



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 Issue: III Month of publication: March 2021

DOI: <https://doi.org/10.22214/ijraset.2021.33269>

www.ijraset.com

Call:  08813907089

E-mail ID: ijraset@gmail.com

Advocacy to Efficacy: The Impact of the No to Single-Use Plastic Advocacy of Philippine School Doha to the Students Actions towards Environmental Sustainability

Maricel T. Gubat¹, Alexie Lane P. Ibañez², Jhaznine T. Mangalino³, Vianca Gloriene B. Pujante⁴

^{1, 2, 3, 4}Senior High School Department, Philippine School Doha, Qatar

Abstract: *Background: Philippine School Doha establishes the No to Single-Use Plastic advocacy to reduce plastic pollution, a massive threat to Earth's climate, and instill sustainable practices in the school community. This study focuses on the aftermath of the PSD's No to Single-Use Plastic advocacy on the students' awareness, actions, progression, and upholding of environmental sustainability. Method: The utilized phenomenological research design in this qualitative research paper was to understand the lived experiences of senior high school students of PSD in the No to Single-use Plastic, focusing on its effect on the PSD's environment and the behavior of PSDians. The data gathered were from twenty-five semi-structured interviews. The responses were analyzed using an inductive approach in the theme development. Findings: Findings have shown the means of how the students changed through the advocacy, be it on their behavior or environmental changes towards sustainability. Conclusion: The No to Single-Use Plastic advocacy is beneficial to improving the campus's observable external changes and the internal development of students' attitudes towards the environment as they embark on the advocacy. Recommendation: To supplement more knowledge in this study, this paper suggests applying the advocacy to a larger group of plastic, apart from fork and spoons, to have a broader range of variables.*

Keywords: *Single-Use; Plastic; Environmental Sustainability; Advocacy; Earth's Climate; Senior High School; Plastic Pollution*

I. INTRODUCTION

Climate change is known as global phenomenon that impacts the world's socio-economic, political, and ecological aspects. This phenomenon's detrimental effects include energy shortages, infrastructure damages, industry losses, heat-related death and diseases, agricultural losses, and food and water scarcity. The rate of climate change in the present-day becomes an alarming concern as it exceeds the quotidian observed in the past 120 years. According to Shaftel et al. (2020), the Earth's average surface temperature has risen by approximately 2.05 degrees Fahrenheit (1.14 degrees Celsius) since the late 19th century. This observed change is hugely affected by the increase in carbon dioxide and other human-made atmospheric emissions. While it is known that human activity majorly causes climate change, plastic pollution is often overlooked.

Plastic pollution is a massive threat to Earth's climate. Evidence showed that there are greenhouse gas emissions at every stage of the plastic life cycle, from the extraction of raw materials, manufacture of plastics, waste disposal to entering the environment. Even the process of recycling plastic wastes releases a mass of greenhouse gases (Parker, 2020). Single-use plastics are everywhere. Disposable plastic packaging, cutleries, bottles, straws, and even fruits and vegetables at the market with natural protective skins are covered in unnecessary plastic wrappers. According to Laville, S. (2019), single-use plastics in products' packaging form the most extensive and fastest-growing segment of the plastics economy. 40% of which is disposed of at sanitary landfills, 14% goes to incineration facilities, and 14% is collected for recycling. Incineration creates the most CO₂ emissions among the plastic waste management methods. Plastics take hundreds of years to decompose naturally, and by then, it already works their way into the environment without taking any actions. The "No to single-use plastic" advocacy is Philippine School Doha's way of helping the environment lessen the number of gaseous emissions relevant to climate change caused by plastic pollution. These gaseous emissions are associated with different sources like human activities, mechanical equipment, factories, and products, specifically plastics (Pertsova, 2007). The advocacy proposes and utilizes the new 3Rs principle: Raise, Replace, and Reject. This advocacy raises community awareness about plastic pollution by replacing plastic cutlery with reusable materials to reject plastic consumption gradually. The Philippine School Doha students were highly encouraged to do so and comply with the said advocacy, which aims to change everyone's perspective in lessening the plastic pollution that might lead to climate change in their little ways.

In 2016, France was the first country that banned plastic dinnerware. However, instead of bringing their cutleries to the restaurant, which is unpleasant, they experimented with grain-based edible cutleries from potato starch and areca leaves (Rupp, 2016).

As stated by Kuhn (2008), China campaigned for people to "Bring Your Chopstick" (BYOC) when dining out to eat. Furthermore, because of China's BYOC, in every 4,000 reusable chopsticks brought by the people in China, one tree was saved. Whereas trees help stop climate change by eliminating the carbon dioxide from the air, keeping carbon in the soil and trees, and releasing oxygen into the atmosphere. (Arborday, 2020)

This research paper aims to answer the central question: "What is the effect of the No to single-use plastic advocacy of the Philippine School Doha in the environment and the behavior of PSDians?". The researchers are eager to understand how the advocacy changed the students' internal behavior and environmental condition. This study provides a new perception into students' lived experiences on the course of the no to single-use plastic advocacy. The researchers recognized the means of changes in the students' action, progression, and awareness in achieving environmental sustainability. The researchers also identified the factors that impacted the observable external changes due to the advocacy. This study endeavors Philippine School Doha's advocacy for the plastic crisis is related to climate change is indispensable for two reasons: first, the effect of using plastic items is destructible to the environment, and second, Philippine School Doha's advocacy in helping the environment and lessening the plastic pollution that causes climate change (Major, 2019).

