

Exploring the Strategic Use of Social Media in Environmental Sanitation Campaigns in Ghana

by

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DISSERTATION ABSTRACT

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Title: Exploring the strategic use of social media in environmental sanitation campaigns in Ghana

This dissertation explores the strategic use of social media in environmental sanitation campaigns in the sub-Saharan African country Ghana. It offers insights into the phenomenon of social media use by Environmental Sanitation Organizations (ESOs). That is, whether these ESOs are strategic in using social media as powerful, ubiquitous channels of communication to influence pro-environmental sanitation behaviors.

The dissertation also addresses gaps in literature on social media use in sanitation campaigns in the global south, where social media have become commonplace, therefore; seen as potential tools for driving social change.

It applies the framing theory through the lens of Snow and Benford's (1988) typology of framing to examine whether the ESOs in Ghana are being strategic in their use of social media in sharing information on sanitation problems. The mixed-methods approach was used in collecting data through interviews with four Chief Public Relations professionals of selected ESOs and a content analysis of these ESOs' Facebook posts, which underwent thematic analysis with conclusions drawn.

Findings show that public relations professionals who use Facebook as a communication tool are strategic in creating messages on sanitation on the platform despite the high number of posts that had no specific frame. The motivational frame was the most used strategic frame while the prognostic frame elicited the highest engagement and positive valence.

This preceding finding particularly has implications for the framing theory, specifically the Snow and Benford's (1988) typology of frames, as it brought to light the potential of the prognostic frame in health messaging. Thus, the study has advanced the application of this typology, which has been mostly applied in the study and analysis of communication by environmental social movement organizations. Recommendations are offered for practical implementation to enhance the understanding and ability of public relations professionals in the environmental sanitation sector to leverage the potentials of social media in advancing sanitation causes, such as positive attitudes and behaviors for improved sanitary conditions and health in Ghana.

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DEDICATION

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ABBREVIATIONS

CLTS	Community Led Total Sanitation
CWSA	Community, Water, and Sanitation Agency
EOs	Environmental Organizations
ESM	Environmental Sanitation Management
ESOs	Environmental Sanitation Organizations
ESPA	Environmental Services Providers Association
GAG	Green Advocacy Ghana
GoG	Government of Ghana
GCGL	Graphic Communications Group Limited
GSDP	Ghana-Spain Debt Swap Development Program
HDA	Health Development Army
IISD	International Institute of Sustainable Development
IRB	Institutional Review Board
IWSA	International Water and Sanitation Agency
MDGs	Millennium Development Goals
MSWR	Ministry of Sanitation and Water Resources
NGO	Non-governmental Organizations
NRDC	Natural Resources Defense Council
NSD	National Sanitation Day
OLS	Ordinary Least Square
SDG	Sustainable Development Goal
SM	Social Movement

SMEBs	Social Media Engagement Behaviors
UGT	Uses and Gratification Theory
UN	United Nations
UNCED	United Nations Conference for Environment and Development
USAID	United States Agency for International Development
WHO	World Health Organization
WWI	World Watch Institute
WRI	World Resources Institute

CHAPTER I

INTRODUCTION

Environmental sanitation continues to be a critical part of human existence. This is because good sanitation protects life, extends life spans, and contributes to human well-being (Naughton & Mihelcic, 2017). However, with the explosion in human population, the need for adequate and corresponding sanitation to match the increasing demand has become paramount. It is estimated that the number of people with sanitation needs worldwide will grow to 5 billion by 2030 (Strande & Brdjanovic, 2014), which implies that the current state of sanitation in the already affected nations will further deteriorate if steps are not taken to reverse this trend.

Environmental sanitation problems have different dimensions, such as policy/regulatory, infrastructural, and behavioral, all of which require a comprehensive understanding of the factors that impact each dimension and the consequences for human life. For example, an increase in population in a given area or settlement can overstretch the existing sanitation infrastructure, which could either limit access to these facilities or cause frequent breakdown of these facilities.

Policy gaps in environmental sanitation, however, retard progress in terms of lessening the ability of the sanitation system to function efficiently. Thus, this could limit the system's ability to plug emerging regulatory loopholes in the sector. The negative attitudes and behavioral tendencies of a population toward sanitation also defy the logic embedded in efforts to fix these two-dimensional problems. Human attitudes and behaviors are integral to environmental sanitation management (ESM) (Mensah, 2020), both at individual and collective levels. This explains why interventions, such as campaigns to correct actions that derail progress on sanitation take into account the need to address the aspects of human attitudes and behaviors.

According to Van Minh and Nguyen-Viet (2011), one of the reasons for the low progress in the areas of water and sanitation is inadequate understanding of ESM by policy makers and the general public. Given that information is the basis of awareness and action (Maibach, 1993), adopting strategic ways of communicating information on sanitation is central to overcoming environmental sanitation problems. This is particularly so because information influences and shapes behavior, and where good sanitation and hygiene behaviors are present, huge benefits, such as a drop in rates of illness and improvement in safety and human dignity become visible (UN-Water, 2008).

The advent of social media has provided new opportunities for disseminating information on various issues, including sanitation. The question of whether social media are leveraged by Environmental Sanitation Organizations (ESOs) to promote pro-environmental sanitation behaviors, however, is underexplored. In addition, it has been observed that despite the potential of social media to contribute to positive environmental behaviors (The Environmental Magazine, 2021), there is limited literature on how community-based organizations, such as ESOs use social media in the area of health promotion campaigns (Ramandhan et al., 2013). While this finding was made a decade ago, this dissertation provides an update on the current state of social media use in this area. The purpose of this dissertation, therefore, is to understand whether and how ESOs use social media to promote good sanitation practices in the sub-Saharan African country Ghana, which is currently plagued with sanitation problems.

Efforts, including sensitization campaigns, have been made as part of the interventions to address sanitation problems in Ghana. These sensitization campaigns aim to raise public awareness of a range of sanitation-related problems believed to be caused by poor human behaviors. Messaging is key to the overall efforts to shape and influence the targeted audiences’

attitudes toward sanitation. Effective messaging can be used to orient decision-making toward sanitation solutions or induce attitudinal change (European Environmental Agency & Centre of Environmental Information Studies, 1999), that is, influence specific audiences to support a positive cause or avail personal and shared resources to the advancement of the human condition through improved sanitation.

This dissertation aims to address the challenges of sanitation communication. While environmental sanitation is a global problem, the questions asked here focus on the global south, specifically Ghana, a sub-Saharan African nation. To that end, the research seeks to fill a gap in literature related to social media use in sanitation campaigns in the global south, making a case for this underexplored area to be given scholarly attention. The ultimate goal of this dissertation, therefore is to contribute to effective sanitation campaign development and impact, as well as the scant literature on social media use in sanitation campaigns. Before exploring the theoretical literature that provides the framework for this dissertation, however, it is important to first understand the current state of environmental sanitation, both globally and in Ghana.

Overview of global sanitation situation

Globally, approximately 2.4 billion people (32%) lack basic sanitation (CDC, n.d., WHO, 2023). Inadequate sanitation causes an estimated 525 000 diarrheal deaths annually among children under five (WHO, 2017). This number of deaths is not only alarming but also points to the urgency required to address the sanitation problems facing the affected populations.

Perhaps most-concerning is the prediction of the Joint Monitoring Report (JMP) by UNICEF and WHO (2021) that the Sustainable Development Goal (SDG) 6: to “Ensure availability and sustainable management of water and sanitation for all by 2030” cannot be achieved unless progress on all facets of sanitation quadruples. This gloomy picture indicates the

state of sanitary conditions and the slow pace of progress in this sector so far, which needs to be addressed to improve the living conditions of affected communities and nations.

Although sanitation problems are universal in character, they are said to be more prevalent in countries of the global south (UNICEF, 2020). In fact, Maharaj and Maharaj (2022) described the sanitation situation as a “looming crisis” in the global south. This is particularly evident in Africa, as reports on the continent reflect a soaring state of poor sanitary conditions. For example, Adugna’s (2023) recent study conducted in fourteen towns of the East African nation of Ethiopia discovered that only 20% of these towns’ populations had flushed toilets and none had wastewater dumping site, which is a major contributor of poor waste management in these towns. Similarly, Tseole et al.’s (2022) study of the sanitation situation in Southern Africa revealed that the WASH conditions do not equate to the improved standards stipulated in the UN’s SDG 6 on sanitation.

Again, while poor sanitation is generally a problem facing the African continent, the situation is acutely endemic in the sub-Saharan African nations, where only 28% of the population has access to basic sanitation (UNICEF, 2017; Awuah et al., 2009; Yaya et al., 2019). In addition to this, the access rate in the sub-Saharan African nations remain the lowest in the world (USAID-WASH, 2017). For example, while the global target for water was met in 2010 with some progress in the area of sanitation, sub-Saharan Africa nations failed to meet both water and sanitation targets by 2015 (Ohwo & Agusomu, 2018).

The sanitation problem of African nations is attributed to a number of challenges identified as the causes of the continent’s sanitation problems. These include inadequate toilet facilities, poor toilet facility emptying practices, and poor community perceptions on sanitation management (Adugna, 2023). Other challenges include the lack of WASH infrastructure,

inadequate knowledge on water-borne illnesses, and the lack of community engagement on sanitation (Tseole et al., 2022). For the continent to achieve the SDG 6 targets on sanitation, UNICEF's (2022) report recommended a twenty-fold increase in all sanitation-related efforts and components, including the above.

Ghana, as a nation of the sub-Saharan Africa, is no exception when it comes to the sanitation problems of Africa. Indeed, Ghana is faced with dire sanitation problems. Annually, Ghana spends an estimated \$290 million (constituting 1.6% of the national GDP) on sanitation-related programs (Water and Sanitation Program, 2012). Despite this, the country failed to achieve the United Nations (UN) Millennium Development Goals (MDGs) on sanitation by 2015 (Appiah-Effah, 2019).

Sanitation problems in Ghana are multi-dimensional, including open drainage systems and poor waste management that result in choked, filthy gutters (Awuah et al., 2020). In addition, less than 15% of Ghana's population has access to improved sanitation and 70% of the country's northern domiciles resort to open defecation. Waste management in urban areas is also a major challenge because of the indiscriminate littering of the streets and inappropriate siting of waste yards in the country's major cities. The case of the lavender hill waste dump in the middle of Accra, the capital city, epitomizes the gravity of improper waste disposal in Ghana.

Besides the pollution of lavender hill, a strait to the Atlantic Ocean in Accra, other urban river bodies, such as the Odaw River and Korle Lagoon in Accra are impacted by sewage from septic trucks, rendering these water sources unusable for domestic purposes. The fecal sludge discharged into these water bodies further spills over to riparian lands during heavy downpours, creating unhygienic conditions in the affected settlements, such as Korle Bu, Agbogbloshie, and Kwame Nkrumah Circle in the city of Accra. This problem is not without consequences for the

general well-being of persons in communities that are impacted. For example, in 2014, the country recorded 150 deaths as a result of a cholera outbreak in Accra and more than 150 deaths occurred during a flood-inflicted fire disaster in 2015 (Totimeh, 2017), all of which were sanitation-related.

In view of the numerous efforts, ranging from sensitization campaigns by nonprofit organizations, government's engagement of private waste management companies (e.g. Zoomlion Ghana Limited) to the commissioning of the National Sanitation Day (NSD) in 2014 and the Sanitation Ministry in 2017, one would have expected a drastic improvement in sanitation. However, this is not the case here. A recent study, which confirms earlier findings on the fast-deteriorating nature of sanitary conditions, a testament of a bleak future for Ghana's sanitation situation, is Oppong et al. (2022) finding. According to Oppong and colleagues, Ghana's sanitation targets of universal access to safe drinking water by 2025 and the elimination of open defecation by 2030 is impossible. They suggest that unless appropriate and drastic measures are implemented to improve sanitary conditions, these targets will remain elusive.

This problem is observed not only as the outcome of inadequate investment in sanitation (Appiah-Effah et al., 2019), but also as a consequence of poor attitudes toward sanitation in Ghana (Gyasi, 2018; Tengan, 2017). Both Gyasi's and Tengan's studies on waste management and flood challenges in Ghana indicate that human attitudes and behaviors contribute significantly to sanitation problems.

Although what accounts for poor attitudes is yet to be uncovered, a study on the performance of the NSD exercise at Aboabo, a suburb of Kumasi, hinted that the low participation of members of the sampled communities was due to communication and information inadequacies (Abalo et al., 2017; Mansour & Esseku, 2017). This information deficit

and public apathy toward sanitation prompted this study, which examined how concerned ESOs are addressing this problem using social media channels.

Previous research on the effects of media on environmental sanitation awareness in Ghana (Kwansa-Aidoo, 1999; 2003; Ofori-Parku, 2014) explored the role of mainstream media (i.e. television, radio, and newspapers). The current study departs from this category of media to focus on social media channels, which have recently proven influential in the communication habits of Ghanaians (Dadzie, 2017). This influence signals the potential impact social media, as communication channels, have on the population of Ghana, which the ESOs in the country can capitalize on to help achieve their communication goal: address the information and education needs of the public, which is linked to behavior-related negative consequences of sanitation.

To explore the role of social media, an empirical study is required to understand the current use of social media in sanitation campaigns. Therefore, this dissertation broadly sought to answer the general question of whether and how public relations professionals of ESOs in Ghana use social media to communicate on sanitation problems and what message-framing strategies they employ in doing so.

Ghana

Equipped with the broader understanding of the sanitation issues facing Africa, it is important to now understand Ghana's specific context, in terms of its history, economy, and media context. Ghana is located on West Africa's Gulf of Guinea and a few degrees north of the Equator. With a land size of 238, 533 square kilometers (Berry, 1994), it shares boundaries with three African nations. That is, it is bordered to the east with Togo, to the west with Cote d'Ivoire, to the north with Burkina Faso, and the Atlantic Ocean to the south. Figures VII and VIII are the

African and Ghanaian maps, showing Ghana's location on the continent of Africa and the nations it shares boundaries with, and Ghana's map respectively.

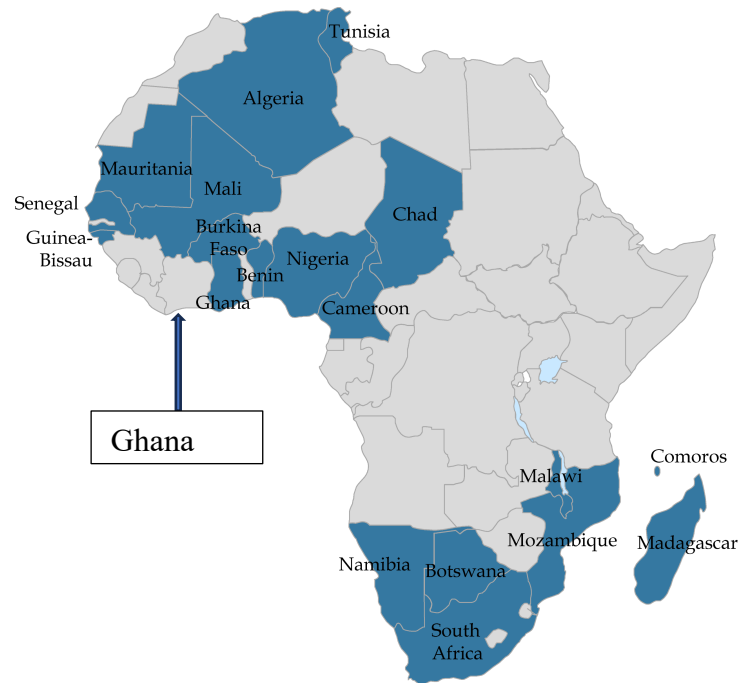


Figure 1: African Map showing Ghana and its neighboring countries (source: Wikipedia)

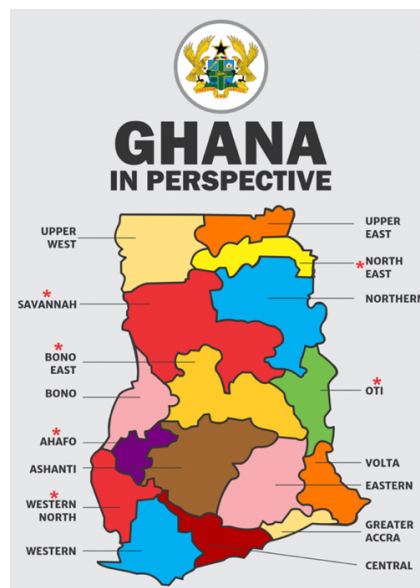


Figure 2: Ghana Map (Extracted from The Ministry of Foreign Affairs, Ghana)

Politically, Ghana gained independence from the British colonial government on March 6, 1957 (Akyeampong & Aikins, 2008). It is on record to have been the first country in the sub-Saharan Africa to obtain self-rule from the colonizers. This pioneering status positioned Ghana as a major influence on other African nations. It became the beacon of hope for self-determination on the whole continent.

Prior to being named Ghana, the nation was known as Gold Coast, a name that reflected its huge gold deposits. The mineral deposits attracted European merchants and continues to be the point of attraction to investors. With a population of 30.8 million people (Ghana Statistical Service, 2021), Ghana has about 50 indigenous languages (Dakubu, 1996) spoken across the nation. Of these languages, the most widely spoken are the Akan, Ewe, Ga, Dagaare, and Dagbani (Sadat & Kuwornu, 2017).

A democratic nation, Ghana has embraced freedom of expression and free press with both regional and international recognitions. For example, it ranked first in press freedom in Africa in the World Press Freedom Index for 2018 (Reporters Without Borders, 2018). Ghana's unrepressed environment has fostered a conducive atmosphere for the media to thrive in its watchdog role while educating the public on a myriad issues, including political, social, economic, and environmental.

In line with the above roles, the media in Ghana partner with organizations to bring to light matters of public concern and interest on various topics. One such organizations that receives media attention is environmental organizations (EOs). The media-EOs relationship has been bolstered in recent times by the increased environmental problems of the country. In April 2017, *The Media Coalition Against "Galamsey"* (a local term for illegal mining) was formed in

collaboration with EOs to stamp out illegal mining and its devastating effects on the environment in the affected regions of Ghana (CitiFm, 2017; Frimpong, 2019).

As a predominantly agrarian economy, galamsey has had negative impact on Ghana's farmlands, affecting the quality of food production and polluted natural water sources like rivers in the mining communities (Adiyahba, 2015; Amoah, 2021, Eti et al., 2023). The effects of the phenomenon of galamsey has also reached into the domain of sanitation (Mantey et al., 2020) and public health (Gyan, 2019), as lead and mercury concentrations in water bodies and soil are at alarming rates.

Environmental, sanitation, and health problems are interlinked, requiring concerted efforts by stakeholders across these sectors. Therefore, and key to the goals of this dissertation, in-house public relations practitioners play a crucial role in disseminating information that support the education and policy pursuance of organizations in these sectors in Ghana. While the mainstream media are used as channels for sharing information by public relations professionals, these professionals are expected to be creative in utilizing controlled communication platforms in telling their organizations' stories.

Although previous studies (Wright & Hinson, 2009; Robson & Sutherland, 2012) have shown the lack of strategic application of social media among public relations professionals, the case of Ghana, in recent time, has shown positive signs as professionals have begun to give significant attention to the use these tools (Anani-Bossman, 2023). But as to whether these nascent media are being used in a strategic manner to address problems, such as the surging urban sanitation crisis in Ghana (Gould & Brown, 2020), is yet to be fully explored. This question is at the core of this dissertation, which intends to address the gap in literature with regards to strategic social media use in addressing sanitation problems in the sub-Saharan

African region. Accordingly, given this global and African context regarding environmental sanitation, the following chapter outlines the theoretical framework that guided this study.

CHAPTER II

LITERATURE REVIEW

In his early work on public relations' role in advancing environmentalism, Grunig's (1977) paper, *Review of research on environmental public relations*, draws attention to how public relations professionals can play a crucial role in conscientizing various publics and organizations on the causes of environmental problems and the solutions to them. Grunig argues that people can only relate to environmental issues and see them as threats only if they are conscious and knowledgeable about them. He concluded on the importance of messaging in environmental communication by positing that the differences in the publics and variations in their behaviors require professionals engaged in environmental public relations to master the skill of crafting effective messages.

Merry's (2012) study of environmental messaging strategies extends Grunig's (1977) work. According to Merry, the complexity of messages by public relations professionals planning environmental communication should depend on the level of the targeted publics' understanding of the environmental problem being communicated about. Both studies focused on the importance of effective messaging in changing environmental behaviors. This dissertation study builds on these works by examining how public relations professionals of ESOs in the global south's context utilize social media as strategic channels of communication in communicating on environmental sanitation problems.

To understand why communicating on environmental sanitation matters, it is important to first understand the meaning of the phrase “environmental sanitation,” trace the historical roots of the phrase, and understand how environmental sanitation metamorphosed into a subject of critical importance in human society. To delve into this topic requires an answer to the basic question, what is environmental sanitation? Various definitions have been offered in respect of the concept of sanitation.

The World Health Organization (WHO) defines sanitation as the “control of all factors in the physical environment which may exercise a harmful effect on human beings’ physical development, health and survival” (WHO, 1950). Rottier and Ince (2003), on the other hand, defined environmental sanitation as the drainage (how unwanted water is disposed of); solid waste management (how refuse is dealt with); and vector control (measures taken to reduce the risks of excreta and its disposal). These two definitions on sanitation and environmental sanitation make use of phrases, such as “solid waste management”, “control of all factors in the physical environment” and their connection with “harmful effects on human beings” in the areas of physical development and health.

The following section looks at literature on environmental sanitation, which includes its history and the role of ESOs in sanitation management in terms of influencing policy and shaping public perceptions of sanitation and for the desired solutions. The history of environmental sanitation is long and complex, dating back to the earliest civilizations. For example, in ancient Mesopotamia, the city of Mohenjo-Daro had a sophisticated system of sewers and drains that helped keep the city clean and free of disease (De Feo, 2014). Ancient Romans also made significant advances in sanitation, building aqueducts to bring clean water to their cities and sewers to carry away waste (Deming, 2019).

In the Middle Ages, sanitation standards declined in many parts of the world; however, there were some notable exceptions. For example, the city of Venice had a system of canals and gondolas that helped keep the city clean to prevent the spread of disease. The industrial revolution also brought about a new era of sanitation as cities grew rapidly and new technologies were developed to improve waste disposal and water treatment (Goldman, 1997).

In the United States, the city of New York built a sewer system in the 19th century that helped reduce the incidence of cholera and other waterborne diseases (Goldman, 1997). It is also argued that in Europe and North America, developments in the sanitation sector occurred in the 19th century (Budge et al., 2022; Harvey, 2008). According to the above scholars, this century saw expert consensus that infectious disease transmission is influenced by environmental conditions. In the 20th century, the field of environmental health continued to advance with the development of new technologies, such as septic tanks and water filters.

Environmental sanitation is an essential part of public health, and it is argued that improved sanitation can save millions of lives each year. Environmental factors associated with disease transmission include drainage, waste disposal, proximity to stagnant water, poor air quality and other harsh conditions (Berridge et al., 2011). Berridge et al. argued that the discovery of the relationship between the environment and sanitation marked a milestone in public health in these regions. This discovery also established the intertwined relationship of the environment, sanitation, and health.

