculate the average number of how well the respondents are satisfied with the product. This aids the researchers in assessing the respondents' level of acceptability in terms of appearance, aroma, taste, texture, and general acceptability.

Figure 3: Formula of Standard Deviation

$$\sigma = \sqrt{\frac{\sum (x_i - \mu)^2}{N}}$$

Wherein:
σ = Population standard deviation
N = the size of population
Xi = each value from the population
μ = the population mean

Furthermore, the standard deviation formula is to assess and understand the presented data on the level of acceptability of using galunggong tinapa as an alternative filling in Siopao. It also shows how far replies to a question "deviate" from the mean or how widely they vary across respondents. The standard deviation reveals to the researcher how dispersed the responses are—are they centered on the mean or dispersed widely?

The researchers used a dependent sample t-test to analyze the data gathered from the respondents. This statistical tool assisted the researchers in evaluating the data collected. A t-test is a statistical test used to compare the means of two groups. It is often used in hypothesis testing to determine whether a process or treatment actually affects the population of interest or whether two groups are different from one another (Bevans, 2020).

The following interpretation was utilized to interpret the level of acceptability of using galunggong tinapa as an alternative filling in siopao.

Rank	Rating	Interpretation
5	4.24 - 5.00	Liked Very Much
4	3.43 - 4.23	Liked Moderately
3	2.62 - 3.42	Liked Slightly

2	1.81 - 2.61	Disliked
1	1.00 - 1.80	Disliked Very Much

RESULTS

This section presents and interprets the data gathered from an evaluation of the Level of Acceptability of Using Galunggong Tinapa as an Alternative Filling in Siopao among the selected residents of Imus City, Cavite.

Table 1: *Demographic profile of the respondents*

Table 1.1: *Profile of the respondents in terms of Age*

Age	Frequency	Percentage
22 years old and below	19	23.8
23-27 years old	5	6.3
28-32 years old	4	5.0
33-37 years old	5	6.3
38-42 years old	9	11.3
43 years old and above	38	47.5
Total	**80**	**100.0**

Table 1.1 shows the profile of the respondents from the eight selected barangays in the City of Imus Cavite in terms of Age. A total of 80 respondents participated in this research. The results show that 47.5% of the participants belong to the age bracket of 43 years old and above, representing 38 of the total number of respondents. This was followed by those who belong to the age bracket of 22 years old and below, constituting 19 respondents with 23.8%. Nine participants and those belonging to the age bracket of 38-42 years old constituted 11.3%. Those who belong to the age bracket of 33-37 years old reflected 6.3% of the total number of respondents, number 5 participants. Participants 23-27 years old reflected 6.3% numbering 5 respondents. Finally, those who belong to the age bracket of 28-32 years old with 4 participants reflected 5.0%.

Table 1.2: *Profile of the respondents in terms of Gender*

Gender	Frequency	Percentage
Female	45	56.3
Male	35	43.8
Total	**80**	**100.0**

Table 1.2 shows the profile of the eight selected barangays in the City of Imus Cavite in terms of Gender. A total of 80 respondents participated in this research. The results above show that 45 participants are female, constituting the highest percentage of 56.3%. This was followed by the male participants with a total of 35 participants constituting 43.8% of the total respondents.

Table 1.3: *Profile of the respondents in terms of Location*

Baranagay	Frequency	Percentage
Carsadang Bago 1	10	12.5
Carsadang Bago 2	10	12.5
Alapan 1-A	10	12.5
Malagasang 1-G	10	12.5
Malagasang 2-A	10	12.5
Malagasang 2-B	10	12.5

Pasong Buaya **2**	10	12.5
Buhay na Tubig	10	12.5
Total	**80**	**100.0**

Table 1.3 shows the profile of the eight selected barangays in the City of Imus Cavite in terms of location. A total of 80 respondents participated in this research. The results display the percentage and frequency of respondents in terms of their location. It is evenly distributed among 8 barangays with 10 participants per barangay. The eight selected barangays which are Carsadang Bago 1, Carsadang Bago 2, Alapan 1-A, Malagasang 1-G, Malagasang 2-A, Malagasang 2-B, Pasong Buaya 2, and Buhay na Tubig have the same and equal frequency of 10 and a percentage of 12.5%.