II. METHODOLOGY

A. Research Design

The qualitative type of research design was applied, which is used to answer questions about experience, meaning, and perspective, most often from the participant's standpoint. (Hammarberg, K. et al., 2016). The type of research method, phenomenology, is a type of qualitative research. Its focus is answering the 'what is it's question rather than questions of frequency or magnitude such as 'how much' and 'how many' (Guilbeau, C., 2014).

B. Research Locus and Sample

The respondents in this study are Filipino students in the Philippine School Doha with at least two years of experience in the said country. They have experienced and implemented the No to Single-Use plastic advocacy. The respondents' educational attainment varies from batch 2018-2019 to batch 2019-2020 of the Department of Education K-12 curriculum.

In choosing participants, three things were considered. First, the participant must be a senior high school student studying in Philippine School Doha or a graduate of batch 2018-2019. Second, they must be living in Qatar for at least two years. Third, the participant must have experience and implemented the No to Single-Use plastic advocacy. All of the chosen participants are PSDians living in Qatar for more than nine years. Since phenomenological research is the ideal methodology to understand individuals' lived experiences, the research calls for a trustful relationship between the participants and the researchers for an honest and accurate study. To ensure the findings' trustworthiness, qualitative research focuses on designing and integrating methodological strategies through data collection and analysis (Dainty, K. N., 2017.) Interviewing research allows the researchers to go beyond the answers' surface and dig deeper into their emotional responses, establishing fruitful relationships with the participants (Vallesteros, D. J. et al., 2019.) Since safety and precautions were applied due to the pandemic, CoVid-19, participants were interviewed in three different zoom meetings. The conversation was being recorded with the proper consent from the respondent.



Figure 1: Map of Qatar

C. Data Collection and Ethical Consideration

To capture the phenomenon's essence and understand the participant's background, a two-layered approach to data gathering was employed. Preliminary, *robotfoto*, the personal sheets to fill up were handed to the three eligible participants. All the data explicitly required for this research were written, namely; Name, Age, Years of stay in Qatar, Years of staying in Philippine School Doha, and Educational Attainment.

The *robotfoto* is followed by a 25 item semi-structured interview conducted with a fairly open framework that allows a comfortable atmosphere between the researcher and respondent (Shirey, M., 2018). Qualitative studies are frameworks in which the practices and standards are recorded and considered as achieved, challenged, and well-achieved, for they contain the data to be used for the study (Jamshed, S., 2014). For clarification between the researcher and the respondent, since all are still experiencing the pandemic and the need to observe safety and preventive measures, the interviews were conducted virtually for accessible communication and deniability. Before the interview, the researchers have been told that confidentiality will be kept at the utmost importance. The research adviser and researcher will be the only ones to know the respondents' identity.

D. Mode of Analysis

This research uses the inductive type of approach in order to gather and analyze the responses deeply. (1) Listening to the audio recordings thoroughly and repeatedly of the participants to analyze the live-experiences of the participants about the title sincerely; (2) Encoding the responses from the audio recorder, word-per-word; (3) Converting the emic transcription to the researcher naïve understanding: etic; (4) Segregation of the formulated meaning to its categories, placing the thought unit and cluster the themes through dendrogram to present the similarities of the given data; (5) Creating of the simulacrum to show the themes being identified for the representation of the findings.

The researchers have developed themes within the study to conceptualize the ideas and results of the study. The researchers utilized an inductive approach which includes: (1) the transcribed recorded responses into a written text; (2) Read and understand deeply the responses to achieve the general ideas, thoughts, and the live- experiences of the participants; (3) converting the responses into the researchers understanding: etic; Created the concepts for each response; (5) Organized the responses and grouped the themes through the use of a dendrogram; (6) lastly the simulacrum a visual representation, that represents the findings of the research.



Figure 2: Simulacrum. The cyclical process of the students' metamorphosis, Internal and external, towards environmental sustainability.

III. FINDINGS

This phenomenological study seeks to understand the impact of the No to Single-Use Plastic Advocacy of Philippine School Doha on the student's actions, relative to the central question: "What is the effect of the No to single-use plastic advocacy of the Philippine School Doha in the environment and in the behavior of PSDians?". Furthermore, the study focuses on the specific question: "How do the students of Philippine School Doha conform to the no to plastic cutlery and bottle advocacy?". Indeed, considering all the factors and guidelines pushes them to adhere to the advocacy and initiate to use their voice in spreading this awareness.

Figure 2 shows the simulacrum focused on four major themes: Evidential Driving Forces, Effective Advocacy Enactment, Ecological Impact Assessment, and Environmental Enlightenment Initiative. These themes highlight the cyclical process of the students' behavioral metamorphosis towards environmental sustainability. It is the external variables that were observed and the internal effects of these practices on the people who enact the advocacy.

A. Evidential Driving Forces

Awareness is the first step for one to take responsible action towards a particular issue. This is why teaching the basics of climate change in school is very crucial to a child's environmental awareness. Awareness may vary from theoretical and experiential awareness. Theoretical awareness is the person's learning results from teachings of a particular concept, particularly climate change, and how they address these misconceptions. As mentioned by three respondents:

"I could say that I am knowledgeable enough to understand climate change's basic concepts like its process, effects, and certain causes. I also know that climate change is happening and is a real threat because the effect of this climate change can be dangerous and fatal." (R2)

"I am very well aware of the situation that the world is facing right now. I am quite knowledgeable on the topic, on the reasons behind it and its effect. It has been taught in my previous years in elementary, high school, and until now in college." (R4)

"Climate change was introduced to me as the change in temperature over some time. I always remember it as the warming of the temperature and rising sea levels. I learned it during my elementary years and was further elaborated during Intermediate and High School." (R5)

Theoretical awareness also includes the testimonies of people they know and has a big impact on them. This is because when someone they are close to experiences something; they are more likely to believe that it is real. A respondent affirms with this replies:

"I had a few friends and teachers who have observed that as years go by, the period of time that winter occurs in Qatar is generally getting shorter. Every year, it eventually gets less cold than before. A teacher once told me that it used to hail here before, and now the most that we get is just one major storm, and then it is cold for a few months, and it is back to being hot again." (R1)

While experiential awareness is like a trigger to anybody to act on a certain situation. This includes all the first-hand experiences of a person concerning climate change and acknowledging that his/her action is significant to create a more environment-friendly and sustainability in the surroundings. The respondents replied with these:

"Earlier in the year, we visited Australia for vacation, that was around the time that the forest fires were still happening. There were many instances where we had to change our schedules or avoid certain places to be away from the fire because we could feel the heat and sense the smoke coming from the fires." (R1)

"Based on my personal observations, the summers here in Qatar are hotter than the previous years. And also the winter has become shorter, and the occurrence of rain is quite rare now." (R2)

"I assess my understanding about climate change with the news and with what I see in my surroundings. An example is in my city, Marawi, wherein our mountains are subject to landslides because of deforestation which destroys our environment." (R3)

"In Qatar, I have noticed that winters are pushed back in time. When I was a kid, the temperature gradually decreased by the time October or November came. However, in the past years, winter comes in late November or early December." (R4)

B. Effective Advocacy Enactment

After learning all the concepts and having a theoretical and experiential awareness about climate change, students realized how significant the impact of human activities are on climate change. Two respondents made mentioned that:

"I believe human activity is indeed a huge factor in this change. There are many activities and routines that we do that we may think is normal for or a necessity for progression, but in reality, it is just putting harm into the environment, cutting down trees from forests or like burning fossil fuels". (R1)

"Humankind uses a significant amount of plastics, and our energy consumption heavily relies on fossil fuels. To retrieve these said fossil fuels, we do things that cause several types of pollutants that affect the environment. Factories are a massive contributor to these said pollutants, especially on the release of carbon dioxides." (R4)

They also admitted that every person living on Earth has the primary duty to be a steward of our planet. Although one can make a change, having a large organization who can lead them to action will be a great help as they have bigger platforms and louder voices. As stated by three respondents:

"I believe each of us should have that responsibility to fight climate change. Because in the first place, we all contributed to it. I just wish that our nations' leaders would be more open about the topic, which many people look up to. I hope to see more initiative on their part to advocate actions on climate change." (R2)

"Everyone. All of us live in this planet, and we all need to take care of it. However, I believe that people would only follow this if they see influential organizations stepping up like the government, their school, etc." (R4)

"I think everyone has the primary responsibility for fighting climate change. Since human activities are the most significant factors in climate change and it only worsened due to our actions, it is also our responsibility to fight against it to save not just the Earth itself but our lives as well and since we are the cause." (R5)

As a very influential organization, Philippine School Doha started the No to Single-Use Plastic Advocacy. This encouraged the senior high school students to take part. Because the boundaries, limits, and extent of all their actions can have a big positive impact. Knowing this, the students are prompted to take action and stop the worsening of the current situation. The respondent affirmed with these replies:

"When I was in PSD, I avoided using plastic cutlery and plastic bottles. As much as I can, I would encourage others, even though I knew it is difficult to change someone's opinion in using these plastic cutleries." (R1)

"Whatever I learn from PSD, I also bring it to my home. At home and in school, we would not use plastic cutlery, we would use the eco bag to avoid single-use plastic bags. And whenever we do our weekly groceries, I would also have these eco-bags, my own water tumbler to avoid using plastic bottles." (R2)

"I used to bring my own utensils in school and bring my own water tumbler. I also avoid buying food from the canteen because even if we have our own utensils, our meals' containers are still plastic. My class and I also agreed to buy a water dispenser to ensure that we do not buy water from the canteen as often." (R4)

C. Ecological Impact Assessment

In every action that a person does, there is always an outcome and the impacts of it may be a full success or an improvement. A student doing advocacy can affect and impact their life externally and internally. External changes are all the changes that can be seen using our naked-eye, including the observed environment. The efforts of PSDian have paid off as they see noticeable changes in the school surroundings. As testified by the respondents:

"I noticed that there is less plastic consumption not only in my school but also in my home. My classmates would have their own water tumblers. We would bring our lunch boxes in the canteen, and we would not use the plastic spoon and forks there. So fewer plastics are being used." (R2)

"The students used to play with their water bottles and act like it was a basketball and throw it around. But it was lessened when the advocacy started." (R3)

"Based on what I observed, the environmental changes are done by many people, and since many people see how convenient the change is, more people are encouraged to lessen plastic usage." (R5)

Internal changes are just as significant as external changes. The former will determine for how long the student will continue his/her formed habits. Internal changes include the behavioral attitude of the student towards environmental sustainability. As the mind controls everything, the senior high school students' internal development enables them to continually do what they have started. The respondents made mentioned that:

"I became more conscious about what I use and do and if my actions are good for the environment. Aside from this, I also became more aware, and it helps me remind myself that I can do more to help maintain a sustainable environment." (R5)

"I have developed a conscious effort to be more aware of my actions. For example, even when I am outside school and do not have my metal straws, I would usually refuse to use plastic and drink straight from the cup." (R4)

The students' internal changes are proven as they continue their formed habits from school into their own homes and even when they are going out. This includes being conscious of what they use and choosing more environmental-friendly options. The students confirmed by stating:

"Outdoors, specifically in restaurants, there is often the option of using metal versus plastic. With that, I now lean more towards using metal cutlery and metal straws." (R1)