Ghana, as a developing nation, has a long history of sanitation problems, dating back to the nation's pre-colonial era. Before the arrival of the first Europeans on the shores of Ghana in 1471, citizens of Ghana relied on pit latrines with the majority of the population resorting to open defecation, bluntly referred to as "free range." In fact, this pre-colonial period witnessed a

massive open defecation, especially in the coastal areas where certain spots were delineated as defecation grounds.

Given the manual construction of these latrines, they easily deteriorated into bad conditions after a period of use. This was because the latrines were basically dug-out trenches covered with wooden planks and often located a short distance from the communities that used them (Awuah et al., 2020). Awuah et al. noted that the main problem associated with the pit latrines was the infestation of insects, which invited snakes that posed tremendous threats to human life.

The dawn of colonialism opened a new phase of sanitation development in Ghana. The British government introduced several sanitation reforms, including the construction of public latrines and the promotion of handwashing (Adu-Gyamfi, 2017). However, these reforms were often met with resistance from the local people (especially those residing in the coastal areas), who were reluctant to change their traditional practices. The British reforms were however embraced after Ghana gained independence in 1957. The Government of Ghana (GoG) focused on building on the British infrastructure as a step towards improving sanitation. For instance, in the 1970s, the GoG launched a major sanitation campaign, which resulted in the construction of millions of latrines. However, this progress reversed in the 1980s and the 1990s due to economic decline and political instability (Adu-Gyamfi, 2017).

In recent years, the GoG has renewed its efforts to deal with the sanitation problem. In 2015, the government launched the UN's Sustainable Development Goals (SDGs), which include a target of achieving universal access to improved sanitation by 2030. The GoG has also developed a number of policies and programs to promote sanitation, including the Community

Led Total Sanitation (CLTS) approach. Despite these efforts, Ghana continues to face major sanitation challenges (Adu-Gyamfi, 2017).

As stated earlier, UNICEF-Ghana's (2017) report indicates that only 15% of the 25 million Ghanaian population (based on the 2010 population census) (Ghana Statistical Service, 2021) had access to improved sanitation. This statistic means that over 21 million people in Ghana lacked basic sanitation as of 2017. This lack of access suggests that majority of the population are at risk of contracting waterborne diseases such as diarrhea, cholera, and typhoid that are the effects of sanitation. It is, therefore, not surprising that UNICEF-Ghana reported that about 4,000 Ghanaian children die each year from diarrhea and pneumonia, which are all linked to poor water and sanitary conditions. Equipped with this history and context specific to sanitation, the review now turns to the communication-focused literature that guides this study.

Theoretical Framework

Framing theory is used as the theoretical framework for this dissertation. The concept of framing is a product of Erving Goffman's (1974) frame analysis. This theory is linked to the symbolic interactionism and constructionism theories whose understanding of meaning construction advances the argument that meanings are not naturally associated with or attached to objects, but, instead, arise out of "interpretive processes mediated by cultures" (Snow et al., 2013, p.1).

Framing theory, as it applies to the media, posits that in presenting issues to the public, the media select an aspect of the perceived reality of the issue and make it more salient or prominent over the other aspects (Entman, 1993). According to Entman, when framing, the media define a problem, identify its causal agents, make moral judgments, and suggest remedies to it. This problem definition evinces the disposition of the framer about the issue for which

communication is carried out. Therefore, framing reflects a sender's intention of the meaning they intend receivers to make of the message.

The fluidity of the framing concept is evident in its application in different fields, including cognitive psychology (Bateman, 1989; Kahneman & Tversky, 1981), political science (Schon & Rein, 1994; Triandafyllidou & Fotiou, 1998), linguistic and discourse analysis (Tannen, 1993), communication and media (Pan & Kosicki, 1993; Scheufele, 1999; Entman, 1993), and public relations (Hallahan, 1999). Framing has also received considerable attention in the field of sociology, partly because of its roots in the area through Goffman's (1974) seminal book on framing.

According to Snow et al. (2013), frames perform three main functions: they focus attention on what is deemed relevant or irrelevant in relation to an object or given situation of attribution, function as articulation mechanisms in which one set of meanings is bracketed and projected as salient in relation to others, and perform a transformative function by constituting the way in which some objects are interpreted or understood in relation to other objects. Based on this understanding, it could be argued that given the focusing, articulating, and transformative functions of frames, how an object or a situation of orientation is seen or understood has much to do with its framing.

Applying this understanding to environmental sanitation issues, particularly how the concerned organizations communicate about it, it can be said that the lens through which the communicators of these organizations project these issues shapes the targeted publics' understanding of these issues. Snow and Benford's (1988) framing, which pioneered the concept of collective action frames, was initially tied to social movement activism on to environment.

Because environmental issues are seen through different lenses due to various actors and competing interests (Cox, 2012), framing has become a “central organizing force” for mobilizing support for environmental action, especially on the part of pro-environmental organizations, campaigners and activists. With regards to framing that seeks to elicit collective action, Snow and Benford (1988) identified three types of frames: diagnostic, prognostic, and motivational.

The diagnostic frame is described as a “problem-frame”. It mainly identifies a problem and attributes blame to an entity, and directs recipients’ attention to the existence of this problem in a given situation. A prognostic frame proposes a solution and conveys a plan of action. It basically provides a solution while a motivational frame is a call-to-action frame using a vocabulary of motive (see Mills, 1940; Entman, 1993; Iyengar, 1996; Snow & Benford, 1988; Benford & Snow, 2000).

These frames aim to encourage and mobilize potential adherents (Snow & Bedford, 1988) of a cause to support it, or, where necessary, withdraw such support for a cause that turns out to be diametrically opposed to the original intent of the supporters, or is found to be inimical to a cause reasoned as worthy of attention.

With respect to EOs, their communication, which includes the public relations function, aims to influence publics’ attitudes toward a particular cause using carefully selected information that aligns with ongoing efforts to promote this cause. As there is nothing like unframed information in communication (Nisbet & Markowitz, 2015), the framing theory enables researchers to understand how communicators, including public relations professionals, intentionally or unintentionally create messages in different contexts and on different subjects, including environmental sanitation. Using Snow and Benford’s concept of framing as a

theoretical basis, this study brings to light how ESOs in Ghana frame messages on environmental sanitation.

Framing as a strategic framework in Public Relations

According to Toth (1992), public relations, as a strategic communication function, can be examined using different frameworks, such as systems, critical, or rhetorical approaches (Hallahan, 1999). The rhetorical perspective centers on the use of language to project certain meanings over others. This rhetorical perspective is also aligned with advocacy and persuasive communication, whose primary aim is to orient a specific public in a certain way toward an object or situation of interest.

The activation of a specific orientation can be said to be strategic when the message conveyed to enable such activation is created to elicit the response intended by the communicator. Because public relations efforts are often meant to influence publics' opinion about organizations (Seitel, 2007) or cause publics to act in ways that are favorable to organizational goals, strategy is crucial to successful public relations. Defined as a "plan—some sort of consciously intended course of action, a guideline" (Mintzberg, 1987, p.1), strategy involves specific choices and purposeful action (Drucker, 1979) in any goal-oriented communication activity, the absence of which constitutes a risk of a missed opportunity in any communication effort.

Hallahan's (1999) seminal article on models of framing in public relations alludes to the role of strategic choices in the field, which is reflected in the frames that professionals choose to use. To shed more light on the concept, framing and its connection to public relations, Hallahan identified seven distinct types of framing that are applicable in public relations depending on

what is at stake. These include the framing of situations, attributes, choices, actions, issues, responsibility, and news (p. 205).

Of all the seven framing types identified by Hallahan (1999), this dissertation is in sync with the action frame. Action frames seek to elicit cooperation from recipients using action-focused frames where a communicator, such as a public relations professional, exclusively accentuates a particular action while avoiding other independent options or “attention getters” that could shift recipients’ attention to those other options. Framing of actions also align with Kahneman and Tversky’s (1970) prospect theory’s key proposition, which states that action-driven messages can be framed, especially in health contexts, to reflect gain or loss for implementing a suggested solution to an attitudinal or behavioral problem. That is, a message can either prompt a recipient to adhere to its inherent proposition in order to benefit from acting in a desired way, or warn a recipient of the potential to incur losses for neglecting the invitation to act in a manner deemed desirable.

Public relations is leaned toward influencing public opinion (Seitel, 2007) through meaning construction using ethical language. This involves the intentional presentation of information to produce certain responses from the targeted publics while aiming for mutually beneficial relations. Based on this understanding, framing is critical in public relations. Framing involves the selection of information from sources that support the communication intentions of the communicator.

In the following section, I examine the sources of information for EOs in general, and then the ESOs, the considerations for choosing sources, the intentions for communicating on health-related problems, such as environmental sanitation, and what makes a communication endeavor strategic.

Information plays a crucial role in knowledge sharing on environmental problems. It helps shape both existing and emerging perceptions that communicators intend to influence.

Because people are more inclined to take information that speaks to, or gratify their needs (Blumler & Katz, 1974), the sources of information remain a vital part of decisions as to what information is worthy of attention, adoption, and application against what information to take with a pinch of salt. Therefore, communicators, including public relations professionals, are expected to be intentional about their choice of sources as the recipients of their communications, as the former's reliance on a source is, in part, informed by the source's suitability in furthering the communication goals or interests of the communicator's organization. This understanding aligns with the proposition of the Uses and Gratification Theory of communication.

Categorization of Environmental Organizations

In the area of environmental sanitation, organizations that disseminate information on sanitation are as varied as the sources from which they draw such information to help make the needed impact in terms of altering attitudes and behaviors. Accordingly, this section explores what environmental organizations are, their sources of information, and the intentions or goals that inform the choice of sources of information they share with their target publics.

Environmental organizations (EOs), as the name implies, refer to organizations that are concerned with environmental affairs either at the community, district, regional, national, or global level. EOs vary based on their goals, modes of operation, and political orientations. The orientation is reflected in the approach—conservative or radical—to environmental action. Broadly, EOs can be categorized into two major types: governmental and non-governmental organizations (NGO). The latter refers to independent, non-state actors (Tamietti & Finger,

2001) that promote environmental awareness to motivate action toward achieving environmental sustainability.

As the name implies, the government is state-managed and mostly research and policy centered, with a conservative approach to environmental problems. Under the umbrella of the governmental and non-governmental are different EOs (e.g. sanitation-oriented EOs) that focus on various facets of the environment and issues related to it. Apart from the two broad categories stated above, there is a third type, social movement (SM), defined as a loose network of individuals joining forces around a common environmental cause. Unlike the government, SMs tend to employ radical strategies, such as protests, to push government and business (corporations) to take action on specific environmental problems of interest to the movement.

Over the years, EOs have evolved in parallel with changing ecological concerns (Tamiotti & Finger, 2001), beginning with conservationist ecology in the 19th century to the present-day organizations. EOs have gone through a three-stage cycle. Before the 1960s, these organizations predominantly took the form of nature protection organizations and had natural scientists and naturalists as the driving force behind them (Tamiotti & Finger, 2001). Also, some early nature protection organizations, which remain active and committed to their original roles till today, especially in the United States, include Nature Conservancy, the Sierra Club, and the Environmental Defense Fund.

The next evolution of EOs that constituted the second stage occurred during the 1970s (i.e. 1962-1982). The activists who emerged from this revolution commenced environmental social movements in Europe and the US. Organized by activists, their original nature took the form of grassroots groups, which challenged the system and status quo on issues relating to nuclear energy and polluting technologies. These revolutionary organizations, described as green

movements, later metamorphosed into green parties. International green movement organizations, such as Friends of the Earth, Greenpeace, and the Natural Resources Defense Council (NRDC) are a few examples of these organizations.

The third stage was in the 1980s, a period described as the “global ecology.” During this stage, the types of EOs that emerged had no defined political agenda or aim to protect nature or conservation compared to the social movement organizations that surfaced in the second stage (Tamiotti & Finger, 2001). Examples of these third-stage organizations include the World Watch Institute (WWI), the World Resources Institute (WRI), and the International Institute of Sustainable Development (IISD).

According to Tamiotti and Finger (2001), the organizations of the third stage were oriented toward biodiversity, deforestation, desertification, and climate change, concepts resulting from the United Nations Conference for Environment and Development (UNCED) held in Rio de Janeiro, Brazil, in 1992. The above stages show the distinction between nature conservation, social movement, and global EOs that developed over the period. These distinctions, again, show that EOs have different identities (Dreiling & Wolf, 2008), which inform how they construct or frame environmental issues.

Apart from the traditional EOs that deal with the “big” environmental issues, some of which are political in nature, there is a subset of EOs that are focused on sanitation issues. This subset of EOs are environmental sanitation organizations (ESOs). The ESOs are mostly community-based and seek to promote hygienic practices among the population using a variety of methods. The interventions of these organizations often take the form of the provision of sanitary facilities, like good drinking water, flush toilets, and by embarking on educational campaigns to change attitudes and behaviors that contribute to poor sanitary conditions. These

campaigns are carried out using key messages that draw attention to sanitation problems. These messages are sometimes crafted to refocus attention to the specifics of these problems, bringing to the fore the importance of the concept of framing, which reflects the intentions behind the messages shared on sanitation. The next section looks at framing research in environmental communication and the findings on frames and their efficacy in influencing environmental behavioral outcomes.

Framing research on environmental communication

Framing research in environmental communication covers a range of environmental issues and problems. These include deforestation, biodiversity, soil pollution, wastewater, and ozone depletion, amongst others. Despite this, much of the recent research on framing has focused extensively on climate change action discourse (Moernaut et al., 2017) and behavioral change (Antonopoulos & Karyotakis, 2020; Nisbet & Newman, 2015; William, 2022).

The research on climate change framing covers topics, such as how climate change is framed by different actors, the persuasiveness of different frames in encouraging public participation and action, and how effective certain frames are in counteracting contrarians' arguments that seek to weaken the public will to participate in climate action. Spence and Pidgeon's (2010) study on effective ways of framing climate change messages found that using positive framing (also known as "gain frame") that highlights desirable outcomes and provides optimism for a distant future resonated well with recipients compared to frames that reflected bad outcomes. This is because the latter increases perceptions of the severity of climate change, heightens feelings of hopelessness and reduces motivation to take action.

Tsung-Jen and Cheng-Yu's (2017) study in Taiwan also examined the appeals in messages on climate change. Through the lens of Kahneman and Tversky's (1979) prospect

theory, which postulates that messages can be framed to reflect gain or loss appeals, the study found that the positive frame (with a gain appeal) was more persuasive to the participants than the negative (with a loss appeal). The authors argue that this is so because positive framing conveys upbeat messages that empower and encourage individuals to act.

Similarly, Rossolini et al.'s (2021) recent work on the effect of message framing and communication tactics on crowdfunding campaigns promoting environmentally sustainable products and projects found the positive frame as more impactful, highlighting that the emphasis on the benefits of undertaking environmental initiatives are more appealing to the target audience than what negative frames proffer.

In a meta-analysis of 129 studies focusing on the use of gain versus loss frames in promoting ecologically sustainable behavior, Woon and Lynes (2011) discovered that the gain frame is widely reported to be more effective in influencing environmental behavior compared to the loss frame. A variant of these studies tested frames, guilt versus shame frames (Baek & Yoon, 2017) and love versus loss frames (Jacobson et al., 2019) with results indicating the potency of love and guilt frames compared to the loss and shame frames. Baek and Yoon's experimental study employed guilt and shame as different appeals in message framing to test either's potency in influencing pro-environmental behaviors among participants. The study found that the guilt frame was more persuasive in terms of encouraging attitudes and intentions that support pro-environmental acts. Baek and Yoon contend that the guilt frame is more effective probably because it enables people to accept accountability for their deeds and gives them the power to take action to make amends.

In the same vein, Wonneberger's (2018) study, which tested the efficacy of the guilt frame confirmed Baek and Yoon's finding, indicating that messages framed to arouse guilt had a

positive impact on pro-environmental behavior. Other studies (Newman et al., 2012; Gomez-Carmona et al., 2021) found the role of moderating factors as instrumental in the effects of frames. Gomez-Carmona et al., whose work, for example, examined how factors, such as levels of environmental concern moderate the effects of frames, concluded that people's level of concern over environmental issues determined the extent to which a particular type of frame, gain or loss, could influence their behavior.

Using different framing prompts, Linderberg and Steg's (2007) study on the role of moderating factors in frame effects found that participants' varied goal orientations toward environmental issues moderated the extent of influence of each frame type on them. This study discovered that participants oriented to hedonic goals (i.e. goals that promote pleasure and satisfaction for doing something, say, engaging in responsible environmental behavior) will be impacted positively by messages framed with hedonic goals. Those oriented to gain goals (i.e. goals that prioritize achieving outcomes) were more likely to engage in environmentally friendly behavior. Similar to this, the prompts presented using normative goals (i.e. goals that value adhering to social standards) saw participants attuned to such goals impacted by this frame. A more outlier of these studies were those whose findings showed the effectiveness of both gain and loss frames and the role of moderating variables in framing effects.

Anghelcev and Sar's (2014) experimental study tested how mood congruency influences research participants' intentions to engage in environmentally friendly actions. The findings of this study indicate that both positive and negative frames were moderated by participants' moods. The study concluded that framing in itself had less of an impact on recycling intentions than mood congruity in social marketing messaging. The role of culture in environmental campaign message framing has also been explored.

Ademosu's (2020) research, which examined the effectiveness of online communication in raising environmental awareness and action, compared the differences in framing between Greenpeace's international campaign and the local campaign by Nigeria's Lagos State Government campaign on environmental protection. The study found that different frames were used in these campaigns. While Greenpeace's framing was more antagonistic and combative in calling global stakeholders to take action, the local Nigerian campaign's framing focused on establishing relationships with the targeted local communities by appealing to their sense of responsibility for their immediate environment.

Although both campaigns made use of action-oriented messages, emphasizing the value of individual action and the necessity of group action, the study concluded that the culturally distinct contexts and priorities of the local and international campaigns were mirrored in the disparities in communication tactics and language use between the two campaigns. Therefore, focusing on Ghana as a case in sub-Saharan Africa presents an opportunity to understand how communication is applied in supporting environmental efforts, such as behavior change campaigns.

The nexus between the term “strategy” and strategic communication

The term “strategy” is a multidimensional concept that is applied in different disciplinary discourses and defined variously. Mintzberg (1987) defined strategy as a “plan—some sort of consciously intended course of action, a guideline” (p.1). Similarly, Drucker (1979) defined strategy as simply purposeful action. The two characteristics of strategy in these definitions are that (1) it is made in advance of the action to which it applies, and (2) it is consciously developed with a goal in mind.

Strategy is recognized as critical to every communication activity, especially in organizational contexts, where communication is expected to inform and drive collective action. Therefore, the absence of a communication strategy is a risk to organizations (Smith, 2017), as this results in haphazard communication and missed opportunities. To derive the maximum benefit of strategy as an integral element of a communication plan, strategic communication scholars Holtzhausen and Zerfass (2015) proposed five basic issues that strategic communication research should address in organizations. These issues include (1) identification and segmentation of stakeholders, (2) selection of media channels, (3) behavioral outcomes, (4) reputation management, and (5) agency of communication professionals.

The current study falls under the second and third issues: selection of media channels and behavioral outcomes (i.e. whether ESOs use social media as strategic communication channels in framing messages to influence attitudes toward sanitation). Having defined the term strategy, it will serve a useful purpose, at this point, to examine the role of communication by understanding what strategic communication means.

Hallahan et al. (2007) define strategic communication as “the purposeful use of communication by an organization to fulfill its mission” (p.3). In other words, communication is said to be strategic when it has a purpose from the outset of any communication program. Public relations is a strategic function, as it makes use of well-reasoned messages to help achieve specific communication objectives and goals. The key elements of a communication program that qualify it as strategic include its reliance on a robust communication plan that contains a well-articulated strategy and clear goals that drive the program.

EOs, including ESOs, employ different communication methods based on their mission (Dreiling et al., 2008). The extent to which a campaign can be described as strategic, however,

depends on campaigners' adherence to the aforementioned elements of strategic communication. Generally, the literature on environmental campaign strategies reflect a range of communication methods that do not necessarily reveal how truly strategic these methods are applied in campaigns. To have a sense of what is currently described as "campaign strategies" in environmental contexts require us to draw some insights from the topic in extant literature. First, let us look at what campaigns are from a communication perspective and why organizations use campaigns in a bid to achieve their communication goals.

What are communication campaigns?

Various definitions have been offered by different scholars on the term, "campaigns." This is partly because of the multidisciplinary approach to the study and use of communication, where disciplines such as health, advertising, agriculture, political science, environmental, among others have different goals for embarking on campaigns. Rogers (1973) defines campaigns as a "pre-planned set of communication activities designed by change agents to achieve certain changes in receiver behavior in a specified time period" (p.277). Atkin (1981) defines it as a form of communication that "involves a series of promotional messages in the public interest disseminated through mass media channels to target audiences." While these two definitions differ in their wording, the common thread is that they stress either the intentions or the process of the communication (Paisley, 1981). This is affirmed by Rogers' (1973) argument that a campaign is purposive besides its other characteristics, such as having a clear time limit, using an organized set of communication activities, and targeting a large audience.

Environmental campaign strategies are multidimensional with various degrees of complexities. Consequently, different communication strategies are employed to achieve defined goals. Generally, these goals include raising awareness of environmental issues, persuading a

target population to change attitudes and behaviors, taking action on an issue, or pushing for a particular policy agenda that will promote an environmental cause.

According to Nisbet and Markowitz (2015), communication regarding environmental problems is a continuum. At the lower end of the continuum are informational strategies; the middle involves dialogue and a call to action, and advocacy fall at the high end of the continuum. Informational strategies involve sharing information with a target population to raise awareness of a problem. This awareness is a necessary first step in sensitizing the population on the problem identified (Baker, 1990).

The dialogic approach transcends awareness. It recognizes the essence of public participation in environmental discourse (Brulle, 2010) and emphasizes public engagement through a two-way communication process (Anderson, 2015; Major, 1993). Irvin et al. (2018) referred to this approach as co-production. That is, the receptive act of incorporating different stakeholder views and values in creating knowledge that is built on consensus and addresses environmental problems. Devries (2020) argues that for this dialogic approach to be successful in terms of winning targeted publics' support, it should incorporate the opinions and values of the publics, as well as their beliefs and interests (Cantril, 1993).

Advocacy, on the other hand, targets decision-makers with the goal of influencing policies on environmental issues (WASH, 2015). For instance, advocacy, which involves the formation of coalitions and alliances, has been found to be an effective strategy that enables such campaigners to succeed (Cullerton et al., 2018). The use of coalitions and alliances empower advocacy organizations to synergize and pool resources to put pressure on governments and corporations to act in environmentally sustainable ways. Although these three strategies are distinct yet on a continuum, communication media can be used if any of these strategies is being

employed to share messages with a target public. Therefore, EOs select media that are considered appropriate in each situation to enable them to reach a population with messages to act favorably toward these EOs' objectives and goals (Hansen, 2011). These objectives may include mobilizing to protect a wilderness area, halting a waste dump, insisting on an increase in the fuel efficiency of cars and SUVs, or persuading businesses (corporations) to abide by strict environmental standards (Cox, 2006).