Table 2: *Hedonic Scale*

Table 2.1: *Hedonic Scale Results of Pork Siopao*

Components	Std. Deviation	Mean	Verbal Interpretation
Appearance	0.788	4.32	Liked Very Much
Taste	0.691	4.47	Liked Very Much
Aroma	0.822	4.27	Liked Very Much
Texture	0.908	3.98	Liked Moderately
General acceptability	0.709	4.51	Liked Very Much
Overall	**0.554**	**4.31**	**Liked Very Much**

Table 2.1 above shows the respondents' level of sensory acceptability of Pork Siopao in terms of Appearance, Taste, Aroma, Texture, and General Acceptability. The Component in terms of "General Acceptability" shows the highest mean of 4.51 with a standard deviation of 0.709 and ranked number 1 with a verbal interpretation as Liked Very Much. This was followed by the component in terms of "Taste." which ranked number 2 with a mean of 4.47 and standard deviation of 0.691 interpreted as Liked Very Much as well. The Component in terms of "Appearance" shows a mean of 4.32 with a standard deviation of 0.788 and ranked number 3 with a verbal interpretation as Liked Very Much. The Component in terms of "Aroma" shows a mean of 4.27 with a standard deviation of 0.822 and ranked number 4 with a verbal interpretation as Liked Very Much. Lastly, the component in terms of "Texture" ranked number 5 with a mean of 3.98 with a standard deviation of 0.908 interpreted as Liked Moderately.

According to the results, the mean hedonic scale rating of pork siopao is 4.31, with the verbal interpretation of Liked Very Much.

Table 2.2: *Hedonic Scale Results of Tinapa Siopao*

Components	Std. Deviation	Mean	Verbal Interpretation
Appearance	0.797	4.20	Liked Moderately
Taste	0.806	4.11	Liked Moderately
Aroma	0.859	3.99	Liked Moderately
Texture	0.889	3.90	Liked Moderately
General acceptability	0.734	4.25	Liked Very Much
Overall	**0.595**	**4.09**	**Liked Moderately**

Table 2.2 above shows the respondents' level of sensory acceptability of Tinapa Siopao in terms of Appearance, Taste, Aroma, Texture, and General Acceptability. The Component in terms of "General Acceptability" shows the highest mean of 4.25 with a standard deviation of 0.734 and ranked number 1 with a verbal interpretation as Liked Very Much. The component followed this in terms of "Appearance." which ranked number 2 with a mean of 4.20 and standard deviation of 0.797, interpreted as Liked Moderately. The Component

in terms of "Taste" shows a mean of 4.11 with a standard deviation of 0.806 and ranked number 3 with a verbal interpretation as Liked Moderately. The Component in terms of "Aroma" shows a mean of 3.99 with a standard deviation of 0.859 and ranked number 4 with a verbal interpretation as Liked Moderately. Lastly, the component in terms of "Texture" ranked number 5 with a mean of 3.90 with the standard deviation of 0.889 interpreted as Liked Moderately.

The results show the Hedonic Scale rating of the Tinapa siopao depicting a mean hedonic scale rating of 4.09 with the verbal interpretation of Liked Moderately.

Table 3: *Dependent Sample T-test*

Table 3.1 & 3.2: *Paired Sample Statistics*

Table 3.1
Paired Sample Statistics

Samples	Mean	N	Std. Deviation	Std. Deviation Error
Pork Siopao	4.31	80	0.554	0.062
Tinapa Siopao	4.09	80	0.595	0.066

Table 3.2
Paired Sample Statistics

Paired Differences					
Mean	Std. Deviation	Std. Deviation Error	t	df	Sig (2-tailed)
0.223	0.484	0.054	4.108	79	.000

Table 3.1 shows the means of the frequency of the hedonic scale rating of the pork and tinapa siopao. It also shows the standard deviation and the standard deviation error of the sample. The researchers used a dependent sample t-test to measure the difference between the two means with a 95% level of confidence.