"For outdoors, it is a given that we should dispose of our garbage properly. And at home, when ordering food in Talabat there is this option that you could click if you don't want to use the plastic cutlery. And we also use eco-bags when we go grocery shopping." (R2)

"An example is the take-away foods. We usually have these disposable containers. I ask the restaurant staff that has these services, if they could put it in pyrex that I will give them." (R3)

The changes observed by PSDians made them realize that small actions can collectively result in a big difference. As made mentioned by two respondents:

"It made me realize that we can make a big impact just by doing small actions every day without spending too much or doing something so grand to help the environment. In our little ways, we could already do so much to help." (R2)

"It helps me realize that the simplest acts that we do can collectively make a big difference in the advocacy. It also helps me realize that even just being a student, we can help change and mold the world that we will soon take over." (R4)

D. Environmental Enlightenment Initiative

After doing advocacy that has impacted the students internally and externally, having the confidence that the advocacy works, one should spread and share the idea. In being able to have a larger scale and soon, a worldwide change, the students have begun using their voice to encourage others to mitigate their plastic consumptions. As one respondent stated to have first started the transition at home:

"At first, I was always using water bottles at home. We didn't have any pitchers that we can use. After learning about the PSD advocacy, I encouraged my parents to use a water pitcher in our house to avoid buying water bottles every week." (R3)

The environmental awakening, they experienced in Philippine School Doha are brought even to their new school community. As one respondent shared:

"I believe that in college, we have more voice due to our different organizations. Through them, our voices are more amplified, and we can reach a wider audience. I start joining organizations that are focused on the betterment of the environment." (R4)

As social media reaches a vast audience, students use this platform to give awareness to the masses to be influenced and practice the same advocacy or do something about a specific issue, climate change. The students affirmed with these replies:

"Nowadays, social media is compelling. I could use that platform to voice out my advocacy to everyone. I can share some facts and figures that might make people more aware of the effects of climate change, and maybe some ways on how they can help the environment." (R2)

"Since social media is a powerful tool, and I often use SNS, I can share information about advocacy and spread awareness. I can also promote by telling my family and friends about it." (R5)

IV. DISCUSSION

A successful pro-environmental behavior stems from a strong foundation that is not limited to surface-level knowledge alone. Environmental knowledge, values, and attitudes, together with emotional involvement, make up a complex called 'pro-environmental consciousness' (Kollmuss, A. & Agyeman, 2002). This is the reason as to why concepts and factors that lead to pro-environmental behavior is a complex matter. Different stimuli revolve around different types of people that can immensely affect their disposition towards the environment. Motivation is the reason for behavior or a solid internal stimulation around which action is organized (Kollmuss, A. & Agyeman, J., 2002). One must be holistically aware and motivated in an immersive environment in order to be prompted towards a positive and genuine behavior towards environmental sustainability.

Most researchers agree that only a tiny fraction of pro-environmental behavior can be directly linked to environmental knowledge and environmental awareness (Kollmuss & Agyeman, 2002). Therefore, it is a necessity that a person must undergo an in-depth behavioral metamorphosis. This is to hone the surface-level knowledge and transform it into a greater motivation to propel a positive behavior towards environmental sustainability.

A. Evidential Driving Forces

1) *Theoretical Awareness:* The essence of behavioral metamorphosis starts with theoretical awareness as the primary foundation. Theoretical awareness refers to the perception of a phenomenon that concerns its principle of study rather than its practical application. Perception transforms the individual's attitude or societies to take specific actions under particular circumstance.

The attitude and knowledge of individuals play a central role in improving natural environments (Mumtaz et al., 2019). An individual's intentions to portray a particular behavior are the central tenet of the 'theory of planned behavior. This intention reflects the extent of effort and motivation that an individual will make to project demeanor and is gauged by his attitude toward the behavior, subjective norms, and supposed behavioral control (de Oliveira et al., 2019; Zakeer et al., 2020). As Kollmuss and Agyeman (2002) said, awareness on climate change helps in providing the dynamic knowledge about the development of values; transformation and acceptance; and involves knowledge creation, thereby assisting the individuals in the building and shaping their abilities, knowledge, skills, and attitudes. It helps the individuals in social groups more about climate change issues to manage a better quality environment concerning climate change (Lorenzoni & Pidgeon, 2006; Zakeer et al., 2020).

- 2) *Experiential Awareness*: Experiential awareness serves as a supplement to theoretical awareness. It is the knowledge that gives body or concreteness to the idea about a phenomenon as it deals with the understanding acquired from experience. Experiencing climate change first-hand has the significant ability to affect the environmental behavior of a person. According to Kollmuss and Agyeman (2002), direct experiences have a more substantial influence on people's behavior than indirect experiences. In other words, indirect experiences, such as learning about an environmental problem in school instead of directly experiencing it (e.g. seeing the dead fish in the river), will lead to a weaker correlation between attitude and behavior. A person who directly experiences a phenomenon tends to be more aware and more engaged due to their familiarity with the concept. The arguments that a person's 'experience' with phenomena that are weather-related provides a potentially significant path to affiancing with climate change has been suggested often (Lorenzoni and Pidgeon, 2006; Weber, 2010; McDonald et al., 2015; Reser et al., 2014, as cited in Demski et al., 2017). This hypothesis is from the literature that shows that people can use their direct personal experiences, to add in the secondary sources (e.g., scientists, media), to understand otherwise risks of abstracts. Such subjective experiences may help anchor people's understanding of climate change by making the threat more familiar and concrete (Smith and Joffe 2013; Bickerstaff and Walker 2001; Spence et al. 2012).