The news media and environmental issues

The news media are major communication tools. In spite of the dominant role of the mainstream media in information dissemination (Hansen, 2010; Hansen, 2011), however, earlier observations point to this category of media's low attention to environmental issues. The European Environment Agency and the Centre of Environmental Information Studies (1999) found the mainstream media's coverage of environmental issues to be minimal and partial, while scholars, such as Cantril (1993) described this as a neglect of the coverage of environmental issues. This neglect is partly attributed to the mainstream media's proximity to the market forces that provide the much-needed financial resources like advertising revenue that supports the sustenance of these media outlets. The Koch industries', climate change contrarians in the United States, for example, influence Fox News' presidential debate selection criteria for Republican candidates vying for the party's nomination in 2016 reflects mainstream media's vulnerability to corporate manipulation when it comes to environmental issues (Luedecke & Boykoff, 2017; Brulle, 2014; Brulle, 2018; Farrell, 2015; Farrell, 2016a; Farrell, 2016b; Dunlap & McCright, 2011). The Kochs, who are known funders of denial campaigns on climate change, an environmental problem, provided funding for the debate on their terms, contrary to one's expectation of the news media remaining independent watchdogs of society.

Based on the foregoing literature, mainstream media are arguably less oriented toward shedding light on environmental problems. As such, the advent of social media is viewed as an alternative to mainstream media. This is because social media have democratized communication on the environment, as EOs can now self-produce content and target their publics with messages (see Agarwal & Pragma, 2016; Badea, 2014) without the impediments (e.g. news media's censoring of content) that come with relying on mainstream media. The fact that social media have equally given publics the "capacity to create messages and images that can be seen by huge numbers of people" (Berger, 2020, p. 30) means that messages received from ESOs can be reproduced and spread in the publics' (i.e. message recipients) network, giving those messages the needed visibility (Schafer, 2015). The organic reach of social media content is also found to be useful for organizations' communication, including campaigns intended to spread a word.

The following section looks at literature on social media use by broadly looking at the EOs in Africa and beyond. Before we delve into the above literature, however, we need to first understand what social media are and how they came into being in terms of their history.

Social media definition

Social media have been studied from different perspectives, resulting in various definitions. In a basic form, social media refer to the way people connect with one another through computation (Lenhart et al., 2010). Manning (2014), on the other hand, defines social media as "the term often used to refer to new forms of media that involve interactive participation" (p. 1158). These two definitions highlight two important words, "connection" and "interaction" that constitute the character of social media, which permits users to connect and interact with others in the same network.

This interactive feature of social media sets them apart from other communication media, creating a distinction between the interactive age and the broadcast age. The term, “social”, therefore, underscores this unique affordance of social media which enable users to participate by contributing to online discussions through personal involvement (Bria, 2013; Manning, 2014). Thus, social media provide a participatory digital sphere where users dialogically interact, create content, and shape the flow of information on a topic of interest (Jenkins, 2006).

Compared to traditional media, social media give users an unprecedented voice to express their thoughts on an organization or brand’s actions, an opportunity that had hitherto been limited by face-to-face mode of expressing themselves. This enormous possibility offered by social media guarantees, to a large extent, publics’ objective interpretations and perceptions of an organization’s performance that reveal its strengths as well as weaknesses that need to be worked on to improve existing perceptions.

History of social media

The history of social media can be traced back to the dawn of technology developed to make daily communication easier (Carton, 2009). It started with the emergence of telegraph in 1792 to enable the transmission of messages. Technology for fostering human communication continued to evolve over the years to meet the changing needs of society. This evolution culminated in the emergence of what has come to be widely known as social media. While these tools continue to evolve with additional functionalities to enhance their utility and efficiency, their impact on daily interactions among individuals and between organizations and their various publics is clear. Evidence shows that through social media, organizations have experienced an expansion in their communication networks, helping them to reach new customers (Polanska, 2014) by successfully bypassing various constraints like time, availability, accessibility, and

distance or reach (Venkateswaran et al., 2019). This is because their multifunctional networking abilities tend to offer an increasingly wider variety of services (Koukaras et al., 2020).

Based on what Koukaras et al.(2020) refer to as the “utilities” of social media, these authors proposed a new taxonomy of social media categorized under broad types, namely entertainment networks, profiling networks, and social networks. The entertainment networks are a cluster of social media whose content provide general entertainment, such as games, sports, cinema, travel, etc. The profiling networks refer to platforms that offer functions promoting skills, goals, personal journals, and so on while social networks are general purpose social media that offer primary utilities (i.e., connecting, multimedia, professional, sharing) and a secondary utility—publishing.

While the above taxonomy of social media was developed based on purpose and functionality, an earlier work by Obar and Wildman (2015, cited in Koukaras, et al., 2020) presented a broader (i.e. nine categories) of social media types as follows: 1. Online Social Networking Web-based services that allow individuals and communities to connect with real world friends and acquaintances online. Users interact with each other through status updates, comments, media sharing and messages. Examples: Facebook, Myspace, LinkedIn. 2. Blogging Journal-like websites for users, to contribute textual and multimedia content, arranged in a reverse chronological order. Blogs are generally maintained by an individual or by a community. Examples: Huffington Post, Business Insider, Engadget, WordPress.com, Medium. 3. Micro-blogging Same as blogs, but with limited content. Examples: Twitter, Tumblr, Plurk. 4. Wikis Collaborative editing environment that allows multiple users to develop Web pages. Examples: Wikipedia, Wikitravel, Wikihow. 5. Social news Sharing and selection of news stories and articles by communities of users. Examples: Digg, Slashdot, Reddit, Quora. 6. Social book-

marking Allows users to bookmark Web content for storage, organization, and sharing.

Examples: Delicious, StumbleUpon. 7. Media sharing Sharing of media on the Web including video, audio, and photos. Examples: YouTube, Flickr, UstreamTV. 8. Opinion, reviews and rating The primary function of such sites is to collect and publish user submitted content in the form of subjective commentary on existing products, services, entertainment, businesses and places. Examples: Epinions, Yelp, Cnet, Zomato, TripAdvisor. 9. Answers Platforms for users seeking advice, guidance or knowledge to ask questions. Other community users can answer these questions based on previous experiences, personal opinions or relevant research. Answers are generally judged using ratings and comments. Examples: Yahoo! answers, WikiAnswers.

With the rise in influence of social media platforms, organizations are devising strategic ways of leveraging the benefits of the prime affordance of these tools (i.e. interactivity)(Pallis, et al., 2011) to engage with users on pertinent topics. Thus, making engagement an integral part of online communication through which insights into publics' sentiments and attitudes toward an issue is obtained.

Strategies for Creating Engaging Social Media Posts

Malthouse et al. (2013) argue that the goal of organizational social media strategy is to attract audience and create value. This goal does not only hinge on engagement but thrives on it, as engagement accelerates audience participation in organizational conversations and activities and ultimate discovery of an organization's offerings.

Engagement broadly refers to a one-to-one or many-to-many exchange of information on a platform, or a direct expression of one's thoughts about a post on a platform. In other words, engagement can either occur between human to human, or a human simply reacting to the

content posted on a platform. Human-to-human engagement on a topic in online spaces take the form of instantaneous and simultaneous sharing of information between two or more people on a platform. With regards to a post, it can be said to be engaging when it draws us (i.e. users) in and hold our attention (Chapman, 1997). According to Chapman, the attention to a post, which reflects engagement, manifests in three different ways or dimensions: affect/emotion (positive affective reactions to something), behavioral (observable actions such as participation and involvement), and cognition (the extent to which individuals are intellectually absorbed in an activity). Hence, Hollebeek's (2011) description of engagement as "the level of customer's cognitive, emotional and behavioral investment in the specific brand's interactions" (p.1).

Arora and Predmore (2013) posit that for engagement to take place between firms and their customers or audience on one hand, and between customers on the other hand, it depends on the nature of the conversation (i.e. the tone, type of topic or the benefits) about its products or services. Effective engagement has shown to lead to positive outcomes, such as increased awareness of a brand and its offerings, task performance, job satisfaction, or enhanced learning (de Vreed et al., 2019).

The nature of engagement also manifests in different behavior forms, referred to as social media engagement behaviors (SMEBs), and can be either positively or negatively-valenced or neutral (Dolan et al., 2015). Thus, a positively-valenced behavior toward a social media content (such as messages) can be interpreted to mean a user's comprehension and perhaps demonstrable support for the idea conveyed in a post. A negatively-valenced behavior is the opposite—signs of misunderstanding of a post or an expression of unsupportive attitude toward it. The neutral suggests a non-association with any of these valences.

The SMEBs are believed to be influenced by the content type, which is either informational, entertaining, or remunerative. These categories are derived from the theoretical underpinning of the Uses and Gratification Theory (UGT) (Katz & Foulkes, 1962), which argues that information seekers have different motivations for seeking information from different sources. The role of content type in engagement is underpinned by Shahbaznezhad et al.'s (2021) study on the link between social media content type and users' engagement. Shahbaznezhad et al. argue that "the effectiveness of social media content on users' engagement is moderated by content context" (p.47).

Drawing on Katz and Foulkes' (1962) work, social media content has been conceptualized into three categories, namely rational (which centers on informational, educational, or current events), interactional (which relates to sharing of personal experiences), and transactional (also referred to as remunerative). Similarly, Arora and Predmore (2013) classified social media content into four types, based on the nature of information each content type provides (de Vries et al., 2012; Taylor et al., 2011), remunerative (Lee et al., 2013; Cvijikj & Michahelles, 2013) and relational content (Muntinga et al., 2011).

These constructs of the Uses and Gratification Theory represent different meanings. The informational represents the extent to which the social media content is perceived as providing resources, including useful information (Chen et al., 2002). In fact, the level of information a particular content is perceived to have is related to users' attitudes to the website or platform that provides such information. That is, perception about a content and attitudes towards it are found to be positively correlated.

The entertainment construct of the UGT refers to the extent to which social media content is fun and perceived to be entertaining to the users (Eighmey & McCord, 1998). According to

McQuail (1983), content is said to be entertaining when it is embedded with the ability to fulfil user needs for escapism, hedonistic pleasure, aesthetic enjoyment and emotional pleasure. Taylor et al. (2011) found that entertaining content, specifically in advertising, is correlated with positive attitudes toward the advertisement. Users' attitude is expressed in a number of ways, including consuming, creating, and contributing to brand-related content online (Muntinga et al., 2011).

The remunerative is offered to consumers when their expectation of rewards, such as economic incentive, job-related benefit or personal wants or needs for participating in social media are met (Muntinga et al., 2011). Social media monetary rewards, for example, may take the forms of bonus points and prize draws (Arora & Predmore, 2015). The relational, which refers to the need to be integrated, is facilitated through social interaction. This interaction is identified as a motivation for users who access the internet (Hennig-Thurau et al., 2004).

The extent of social media usage has also been categorized. Muntinga et al. (2011) suggest three social media usage types: *consuming* (conceived as low level of brand related activity), *contributing* (medium level), and *creating* (highest level). Based on Muntinga et al.'s typology of usage, consuming a brand or an organization's social media's content reflect a low level of involvement while self-creation of content indicates active participation or engagement with a brand's post.

In line with Muntinga et al.'s (2011) proposition, Malthouse et al. (2013) attempt to differentiate between two levels of engagement: lower and higher. For Malthouse and colleagues, lower engagement depicts situations in which user audience are apathetic by exhibiting passive engagement, thus providing the most basic reaction or feedback, such as "liking" a social media platform's page or post. A higher engagement occurs when users of a

platform actively participate by co-creating content, such as commenting on a post (Malthouse et al., 2013).

While Shahbaznezhad's (2020) study found content type as a moderator of engagement, other prior studies presented contradictory findings on the influence of content type on SMEBs. For instance, Coelho et al.'s (2016) study on the rational or informational content type found a weak correlation between this content type and user engagement on Facebook and Instagram, but Cvijkj and Michahelles' (2013) found strong empirical support for this relationship. The different findings call for further exploration of this relationship across different social media platforms, thereby calling attention to the question, what content type, and in this case, message frame on sanitation elicits the most engagement among the ESOs in Ghana?

The common social media platforms in recent times include Facebook, Twitter, Instagram, LinkedIn, Snapchat, and TikTok. Of all these, Facebook is the most popular platform worldwide (Statista, 2023). This dissertation narrowed down on Facebook because of its wide use in Ghana coupled with the fact that it has rich data for analysis. Founded in 2004 (Brugger, 2015), as of April 2023, Facebook has close to three billion monthly active users, according to Datareportal (2023). This places Facebook as the most popular platform that many receive information and also reached by organizations that use Facebook.

Given that social media have become useful sources of information, their role in organizational success cannot be overemphasized. Public relations professionals, for example, use social media as platforms for building organizational relationships through a variety of efforts, such as the creation of online communities for organizations (Kim, 2016) and disseminating information to their target audience. The various uses of social media by public relations practitioners is underpinned by role theory by Broom and Smith (1979), which

classifies the behaviors enacted by practitioners into two major role types: public relations manager and public relations technician (Dozier & Broom, 1995). These roles have different responsibilities. The manager's role typically reflects functions, such as formulating communication policies, counseling management, evaluating program results, and planning public relations programs (Toth et al., 1998). The technician role, on the other hand, is portrayed as a creator and disseminator of messages" (Dozier & Broom, 1995, p. 22).

According to Neil and Lee (2016), some of the responsibilities that are connected to social media use, such as writing of social media posts are associated with the technician role (Dozier & Broom, 1995). Other studies (see, Sha and Dozier, 2012) which explored PR roles in the context of social media use had different findings, leading to Diga & Kelleher (2009) and Vieira and Grantham's (2014) propositions that the advancement in communicative technologies required a deeper exploration of these roles in relation to the use of social media in organizations. Vieira and Grantham advanced this proposition to include the question whether practitioners' use of social media is focused on either internal or external audiences.

Similar studies (Breakenridge, 2012; Neil & Moody, 2015) have outlined several strategic roles connected with managing social media as communication platforms, which seem to be more associated with the managerial role. For instance, Breakenridge (2012) highlighted eight strategic uses of social media that have semblance with the managerial role while subsequent studies like Neil and Moody's (2015) merged two of the roles from Breakenridge's study (i.e. pre-crisis doctor and reputation task force member) and identified a couple more roles, culminating in nine strategic roles with associated responsibilities as follows: 1) internal collaborator, 2) policy maker, 3) technology tester, 4) communications organizer, 5) issues manager, 6) master of metric, 7) relationship analyzer, 8) employee recruiter, and 9) policing.

Neil and Lee (2016) found support for seven social media roles assumed by public relations practitioners. These roles include 1) social media technician, 2) social listening and analytics, 3) online media relations, 4) policy maker, 5) employee recruiter, 6) internal social media manager, and 7) policing. This variation in roles in connection with public relations practitioners' use of social media is dictated by the goals and aspirations of practitioners' organizations. In the next section, we look at how public relations professionals in environmental organizations use social media.

Social media use in environmental communication

Much of the world's population is using social media as a means of communication (Appel et al., 2020; eMarketer, n.d.). It is not surprising that organizations, including those engaged in environmental and health communication, are turning attention to the use of these tools in their campaigns (Baum et al., 2010). Despite the shift, it has been observed to be slow.

Environmental organizations in Africa have not been left out of this, as evidence suggests social media tools are being integrated into their communication activities. For example, Akpoghiran et al.'s (2018) study on social media's impact on environmental campaigns in Nigeria revealed that social media platforms helped provide opportunities for sharing ideas and information. The study revealed that social media afforded stakeholders wide-ranging opportunities where they could ask questions and express concerns about environmental issues.

Similarly, Pearson et al.'s (2016) study found that Facebook and Twitter are effective in environmental campaigns in several ways: raising awareness of environmental problems, encouraging environmentally responsible behavior, supporting efforts in getting petitions signed, providing news, and motivating action. Baum et al. (2018) argue that social media's ability to activate its social sharing function to organically grow a following yield a wealth of data, which

makes it possible for the performance or extent of success of campaigns to be measured. This data, according to Baum et al., is generated through traffic to the site on a cost-per-click basis, engagement on platforms, completion of video viewing, and sharing of content. The opportunity for data collection, which is used in assessing the success of campaigns has made Kaur and Gera (2017) posit that for a campaign to be successful, it is important to publicize and promote it on a large scale over social media.

Kaur and Gera's (2017) study on the effects of social media on the success of crowdfunding campaigns concluded that the social interactivity and connectivity of social media have a positive impact on the success of campaigns. Davies (2019) agrees with these authors, as he accentuates that the rich data social media platforms offer during campaigns make it feasible for the performance of campaigns to be evaluated, making these tools valuable in campaigns. To maximize the potential of social media in campaigns, Cawdsey and Rowley (2016) proposed a six-component framework for an effective social media strategy. These include creating compelling content, monitoring engagement, listening to conversations, tracking the effects of messages, stimulating electronic word of mouth, and selecting and evaluating channels (e.g., specific platforms, such as Facebook, Twitter, Instagram, etc.). The potential of social media in environmental and health promotion in Africa are seen as a new potential in the area of health, including environmental sanitation communication.

Studies in African nations point to this fact, advocating that environmental and health institutions take advantage of the opportunities social media offers. For example, Mwaura, et al.'s (2020) study explored the potential of social media for health promotion in South Africa. The study found that social media were underutilized. As such, the researchers recommended that given the opportunities presented by social media, South Africa's Department of Health

should use social media as an enabler of its health promotion strategy. This recommendation is supported by earlier evidence that social media can serve as important sources of information on environmental sustainability in African nations.

Kachali's (2015) study on the sources of information on climate change in the southeastern African country of Malawi found Facebook as a common platform that served as a major source of information. The dichotomous findings on the two African nations call for further inquiry into how health and allied organizations in other African countries, such as Ghana, are using social media to reach its diverse population with crucial sanitation-related messages. Taking advantage of social media has become necessary at this time of immense challenges in ensuring adequate sanitation and hygiene behaviors in sub-Saharan African nations (Malima et al., 2022). Accordingly, given this broad background of social media, the next section sheds light on the use of social media in Ghana and why incorporating these tools in ESOs' communication could be beneficial.

Social media use in Ghana

Social media has become commonplace in Ghana (Dadzie, 2017). This is because of the expansion of Internet infrastructure across the country. Statistics show that more than half of Ghana's 30.8 million population have access to the internet (Kemp, 2021). Out of this number, 67% are mobile phone users (Hatt et al., 2017) with 51% of mobile phone users being active on social media (Social Media Stats-Ghana, 2019). Among the social media platforms, WhatsApp and Facebook are ranked the most used interactive platforms in the country (Datareportal, 2020).

Although youth are significantly more likely to use social media in most jurisdictions of the world, the Ghanaian setting presents an interesting case. There is an increased involvement of the older generation in the use of these platforms in Ghana. As noted by Dadzie (2017), "social

media has become the central communication media for both the young and older generations in Ghana” (p.1). This observation suggests that social media have become an essential part of the communication habits of the citizenry through which many users receive information, share messages, and probably participate in both community and national discourse in the online space. Studies on specific uses of social media in Ghana (Asare-Donkoh, 2018; Bernard & Dzandza, 2018) have mainly concentrated on the effects on academic performance.

The role of social media in advocating social issues such as proper sanitation and climate change is yet to be systematically investigated. This gap in research further strengthens the basis for this study. Because web-based social media platforms have affordances that permit public interactions or engagement, the choice of social media is premised on the idea that the researcher can gauge engagement, which is crucial to the goal of the study—to determine social media message framing strategies and the resulting user attitudes toward each frame used.

Environmental campaigns in Ghana

Environmental campaigns refer to a series of communication activities or actions meant to alter attitudes and behaviors that affect the environment, which, in turn, impact negatively the well-being of humans (Jena & Behera, 2017). With poor sanitation practices taking a toll on the health and productivity of Ghanaians (Mensah, 2019), various approaches have been adopted to tackle this problem. One such approach is sanitation campaigns. A prominent example of past sanitation campaigns in Ghana is the Aliu Mahama (Vice President of Ghana, between 2000–2008) campaign, popularly known as “#Let’sCleanGhana, #PlayYour Part #SesaWosuban campaign”. Other examples include the launch of the National Sanitation Day campaign in 2014, and the United States Agency for International Development’s (USAID) WASH for Health campaign.

The most recent of the sanitation campaigns in Ghana was organized by Graphic Communications Group Limited (GCGL), a media organization. The campaign was launched in April 2021 in partnership with three organizations: Zoomlion-Ghana (a private sanitation and waste management company), the Environmental Services Providers Association (ESPA), and the Ministry of Sanitation and Water Resources (MSWR). Under the theme “Keep Ghana Clean”, the campaigners declared 2021 as the “Year of Sanitation” for Ghana (Ministry of Sanitation and Water Resources, 2021). The goal of the campaign, which as of 2024 is still active through an annual replication of these campaigns, is to revive citizens’ consciousness of the consequences of poor sanitation practices to change behaviors that contribute to the vicious circle of sanitation problems in Ghana.

Albeit this recent campaign sought to change poor attitudes and behaviors, the campaign in itself is indicative of the fact that all is not well with the sanitation situation of the country, as previous campaigns did not make much impact. Meanwhile, the continuous use of campaigns show that campaigns are recognized as one of the panaceas to negative public attitudes toward sanitation in Ghana.

Sources of Information on Sanitation

Key to these efforts is the need to develop effective strategies that will help improve communication on sanitation. At the core of strategies for effective communication is credible information (Kim, 2016) from trusted sources. The sources of information on sanitation are discovered through a search process involving human agents. These human agents not only harbor the discovered information but also create repositories, such as libraries, institutional archival centers, among others, where this information is stored, retrieved and shared with the targeted publics or the larger society.

Because information is often specialized and tailored, serving different purposes, sources are also varied and can be categorized into different types (e.g., primary sources, secondary sources, and mediated sources). The choice of sources of information is primarily dictated by the gratification the information-seeker has in mind and is seeking to have (Kelly & Sharot, 2021). According to Kelly and Sharot, information seeking is associated with three diverse motives: “Whether the information is useful in directing action, how it will make them (information seeker) feel, and whether it is related to concepts they think of often” (p.1).

Accordingly, the following section looks at existing literature on the sources of environmental information. This literature reflects mostly the African context while broadly drawing on other global research on this topic. Belachew et al. (2018) conducted a study to examine the access and use of sanitation facilities in Enderta district, Ethiopia. The mixed-methods approach was adopted for this research. Hence data were gathered through interviews, observations, quantitative surveys, and observation checklists. Although the study was not primarily based on sources of information about sanitation, findings suggested those who were exposed to practical/instructive information sources were more likely to practice good sanitation. In essence, the authors indicated that information regarding sanitation primarily emanated from in-person/ face-to-face interaction with health professionals or health extension workers. From the study, it was identified that another institution responsible for providing information to members of the community was the health development army (HDA).

Ofori-Parku (2014) suggested that the television media also serve as a major source of information on sanitation in Ghana. Based on content and frame analysis of sanitation-related news coverage of TV3, coupled with responses from 100 research participants, Ofori-Parku explored how television media present developmental issues that revolve around sanitation. At

the time of the study, the researcher found that the mass media, specifically television, radio, and newspapers were the dominant sources of information in the country. Although research respondents largely indicated that they obtain sanitation-related information from the aforementioned media, television was ranked as the most preferred media channel for such purposes. In essence, the study pointed out that television has been impactful in providing information about environmental issues such as waste disposal and management, choked and filthy drains, plastic waste, water, and air pollution, which consequently leave lasting effects in the minds of audiences.