Table 3.2 shows that the results are $t(79) = 4.108$, $p = 0.0005$. Due to the means between the hedonic scale rating of the pork siopao and tinapa siopao and the direction of the t-value, the researchers conclude that there was a statistically significant difference in the hedonic scale rating of the pork siopao and tinapa siopao from 4.31 ± 0.554 to 4.09 ± 0.595 ($p<0.0005$) a difference of 0.062 ± 0.066.

DISCUSSION

The researcher concludes that in terms of the demographic profile of the respondents, the result indicates that the age 43 years old and above constitutes the majority of the respondents, While in terms of gender and location, the result indicates that Female constitutes the majority of the respondents. It shows that the eight selected barangays are evenly distributed with 10 participants. The Hedonic Scale rating of the respondents for Pork siopao and Tinapa siopao. For the Hedonic scale, we measure the appearance, taste, aroma, texture, and general acceptability. Table 2.1 shows the results for Pork siopao. According to the results, pork siopao's mean hedonic scale rating is 4.31 with the verbal interpretation of Liked Very Much. While Table 2.2 shows the Hedonic Scale rating of the Tinapa siopao depicting a mean hedonic scale rating of 4.09 or Liked Moderately.

The study's key findings shows that there was a statistically significant difference on the hedonic scale rating of the pork siopao and tinapa siopao which is from 4.31 ± 0.554 to 4.09 ± 0.595 ($p<0.0005$) a difference of 0.062 ± 0.066. This result tells us that there are significant differences in the level of acceptability of Pork Siopao and Tinapa Siopao in terms of age, gender, and barangay where the null hypothesis has failed to be accepted. The implications of the results matter for the researchers to create improvements and choose other examination methods to enhance the study. Since the study measures the levels of acceptability of using Galunggong Tinapa as an alternative filling in siopao. The study was only delimited to the sensory characteristics and the level of acceptability of the Tinapa Siopao for the academic year 2022 to 2023. Since only its external qualities—such as appearance, aroma, taste, texture, and overall acceptability—are to be taken into consideration, the study will not include shelf determination, packaging, or the impact of storage circumstances. The study's applicability entails creating, finding, and creating substitute filler for siopao.

Since Siopao has many health benefits, combining it with a very healthy and nutritious filling is a good opportunity to make innovative

foods. In a recent study by Peter et al. (2022), this study decided to develop the existing Mushroom Siopao and add chicken to it. Their study is conducted to identify sensory characteristics of Oyster Mushroom Siopao in terms of appearance, aroma, taste, and texture, to know what is the most preferred sample for Oyster Mushroom Siopao, and to determine the acceptability level of the Oyster Mushroom Siopao. Peter et al. concluded that the level of acceptability of Oyster Mushroom Siopao is Acceptable, and there is still room to improve the product for excellence. The researchers hypothesized that this could be possible for Tinapa Siopao since the raw materials for the food products are locally available, less expenses in importing the main ingredients in making Galunggong Tinapa Siopao. It will be great if the main ingredients will be fresher.

The results are still valid for answering the research questions because it implies a section of terms isolating the variables and target of the study. For practical implementation, the researchers recommend to examine first the product and instrument to be used before undergoing the experimentation to evaluate properly the downfalls that can happen during the experimentation process. For future research, the researchers must choose an appropriate alternative product for descriptive design, and hypothesize if the respondents will likely or unlikely support your product.

The researchers tend to recommend Tinapa Siopao for laboratory testing and patenting. The research that recommends the Level of Acceptability of the Tinapa Siopao is Liked Moderately there is still room to improve the product for excellence; Implement a Tinapa Siopao production and A developed development is now in reality; can propose marketing feasibility research for the Tinapa Siopao can be one of the products that can be sold by the selected barangays in the City of Imus as income generating project. A study on the marketability of this study must be conducted.

While the respondents recommended that the researchers make the filling more tasteful, softer dough, and add more aroma. The Tinapa siopao is accepted by the residents but there is still a need to improve not only the taste but also the texture, appearance, and aroma since there are many respondents who evaluated the variables as "Liked Moderately." Lastly, future researchers can use the limitations of this study to widen their coverage and create scholarly results to develop food products since the study is only limited to the sensory characteristics of the food product, product preference, and product acceptability.

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