B. *Effective Advocacy Enactment*

- 1) *Primary Duty*: As an aftermath of the driving forces of knowledge comes the realization and recognition of one's primary duty. This is the process wherein the individual assumes his or her responsibility for the environment. The Value-Belief-Norm (VBN) theory suggested by Stern (2000) precisely emphasizes morality. VBN theory incorporates the value and norm components from the Norm Activation Model (NAM) and the New Environmental Paradigm (NEP), which encompasses general beliefs and concerns about the environment and the need for actions to address environmental problems. Both the NAM and VBN models of pro-environmental behavior emphasize the value of pro-environmental behavior and how values translate into internalized norms that compel individuals to act pro-environmentally (Liobikiene & Poškus, 2019, p. 1-2). VBN theory suggests that values influence beliefs, which are operationalized through environmental worldview, which influences awareness of behavioral consequences, an assumption of responsibility that leads to personal norms regarding behavior, and, finally, predict behavior (Liobikiene & Poškus, 2019, p. 1-2). Awareness of behavioral consequences and responsibility are directly related factors in VBN theory. De Groot and Steg, Hansla et al., and Steg et al. stated that awareness of products is a necessary factor to environmental responsibility. In a meta-analysis, Klöckner also found that awareness of consequences and responsibility are related factors. Additionally, Liobikiene and Juknys reported a significant correlation coefficient between the awareness of behavioral effects and environmental responsibility. It also appears that when people believe their behavior has an ecological impact, they can become more willing to engage in pro-environmental behavior (Liobikiene & Poškus, 2019, p. 6).
- 2) *Substantial Movement*: Substantial movement, in this context, pertains to the carrying of action that aims to mitigate climate change. Recognizing that knowledge alone is insufficient to inspire learners' sustained engagement, researchers have articulated the need for climate change educational approaches that facilitate learners' sense of agency and provide opportunities action (Chawla and Cushing 2007; Dittmer et al., 2018; Pruneau et al., 2003; Walsh and Cordero, 2019, as cited in Trott, 2020). PSD established the No to Single-Use Plastic advocacy to campaign action to the students as an active approach. This advocacy propelled the students to observe their habits and behavior towards using single-use plastic in their everyday life. Through their action projects, children observed and experienced the effects of their actions on others and the environment, which expanded their sense of agency to make a difference (Trott, 2019). Children's action projects likely also served to ameliorate children's concerns that no action was being taken to address the issue. As Kelsey and Armstrong (2012) have suggested, when inviting children's participation: ...involvement in community initiatives to address climate change would provide the opportunity for CCE [climate change education] to be empowering, confidence building, and solution-based aiding in the reframing of climate

change from tragedy to being embedded in local context (Trott, 2020, p. 18). Findings of this study suggest that, by taking ownership of the problem and its solutions individually and collaboratively, children could develop a sense of constructive hope (Ojala 2012) – that they can envision and enact sustainable alternatives. These findings reflect those of previous studies with high school students and informal climate change educators, indicating that hope is supported by beliefs in humans' (and one's own) efficacy to make a difference (Li and Monroe, 2017; Swim and Fraser, 2013, as cited in Trott, 2020).

C. Ecological Impact Assessment

- 1) *Internal Aftermath:* The first component of ecological impact assessment is the internal aftermath. Internal aftermath refers to the effects of the advocacy on the individual's inner aspect carrying out the advocacy. Such internal aspects pertain to perception, belief, and insights. The policy has the opportunity to empower consumers to change towards a sustainable lifestyle and play a critical role in tackling environmental problems. By offering information (e.g., eco-labeling) and removing structural barriers, consumers can be encouraged to make informed choices and easily implement their choices. Pro-environmental behavior thus becomes less dependent on consumers' goodwill. (Heidbreder et al., 2020, p. 5). This theoretical perspective is also material to climate action; hence, the interference is aimed at behavioral change by environmental awareness campaigns directed at creating new perceptions and attitudes about a new behavior by reforming mediating factors such as knowledge; and social norms (Mumtaz et al., 2019; Zakeer et al., 2020). Malaysia, Mashud et al. (2015) posited that awareness, perception, and knowledge of climate change influence a person's attitude towards climate change and pro-environmental behavior. Climate change awareness entails development creation, values, knowledge and acceptance and transformation of attitudes and building abilities and skills amongst individuals and social groups regarding the issues of climate change intending to attain a better quality of environment (Akinubi et al., 2012, as cited in Zakeer et al., 2020).
- 2) *External Aftermath:* The second component of ecological impact assessment is the external aftermath. External aftermath refers to the effects of the advocacy on the external aspect: the changes in the environment. Differences were, as testified by the students, less plastic consumption and littering when the advocacy started. In the study conducted by Heidbreder et al. (2020), they analyzed if people would reduce their single-use plastic consumption when they promoted the month of July as an action month for behavior change in the plastic purchase. The results showed that participants to whom the idea of 'Plastic Free July' was presented used significantly less plastic than those without any intervention. According to Heidbreder et al. (2020), to enable consumers to reduce their plastic consumption, barriers should be reduced by introducing plastic-free alternatives. Hence, instead of plastic bottles and cutlery, students were encouraged to bring their own tumblers and non-disposable cutlery. In this study, 468 advocates from the senior high school department of PSD have already enacted the advocacy. Therefore, they already saved 575,640 pieces of cutlery in a year than the previous year. This exhibits that policies and advocacies can have a significant impact on the environment. In order for people to adopt pro-environmental behavior, advocacies must be promoted.