Relying on a cross-sectional survey, Sidney-Nnebue et al. (2020) examined environmental sanitation practices and how people sought sanitation-related information in 445 households in some rural areas of Nigeria. Data for the study were gathered through semi-structured interviews, and subjected to SPSS. Findings show that 98% of the respondents suggested that key sources of obtaining information on sanitation include radio and television channels, community meetings, and from familial relatives. The study also suggested that town criers were also relied on to provide information on sanitation to community members.

Safari et al. (2019) qualitatively investigated how sanitation campaigns are conducted in the Njombe District of Kenya. The study particularly identified that an initiative named Community-Led Total Sanitation was being used by the National Sanitation Campaign program to ensure that community members are well-informed about issues of sanitation and consequently practice good sanitation. Based on interviews, focus groups, and document analysis, Safari et al. (2019) found that community members were actively involved in sanitation campaigns and provided practical information that helped in intensifying these campaigns. The study shows that community members were reliable sources of information for sanitation

campaigns because they provide information on the actual state of affairs and largely contributed to the formulation of campaign messages.

Safari et al. (2019) also pointed out that baseline surveys in the communities provided relevant information that helped in designing and implementing sanitation campaigns. According to the researchers, collecting background information through baseline surveys helped in understanding the settlement conditions in specific areas. These surveys were also helpful in determining the required facilities that will adequately serve the needs of the community members. The baseline survey was also useful for gaining knowledge of how broader stakeholder engagements should be conducted.

In a report on sanitation campaigns, Adikhari et al. (2021) suggested that environmental sanitation campaigns should largely be driven by research. According to the authors, research should be conducted in the catchment areas where a campaign is targeted. Adikhrari and colleagues indicated that there is a need to first understand the attitudes and behaviors of the target publics in light of the environmental sanitation issue(s) that the organization seeks to tackle. From this report, it was established that information for conducting these campaigns could be gathered from in-person conversations with community members, triggering television, radio, social media, community-information systems, household visits, local government symposia, workshops and advertisements, among others. The authors also indicated that information can be drawn from Community-led Total Sanitation guidelines and manuals, household interviews, mobile-to-web surveys, field observations, and photographs of the target areas.

Jimenez (2014) examined the local government's involvement in the promotion of sanitation in Tanzania. The study relied on interviews and document analysis to understand how

sanitation campaigns are coordinated and implemented. Findings suggest that stakeholder consultations mostly characterize these campaigns with information being obtained from government officials, community-based associations, traditional leaders, health and sanitation workers, local artisans/masons, and individual community members.

Kumar and Mishra (2016) conducted a study to understand how a sanitation initiative to curb open defecation is organized in Simrol, an Indian Village. The study relied on the case study design and drew data from interviews. Based on the coding and analysis of data, the researchers established that a sanitation committee had been formed in the village to provide expert opinions on sanitation campaigns and projects. The study also indicated that households and selected community members are also invited to meetings for their opinions to be considered in undertaking this project. From the study, it was observed that digital communication tools are also predominantly used in communicating about sanitation in the village. Findings reveal that WhatsApp groups were reliable sources of information being adopted by the sanitation committee to interact with community members on sanitation.

Additionally, it was found that peer group members were a relevant source of information during this initiative. The researchers also found that traditional media outlets, particularly television advertisements and newspapers were also relied on for sanitation-related information. According to Kumar and Mishra (2016), although the government's sanitation awareness initiatives are organized by the district administration to sensitize community members on sanitation, this initiative was not very pronounced in Simrol.

Similarly, Jamjade et al. (2017) also investigated citizen participation in the "Total Sanitation Campaign" in the Satara District of India. The researchers collected data through interviews. They also relied on field visits to six villages in the district. The data showed that

information was drawn from community members before the campaign began. Be that as it may, the researchers also established that involving community members in the decision-making was not all-encompassing as it was based on the fact that 20% of the research respondents indicated that they were not partakers of the decision-making process. Again, the study found that inputs were taken largely from men than women in the decision-making and planning process of the campaign. Additionally, lettered individuals were given more opportunities to make their inputs during the planning and implementation stages. From the study, it is evident that although the community members were relied on to provide information because of sanitation campaigns, stakeholder engagement is largely biased and skewed to exempt or repress some voices in the society.

Madon et al. (2018) explored community participation in organizing and promoting campaigns to curb the prevalence of diseases related to Water, Sanitation, and Hygiene (WASH) in some selected villages in Tanzania. The mixed method case study approach was adopted for the study. The study suggested that in-person meetings were initially held with village council members and chiefs to obtain information from them about the environmental sanitation situation in the villages and also to discuss ways of implementing the campaign projects. A committee, named “Social Services Committee” was formed to help gather enough information about the situation and also steer campaign affairs. The council members were also engaged to nominate other relevant stakeholders who should be part of the campaign program. Leaders of youth associations and religious groups were identified to be members of the committee. Some selected school teachers and drug distributors also joined this committee. Based on interviews and focus group discussions, the study established that the social services committee, made up

predominantly of relevant stakeholders in the community, was an effective source of information for the sanitation campaign.

Nelson et al. (2021) conducted a systematic review to explore the literature on citizen participation in WASH projects and campaigns. Data were drawn from 73 peer-reviewed studies published on PubMed, Scopus, and Web of Science. Findings largely suggest that nonprofit organizations are enthused about environmental sanitation, and governmental bodies sometimes rely on information provided by community members and leaders when conducting sanitation programs or campaigns. According to Nelson et al. (20), the information provided by these groups of people could range from the culture and tradition of the people, resource dependency, taboos, and the language and norms that guide their behaviors and attitudes. By gathering information from community members, the literature also indicated that environmental organizations could also be provided with structure and places to implement their planned projects.

Smith et al. (2020) adopted the qualitative case study design to explore the role civil society groups play in generating and using evidence or data to influence sanitation programs in Ghana. Interviews and document analysis were the two data collection tools for the study. Particularly, the study relied on interviews with representatives of civil society groups, privately owned fecal sludge companies, and government agencies. A desk review of documents on the operations of sanitation-centered NGOs was also conducted. Findings from the study suggested that evidence for sanitation programs is sometimes gathered from research conducted by international agencies like UNICEF and the WHO. Information from NGOs such as WaterAid, Trend, and Coalition of NGOs in Water and Sanitation was also relied on for sanitation programs.

Additionally, it was identified that the ministry in charge of water and sanitation, Metropolitan, Municipal, and District Assemblies (MMDAs), and other governmental agencies could act as sources of information for sanitation programs. Smith et al. (2020) also revealed that workshops are also conducted to draw evidence from individual citizens, and other state and non-state actors. Information drawn from households is also key to sanitation programs. The study however maintains that civil society groups have been instrumental in generating information for sanitation programs.

Freihardt (2020) indicated that information from social media platforms could be effective in informing environmental sanitation campaigns. Relying on online surveys, administered specifically on social media, Freihardt examined how online surveys could present a cost-effective alternative to obtaining data for sanitation campaigns. Data for this study were specifically drawn from 40 households in Malawi and findings suggested Facebook and WhatsApp could be effective for gathering information for sanitation campaigns. The study concluded that data collection via social media is relatively cheaper than relying on conventional methods of obtaining data.

Zarrabeitia-Bilbao et al. (2022) also found that social media such as Twitter could serve as a good source of information on environmental sanitation. In their study, Zarrabeitia-Bilbao et al. examined interactions that emerged on Twitter during the 2021 edition of the United Nations World Environment Day. Based on an analysis of 400,000 tweets that emerged during that period, the researchers pointed out that social media engagement is largely influencing public discourse and programs on environmental protection, ecosystem, and sanitation.

While there are several sources of information on a topic, certain sources may be prioritized over others based on different motivations or reasons. This leads to RQ (1): What are

the sources of information the ESOs in Ghana draw information from to share with their target publics, and RQ1(a) what are the considerations for choosing these sources.

To fully understand whether the ESOs' choice of sources and the considerations for selecting such sources are informed by strategic thinking, it is crucial to figure out their intentions or goals for creating messages on their various communication outlets, including social media. Intentions are key in strategic communication as they drive specific communication agendas that aim at orienting recipients of messages to act in desirable ways.

At the center of organizations whose communication is deemed strategic is a carefully designed communication plan that outlines: (1) the motivations (intentions or purpose for embarking on a communication activity), (2) what to communicate (i.e. actual message), (3) how to communicate the message (i.e. strategy to use, including the selection of media), and (4) whom to share the message with (i.e. target audience) in terms of directing their attention to the message—the takeaways of the message, which is often reflected in the framing of the messages. Studies on the intentions and goals of PR professionals engaged in planning and communicating on environmental issues point to several reasons. The following section highlights the literature on the intentions that inform these professionals' messaging on environmental sanitation.

ESOs' PR practitioners' intentions for creating messages on social media

Public-interest environmental organizations, both local and international, have goals that drive their communication activities. For these goals to be achieved, Grunig (1977) argues that these organizations' public relations practitioners' communication plans must be informed by clear

intentions that should be embedded in messaging. The following section looks at the literature on the intentions that motivate communication on environmental issues.

Wilkes-Alleman et al. (2021) qualitatively investigated how communication campaigns have been designed to persuasively engage forest owners in some parts of Europe to be actively involved in forest preservation and management. In light of Grunig and Hunt's (1984) 'four models of communication', the study analyzed 34 campaigns, which were gathered from webpages, official documents, and internal reports. Some interviews were also conducted with officials who were part of these campaigns. The study shows that the campaigns were mostly designed by the communication departments of ministries in charge of forestry, forestry advisory bodies, and private forest owners' associations. Findings reveal that one-way communication is more dominant in these campaigns than two-way communication. The researchers argue that while the one-way communication model could be operative for short-term engagements and informing target audiences, it was far less effective for persuading and influencing these forest owners. Due to the over-reliance on the one-way communication model, it was found that recipients' understanding of messages was largely inconsistent with the intended message construction/meaning by the senders (campaigners).

According to Wilkes-Alleman et al. (2021), the two-way communication model was more relevant for persuading people and ensuring long-term attitudinal change. The researchers suggested that for campaigns to be effective, there is the need for broader stakeholder consultation and research to understand the viewpoints of the forest owners so that messages can be tailored to reflect their needs and interests. Thus, this study highlighted the desire to persuade and influence behaviors as the primary intention for communicating.

Meijers et al. (2018) examined how visual metaphors are relied on to influence/persuade people to adopt environmentally friendly lifestyles, particularly the recycling of clothes. 174 participants were conveniently sampled through social media and direct emails to take part in the study. The researchers introduced the research participants to distinct visual campaigns (5 photographs) and requested them to fill out a questionnaire indicating/demonstrating their identification of persuasive imageries. The quantitative analysis shows that photos that have high visual impact metaphors were considered by the participants to be more effective and persuasive than photos with relatively lower or no visual impact metaphors. According to Meijers et al., campaigns that do not adequately employ visual impact metaphors might not have desired impacts as compared to the ones that optimize high visual impact metaphors.

Using the mixed-methods approach, Franken (2020) explored how selected youths interpreted persuasive messages by the PAX non-profit organization. In essence, this study uses the case study design to examine how the audience perceived one of PAX's communication campaigns to promote peace in Iraq. The campaign was promoted on the Internet, particularly through the organization's website and social media handles. Surveys were conducted online to gather data from 100 youth or young adults, most of whom are students. Descriptive analysis, content analysis, and non-parametric analysis were used to analyze the data. Essentially, the content analysis was used to analyze qualitative data from websites and social media engagements, whereas the descriptive and non-parametric were used to analyze responses from the respondents. The study found that although respondents are somewhat related to the objectives of the campaign, there were significant levels of discrepancies in their understanding. Findings also suggested that the interpretation of the campaign messages is inconsistent with the intention of the campaign.

Hameleers (2022) examined the concept of disinformation as a persuasive strategy in public communication. Hameleers argues that disinformation is a deliberate attempt to manipulate audiences into believing a well-articulated but fabricated concept or issue. Essentially, it is the intention of the sender of the message to persuade the message recipient to accept an inaccuracy. This is done by exploiting the belief systems and social orientations of the recipient and designing messages that they can resonate with. Relying on the information manipulation theory by McCornack et al. (2014), Hameleers supported the argument that the intents of disinformation are largely political, ideological, and financial. The corresponding implication is that some campaigns are deliberate attempts to influence people to embrace a series of lies or what the communicator wants to send across.

Lee et al. (2022) studied why communicators' intentions behind public health communication campaigns could be questioned by some sections of the South Korean public. The study particularly focused on health communication via news websites and social media. In the first study, 103 respondents were sampled and asked to consume specific health campaign items/messages on social media and some specific news websites. After identifying the stimulus or the persuasive messages embedded in these campaigns, these respondents were then asked to fill out questionnaires. The ordinary least square (OLS) regression analysis was used to analyze the gathered data. Findings revealed that information that came directly from medical news reporters received more acceptance than those that were provided by ordinary individuals. This finding also suggests that audiences are more likely to accept messages from other sources if they directly align with the position of recognized medical news reporters. If the authenticity of the source cannot be determined, the message is regarded as having ulterior motives. The same methodology was employed to analyze data collected from 338 respondents and similar findings

were gathered. The two studies also pointed out that social media health campaigns could be more effective than mass media campaigns.

Connection between intentions and messages created as a strategic approach

Several studies have explored the efficacy of messages from different angles, including how communicators are intentional about their messages and message targeting to achieve their strategic communication goals. Hoffman et al. (2020) examined how marketing and political campaigns are designed to reveal particularly/specifically selected messages to particular audiences. In essence, campaigners engage in selective disclosure based on the audiences they are communicating with.

Hoffman et al. (2020) pointed out that the availability of personal information or data on the Internet is increasingly giving affordances to campaigners to design and tailor messages based on the needs, interests, and preferences of their target audiences. Disclosure is contingent on the marketing or political impact that a message could have on the audience. In other words, the intended impact of a communication informs the type of messages that are created. This, according to Hoffman et al. contributes to greater levels of persuasion when conducting campaigns. Also, audience segmentation is done to maximize the gains of communication campaign through an emphasis on the mapping of specific messages for the right audience based on the intended goals for communicating.

Ordenes et al. (2019) investigated how intents underlying the design of brand messages influence consumer-to-consumer marketing on social media. To gather data for the study, the researchers conducted text mining of Facebook and Twitter posts by selected well-recognized consumer brands. Findings showed that the employment of speech acts and rhetorical styles,

such as repetition and alliteration, as well as cross-message compositions by these selected firms largely contributed to consumers' attachment to brands, which subsequently influenced consumer-to-consumer sharing of brand messages on social media. The study also found that visual presentations or image acts were effective in stimulating interest in the brands. Because the goal of these brands is to capture consumers' attention, make sales and increase profits, they are adept at embedding persuasive techniques in their marketing campaigns.

Berne-Manero and Marzo-Navarro (2020) explored brand acceptance and corporate sustainability based on relationship and influencer marketing. This study particularly explored how brands rely on influencers for marketing campaigns and the impact of this phenomenon on brand sustainability. Data were gathered from two major sources-Instagram posts and survey questionnaires. The Instagram posts were basically social media campaigns by L'Oreal being promoted by macro and micro-influencers. The survey entails Google forms which were distributed among the social media followers of these influencers. Findings indicate that although influencer credibility, pleasantness, and portrayal of emotions were some dominant persuasive strategies for capturing the interest of target markets during these campaigns, they tend to disagree with the transparency of the campaign message. According to the researchers, to ensure that campaigns are effective, the marketing goals ought to be consistent with persuasive strategies (embedded in messages) and the choice of influencers. Berne-Manero and Marzo-Navarro (2020) pointed out that marketers must do a lot to ensure that their choice of influencers, who are carriers of the message, explicitly reflects with the goal of the marketing campaign.

The above studies point to the various communication strategies that are used in campaigns on different issues. Persuasive strategies, which are integrated into messaging, are a direct result of intentions to influence recipients of messages to take actions that align with these

intentions. In situations involving competing interests, communicators prioritize what makes sense by making choices on the type of information to use and the exact words to employ in crafting messages. In line with this understanding is Li et al.'s (2020) suggestion that public relations practitioners engaged in environmental communication must, as a necessity, always consider the intentions for wanting to communicate with a particular public and embed these intentions into their messaging.

Since there are myriad environmental problems with different actors focused on achieving different goals informed by different intentions, understanding the motivations of Ghana's ESOs for communicating on environmental sanitation, requires an answer to this dissertation's RQ(2) What are the intentions of public relations professionals of ESOs for sharing messages on environmental sanitation with the Ghanaian public? To answer the research questions, the methods through which to do so are outlined in the succeeding chapter.

Based on the guidance of this literature, coupled with the goals of this dissertation, the following research questions, which are both qualitative (i.e. RQ1 & R2) and quantitative (i.e. RQ3 & RQ4) guided this research:

RQ1: What are the sources of information used in creating messages shared on ESOs' social media platforms?

RQ2: What are the public relations professionals' intentions for creating messages on sanitation on social media?

RQ3: What is the connection between the intentions for creating messages and the dominant strategic frames used in the messages?

RQ4: Which strategic frame elicits the most response from the social media users targeted with the messages?

CHAPTER III

RESEARCH METHODS

This chapter presents the explanation and justification for the methods of data collection, data handling, and data analysis. It also provides a detailed description of the methods used and how they complemented each other to provide a panoptic account of the phenomenon of social media use by ESOs in Ghana, which this dissertation explores. The research questions the methods addressed are also captured in this section to further corroborate the appropriateness of the choice of these methods.

Internal Review Board (IRB) Application

As a study that required, in part, human interactions, it automatically involved human subjects, and thereby needed ethical clearance (Eid, 2011). As such, an Institutional Review Board (IRB) application was submitted to the University of Oregon's IRB committee, which reviewed and cleared this study as exempt from IRB requirements (see Appendix VI). Despite the exempt status of the study, however, measures, such as informed consent, involving full disclosure of the purpose of the study and the maintenance of confidentiality that demonstrate respect for participants, were taken by the researcher before data collection commenced.

Communication research employs either qualitative, quantitative, or both (i.e. mixed methods) approach to data collection. The choice of a method depends on the nature of the research problem and the questions the study seeks to answer. The mixed methods, for example, helps communication researchers to address both qualitative and quantitative research questions in a way that enables them to “describe communication behavior and relate it to other variables” (Eid, 2011, p. 4).

This dissertation employed a mixed-methods approach to data collection. As indicated in chapter one and reiterated in the above-stated research questions, the goal of this dissertation is to shed light on whether and how ESOs are using social media as alternative communication channels in shaping public attitudes toward sanitation. The research questions (1) and (2) of the dissertation focused on the sources of information and the considerations for choosing these sources, coupled with the intentions for sharing this information with the targeted audience. The resulting data of these questions are descriptive (i.e. qualitative), providing insights into respondents' experiences and perspectives on the sources, the considerations for choosing these sources, and the intentions/goals for conveying this information (in the form of messages) to their social media audience.

The research questions (3) and (4), on the other hand, aim at examining, in numerical terms, the extent to which empirical data from the social media posts represent or exemplify the intentions or goals for sharing messages on social media. Clearly, these research questions aim at both qualitative and quantitative data, making the mixed methods the most appropriate method for this dissertation.

The mixed-methods approach philosophical assumptions and methods of inquiry are embedded in the understanding that a single method of inquiry may not always provide a clear picture of the problem (Creswell & Clark, 2011). Consequently, this method draws data from multiple sources in a single study (Dawadi et al., 2021). Creswell (2008) argues that drawing on multiple sources leads to rich data that enables depth. In other words, using mixed methods produces robust research results in a situation where one method cannot sufficiently address all research questions (Schoonenboom, 2017). That is, mixed methods make it possible for

researchers to gather data covering all facets of a problem, which in this dissertation involves research questions on different data sets—i.e. descriptive and basic numerical data.

With the sequence of data collection for this dissertation: first, qualitative data, and second, quantitative data, the exploratory sequential variant of the mixed-methods is applied. This variant of mixed methods allows for the collection of both qualitative and quantitative data, where qualitative data collection precedes the quantitative data collection (Morse, 1991). The rationale for choosing this variant of the mixed methods design is that it permits researchers to use the initial understanding from the qualitative data to design the second, quantitative phase of the same study for a comprehensive understanding of the problem under investigation (Creswell, 2014; Eid, 2011).

As a mixed-methods study, this dissertation employed two data collection methods: in-depth interviews and content analysis. In-depth interviews were used to collect qualitative data while content analysis was applied in collecting the descriptive quantitative (i.e. basic numerical data) on social media posts.

In-depth interviews

In-depth interviews were conducted with respondents to understand the sources of information, considerations for choosing these sources, and the intentions for sharing this information on social media. According to Holstein and Gubrium (2003), interviews are “special conversations” (p.3), involving verbal interactions between a researcher and a subject (Maters et al., 2000) in which the researcher guides the conversation to elicit responses about the research questions that prompted the conversation.

Leveraging the advantage of in-depth interviews, the researcher was able to explore respondents’ experiences regarding research questions (1): sources of information and the

considerations for selecting these sources, and (2): the intentions for conveying the information obtained from these sources to the targeted publics.

Using a semi-structured interview guide (see appendix A), which is required to lead a researcher to the object of a study (Taherdoost, 2022), respondents were asked open-ended questions, which allowed them to freely express their views (Handcock et al., 2007) on the above research questions that undergird the qualitative section of the study. The interactive opportunity interviews offer also enabled the researcher to ask follow-up questions, probing respondents for clarification on their responses, which resulted in quality data collection.

Sampling technique

Purposive sampling was used in choosing four chief Public Relations practitioners of the selected ESOs for the study. This category of professionals is at the forefront of these ESOs' communication planning and execution. Therefore, they had the requisite knowledge on the research questions and could respond to the interview questions with ease. The sample size of four respondents (representing the four ESOs) was considered adequate given that the sanitation industry in Ghana is specialized, thus limiting the sources of data. That said, data collection reached saturation, as one of the criteria for including organizations in the study: to be engaged in public education, restricted the search outcome to a limited number of sanitation organizations with these four experienced public relations practitioners as respondents. This sample was also considered sufficient, as qualitative research does not aim to generalize findings but instead to offer a deep understanding of a phenomenon from respondents' perspectives (Cobern & Adam, 2020).

Sampling procedure

The researcher first took a tour of respondents' organizations' websites to read about these organizations to understand the focus of their communication activities. This step enabled the researcher to also access the profile of each respondent on the website to know their role and scope of communication responsibilities. With access to the profiles, the researcher collected the contact information (i.e. email address) of each respondent from the websites.

After collecting their contact information, a first email (see appendix III) was sent to each respondent to request an appointment for interviews. The first paragraph of the email introduced the investigator to the respondents and stated the purpose of the email: the intention to conduct the study. The second paragraph elaborated on the goal of the study and its relevance, and the third paragraph requested the opportunity for interviews with respondents. The concluding paragraph of the email expressed gratitude to respondents for their time and provided the researcher's contact information in case they would want to call or email the researcher with questions before the interviews.

Upon receiving a positive response from respondents, in which they indicated interest in participating in the study, a second email was sent to request face-to-face meetings to familiarize with each one of them before the interviews. Each respondent acknowledged receipt of the email and agreed to participate in the interviews. During the face-to-face meetings with each respondent, they expressed excitement about the research topic, indicating that findings could help them to improve their communication on sanitation, and agreed with the researcher on a date for the actual interviews based on their availability. Culturally, this courtesy visit to engage was perceived by respondents as an act of respect, hence their attachment of appreciable levels of

seriousness to the researcher's request for appointment, which also helped the researcher to establish good rapport with respondents prior to the interviews.