D. Environmental Enlightenment Initiative

- 1) *Butterfly Effect:* As an advocate on environmental sustainability, Philippine School Doha's students have utilized social media platforms such as Facebook, WordPress, and Instagram to pass the good news about the improvement, internally and externally, made by their advocacy. According to Whitman (2021), to successfully spread and promote one's organization or company goal, one can do media advocacy and use any form of media in disseminating information. The students have begun to use their voices to encourage others to mitigate their plastic consumption. The students have put their trust in the butterfly effect concept. This theory is known as small things that could turn into non-linear impacts on a complex system. In simple terms, the butterfly's wing's flapping can cause a typhoon (Eddington et al., 2019). The students believe that their small actions in mitigating plastic pollution and consumption could have a vast and profound effect on the system's outcomes (Vernon, 2017). It is indeed hard to follow an impossible benchmarking without evidence of success (Elisa, 2011). That is why the students have included all the improvements documentation, internally and externally, when spreading awareness on social media platforms about climate change advocacy. And this strategy makes it easy for the students to achieve their goal of butterfly effect on a larger scale and soon into the whole world (Gorkum, 2015). And then here is the Internet, known as the "information highway". It is a kind of metaphor that shows a clear and straight map path in obtaining information (Berdayes, 2006). According to Westerman (2014), a study shows how pieces of the available information in social media can affect one's persons' perceptions.
- 2) *Information Highway:* Disseminating information is an easy task, but knowing where to share it is a big question. For one advocacy like the PSD's No to single-use plastic advocacy, to be strengthened and applied worldwide, it should be implied on a larger scale and soon into the whole world (Gorkum, 2015). And then here is the Internet, known as the "information highway". It is a kind of metaphor that shows a clear and straight map path in obtaining information (Berdayes, 2006). According to Westerman (2014), a study shows how pieces of the available information in social media can affect one's persons' perceptions.

Students of Philippine School Doha, providing evidence of the said advocacy's success and improvements, have made the people who saw their posts about the topic do the same. Social media as an information highway is a really big help in order to gradually apply the advocacy to a larger scale. Not all written sources are reliable, no matter how their arguments sound or appear to be. Information highway as a vast source of information, as a person, before implying particular advocacy to oneself, a person should validate first the information. One factor to consider is that the data must be up-to-date. (Austin Community College, 2020). Philippine School Doha uses information highway to inform the people about the up-to-date improvements and what's new on the No to single-use plastic advocacy.

V. CONCLUSION

Climate is an expected weather condition at a particular time. (Climate Kids, 2020). On the other hand, climate change is the complex shift affecting the planet's weather and climate systems. Climate change is about the rising average temperatures and the intensified weather events, shifting wildlife populations of their habitats, rising seawater levels, and a range of other impacts. These changes are ongoing as humans are relentlessly doing things that add heat-trapping greenhouse gases to the atmosphere (National Geographic, 2019). This study aims to encourage people to act upon the effects of climate change that every human worldwide is experiencing today. School builds the founding knowledge of students about climate change. Words of mouth spread information about the dangers brought by this phenomenon. As found in several studies, students' learning results from teaching particular concepts about climate change and addressing common misconceptions (Roychoudhury, A., 2017). While theoretical awareness contributes to spreading awareness, experiential understanding acts as the most significant driving force for people to take action. People who have first-hand experiences of climate change's effects tend to have increased concern over climate change and the willingness to mitigate its impact. These people acknowledge that their actions impact climate change and are observed to be significantly more driven to adopt climate-friendly behaviors (Kulawska, A., & Hauskeller, M., 2018).

Consequently, every human being living on Earth has a primary duty to fight climate change. It is an equal responsibility that calls for mutual action of both higher associations and their communities. Climate change mitigation demands the cooperation of national governments and their consumers. The initiatives to eliminate greenhouse gas sources and amplify its sinks require long-term coordinated efforts by national and international organizations (Davidescu et al., 2020). While nation leaders have the role of using their influences to promote advocacies to combat climate change, the community's fellow members take the responsibility of complying with the policy. This joint engagement of both forces is essential to the success of an environmental goal.

The policy can encourage consumers to progress towards a sustainable lifestyle and play a vital role in addressing environmental concerns (Heidbreder, L. M., et al., 2020). The Philippine School Doha has taken the initiative to implement the advocacy, "No to Single-Use Plastic." This advocacy highly discourages students from utilizing single-use plastics, incredibly disposable cutleries, and water bottles, prominent in the school community. As an alternative, students were required to bring their metal utensils and tumblers, to which they effectively complied. Every day, they exercise the new policy's enactment and avoid using single-plastics from the school canteen. They have made it a daily routine to pack a pair of utensils and a refillable tumbler as they go to school and have eventually incorporated the advocacy into their lives.

Habits were shown to be a critical factor that influences plastic consumption (Heidbreder, L. M., et al., 2020). By abiding by the said advocacy, the habits of PSDians have slowly changed into positive behavior. They have become conscious of just how much they consume plastics daily. Focusing on the positive aftermath of others and the environment rather than oneself seems to prompt people to act environmentally friendly (Heidbreder, L. M., et al., 2020). These behavioral changes of PSDians are also externally observed in the surroundings of PSD. There are fewer plastic cutleries and water bottles seen in the trash cans, and more students bring their cutleries and tumblers. The students have incorporated these habits into their daily lives and continue to reduce single-use plastics at home and outdoors.

After taking part in the advocacy, the students have widened their awareness regarding the effects of single-use plastic in worsening climate change and now can disseminate and spread words of the success regarding the advocacy combating climate change. Furthermore, as a student in this generation Z era, also-known-as Digital Natives, they are already in the internet-connected world. Some studies show that they have developed their visual ability to learn more effectively using visual forms they see on the internet (Rothman, 2016). Social media, as one of the powerful information sources (Westermen et al., 2014). The PSDians used this online social tool to send factual and theoretical information easily. They spread awareness about the said advocacy, such as making education videos and infographics on how to do it in their simple ways and metastasize the idea through social media. In this way, the passing of the successful enactment of the advocacy will be more comfortable for others to see and be encouraged to do it in their own homes and achieve a sustainable environment.