All interviews were conducted via Zoom over a two-week period, as respondents opted for this mode of interviews due to their busy schedules. Each interview session lasted between 65-75 minutes. Before the start of the interviews, verbal consent was sought from each respondent in line with the requirements for research involving human subjects (Kykken, 2021) as required by the University of Oregon's Institutional Review Board's rules on human subject research.

As part of the consent process, respondents were informed that participation was voluntary and that they could withdraw from the interviews at any point without any consequences. The researcher also requested respondents' permission for the interviews to be recorded for transcription purposes, which all respondents verbally agreed to this.

At the end of each interview session, respondents were asked if there was something else, they would like to add to their responses, to which they all said they had exhausted everything they had to say. They also assured the researcher of their readiness to answer follow-up questions in the future if the researcher missed some crucial information during the interviews and would like to have a second opportunity to seek clarification on anything. This is indicative of the good rapport the researcher forged with the respondents, which created a healthy, friendly atmosphere that played a major role in getting respondents to appreciate the importance of the study (Horsfall, 2021).

To ensure respondents' experiences were captured in the exact sense they expressed them, interview transcripts were shared with each respondent for review to ensure the transcripts reflected what they said. All respondents returned their transcripts without any edits, confirming

the accuracy of the transcripts. This was in conformity with the co-creative philosophy of interviews (Lincoln & Guba, 1985) and to ensure the validity of data - how accurately the accounts of respondents represent their realities (Creswell & Dana, 2000).

Although the study, by its nature, did not pose any obvious risk to respondents, the researcher initially decided to anonymize their identity to protect them as required in human subject research (Cofflet, 2017; Kaiser, 2009). However, they opted for a disclosure of their identity and also for their quotes to be attributed to their names, as they said there was no risk to them for participating in the study. To further understand the sampling procedure requires a brief on the four Environmental Organizations used for the study.

Four Environmental Organizations studied

In developing nations, sanitation initiatives are supported by various bodies, including external NGOs from the developed, western world. These NGOs are more independent and well-equipped (i.e. resource-wise) to undertake comprehensive campaigns than the home-grown ESOs in Ghana. With their focus on campaigns, it is worth examining to determine the performance of these ESOs' campaigns in terms of message effectiveness which is evidenced through public engagement with these messages. This study concentrates on the ESOs in Ghana, their communication strategies, and how these strategies translate into the type of message frames used in conveying information on their social media platforms.

Since communication methods must be chosen with the target public in mind, a consideration of the publics' access to the media for communicating matters in every communication activity or context. Given the goal of this dissertation, four ESOs were studied in line with the dissertation's objectives. The four ESOs targeted for this study included the Community, Water, and Sanitation Agency (CWSA) and Green Advocacy-Ghana (which are

home-grown, Ghanaian ESOs), and WaterAid-Ghana and IRC-Ghana (local chapters of WaterAid International and IRC International respectively). A brief background of each of these four ESOs is presented for our understanding of their mission and goals, which qualified them for selection for this study.

Community and Water Sanitation Agency (CWSA)

The Community and Water Sanitation Agency (CWSA) is a governmental sanitation agency in Ghana. It was carved out of Ghana Water and Sewerage Corporation in 1994 (CWSA website, n.d.). Its creation is attributed to the Ghanaian government's decentralization policy in the 1990s, which aimed at addressing the water and sanitation problems faced by rural communities in Ghana.

The core functions of the CWSA are to raise public awareness of sanitation and health through proper waste management educational programs and the provision of information, advice, and policy guidelines on water and sanitation services. As a public sector organization, it is funded by the GoG with additional support from donor organizations such as the World Bank, Rotary International, GoG-UNICEF WASH program, and Ghana-Spain Debt Swap Development Program (GSDP). The CWSA has offices in the 16 regional capitals of Ghana and operates in the districts.

The CWSA has five directorates at its head office that oversee the activities of the regional offices. These directorates are Administration and Human Resource, Engineering Services, Finance, Planning and Investment, and Legal Affairs. Per the information found on the CWSA's website, Public Relations does not have a directorate, but instead falls under the Chief Executive Officer's (CEO) secretariat. As to what the reason is for boxing in the public relations function under the CEO's secretariat, this dissertation did not attempt to explore this.

Green Advocacy Ghana (GAG)

Green Advocacy Ghana is located at Sakumono, a suburb of Accra. It is a non-governmental environmental organization with sanitation as one of its major areas of interests. As found on GAG's website, its three-part mission includes: "to nurture positive environmental attitudes in children and the youth; to challenge the adult population to shed off apathy to the environment, and to influence actions and decisions of institutions, etc. to thread sustainable paths" (Green Advocacy Ghana, n.d.). To carry out its mission, GAG embarks on awareness campaigns to sensitize the public on proper waste management practices and the need for recycling, with the goal of ridding communities of filth in Accra.

GAG's mission, as stated above, has a broad scope. Among its core areas of focus is waste management, which is connected to sanitation. GAG's work on sanitation is focused on recycling of single-use plastics to mitigate the adverse effects of indiscriminate littering of these materials in communities. Consequently, GAG's campaigns promote plastic disposal at designated joints for collection and recycling. GAG communication channels include social media and websites.

With a staff capacity of ten, GAG has a designated person for the public relations function, who oversees its communication, both through in-house media channels (i.e. website content, social media) and external, mainstream news media outlets. The caliber of professionals represented at GAG is captured on its website: "GreenAd is made up of people from various backgrounds and professions—Educators, Communicators, Scientists..." The mention of "communicators" evidences the recognition of the role of communication in GAG's operations, which is one of the bases for the researcher's curiosity in ascertaining the communication function leverages the power of social media to help achieve GAG's mission.

WaterAid International (Ghana branch)

WaterAid International is traditionally an environmental organization that focuses on water and sanitation (WaterAid International, n.d.). According to WaterAid's website, it was officially established in 1981 in the United Kingdom to ensure that marginalized communities have access to safe water and hygiene. This mission is clearly spelled out on its website: "Our mission: making clean water, decent toilets, and good hygiene a normal part of everyday life for everyone, everywhere." With its first projects in Zambia and Sri Lanka at its inception, WaterAid has spread to many countries and has had a tremendous impact on sanitation. For example, in 2019, it reached a record of 27 million people with sanitation services worldwide.

Prior to this milestone, WaterAid successfully lobbied the United Nations for inclusion of sanitation in the Millennium Development Goals (MDGs) in 2000. These two successes are indicative of WaterAid's focus on bringing relief to communities facing harsh sanitation conditions. In providing hygiene services, WaterAid embarks on campaigns to alter attitudes and behaviors that contribute to sanitation problems or erode the gains made in the sanitation sector. The strategy its teams across the globe employ in addressing sanitation issues include working with communities, local authorities, and national governments to embed hygiene behavior in these organizations' policies and communication. With many branches in different countries, WaterAid Ghana, which is located in Accra, is a local chapter of WaterAid International. Donor support is the main source of funding for the organization.

IRC International(Ghana branch)

IRC International is a private environmental sanitation organization. However, its website contains little historical information. Instead, a Google search engine revealed quite a bit about the organization. According to the Google search engine, the IRC is an international think

tank that works with governments, NGOs, entrepreneurs, and people across the globe to find long-term solutions to the world's water and sanitation problems.

Founded in 1968, the IRC was registered in 1980 as a non-profit organization and as a foundation under Dutch Law (Wikipedia, n.d.). It is headquartered in The Hague, The Netherlands. With its international character, the IRC has offices in African countries, such as Burkina Faso, Ethiopia, Mali, Uganda, and Ghana. IRC Ghana, a local office, reflects the mission of the parent body. As such, it provides water and sanitation services through aggressive undertaking of projects and programs in selected districts of Ghana (IRC Ghana, n.d.).

Why these selected ESOs

To achieve the goal of this dissertation, as indicated earlier, the choice of the ESOs for study was based on three important criteria: the organization (1) engages in public education campaigns (with evidence of communication - regular sharing of information with the public), (2) uses social media as communication channels (to enable the researcher examine its posts/messages), and (3) has a public relations practitioner in charge of its communications (to enable the researcher assess how these professionals are leveraging social media in sanitation communication). These strict criteria narrowed the search, leading to a few ESOs being qualified for inclusion in the study. However, the common thread across the selected ESOs explored is the mission of delivering water and sanitation services to targeted communities in Ghana. These organizations also embark on campaigns to raise public awareness of the best sanitation practices that bring health benefits.

Also, only Accra-based ESOs were used for this study. This is because the sanitation problems are much prevalent in the urban areas of the Greater Accra region (Ghana's capital city), which is the epicenter of the sanitation menace due to its overpopulated nature and slums.

Due to this peculiar state of sanitation in Accra, the ESOs located in Accra actively engage in frequent campaigns to educate the public on best sanitation practices. These campaigns take different forms: face-to-face, on-the-street interaction with the public, open fora, and through mediated communication channels, such as mainstream media and social media. The social media platforms of these ESOs were also active with rich data for the study's analysis. The above characteristics of the Accra-based ESOs, which influenced the decision to focus on them for this dissertation, were detected using a two-step process. First, the researcher relied on the list of registered environmental organizations in Ghana (an official database) for the initial selection, and second, checked the purpose of these organizations to ensure that these organizations are involved in public education. This was done by surfing their websites for the mission statements, which reflect these organizations' identity, and purpose, as well as the focus of their operations (Dreiling & Wolf, 2001).

In addition, Accra-based ESOs have a pool of professionals who provide specialized and expert support in different areas of these organizations' operations, including communication and public relations. Professionals designated for the public relations function double as the official mouthpiece of these organizations and oversee all communications, from planning to execution.

Also, the mix of these organizations is purposeful to help gain insight into any potential differences in how WaterAid-Ghana and IRC-Ghana, which are internationally-oriented ESOs, use social media in communicating on sanitation versus the usage by their locally-centered counterparts, CWSA and Green Advocacy-Ghana, so as to ascertain what could be cross-learned and applied in making messaging on sanitation more impactful.

To understand how communication professionals in ESOs leverage the communication function worldwide, the following section examines the literature on environmental

communication strategies, sources of information on sanitation, intentions and goals of organizations engaged in environmental sanitation communication, and the framing strategies used by ESOs to disseminate information on environmental sanitation.

Data analysis

With two data sets: qualitative (from interviews) and quantitative (from content analysis), the former's analysis preceded the latter. As indicated earlier, the sequential variant of the mixed methods approach advocates the collection and analysis of qualitative data to serve as the premise for the design of the quantitative section of the study. Therefore, in keeping with this variant's rationale, and also to enable the researcher to find answers to the quantitative questions, interview data were analyzed first. Data gathered through interviews were analyzed using the interpretive paradigm in which researchers explore respondents' views and perceptions of an issue or event by soliciting their "descriptions and explanations of events taking place in their environment" (Eid, 2011, p.10; Warren & Karner, 2015).

The interpretive paradigm requires the researcher to wear what Saldana (2013) describes as the "analytic lens" (p.6). Through this lens, the researcher can observe patterns across the data (Yin, 2003; Creswell, 2013) to determine similarities and differences in the responses recorded (Hatch, 2002; Lincoln & Guba, 1985). This process, according to Saldana, involves a close reading and rereading of the text in the transcripts, paying "meticulous attention to language and deep reflection on the emergent patterns and meanings of human experience" (p.10).

Data analysis was thus influenced by the strategies proposed by Lincoln and Guba (1985), who outlined a four-step process: the comparative assignment of incidents to provisional categories; the elaboration and refinement of categories; the search for relationships, patterns, themes, and the establishment of meaningful connections between respondents' voices.

Codes ranged from a single word to a phrase or sentence, where these codes were placed into categories and themes carved out as the outcome of coding categorization and analytic reflection (Saldana, 2013). Thus, a bottom-up, inductive reasoning was applied to discover patterns across data to arrive at themes and their interpretations (Blackstone, 2012; Eid, 2011; Corbin & Strauss, 1990).

These themes were derived based on the dissertation's qualitative research questions, which focused on the sources of information, the considerations for the choice of these sources, and the intentions for sharing this information on social media. The derived themes informed the choice of theoretical framework (i.e. Snow & Benford's (1988) frames) to guide the coding and analysis of the quantitative data (i.e. Facebook posts), leading to effective design of the quantitative section, which the content analysis method is used for data collection and analysis.

Content analysis

Content analysis is a widely used method in communication and media studies research (McNamara, 2018). This is because it is regarded as a flexible method for collecting and analyzing text data, including verbal, print, and electronic (Cavanaugh, 1997; Kondrack & Wellman, 2002), which can be applied in analyzing social media content.

Mostly considered a quantitative research method (Krippendorff, 2009), content analysis enables researchers to “make sense of often unstructured content of messages – be they texts, images, symbols or audio data” (Gheyle & Jacobs, 2017, p.1). This sense making is done through an interpretation of the content of data using a systematic classification process of coding and identifying themes or patterns in data (Hsieh & Shannon, 2005). It is, therefore, defined as a “research technique for making replicable and valid inferences from texts (or other meaningful

matter) to the contexts of their use” (Krippendorff, 2004, p.18). This is effectively done through a systematic classification process.

To decipher the embedded meanings of posts, as a means of figuring out the connection between these posts and the intentions of respondents, a coding scheme was developed to serve as a guide for data collection (Gheyle & Jacobs, 2017). This guide enabled the researcher to decode as data (gathered from the posts), thus, moving from the unstructured texts to answers to the quantitative research questions (White & Marsh, 2006) of the dissertation. Snow and Benford’s (1988) three frames: Diagnostic, prognostic, and motivational were relied on as the framework for identifying the codes deemed related to the themes extracted from the interview data on intentions.

A total of 400 posts (100 from each ESO) were purposively sampled from the four selected organizations’ social media, specifically Facebook because of its rich data offerings. The first 100 posts were considered the most current, and therefore, represent the present use of social media by these organizations—i.e. whether the usage is strategic or done haphazardly. To effectively carry out data collection, a codebook (see Appendices I & II) was written with codes based on Snow and Benford’s (1988) three types of frames: diagnostic, prognostic, and motivational. These codes were clearly defined to guide the researcher in data collection. Given the high volume of posts (n=400) to code and in the interest of ensuring data reliability, two coders were recruited and trained for two days to assist with the coding. First, each coder was given a printed copy of the codebook. The principal investigator explained each code to the coders to ensure they fully understood each code’s definition as well as the differences between the codes. With regards to engagement, only comments (not “likes”) were coded for analysis

because of their imbedded meanings that render them interpretable and easy to categorize in ways that contribute to an understanding of the research questions.

After explaining the codes, the principal investigator walked the coders through the Facebook page of the targeted ESOs to make them abreast with the content before the actual coding started. During this process, the researcher tested the coders' understanding and application of the codes through a random selection of Facebook posts for coders to determine whether these posts contained any of the above frames based on the definition provided for each code. This process offered coders the opportunity to ask questions for clarification, which resulted in successful data collection.

To achieve intercoder agreement, a measure of consistency between coders (Saldana, 2021; Krippendorff, 2009; Bernard, 2011; Hruschka et al., 2004) engaged in a collaborative venture of data collection (Erickson & Stull, 1998; Guest & MacQueen, 2008; Schreier, 2012), a test coding was carried out prior to the actual data collection. Twenty-five (25) Facebook posts of the Community Water and Sanitation Agency (one of the ESOs for the study) were coded two times by both coders to ensure consistency in coding.

The second round of coding achieved a Cohen's kappa value of ($\kappa = .926$) (see, appendix V), which demonstrates a high level of agreement in coding between the two coders. This near-perfect kappa value was achieved because of the high English language proficiency (i.e. reading and understanding) level of the coders. Both coders had higher education degrees: The first coder is a lawyer by profession while the second coder holds a master's degree in development journalism. These backgrounds made it easy for them to completely grasp the definitions of the codes and to carry out the coding task without challenges.

A directed analytic approach to data analysis (Hsieh & Shannon, 2005) was used, where individual posts, as units of analysis, were examined based on the Snow and Benford's (1988) framing. Posts with words, phrases, and sentences that exemplified either the diagnostic, prognostic, or motivational frame were collected, highlighted, and placed into separate categories, tallied, and counted to determine the dominant frame across the ESOs investigated. This counting technique was also in keeping with the goal to determine the connection between the intentions for sharing sanitation information on the Facebook platform and the extent to which these intentions were manifest in the actual messages. Thus, enabling the researcher to make inference on how strategic the ESOs are in their messaging on environmental sanitation.

In-depth interviews and content analysis as complementary methods in the dissertation

As mentioned in the preceding section, the initial understanding from the data obtained from in-depth interviews served as the foundation for the design of the second phase, quantitative content analysis. The goal of the content analysis method was to help determine whether the themes found in the interview data, particularly regarding the intentions for sharing information on social media, reflected in the actual messages (i.e. posts).

The interview method played a crucial role in finding the themes, which then aided in identifying the appropriate theory to guide the quantitative data collection and analysis of posts using content analysis. Therefore, in-depth interviews and content analysis played a complementary role in this dissertation's data collection and analysis.

Researcher's Positionality and Reflexivity

Before I outline the procedure and participants of the study, I declare my positionality for this study. As a researcher, my childhood and professional experience position me well to conduct this study, given my familiarity with history, culture, and the local challenges. My background, therefore, largely, has an influence on how I perceive the world, and shapes the lens through which I interpret issues, including the interpretation I offer in this study.

I was born and raised in Ghana, a sub-Saharan African country in the Gulf of Guinea. Ghana has a population of 34 million (Worldometer, 2022.) and is bordered by Cote d'Ivoire Coast to the west, Togo to the East, and Burkina Faso, which lies north. My childhood experience of tilling the land for crop cultivation with my parents has made me develop a strong attachment to anything environment-related: farmland, water bodies, and natural vegetation. Hence, my interest in environmental topics.

Because human activities, which negatively impact the environment, have implications, such as poor health, for the human condition, my disposition toward issues related to environmental health is marked. Again, because this study examines the topic of social media use by professionals practicing public relations, which happens to be my academic and professional background, respondents could be influenced in their responses, knowing my background as a public relations practitioner.

In fact, being aware that the researcher had several years of experience in the public relations profession in the Ghanaian context, respondents were cautious in their responses. The mindset that the researcher probably used social media in his professional life before transitioning back to the classroom, and would likely detect inadequacies in their approach to

using social media as public relations professionals was high. Producing socially desirable answers in this case (Guba & Lincoln, 1994) was a high possibility.

The researcher's background potentially influenced the interpretation of how strategic the participants were in terms of their use of social media in sharing messages on environmental sanitation. For example, the researcher's knowledge and professional experience on the topic, as explained above, potentially influenced his line of probing questions for clarification from respondents.

CHAPTER IV

RESULTS

This chapter presents the results of both the in-depth interviews and content analysis of the study. The results of the two methods are in two separate sections: A and B. Section A contains the results of in-depth interviews while section B presents the results of content analysis (i.e. Facebook posts), which are all analyzed based on the research questions.

SECTION A

ESOs' SOURCES OF INFORMATION ON SANITATION PRACTICES

Interviews revealed that ESOs rely on two main sources of information on sanitation practices: allied sources and unilateral sources. Allied sources are external and unilateral sources (self-generated information) are internal to the ESOs. Below, the findings will walk through how the interviewed ESO communication leaders perceived of, and used, these sources.

“Community Entry:” Pulling from Allied Sources

The data indicated that the ESOs draw information on sanitation from allied sources, which all the respondents referred to as ‘stakeholders’ in the sanitation sector. These stakeholders are varied. Many of the respondents said they work on projects that involve other organizations, both in Ghana (locally) and outside Ghana (international partners). Because these organizations’ operations are focused on sanitation and water, they serve as sources of information to the ESOs. This information, according to respondents, is drawn from the research of these organizations. As noted by Abubakari Wumbei of IRC Ghana:

We basically work with the government. We work with civil society organizations. We work with local authorities and the district assembly. We work with development partners. Through that we get information from their research findings and incorporate it into our communication.

Kwaku Sarpong of the CWSA also added that through the alliance with these stakeholders, they are able to draw information from the platforms and other information resources of these stakeholder organizations. Sarpong described these as “learning alliance platforms”, where information shared by stakeholders is extracted and used in ESOs’ messaging on sanitation problems:

As to our sources of information, we have what we call a ‘learning alliance platform’, which is a platform that brings a range of stakeholders to engage on a determined direction. So, through that platform, a lot of information, you know, is obtained.

As part of the local sources, communities in which sanitation and hygiene services are provided are also identified as a stakeholder group that constitutes a source of information to respondents’ organizations. By engaging directly with beneficiaries of sanitation projects, information is obtained on a range of issues of interest. This information is shared on the individual media platforms of the ESOs for targeted audiences to be informed of what is going

on, or for them to be educated on the latest discovery that requires these audiences' attention.

Communities are therefore recognized as viable sources, according to Ewurama Kakra of Green

Advocacy-Ghana:

From the start of a project, we enter the particular community and engage with them, what we call 'community entry' And in doing community entry, we get the basic information on what is going on, what needs to be done, so our audience can learn from that on our social media platforms.

Abubakari Wumbei reiterated the use of open fora to elicit information from community members. These fora offer great opportunities for discursive sessions to take place on a range of topics that are recognized as relevant to the sanitation problem at hand. The lessons drawn from community practices by the communication team are incorporated into future communication.

According to Wumbei:

Some of the information we come across come from people we speak with. We organize forums...engage the local people, take their ideas and opinions, and share what is informative and helpful to our audience on our platforms.

From the above excerpts on the sources of information, it was deciphered that respondents use two basic methods for allied sourcing. These are personal and non-personal. The personal involves face-to-face (through community engagement), where the communication teams of the ESOs use dialogue to elicit pertinent information that contributes to the achievement of the communication goals. The non-personal involves mediated sources (i.e. stakeholders' interactive platforms—e.g. social media, websites), which, similarly, help in gathering information that is processed with the lessons funneled into future planning and communication.

Content Gathering and Creating: Pulling from Unilateral Sources

In addition to allied sources, the data also indicated that ESOs rely on unilateral, or self-created information as sources. This information is generated through routine operations, such as

visits to project sites in different parts of Ghana where sanitation programs are implemented. Information is elicited through engagement with members of the targeted communities. This information is considered primary and original given that it is first-hand information. As captured in the words of Kwaku Sarpong, “We do not have many sources except our regional project sites where we visit from time to time. But we consider this source as original, as we create content ourselves.”

An integral part of this unilateral production of information is research. As noted by Akosua Ogyiri of WaterAid Ghana, self-generated information provides insights that are considered primary, therefore; useful to future messaging on sanitation solutions. This research, according to her, is deliberate and aim to unearth the underlying causes of a specific, identified problem. As explained by her, this self-commissioned research on sanitation and water sometimes reveal the causes of frequent facility breakdowns, which empowers the communication team to be able to develop effective messages to educate the publics on the proper management of these facilities:

We commission research ourselves to gather information based on what we are looking out for...this helps us to get to know the actual causes of problems and our audience’s thoughts. For example, sometimes the sanitation facilities we provide break down so early and we need to find out what is making this happen and how to solve it...we share that information with other communities so they can learn from it.

Relevance, credibility, and context: Considerations for choosing sources

Regarding the choice information sources, the data indicated that ESOs consider certain factors, which are deemed important in their decisions on sources. Three key themes emerged that constitute these factors. These factors include relevance of the source, credibility of the

source, and contextual applicability of a source's information. Only sources that meet these criteria are considered useful to the goals of the ESOs in Ghana.