VI. ACKNOWLEDGEMENT

The researchers wish to express their appreciation and gratitude to the people who offered guidance and assistance throughout the startup process until the end, making this study a success. The researchers would like to give appreciation and thanks to the following people:

Dr. Alexander S. Acosta, our school principal for inspiring and encouraging the researchers to conduct this research study.

Dr. Noemi F. Formaran and Dr. Lorina S. Villanueva, our Senior High School and Research Development Accreditation Publication Office Vice Principals, respectively for supporting us in the conduct of this study and auspiciously guiding the researchers.

Mrs. Maricel T. Gubat, our co-author and research adviser for the effort of providing suggestions, advices, and comments for the betterment of the content throughout the process, making this study a fruitful success in the end. Without her, this research study will not be accomplished and published.

Dr. Don John A. Vallesteros, our former research teacher for inculcating advice, lessons, and tips and continuously suggesting innovations to improve and achieve a good start in this research study. Without him, this research will not be a success.

Mr. and Mrs. Mangalino, Mr. Mrs. Ibañez, and Mr. and Mrs. Pujante, our dear parents for their moral and financial support to the researchers. Without them, this research will not be a success.

Above all, to the Almighty God, for the strength, wisdom, guidance, and mantle of protection to accomplish this task.

REFERENCES

- [1] Eddington, B. Mandelbrot, E.Lorenz, J.Gleick, J.Gribbin, R.Bradbury, S.Mcchrystal, S.King. (2019, November 27). The butterfly effect: Everything you need to know about this powerful mental model. Farnam Street. <https://fs.blog/2017/08/the-butterfly-effect/>
- [2] Arborday, F. (2020). Climate change at arborday.org. <https://www.arborday.org/trees/climatechange/>
- [3] Austin Community College. (2020). What makes information reliable? Guidelines and Technical Tutorials. <https://sites.austincc.edu/student-skills-workshops/critical-reading/what-makes-information-reliable/>
- [4] Climate Kids. (2020). What is climate change? NASA Climate Kids. <https://climatekids.nasa.gov/climate-change-meaning/>
- [5] Dainty, K. N. (2017). Reaching Beyond Doing a Survey and a Few Interviews: The Importance of Maintaining Rigor & Validity in Prehospital Qualitative Research. *Prehospital Emergency Care*, 21(4), 537-538. doi:10.1080/10903127.2017.1282563
- [6] Davidescu, A. A., Apostu, S., & Paul, A. (2020). Exploring citizens' actions in mitigating climate change and moving toward urban circular economy. A multilevel approach. *Energies*, 13(18), 4752. <http://dx.doi.org/eres.qnl.qa/10.3390/en13184752>
- [7] David Westerman, Patric R. Spence, Brandon Van Der Heide, Social Media as Information Source: Recency of Updates and Credibility of Information, *Journal of Computer-Mediated Communication*, Volume 19, Issue 2, 1 January 2014, Pages 171–183, <https://doi.org/10.1111/jcc4.12041>
- [8] Demski, C., Capstick, S., Pidgeon, N., Sposato, R. G., & Spence, A. (2017). Experience of extreme weather affects climate change mitigation and adaptation responses. *Climatic Change*, 140(2), 149-164. doi:<http://dx.doi.org/eres.qnl.qa/10.1007/s10584-016-1837-4>
- [9] Dr. Fredelito Don John A. Vallesteros, Paolo Andrei Emmanuel B. Dipasupil, Rev Adligh V. Gamayon, Dianne Grace M. Bautista, Jeshana Novene F. De Guzman, Ezekielle M. Milan, "Leaving the Daylight: The Adjustments of Filipino Night Shift Workers in the State of Qatar", *International Journal of Science and Research (IJSR)*, https://www.ijsr.net/search_index_results_paperid.php?id=ART_20202894, Volume 8 Issue 11, November 2019, 1739 – 1754
- [10] Elisa. (2011, November 10). Inspiring: Breathing life into advocacy. Average Advocate - Welcome! <https://averageadvocate.com/2011/11/inspiring-breathing-life-into-advocacy/>
- [11] Gorkum, E. V. (2015). DCR. https://www.dcr-africa.org/Uploaded_files/Zelf/how-to-effectively-strengthen-advocacy-capacity.3553d4.pdf
- [12] Guilbeau, C. (2014, September 15). Phenomenology. Retrieved from <https://udallas.edu/udjs/departments/psychology/2014-2015/phenomenology.php>
- [13] Hammarberg, K., Kirkman, M., & De Lacey, S. (2016, January 11). Qualitative research methods: when to use them and how to judge them. Retrieved from <https://academic.oup.com/humrep/article/31/3/498/2384737>
- [14] Heidbreder, L. M., Steinhart, J., & Schmitt, M. (2020). Plastic-Free July: An Experimental Study of Limiting and Promoting Factors in Encouraging a Reduction of Single-Use Plastic Consumption. *Sustainability*, 12(11), 4698. <http://dx.doi.org/eres.qnl.qa/10.3390/su12114698>
- [15] Ita Group. (2017, December 19). The secret to successfully inspiring employee advocacy. ITA Group | Align and Motivate Your Employees, Customers, Channel Partners and Event Attendees | ITA Group.
- [16] Jamshed S. Qualitative research method-interviewing and observation. *J Basic Clin Pharm*. 2014;5(4):87-88. doi:10.4103/0976-0105.141942
- [17] Jonston, I. (2017, September 28). How plastic is destroying the Earth. *The Independent*. <https://www.independent.co.uk/environment/plastic-how-planet-earth-environment-oceans-wildlife-recycling-landfill-artificial-a7972226.html>
- [18] Kollmuss, A. and J. Agyeman. 2002. Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior? *Environ. Educ. Res.* 8(3): 239–260. <https://doi.org/10.1080/13504620220145401>
- [19] Kuhn, A. (2008, February 20). Group pleads: Bring your own Chopsticks to China. NPR.org. <https://www.npr.org/templates/story/story.php?storyId=19203227>
- [20] Kulawska, A., & Hauskeller, M. (2018). Moral Enhancement and Climate Change: Might it Work? *Royal Institute of Philosophy Supplement*, 83, 371-388. <http://dx.doi.org/eres.qnl.qa/10.1017/S1358246118000450>
- [21] Laville, S. (2019, May 16). Single-use plastics a serious climate change hazard, study warns. *the Guardian*. <https://www.theguardian.com/environment/2019/may/15/single-use-plastics-a-serious-climate-change-hazard-study-warns>
- [22] Linda Cooper Berdayes, Vicente Berdayes, The Information Highway in Contemporary Magazine Narrative, *Journal of Communication*, Volume 48, Issue 2, June 1998, Pages 109–124, <https://doi.org/10.1111/j.1460-2466.1998.tb02750.x>