Source relevance

The data suggested that the first consideration when choosing sources of information is the relevance of a source's information to the communication needs of the ESO. Most of the respondents said that this relevance is defined based on whether the potential source is deemed analogous: Whether its mandate and operations are related to what the ESOs are engaged in. This similarity of focus is critical in determining the extent to which a source's information can serve the intended purpose. For Ewurama Kakra, a source is considered relevant if it has the right information, "The relevance of the information is key to us when we think of which source will provide us with the right information in a given situation."

Also, in relation to the criterion of relevance, Akosua Ogyiri said that in order for a source to be regarded relevant, it must be a known, recognized source for the kind of information required. According to her, it is only when information meets this requirement that it will be regarded as useful to the cause of WaterAid Ghana, and by extension the ESOs in the Ghanaian context. Ogyiri had this to say, "I will say the source should be known for providing relevant information on a topic. That will be useful to who we are and what we do."

Source credibility

In addition, the interview data indicated that the credibility of a source mattered to the ESOs. That is, for a source to be seen as worthy of consideration, it has to have an impeccable reputation when it comes to quality and credible information in a topic area. This factor is in sync with the earlier criterion of relevance. That is, a source that has relevant information is

expected to be credible as well, in order to be considered. Ewurama Kakra of Green Advocacy Ghana stressed the importance of credibility. For her, the credibility of information is of topmost priority in the choice of sources. She was emphatic in stating this:

The source has to be credible. Credibility is number one. We want to make sure that the information we put out is from credible sources. Obviously, if we are sharing, we want to be sure that what we're putting out there is credible.

In confirming credibility as a critical factor that influences decisions on which source makes the list of ESOs' sources of information, words like 'pedigree', 'authentic', and 'trust' were used by Akosua Ogyiri of WaterAid Ghana to describe the standing required of a source in order for it to merit consideration by her communication team. She noted, for example, that for her team to retrieve information from an organization, the latter must be deemed a high-profile source that has the pedigree for providing quality sanitation information: "The pedigree of the organization that is putting out that report or research. I think that it's one of the ways we are able to authenticate that this information is something that we can trust."

Regarding how credibility is established, respondents identified the popularity of a source as an indication of its credibility. That is, a source that is well known as an authority in the areas of sanitation and hygiene data is regarded as credible by virtue of its popularity. Respondents think that less-known organizations cannot pass the credibility test required of an organization to be considered a good source of information. To emphasize *popularity* as a key determiner of which source is credible, Kwaku Sarpong of the CWSA stated that information from less-known sources, which he describes as "obscured sources", cannot easily lend themselves to verification by the recipients of such information. The ability of recipients to cross-check the trustworthiness of information is connected to recipients' awareness of the source of the information, which can only be possible based on its popularity. Sarpong had this to say:

We get information from well-known organizations like the United Nations' website, government organizations, and research organizations. So, an organization has to be really known for what it does. We don't use obscured sources that our audience can't easily cross-check the authenticity of the information.

Context congruence

The third factor that data suggested is instrumental in respondents' selection of sources is how a source's information applies to the local, Ghanaian context. ESOs in Ghana are focused on local sanitation and water-related problems. Therefore, how information from an external repository can address the local sanitation problems influence decisions on their selection. That is, the applicability of information from a source is considered a critical requirement to meeting the local information needs. According to respondents, information that is contextually relevant will make sense to the recipients of the information in Ghana. Ewurama Kakra explained the rationale behind this factor: "So, the context—like doing a contextual consideration to see where the information is coming from—whether it would be useful or it would make sense to share that information given our context."

Akosua Ogyiri also expressed this generally held view of respondents on the importance of context to the selection of sources. For her, any source whose information cannot be situated in the Ghanaian context will not serve the purpose for which it is accessed and conveyed to the target publics. Providing an illustration in support of this point, she stated that taking statistical data on sanitation from a country like the United States, for example, may not make sense to the Ghanaian publics due to contextual differences between these two countries. Ogyiri explained why she is picky when choosing her sources: "There are other things like whether this[information] is something that we can situate it within our context because you cannot pick information or statistics from the U.S. and try to situate it within our context. It won't work."

The above excerpts from respondents buttress the main themes: relevance, credibility, and context, that emerged as important considerations in the selection of information sources on sanitation. Given that information is conveyed to a target group of people with a goal in mind, the relevance of this information and its usefulness to the recipients' situation is critical. Ultimately, in order for this information to be taken seriously and acted upon in terms of applying it, respondents believe that it must be perceived as credible in the assessment of recipients.

Calls to Action: Connecting Vital Information with Key Publics

While it is certainly important for these ESOs to keep current with information regarding sanitation, their core responsibility is to convey this information to the public, and learn what resonates and what does not resonate with their key stakeholders. This is done by segmenting publics based on each public's information needs and connecting information with them. To that end, the interviews indicated that there are four reasons underpinning respondents' goals for messaging on sanitation. These include education, calling recipients to cooperate by acting on the information shared, advocating policy regulation, and eliciting feedback from recipients' responses to recommended sanitation solutions relating to projects and facilities in communities.

Education: To educate recipients of messages on sanitation

According to respondents, the first primary reason for communicating on sanitation is to educate recipients of messages on sanitation and water-related issues. This education is to reorient recipients' attitudes toward sanitation. That is, to positively influence their daily behavioral actions that impact their personal hygiene and health as a whole. Education takes the form of sensitization campaigns, where information is shared on a range of sanitation topics,

including best sanitation practices in the areas of proper handwashing, waste disposal, how to access available sanitation resources, and the existing policy implications for engaging certain behaviors. Ewurama Kakra expressed this reason in clear terms:

Primarily, our reason is to educate them.... to bring them up to an understanding of what we are doing and what they need to do to improve their sanitary conditions.

This education, according to Akosua Ogyiri, is meant to conscientize the recipients of messages on the cause-effect consequences of their attitudes and actions. This is to help recipients of the educative messages to avoid behaviors that lead to poor sanitary conditions in their homes and communities. For Ogyiri, education is a necessary component of the efforts to overcome negative behaviors that cause the vicious circle of poor sanitary conditions in communities in Ghana:

We educate the public, educate the youth ...and educating children on environmental problems... how they can help in the fight against all of these negative things, like pollution, littering, etc. using language that they can understand.

In the same vein, Kwaku Sarpong explained that the education is intended to equip recipients with an understanding of practical and proven approaches to sanitation management and solutions. These solutions are expected to lead to improvements in recipients' communities and health conditions in general. Sarpong summarized the goal and approach to this education: "The general goal is to create understanding and promote evidence-based approaches to change."

These excerpts demonstrate respondents' belief that by conveying educative messages to targeted publics on various communication media, including social media, they will be equipped with the understanding necessary to mitigate their vulnerability to a relapse to behaviors that cause sanitation problems. While the next section analyzes and presents examples of social posts,

it does so in the context of a specific framing rubric(i.e. Snow and Benford, 1988). I present these examples here as a way to reflect interviewees' comments, as the succeeding screenshots 1-7 will show.

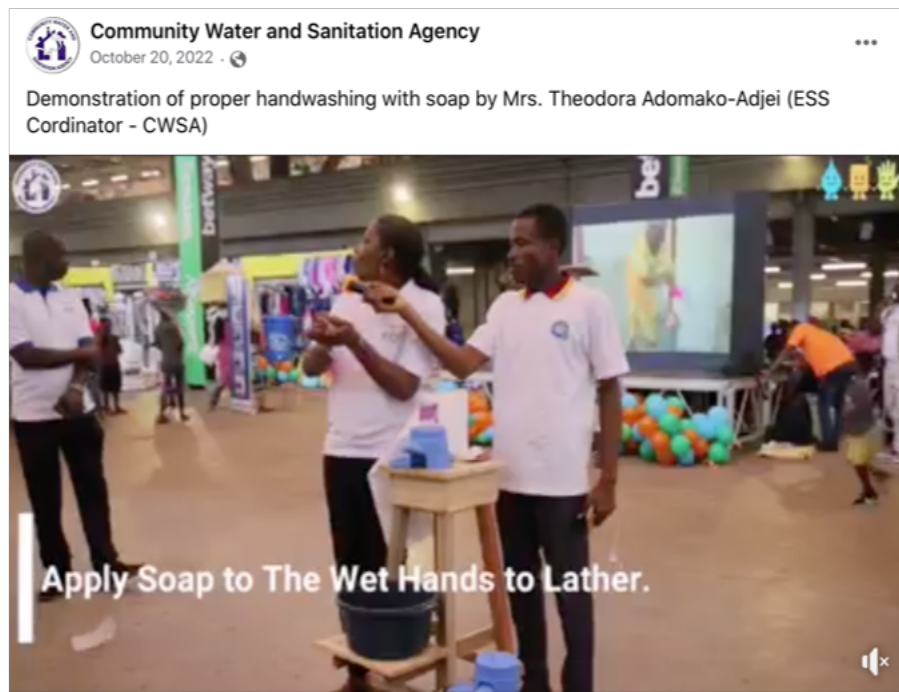


(WaterAid Ghana's post 1: Educative post)

The above screenshot from WaterAid Ghana is educative as it reminds recipients of the importance of handwashing. The post draws attention to the need for handwashing at different places of human habitation or meeting places, such as the home, school, work place (office), and at healthcare facilities. The mention of these different settings in the post suggests that the message was targeted at a wide, diverse public, including parents and children (at home), teachers and students (at school), and career persons (at work or office environment). The post stated:

Handwashing with soap is one of the most effective ways for people - whether at home, school, work, or healthcare facility – to keep themselves and loved ones safe from infections.

The import of this post is that handwashing is crucial in preventing infections, which expresses the intention to educate recipients.



(CWSA's post 1: Educative post)

Just like the first post by the WaterAid Ghana sought to educate its Facebook users and recipients of its messages about the importance of handwashing, the CWSA post (i.e. post 1 above) is a video demonstration of how proper handwashing is done. The post teaches the process of good handwashing: how to apply soap to one's hands, showing the right way to rinse one's fingers to get rid of foamy substance or dirt using water. By conveying the message, "Apply soap to the wet hands to lather", this post expresses the intention to educate. Also, the posts by the Green Advocacy Ghana (i.e. its posts 1 & 2) suggest the intention to educate recipients on waste management.



(Green Advocacy Ghana's post 1: Educative post)



(Green Advocacy Ghana's post 2: Educative post)

The above post (i.e. screenshots 3&4) by Green Advocacy Ghana aimed to educate the target recipients about a basic sanitation problem, and the indiscriminate littering of communities and streets with waste. Post one's core message is "Pick it" and post two encourages recipients to "Break up with plastics." Both posts seek to dissuade message recipients not to litter their homes and streets with waste materials like empty cans, plastics bags, and other

nondecomposable physical matter that cause filth in the environment. WaterAid Ghana's post 2 also contains the intention to educate recipients.



(WaterAid Ghana's post 2: Educative post)

The above post by WaterAid Ghana draws attention to the need for handwashing as well as the consequences of improper handwashing, such as diarrhoea and respiratory conditions, which good handwashing can help prevent. It provides an important statistic on global deaths caused by nonadherence to proper handwashing to not only educate but to also admonish recipients on the need to take this education seriously. This education is observed in the expressions, “Half a million people die each year from diarrhoea and acute respiratory infections that could have been prevented with good hand hygiene” and “hand hygiene is essential for safe and dignified health.” Other posts (i.e. posts 2-4

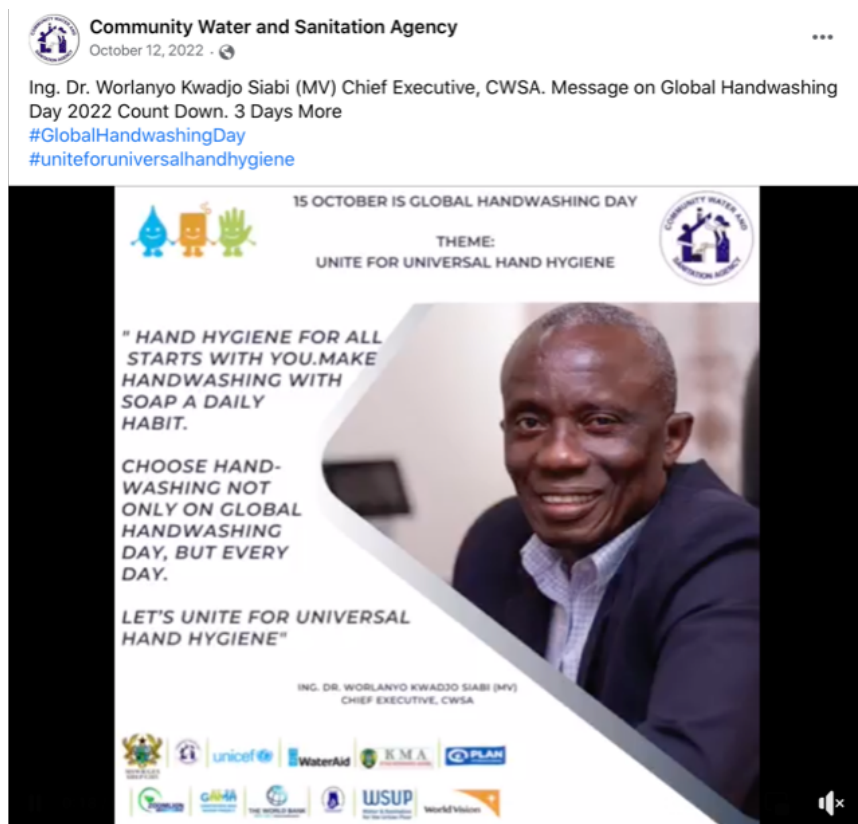
shown below) by Ghana's Community Water and Sanitation Agency contain the intention to educate recipients



(CWSA's post 2: Educative post)



(CWSA's post 3: Educative post)



(CWSA's post 4: Educative post)

The screenshots 5-7, drawn from the CWSA sought to educate the target publics on the importance of handwashing as a basic activity that contributes to good hygiene. In fact, all the posts (i.e. seven screenshots) demonstrate the intention of ESOs' to educate the recipients of their messages: social media users who follow their Facebook pages. The areas of education, as evidenced in the seven screenshots, ranged from the importance of handwashing to prevent the contraction of germs to stoppage of indiscriminate littering of both the immediate environs and public places, such as major streets. Handwashing is a key education message prominently featured (in screenshots) across the ESOs. For example, the following phrases, which reflect the intent to educate, are seen in the screenshots:

“Handwashing with soap is one of the most effective ways for people -- whether at home, school, work, or healthcare facility --to keep themselves and loved ones safe from infections”

“Apply soap to the wet hands to lather”

“Hand hygiene is essential for safe and dignified healthcare”

“Hand hygiene for all starts with you. Make handwashing with soap a daily habit”

From education to action

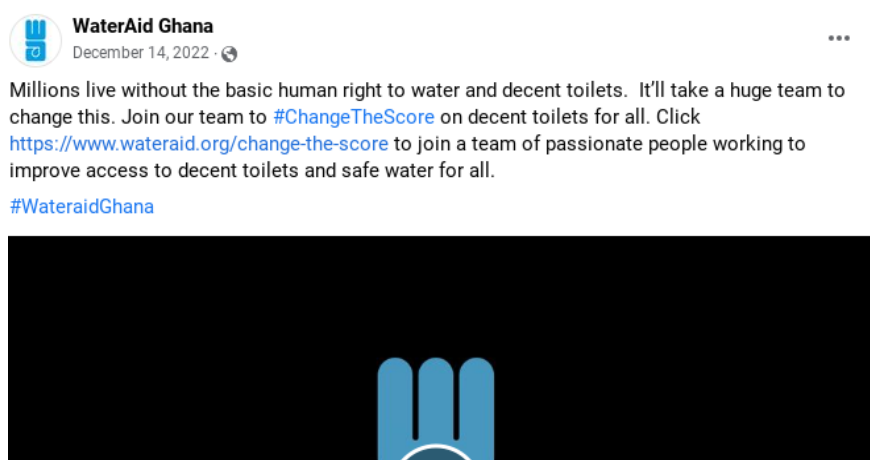
The second intention, which is a progression of the education goal, is to get recipients of messages to act on the information received. That is, by taking the desired, recommended action in the messages. Information conveyed in the messages on the various communication platforms is expected to trigger behaviors that will change existing ways of doing things that have fueled the vicious circle of poor sanitary conditions in many communities of Accra. This intention is well captured in the words of Ewurama Kakra: “Our messages let them sit up to want to be part

of the process or to want to identify with us to be able to work together to achieve what we are aiming to achieve.”

This call to action is not just limited to individual behaviors but also targeted at the collective, community involvement in recommended activities that aim to improve sanitation. Messages are also designed with the appeal for communal action. Abubakari Wumbei talked about the “collective intention” of messages when he noted:

The simple message is that community-level mobilization is crucial to the delivery of water, sanitation, and hygiene services. We pump this into their mind to ginger them to keep doing the work they do.

This design of messages is all-embracing, as it appeals to both individuals as units of their communities, and to the collective, communities at large. This approach prioritizes inclusivity and aims to elicit participation from all. The following posts scraped from the ESOs’ (i.e. Water Aid Ghana and CWSA) Facebook pages depict the intention to get recipients of messages to act on the information received.



(Water Aid Ghana’s post 3: Motivational frame)



(CWSA's post 5: Motivational frame)

The screenshots on the 'call-to-action frame' found among the posts show that apart from the ESOs conveying educative information, they also call them to move past being passive recipients of such information to being users by implementing the ideas shared or joining hands with their communities to effect the needed change. A phrase that vividly shows this intent, as seen from the screenshot of WaterAid Ghana tells this: "...It will take a huge team to change this. Join our team to #ChangeTheScore on decent toilets for all." The post invites targeted publics to enroll in teams for change in the sanitation narrative.

Become part of the change itself

It was found that respondents also engage in advocacy with their communication. Respondents said that sanitation problems have different dimensions, including policy on infrastructure and regulations. The policy dimension is controlled by the authorities who make these policies. Due to the lack of, or the inherence of flaws in existing policies, respondents use

messaging to advocate for either new policies or a change in policy to help plug the loopholes that contribute to sanitation problems. Abubakari Wumbei was clear in pointing out this:

You know, communication for an NGO, for instance, is not in a vacuum. The general goal is to influence and advocate change ... Our engagement with Asutifi North District Assembly is an example.

Ogyiri confirmed this by offering an example of what advocacy messaging targeting authorities seek to achieve. She stated that government, as an authority, is called upon to play a leading role of galvanizing other concerned actors in the sanitation sector to act in concert toward sanitation solutions. Ogyiri's words are excerpted below:

For the local government organizations, we tell them the government has the responsibility to lead other actors to support in achieving the change we are seeking.

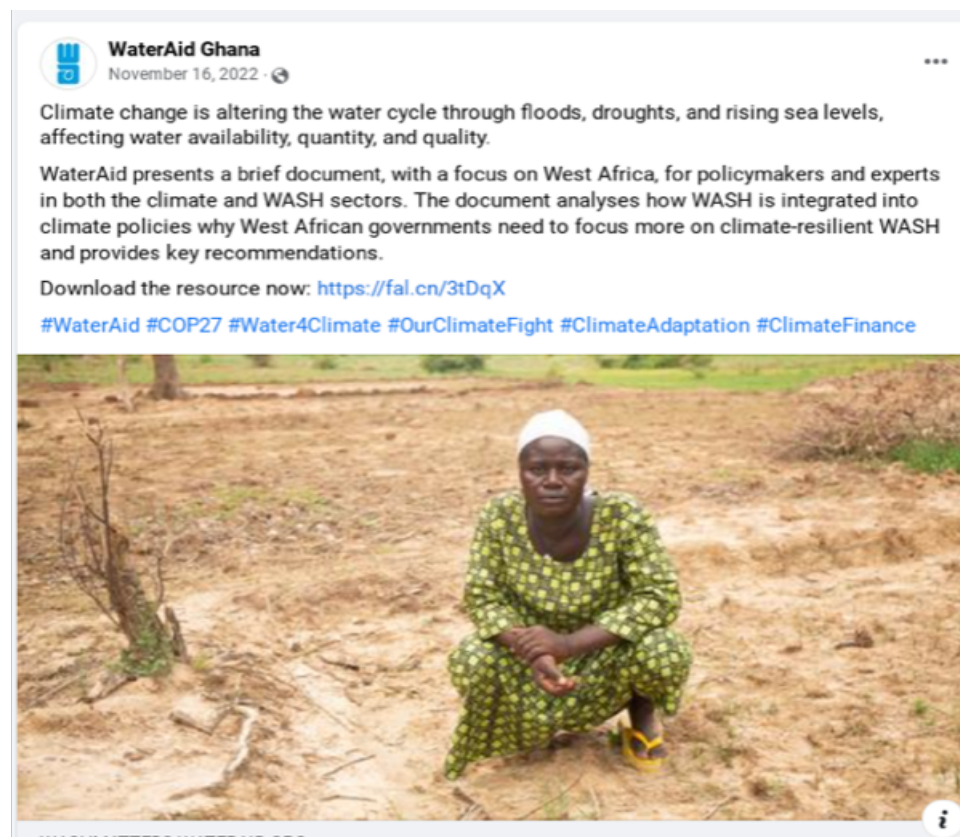
In advocating for change through messaging, the intention is to also elicit support for sanitation interventions, such as community-based projects and programs. This advocacy is targeted at authorities, particularly government whose regulations have implications for what ESOs can do or cannot do. Government policies in support of sanitation efforts may take the form of reduced taxes on sanitation products (e.g. dustbins) and punitive laws against overt public behaviors that contribute to poor sanitation. Kwaku Sarpong explained that the support of these authorities is crucial to the effective implementation of sanitation programs:

We call on the authorities to support efforts to address sanitation problems...they are those we can target to change something that will help in managing sanitation in the communities where our sanitation and water projects are taking place.

The following four screenshots are examples of posts intended to influence authorities with the decision-making powers on sanitation policies and interventions.



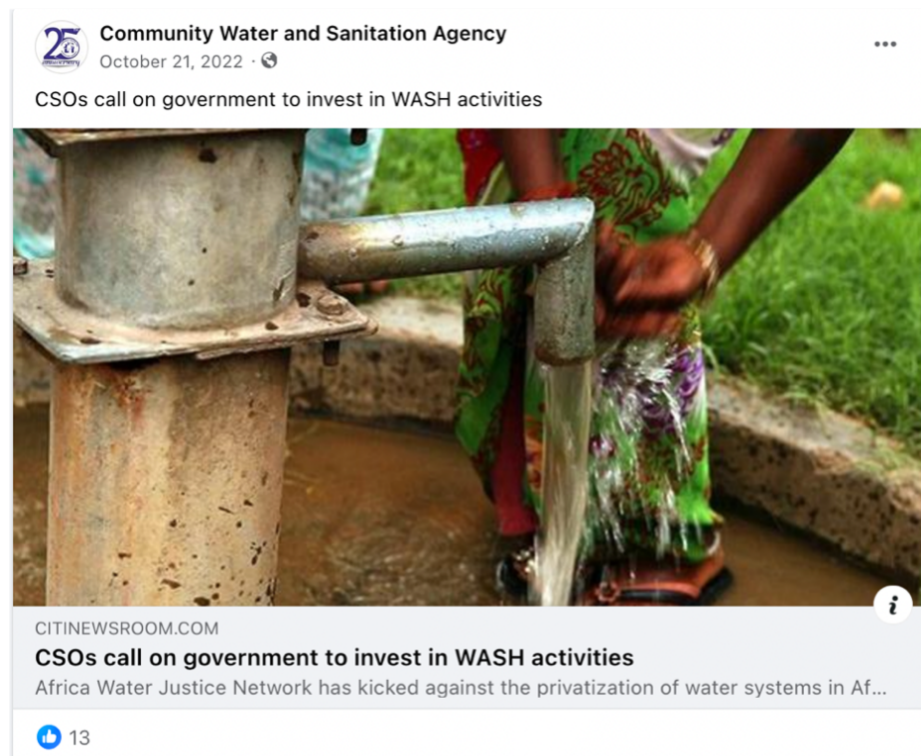
(WaterAid Ghana's post 4: Frame to influence policy makers)



(WaterAid Ghana's post 5: Frame to influence policy makers)



(IRC's post 1: Frame to influence policy makers)



(CWSA'S post 7: Frame to influence policy makers)

The foregoing screenshots (i.e. WaterAid Ghana posts 4 & 5, IRC's post 1, and CWSA's post 7) reflect the intent of these organizations to influence authorities in the sanitation sector,

specifically government, who have the power to drive policy changes in favor of sanitation and other environmental initiatives like climate change. Phrases, such as “We believe that it is a team that can influence big change”. Together, let us call for government to invest more in sanitation”. The second phrase, “WaterAid presents a brief document, with a focus on West Africa, for policy makers and experts in both the climate and WASH sectors”. The mention of “government” and “policy”, and “policy gaps” point to this intent.

Creating feedback loops: Audiences’ reception of interventions

The fourth intention for which respondents create messages on their communication media platforms is to gather feedback from their various audiences. This feedback is related to the projects undertaken in the targeted communities. That is, whether community members perceive the sanitation projects as delivering their maximum impact or not, and what, from the perspective of these audiences, can be done to improve upon the existing sanitation conditions. According to Kwaku Sarpong, feedback is deliberately sought from the audiences:

We also want to get their input—their feedback as to whether they appreciate what we are doing...whether there is a shortfall, whether we need to improve on one or two things.

Ewurama Kakra confirmed the intention to elicit constructive feedback to be funneled into future program designs. Just as other respondents alluded to, she reiterated the value of feedback as an important motivation for sharing messages on sanitation. For Kakra, feedback is a reality check of the ESOs’ performance in terms of the impact of their projects on the communities in which they undertake projects: “Once information is shared on our platforms, we get feedback from our reading audience on our projects. That helps us to know how we are performing.”

From the perspectives of respondents, feedback constitutes a performance indicator, as it helps them to evaluate the extent of impact of their organizations' programs on sanitation from the standpoint of members of the affected communities. Since feedback from recipients of messages reveal their assessment of the impact of messages previously conveyed for instance, insight gleaned from this is crucial to future communicative actions.

Missed opportunities? Lacking formal strategies

To further examine whether respondents are procedural, as part of their strategy in terms following laid down steps from the conception of intentions to their execution in the form of the creation of messages, they were asked if they had a plan to guide the creation of messages. Overall, findings suggest that none of the respondents had a written plan, only a conceptual plan. Respondents rely on their experience and discretion in creating messages to convey their intentions. They had no written plan to guide their message design. This finding is intriguing, as communication can be deemed to be fully strategic when it is driven by clear intentions and backed by a written plan or guide. Interestingly, respondents rather rely on their experience and discretion as their guide instead of a written outline. Ogyiri, a respondent, intimated the difficulty in pinpointing what plan her public relations department works with. In her own words: "Well, it will be difficult to say what the strategy or plan is when drafting the content."

This excerpt is indicative of the lack of a plan at her department. This is a potential flaw that could manifest in the form of inconsistency in messaging, as various members of the public relations team at the department do not have a written messaging plan to guide them in creating tailored messages. This was revealed in the response of a second respondent, Kakra. According

to her, while members of her department generally know what they create messages for, each team member has the flexibility to decide what kind of message is appropriate at what time. This points to the reliance on discretion. She stated: “Whoever it is--the person who is writing the content at any particular time will deploy the strategy that is easy for the person to use.”

Giving the free hand to members of the PR team to apply discretion in creating messages on the basis of convenience - “the strategy that is easy to use”, raises the question of consistency in message design. Because consistency in messaging is critical in forging audience trust in organizational messages, the inherence of inconsistency, as reflected in a respondent’s own words, suggests a flaw in message design. Ineffective message design is connected to inadequate planning or the absence of planning.

In summary, this chapter examined the interview data based on the research questions (1) and (2), which elicited participants’ responses on the sources of information and considerations for choosing these sources, and the intentions for sharing sanitation information (conveyed in the messages created on social media) with the targeted audiences.

Regarding the sources of information, two broad categories were found: Allied sources, which are created from alliance building with stakeholders, and unilateral, self-generated information by some ESOs. Three important reasons were found to be key in the choice of sources. These include the relevance of a source’s information to ESOs’ cause, the credibility of the source (whether it is recognized for the type of information required), and the congruency of the information to the local context of Ghana. These factors play a major role in respondents’ determination of which source qualifies to be consulted for information.

The intentions for sharing information drawn from the sources earlier alluded to include, to educate recipients on a range of sanitation issues, to prompt them to act on this information in

ways that promote healthy sanitary conditions, to influence policy on sanitation through advocacy, and finally, to receive audience feedback on the impact of sanitation projects and programs.

SECTION B: ANALYZING SOCIAL

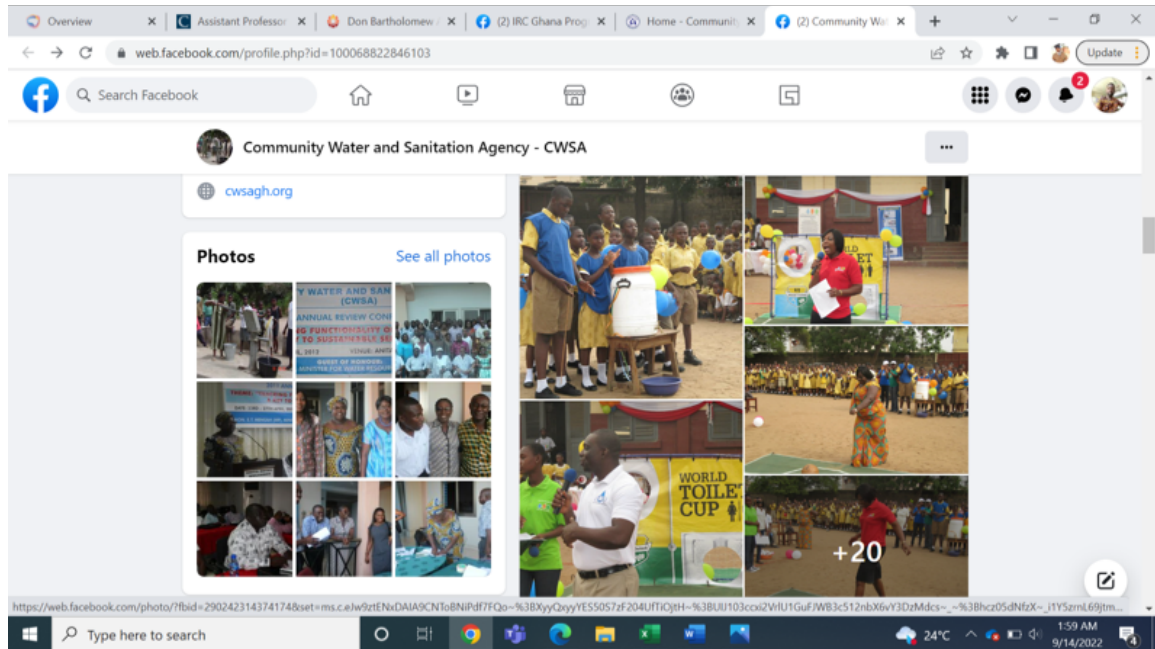
Equipped with the findings from the interviews, the second stage of research analyzed data from 400 Facebook posts of those same selected ESOs. These data were collected to determine the connection between the intentions or goals for creating messages and the dominant strategic frames in messages, and the frame that elicits the most positive reactions from Facebook audiences. Doing so allows us to determine if, indeed, the process and priorities outlined in the interviews were reflected in their communication, and what kind of feedback these ESOs are seeing. The results are based on a count of the frames found in the individual Facebook messages and are presented in tables on each ESO. Each table contains two important elements, a tally of the counts of each frame, as found in the messages based on the three frames—Diagnostic (a frame that identifies a problem), prognostic (a frame that proposes a solution to a problem), and motivational (a call-to-action frame)(Snow & Benford, 1988)—and the type of reaction: positive, negative, or neutral that each frame elicits. These reactions, in this study, relate to the comments users make underneath each post on Facebook. A positive reaction expresses either support for an idea, or support for a proposition made in a post. A negative reaction is the opposite. It is a user's comment that expresses dissatisfaction, or lashes at an organization for not doing something right, or for not providing a solution to a sanitation problem. A neutral reaction, on the other hand, reflects none of the above reactions. The absence of comments or reactions to a post indicates a lack of engagement.

Look how busy we are: Frameless posts

Of the total of 400 posts of the Facebook accounts of the four ESOs—Community Water and Sanitation Agency (CWSA), International Water and Sanitation Center (IRC), Ghana, Green Advocacy Ghana, and WaterAid-Ghana—the majority of the posts (n=212), constituting 53% of all posts, had no frame. These “frameless” posts were mainly photographs of the Directors and Chief Executive Officers’ meetings and events, where no information is provided to convey a specific message about sanitation. These pictures basically conveyed information on these individuals’ meetings with either the press, government officials, or planned upcoming events or programs, or past sanitation programs. Below are screenshots that exemplify these frameless posts.



(CWSA’s post 8: Frameless post)



(CWSA's post 9: Frameless post)

The above screenshots are pictures of meetings and public events by the ESOs IRC Ghana and CWSA. The pictures do not contain any obvious strategic frame that is related to the theoretical framework for this dissertation. That is, the posts do not convey any message that reflect any of the frames in Snow and Benford's (1988) typology of frames. The audiences targeted with these posts are left to figure out what the posts are about on their own.

Our main message: Apply the information we provide

Despite the abundance of frameless posts, other posts did reflect specific frames. User comments/reactions (in the form of valence: positive, negative, or neutral) to each frame type (as reflected in the posts) are presented alongside in table 1. The motivational frame was found to be the most used frame (n=124) (which is 31% of the total posts) across the four organizations' Facebook posts. These posts were messages that conveyed information that reflected this frame. Therefore, the dominant frame was the motivational frame, followed by the prognostic frame (n=42) (i.e. 10.5%) and then the diagnostic (n=22) (i.e. 5.5%) being the least used frame.

Tables 1 to 4 below show the four ESOs and the frequency of each frame used. The tables also show the corresponding audience valence (i.e. engagement type—positive, negative, or neutral) to each frame type. Also, tables 5 & 6 contain information on number of followers of each ESO's Facebook platform and table 6 on the timeframe of posts.

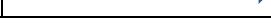
Frame Type	Frequency	Engagement Type	Positive	Negative	Neutral
Diagnostic	1		0	0	0
Prognostic	7		7	0	0
Motivational	45		4	0	0
No Frame	47		0	0	0

Table 1: Community Water and Sanitation Agency-Ghana (CWSA)

Table 1 shows the score of each frame as it pertains to the Community Water and Sanitation Agency (CWSA). As shown in the table, 47 of the posts did not contain any frame. The motivational followed with 45 posts, the highest among the three frames. The CWSA's communication centered on calling targeted audience to act on certain proposed ideas relating to sanitation.

Frame Type	Frequency	Engagement Type	Positive	Negative	Neutral
Diagnostic	6		0	0	0
Prognostic	12		0	0	0
Motivational	24		0	0	0
No Frame	58		0	0	0

Table 2: International Water and Sanitation Agency-Ghana (IRC)

Table 2 represents the International Water and Sanitation Agency's (IRC) framing on sanitation. It shows that majority of IRC's posts (n=58) did not contain information that embody any of the three frames espoused in the theoretical framework that guided this study. However, the motivational frame recorded the highest score (n=24), followed by the prognostic, and then the diagnostic with the least score (n=6). The orientation of IRC's communication was focused more on calling the recipients of messages to act on the information shared on sanitation.

Frame Type	Frequency	Engagement Type	Positive	Negative	Neutral
Diagnostic	7		0	0	0
Prognostic	9		0	0	0
Motivational	25		1	0	0
No Frame	59		0	0	0

Table 3: Green Advocacy Ghana

Table 3 represents Green Advocacy-Ghana and the frequencies of each of the three frames deployed by it. Majority of the posts (n=59) did not contain information that demonstrate any of the frames. But the motivational frame, just like the case of the CWSA and IRC, was the most used frame (n=25). The prognostic placed second (i.e. with 9 posts), and the diagnostic had the least usage (n=7). The orientation to communication was more of asking the recipients of messages to take action.

Frame Type	Frequency	Engagement Type	Positive	Negative	Neutral
Diagnostic	8		1	0	0
Prognostic	14		6	0	0
Motivational	30		1	0	0
No Frame	48		0	0	0

Table 4: WaterAid Ghana

Table 4 represents the outcome of the frame analysis of WaterAid Ghana. As can be seen in the table (in the frequency column), majority of the posts (n=48) did not fall under any of the three frame types. The highest frame was motivational, thus, with a score of 30 posts. This was followed by prognostic (n=14) and diagnostic (n=8), respectively.

The above analysis cannot be done in isolation without a look at the number of followers of each ESO's platform and the timeframe of posts to understand whether there is a balance between the number of followers and engagement with posts. Tables 5 and 6 illustrate this.

ESOs	Number of Facebook followers
1. WaterAid Ghana	45K
2. CWSA	2.1K
3. Green Advocacy Ghana	756
4. IRC Ghana	231

Table 5: Number of followers of each ESO's Facebook as of 2023

Table 5 reflects the number of followers of each ESO's Facebook platform. As evidenced in the table, as of the time of this study (i.e. 2023), WaterAid Ghana had the highest number of followers (i.e. 45K). This is followed by the CWSA with 2.1K, Green Advocacy Ghana with 756, and the least of being IRC Ghana which had only 231 followers. Interestingly, while there were disparities in the number of followers, with some ESOs having a high number of followers, the level of engagement with Facebook posts across the four ESOs did not match up. In fact, no post raked in up to 50 comments. Data in tables 1, 2, 3, and 4 indicate this. Although this could a result of multiple factors, a strategy of constant flow of information through frequent content sharing on Facebook can potentially keep followers' attention unabated, which could boost engagement with posts. Table 6 below shows the timeframe of posts by the ESOs in terms of the contents were shared in specific years.

ESOs	Timeframe of Posts
1. WaterAid Ghana	• May – December 2023
2. CWSA	• January – December 2023 • October –December 2022
3. Green Advocacy Ghana	• October—December 2023; • June 2022 • April 2021 • April—May 2019 • January—October 2018 • March—November 2017 • August—December 2016
4. IRC Ghana	• February—July 2012 • January—May 2014

Table 6: Timeframe of posts(i.e. month/s and years) posts were made

Table 6 shows the various months and years the ESOs posted on their Facebook page, which also reflects the frequency and infrequency of posting of content. From the table, it is clear that the ESOs posted differently in terms of the specific months they posted content in a particular year. For example, WaterAid Ghana posted 100 times between May and December 2023 while CWSA posted 100 times between January and December. Green Advocacy Ghana, however, posted sparingly between 2023 and 2016 with some years (e.g. 2022 and 2021) having just posts in a single month, such as June and April respectively. No content was posted in the remainder of the months. The IRC Ghana had an unusual content sharing practice with all its first 100 posts published exclusively in the years 2012 and 2014. Its Facebook page could be described as inactive or virtually dormant at the time of the study. Despite the discrepancies in how each ESO posted on Facebook, the striking similarity remains in the inconsistent posting across the board. All the ESOs had infrequent posts in certain months with blank posts, thus, ranging from zero to as high as 20 posts in some other months. For example, in the month of November of 2022, only one post was published on the CWSA's Facebook while 20 were published by the organization in October 2023. Similarly, Green Advocacy Ghana posted 8 times in the month of August 2016 but with only 1 post in December the same year.

While what accounts for the infrequencies in posting is unknown to the researcher, this could be a potential manifestation of the consequence of the lack of content calendar to guide the PR team to post at regular intervals, so as to avoid intermittent posting which could disconnect the target audience from receiving regular and updated information from the ESOs' Facebook platform.

The results on the frequencies of frames also reflect a consistent pattern across the four ESOs studied. In summary, posts without any of the three frame types outnumbered

those with frames. However, of all, the most used frame is the motivational while the diagnostic frame is the under-deployed frame. A pictorial view of the use of each frame type by the ESOs is presented in figure 3 below. The pie chart (see figure 3) below also shows, in percentage terms, the totals of each across the four organizations.

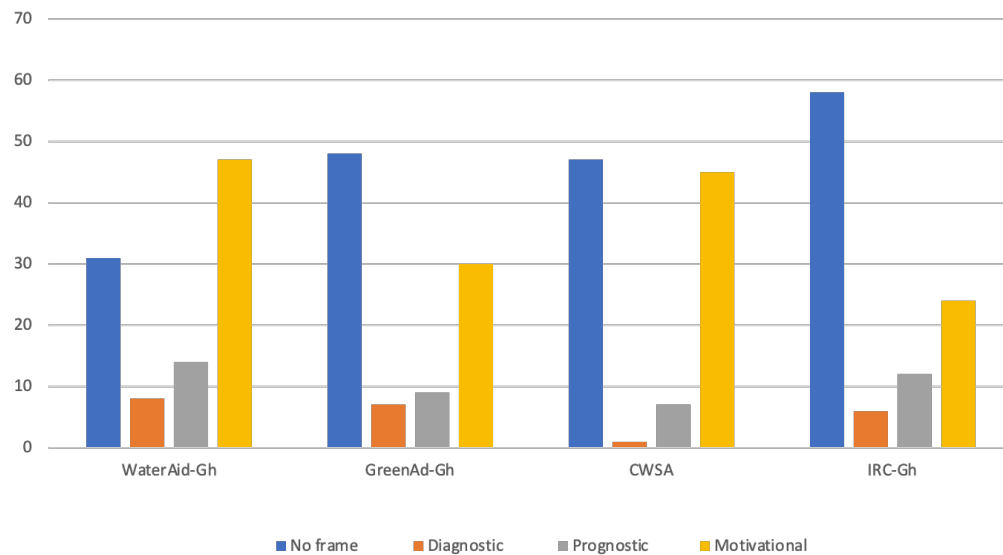


Figure 3: Selected ESOs' use of each frame type

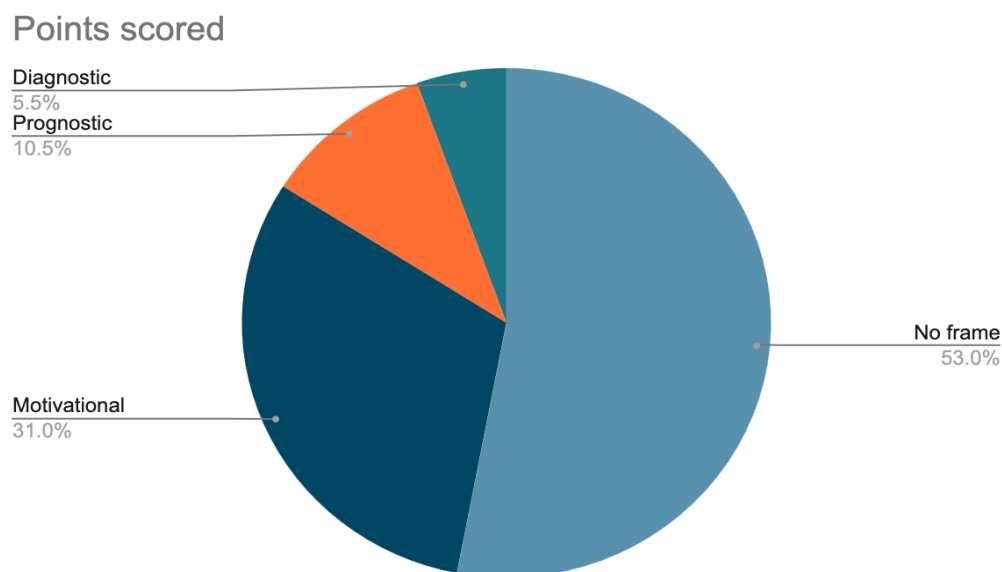


Figure 4: Percentage distribution of frames across the ESOs

Labelled as “points scored”, figure 4 reflects the summation of each frame type in percentage terms across the four ESOs. The pie chart therefore shows the percentage distribution of the three frames: diagnostic, prognostic, and motivational. In figure 2, the blue bar represents frameless posts (labelled as “no frame”). The yellow bar represents the motivational frame, the gray bar represents the prognostic frame, and the orange represents the diagnostic frame. Clearly, the blue bar is the most prominent, as evidenced under each organization. Figure 3, on the other hand, depicts, in percentile form, the distribution of frames based on the tally of each frame type across the four ESOs.

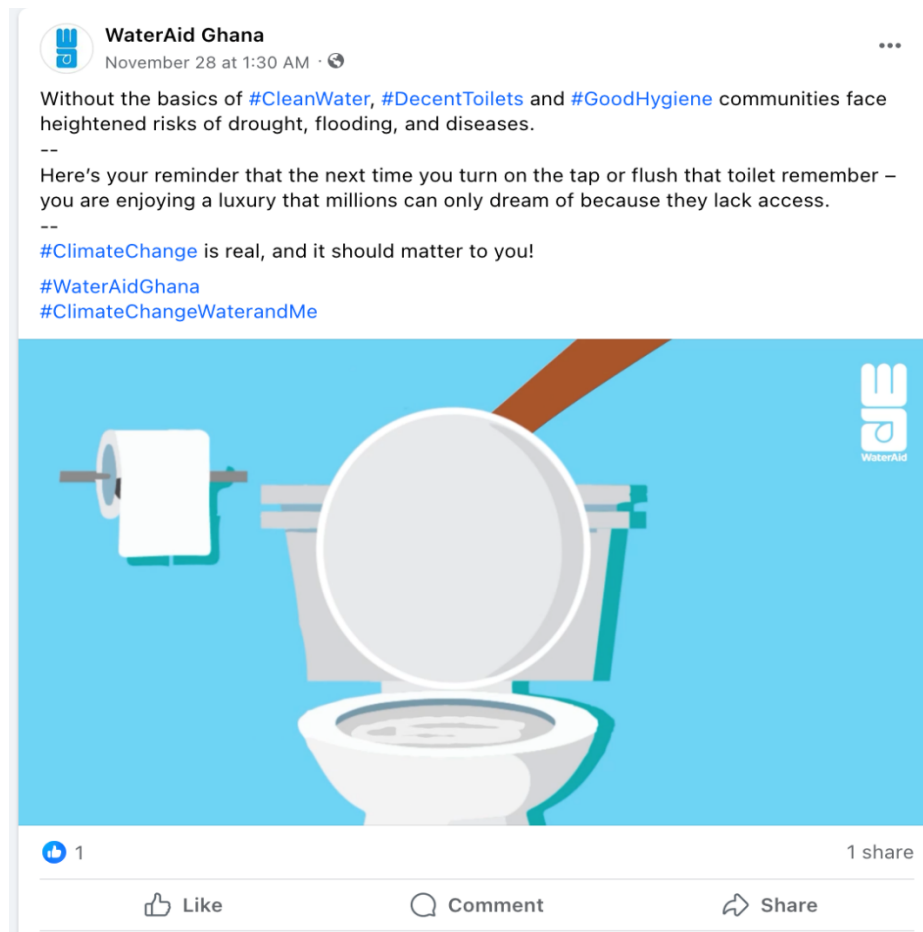
To determine the corresponding valence (positive, negative, or neutral) of the targeted social media audience to the dominant frame, user engagement was gauged. Generally, engagement was low across all the organizations. A total of 20 comments were found across all the 400 posts of the four ESOs. Despite the low engagement, all the 20 comments were positive. The prognostic frame however elicited the most positive comments (n=13). This was followed by the motivational (n=6), and the diagnostic (n=1). The screenshots below, drawn from the four organizations’ Facebook pages show each frame type and the level of engagement.