- [23] Liobikienė, G., & Mykolas Simas Poškus. (2019). The importance of environmental knowledge for private and public sphere pro-environmental behavior: Modifying the value-belief-norm theory. *Sustainability*, 11(12) doi:<http://dx.doi.org/eres.qnl.qa/10.3390/su11123324>
- [24] Major, K. (2019, July 4). Plastic waste and climate change - what's the connection? Wildlife & Environmental Conservation Organisation - WWF - WWF-Australia.
- [25] Mumtaz, M. 2013. National Climate Change Policy of Pakistan: An Analysis.
- [26] NASA Climate Kids. (2020, October 22). What is climate change? Retrieved November 11, 2020, from <https://climatekids.nasa.gov/climate-change-meaning/>
- [27] National Geographic. (2019, January 22). What is global warming? <https://www.nationalgeographic.com/environment/article/global-warming-overview>
- [28] Parker, L. (2020, October 6). Plastic pollution is a huge problem—and it's not too late to fix it. *Science*. <https://www.nationalgeographic.com/science/article/plastic-pollution-huge-problem-not-too-late-to-fix-it>
- [29] Pertsova, C. C. (2007). Ecological economics research trends. Google Books. https://books.google.com.qa/books?hl=en&lr=&id=GCKU1p_6HNwC&oi=fnd&pg=PA1&dq=carbon+footprint&ots=D1vYFI7nLl&sig=EgCormBPgylaE69WzIXW-sIqgt0&redir_esc=y#v=onepage&q=carbon%20footprint&f=false
- [30] Rothman, Ph.D., D. (2016). A Tsunami of Learners Called Generation Z. Office of Continuing Education | West Virginia University. https://ce.wvu.edu/media/15624/needs-different_learning_styles.pdf
- [31] Roychoudhury, A., Shepardson, D. P., Hirsch, A., Niyogi, D., Mehta, J., & Top, S. (2017). The Need to Introduce System Thinking in Teaching Climate Change. *Science Educator*, 25(2), 73-81. <https://search-proquest-com.eres.qnl.qa/docview/1865491862?accountid=49936>
- [32] Rupp, R. (2016, November 3). France just banned plastic forks. What's next? National Geographic. <https://www.nationalgeographic.com/culture/article/france-just-banned-plastic-forks--who-s-next->
- [33] Shaftel, H., Jackson, R., Callery, S., & Bailey, D. (Eds.). (2020, October 7). Climate change evidence: How do we know? Climate Change: Vital Signs of the Planet. <https://climate.nasa.gov/evidence/>
- [34] Shirey M. (2018, August 31). "Ego Love" or "Authentic Love": How Do You Know If You Truly Love Someone? THRIVE GLOBAL. <https://sokogskriv.no/en/https://thriveglobal.com/stories/ego-love-or-authentic-love-how-do-you-know-if-you-truly-love-someone/>
- [35] Trott, C. D. (2020). Children's constructive climate change engagement: Empowering awareness, agency, and action. *Environmental Education Research*, 26(4), 532-554. Retrieved from <https://search-proquest-com.eres.qnl.qa/scholarly-journals/children-s-constructive-climate-change-engagement/docview/2385861913/se-2?accountid=49936>
- [36] Vernon, J. L. (2017, June 12). Understanding the butterfly effect. *American Scientist*. <https://www.americanscientist.org/article/understanding-the-butterfly-effect> <https://ctb.ku.edu/en/table-of-contents/advocacy/media-advocacy/working-with-media/main>
- [37] Westerman, David & Spence, Patric & Heide, Branden. (2014). Social Media as Information Source: Recency of Updates and Credibility of Information. *Journal of Computer-Mediated Communication*. 10.1111/jcc4.12041
- [38] Whitman, A. (2021). Chapter 34. Media advocacy | Section 1. Working with the media | Main section | Community tool box. Community Tool Box.
- [39] Zakeer Ahmed, K. A., & Nawaz, A. (2020). Impact of climate change awareness on climate change adaptations and climate change adaptation issues. *Pakistan Journal of Agricultural Research*, 33(3), 619. Retrieved from <https://search-proquest-com.eres.qnl.qa/scholarly-journals/impact-climate-change-awareness-on-adaptations/docview/2442846294/se-2?accountid=49936>



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)