(CWSA's post 10: Prognostic frame)

The above post by CWSA contains a prognostic frame in its core message: “Clean hands are within reach: Make handwashing a daily priority”. Apart from conveying the message that hand washing is essential, its embedded pictures demonstrate how handwashing should be done. The intent of the post is to present a solution to poor personal care by emphasizing hygiene. The accompanying valence is positive. Cobby Kay, a commenter, who engaged with the post expressed his gratitude for the awareness efforts of the organization stating, “Thank you for this awareness”. This engagement form (involving comments) is indicative of the commenter's sense

of appreciation for the solution conveyed in the message. This contrasts with the WaterAid Ghana's post 6 below, which contains a diagnostic frame with a low-level engagement, a "like".



(WaterAid Ghana post 6: Diagnostic frame)

The above post by WaterAid Ghana contains a diagnostic frame. It only points out problems. That is, the lack of clean water, decent toilets, and good hygiene, as problems in some communities. The post tells recipients that these problems exist, but does not proffer any solution or encourage recipients to act in specific ways regarding these problems. The post is, therefore, problem-centered and not solution-driven or action-oriented. Also, the post had a low-level engagement: one "like", which suggests that recipients were not that interested in this diagnostic frame. Similarly, the motivational frame (in the screenshot below) did not elicit a high-level

engagement (i.e. comment) but instead simple “likes”, although a slightly higher number of “likes” (i.e. four) than that of the diagnostic frame (with one “like”).



(Green Advocacy Ghana post 1: Motivational frame)

The post is motivational as it called on readers to “embark on the path to a greener future and effective waste management”. Green Advocacy Ghana believes that when the target publics take this action, it will eventually lead to a “...more sustainable and eco-friendlier environment in Ghana.” In summation, while the prognostic frame elicited the greatest positive engagement, it also had a high-level engagement, which shows that publics were probably more interested in this frame than the diagnostic and motivational frames.

In summary, the interview data indicated that respondents draw information from two main sources: unilateral and allied sources. In selecting these sources, three criteria are applied. These

include the credibility of a source, the relevance of its information to the sanitation problem being discussed, and the congruence of a source's information to the Ghanaian context. In addition, data also indicated that respondents' organizations' intentions for creating messages on Facebook included to educate the recipients of messages, persuade them to apply the information received to their sanitation practices, and to influence decision/policy makers in the sanitation sector.

Data on content analysis revealed a connection between respondents' intentions for creating messages and the actual messages posted on the Facebook platform (as seen in the screenshots presented in this findings section). The captions of these screenshots reflect specific intentions, such as education(educative post), persuasive (motivational post), and advocacy (posts meant to influence decision/policy makers). The motivational frame was, however, found to be the most used frame among Snow and Benford's (1988) three frames, although a new frame ("frameless") was in the majority. Regarding engagement, the prognostic frame elicited the most reactions from commenters. Markedly, these reactions were positive. The following discussion will tease out these core findings and walk through how they contribute to, and build on, existing literature.

CHAPTER V

DISCUSSION

The findings from the interviews and content analysis provide key insights regarding this dissertation's guiding literature and theoretical framework. The findings also indicate more-immediate practical implications. Accordingly, the findings help answer the guiding research questions. Four research questions guided the dissertation's inquiry. The first research question asked what the sources of information used by ESOs are in Ghana and the considerations for choosing these sources. Given that communication messages are not created in a vacuum, this question aimed to ascertain the sources the ESOs draw information they share in the form of messages with their target audience on the Facebook platform. Ascertaining these sources will also lead to an understanding of the considerations for choosing sources to establish whether the considerations are ethical; therefore, underpin the communication goals.

Regarding this first research question on sources of information, two broad categories of sources were found. These were allied sources and unilateral sources. The allied sources involved a network of stakeholder groups in the sanitation sector, including governmental organizations, international organizations (also referred to as 'international partners'), local sanitation organizations, and members of communities in which sanitation projects are executed. This interconnection is established through alliance building based on the common goal of achieving healthy sanitation. The considerations for selecting these sources included the extent to which a source is perceived as credible in terms of providing relevant information that is useful to the Ghanaian context.

Based on the findings on sources, the third principle of Arthur W. Page, the importance of listening to stakeholders (The Arthur W. Page Center, n.d.), was seen at play, and fully

applied by respondents, as they draw information from the network of like-minded local and international organizations, described as “stakeholders” by respondents. Page’s principles provide the basis for keeping the lines of communication open between organizations and their publics. Drawing information from a network involving stakeholders is archetypal of Page’s third principle stated above. This inclusive, consultative orientation to communication is what Irvin et al. (2018) describes as co-creation of knowledge in communication. This co-creation leads to co-ownership of the communication between message senders (i.e. ESOs in this case) and receivers (i.e. communities) in environmental contexts, which is crucial to the successful implementation of sanitation interventions in communities.

Being deliberate in sharing messages for the purpose of collecting, processing, and incorporating insights from audience feedback into future planning, interventions and communication reflect, to some extent, strategic thinking on the part of respondents (i.e. PR practitioners) in the Ghanaian context. This finding on respondents’ regard for feedback, therefore, echoes the arguments in the symmetrical model of public relations proposed by Grunig (1984), which advocates the two-way communication in public relations-driven persuasive communication. Certainly while the limitations of Grunig’s model have been widely noted in literature in terms of its idealistic nature of true organization-public symmetry, the findings reinforce the importance of opportunities for engagement and the full utilization of feedback in improving future communication. Thus, drawing attention to the need for PR practitioners to apply framing strategies that have at their heart user-engagement as a goal. Engagement is necessary for feedback, which can be used to improve the impact of future communication.

The ESOs that use unilateral sources generate information exclusively internally, without sourcing information from like-minded, external organizations. These ESOs whose public

relations professionals employ this approach often rely on their project sites as the main sources of information. This approach is akin to the asymmetrical model of communication that applies in organizations that operate a closed system of communication. Using a one-way approach to communication, it neglects the voices of other important stakeholders whose expertise, voices, and research-informed information are crucial to effective messaging on sanitation.

Given that communication is in itself a source of information used by public relations managers in decision making (Musheke & Phiri, 2021), how it is carried out, both as a process of transmitting and gaining of information, has implications for the quality of information it offers. Based on the system view of organizational theory that considers an organization as a set of interacting functions that acquire inputs from the environment (Daft, 2001), the unilateral approach to information sourcing lessens the ESOs' exposure to the external world where it draws intelligence and insights for incorporation into future communication.

The dichotomous sources of information used by the ESOs, to a large extent, brings to light the concept of organizational culture, which varies from organization to organization. Literature on organizational culture indicates that culture determines how communication is conducted in organizations. That is, it influences organizational interactions both internally (among employees) and externally (with the outside world) (Keyton, 2011).

Also, as a crucial step to sharing accurate information on sanitation on their organizations' Facebook platform, respondents ensure that the right information is sourced. This is realized through a strict vetting of information sources to ensure their compliance with defined criteria. These criteria include relevance and credibility of source, and whether the information from these sources is applicable to the Ghanaian context.

Studies on the attributes of quality information (Galvin, 1988; Salmela, 1997; Tozer, 1999) emphasize the elements of quality information, which Huang et al. (1999) categorized into four dimensions. These dimensions include intrinsic quality (which borders on accuracy, objectivity, believability, and reputation), accessibility quality (i.e. access and security), contextual quality (such as relevancy, valued-added, timeliness, completeness, and amount of data), and representational quality (i.e. interpretability, ease of understanding, concise representation, and consistent representation).

These themes on considerations for selecting sources are consistent with Huang et al. (1999) attributes of quality information. Respondents' quest for credible sources is backed by a long history of audience use of credibility as a criterion for believing a source's information. In fact, earlier studies found that for this believability to be attained, information sources and messages need to be trusted (Rice, 2001). Rice's work is further corroborated by growing evidence that trustworthiness of sources affects individuals' online engagement behaviors (Shah & Wei, 2022). Respondents' attention to this element of credibility confirms their consciousness of the role of source credibility in communication, which Kim and Brown (2015) find as vital in leveraging the power of social media in disseminating information capable of influencing behaviors. Context is also found to be a critical factor for source selection. Ensuring contextual alignment of information is testimony of respondents' commitment to effective messaging on sanitation.

Although Gregory (2010) conceives the role of context in public relations in a rather broad sense, as she argues that it enables effective planning and managing of programs, she concedes that since context differs from organization to organization, it is vitally important to

look at the context in which public relations activities take place. Thus, respondents' recognition of contextual importance confirms the attention to planning in their communication.

The second research question sought to identify the intentions for creating messages. The aim of this question was to understand whether the ESOs are purposeful in their messaging on sanitation. Since communication on sanitation is expected to offer valuable information that could either draw attention to the overlooked causes of sanitation problems, proffer solutions, or prescribe actions that can potentially lead to solutions, this research question shed light on how intentional or otherwise the ESOs are in creating messages on sanitation. Data suggested three core intentions: to educate the Ghanaian public on best practices, call them to be a part of the process toward the required change, and/or to influence policy on sanitation by calling on the authorities to formulate pragmatic policies on sanitation problems.

These findings on intentions for creating messages on sanitation, are in sync with existing literature that suggests that the overall goal of the communication strategy on sanitation is to attain positive attitudes and behavior change among diverse audiences of a given population. For example, UNICEF's (2012) communication strategy to address poor sanitation behaviors in India outlined the intentions for engaging in campaigns as being the need to raise awareness of the importance of adhering to proper sanitation and hygiene practices, to equip households with knowledge of the linkages between sanitation, hygiene, and health, and to influence decision makers and opinion leaders to support efforts that lead to improved sanitation and hygiene standards.

Pardeshi (2009) concluded that these intentions can be said to have materialized only when sanitation campaigns successfully equip targeted audiences to implement the knowledge gained from these campaigns on proper sanitation for the benefit of the affected communities.

This expectation of campaigns aligns with the intentions for communicating on sanitation found in this study. The main themes that revealed respondents' intentions for sharing messages on social media in Ghana are related to objectives, such as to educate targeted audiences on best sanitation practices, to urge these audiences to act on the information received, to influence authorities (i.e. policy makers) in the sanitation sector to formulate robust policies, and to support ongoing sanitation programs in communities. The individual messages reflecting each of the aforementioned intentions are tailored to the above audience groups through framing to elicit the desired behavioral outcomes.

According to Smith (2009), the common purpose of strategic communication is to build understanding and support for ideas and causes, services and products. It is in line with Smith's view that organizational messaging on social media can only be deemed strategic when the messages shared on the platforms support organizations' causes. As gathered from respondents, the goal for conveying sanitation messages on social media is to reach users with information that can change attitudes and behaviors. That is, how a certain set of audience attitudes, behaviors, or perceptions will support this goal (Paul, 2011).

Literature on advocacy to influence policy on sanitation also supports the current findings on the ESOs' intentions to persuade government, an authority, to implement policies that promote sanitation. The developing world's populations' dependence on government and their exercise of control over both local and national affairs place government and state actors in a position of authority to call the shots, including changing existing policies on sanitation. Jena's (2018) work on sanitation campaigns point to the fact that governments have played a major role in sanitation delivery services in developing countries like Bangladesh, Indonesia, Pakistan, Ethiopia, and Kenya. This governmental influence in sanitation policy direction in the above

countries suggests that respondents' intention to woo authorities is evidence-based, and therefore, strategic.

An interesting finding regarding the research question on intentions, however, concerns respondents' objectives for collecting feedback as part of efforts to evaluate audience reception and appreciation of sanitation interventions in the communities where sanitation campaigns are carried out. This is striking, particularly given the evidence that despite the importance of audiences' feedback in campaign evaluation, public relations professionals have for a long time paid less attention to evaluative research (Weiner & Gilfeather, 2016; Smith, 2017), which basically hinges on feedback. Therefore, the efforts by the ESOs' public relations professionals to obtain feedback and to apply the insights from it in adjusting future messages and strategies is a positive indication of a gradual shift of attention to research. This development is indicative of promise for the public relations profession, especially in the developing nations, such as Ghana, where the use of technology (including emerging tools like social media) for communication is still at an infantile stage. Again, aiming for feedback from social media audience, as part of the intentions for sharing messages, is in line with one of the tenets of strategic communication: audience analysis (Roberts, 2016), which involves data collection and analysis—research.

The third research question asked whether there is a connection between the intentions for creating messages and the actual messages posted on the ESOs' social media platforms. Messages that are deemed strategic are informed by clear intentions to achieve defined goals. Evidence of the connection between the intentions for creating messages and the actual messages created (in the form of social posts) establishes whether communicators are strategic or unguided in their communication on sanitation. For example, the creation of a content guide or calendar can be considered a step toward transposing intentions to messaging.

Although the finding on this question indicated a strong connection between ESOs' intentions and the actual messages, which goes to suggest that messaging on these platforms is, to a large extent, strategic, data also indicated the lack of a messaging guide in respondents' creation of messages. Some respondents talked about relying on their experience (i.e. several years of PR practice) as a guide to the way they create messages instead of using a written communication guide or calendar. The lack of a written guide is not positive in that it limits the possibility of having a structured communication. It is, therefore, not surprising that frameless posts occupied a significant space on the Facebook page of the ESOs. According to Shoker (2023), "creating a long-term PR plan that involves consistent activity and messaging is what will help build strong identity as well as developing trust with your audience and with journalists." Consistency is a natural outcome of an existing plan while inconsistency may be borne out of the lack of it, which can weaken the efficacy of a message.

The fourth research question asked what the dominant strategic frame is in the messages deployed on the Facebook platform of the four organizations and audience engagement with this frame. As there is nothing like unframed messages in communication (Nisbet & Markowitz, 2015), messages on Facebook are expected to contain strategic frames that aim to achieve specific communication goals. Using Snow and Benford's (1988) rubric of frames, data indicated that the motivational (i.e. action-centered frame) was the dominant strategic frame among the three frames.

The findings on frame analysis of the Facebook posts of ESOs suggest that the diagnostic, prognostic, and motivational frames were deployed by respondents. This determination was made based on a content analysis of the Facebook posts. The above frames manifest in various forms, but with one commonality—drawing attention to an existing

sanitation problem. As such, they all contain an element of education, although with additional orientations beyond the problem component. While majority of the posts (i.e. 53%) were mainly pictures and events announcements(i.e. frameless), thus, containing none of the three frames, the motivational frame topped in terms of usage among the three frames, as it had the highest statistic of 31 percent.

The motivational frame, as the name implies, motivates or persuades the targeted audience to implement a proposed idea or solution by taking action. Thus, it transcends the problem identification to providing the rationale for action. By greatly deploying the motivational frame, respondents were more oriented to action—i.e. asking respondents to do something that will lead to solutions instead of suggesting straightforward solutions. In fact, motivational posts sought to call targeted audiences to be involved in taking collective action on sanitation problems. This is probably due to the understanding that sanitation at the community level requires all hands on deck, beyond an individual's effort.

Although Smith's (2015) dissertation on the effects of motivational framing found that it is effective in mobilizing audience for action, this dissertation found something different. A check of audience reactions to the sampled 400 posts to determine the differences in audience valence to the three frames revealed that the prognostic frame elicited the most reactions. Moreover, it also recorded the most positive valence among the three frames. This suggests that the prognostic has the potential of making a better communication impact in terms of influencing attitudes and behaviors on sanitation-related problems.

In addition, the substantial engagement elicited by the prognostic frame, compared to the diagnostic and motivational frames, also suggests that its application in health communication would likely yield positive audience response. This finding is corroborated by earlier works. For

example, while Benford (2005) observed that the diagnostic and prognostic frames can function in a complementary manner in messaging on environmental problems, Snow and Corrigan-Brown (2005, cited in Pinnick, 2007) contend that where a movement, organization, or communicator is “focused more on diagnostic frames without dealing with at least a potential solution ... will most likely be ineffective, as the problem will seem unsolvable” (p. 9). Thus, by deduction, the solution component of a frame, which the prognostic frame conveys, make it more appealing, at least, compared to only a problem-oriented frame (diagnostic). It is not surprising that the prognostic frame elicited the most engagement as well as positive valence across all the four ESOs studied.

Given Ellis and Levy’s (2008) proposition of seven different ways by which research contributes to theory, including “efficacy evaluation”, the finding on the prognostic frame indicates the efficacy of the frame in eliciting positive valence on sanitation. This finding extends our understanding of Snow and Benford’s (1988) three frames, specifically regarding their individual potential influence on audience connected to sanitation discourse. On the basis of the foregoing finding on the prognostic frame, it can be tentatively theorized that publics in health contexts tend to appreciate solution-centered messages more than those that point at problems or presume recipients can only act on information when asked to do so.

In summary, this dissertation aimed to understand whether and how environmental sanitation organizations in Ghana use social media, as strategic channels of communication, to influence attitudes and behaviors on sanitation through messaging on social media platforms. Based on the qualitative and quantitative analysis of interview and Facebook data from the selected organizations, it can be concluded that the public relations professionals (i.e.

respondents) who are in charge of these ESOs' communications and social media management are strategic in the use of social media in communicating on sanitation.

The data indicated that the messages respondents' post on social media reflect their intentions for creating these messages. These intentions are summarized as the desire to educate the targeted recipients of messages and to call these recipients to act on the information received by way of applying the proposed ideas and solutions in the messages to their daily lives. Besides these two reasons, they also intended to influence authorities in the sanitation sector to formulate and implement policies that promote proper sanitation practices in Ghana.

Respondents draw information from diverse sources with characteristics that point to one important discovery: differences in organizational culture, which inform these ESOs' orientations and approaches to communication. The majority of the ESOs (i.e. 3 - WaterAid Ghana, IRC Ghana, and Green Advocacy-Ghana) use of stakeholders as sources show their appreciation of a two-way, consultative approach to communication that is archetypical of the symmetrical model of communication. The unilateral source, which the CWSA uses, on the other hand, is akin to the one-way, asymmetrical model of public relations that operates a closed system of communication.

While all respondents were unanimous in stating feedback as a goal, the dichotomy in findings relating to feedback, as reflected in the symmetrical and asymmetrical, reveals a gap in communication approach on the part of CWSA. This is because contemporary public relations communication emphasizes the value of the symmetrical model in establishing and maintaining relationships. The CWSA's asymmetrical approach lacks this important element and therefore defective. Also, by strictly employing three important criteria (as considerations) for scrutinizing the quality of sources of information, respondents displayed a sense of responsibility to targeted

publics of their messages in terms of ensuring that accurate and useful information is conveyed. This orientation to sourcing of information is strategic and also demonstrates respondents' commitment to the audience's information needs. Thus, confirming respondents' attention to the concept of co-creation of knowledge on sanitation as a crucial strategy for achieving mutual lines of communication (a key principle of public relations) in the Ghanaian context.

The motivational frame was the most used strategic frame. Meaning, respondents preferred providing the rationale for action on sanitation to any other frame. Interestingly, platform users were apathetic to this messaging orientation and rather showed a more positive attitude toward the prognostic frame.

The finding on the prognostic frame, which elicited the most engagement as well as the highest positive valence across the four ESOs' Facebook platform, contributes to public relations professionals' understanding of how audience engagement on sanitation topics and problems on social media can be enhanced through the use of the prognostic frame. That is, by framing messages that present solutions to sanitation problems, the posts will be effective not only in generating the desired engagement but also influencing the audience's attitudes. Thus, the finding has extended our understanding of the potential of the prognostic frame in increasing message efficacy on sanitation-related topics.

In more specific terms, data on the research question (1) indicated that respondents use information from two sources: allied and internal sources. Considerations, such as relevance and credibility of source, and contextual usefulness of information were found to be instrumental in ESOs' PR professionals' choice of information sources. Data on research question (2) suggested three key intentions: to educate, call on recipients to act on information received, and to influence authorities in the sanitation sector to take interest in or support sanitation programs. Per

the data gathered on research question (3): strategic frames, the prognostic frame was the most used frame among the three frames—diagnostic, prognostic, and motivational while the frameless frame emerged as a new frame, topping the aforementioned frames of Snow and Benford (1988) in terms of usage by selected the ESOs in Ghana.

Theoretically, the reflection of the above frames in the data analyzed show that Snow and Benford's (1988) typology of frames is used as strategies in creating messages on other environmental problems like sanitation. That is, the viability of Snow and Benford's frames transcends their traditional application in social movement's campaigns, which are perceived as aggressive, compared to health communication context that is considered to be less tense.

Also, the high audience valence toward the prognostic frame in this dissertation deepens our appreciation of the fact that this particular frame of Snow and Benford's typology— this typology has potential in influencing attitudinal change in environmental health context, where little is known about the influence of frames in this area, especially on health-related policies (Koon et al., 2016).

A key finding of this dissertation is that while the motivational frame topped among the three frames and the prognostic elicited the highest valence, the majority of the posts were not framed in a manner that fits into any of Snow and Benford's (1988) three frames that constitute the theoretical framework of this dissertation. The seemingly inconsequential nature of these demonstrative posts (or frame) on knowledge, attitudes, and behaviors draw attention to some level of wastage in the use of the “space” social media provide for meaningful sharing of information. Wastage in that some frameless posts (because they do not fall under Snow and Benford's rubric), as the data showed, were not creatively designed to ease recipients' processing of these posts. For example, some posts (see CWSA's post 8 & 9 in section B) were not

accompanied with appropriate captions to fully inform the receiving audience what the posts are about. These audience basically had to figure out on their own, which may take more processing time. This frame, therefore, requires a bit of polishing in terms of addition of captions to enhance their efficacy, as intended by the ESOs.

New frame—“demonstrative frame” indicated

Given the emergence and enormous usage of frameless posts across the four ESOs, the composition of these frameless posts (i.e. pictures of stakeholder meetings and sanitation events and programs) and the rationale for their usage (to show ESOs’ sanitation efforts) are worth noting. This frame displays ESOs’ activities, with the intent of demonstrating to the target audience that ESOs are working to provide solutions to sanitation problems.

Based on the intent behind this frame, the researcher describes it as a “demonstrative” or “show it” frame, as it presents, in pictorial form, evidence of ESOs’ efforts, such as ongoing stakeholder engagement (e.g. deliberative meetings, sod cutting for sanitation infrastructure, events, and intervention programs) being undertaken in communities to provide sanitation solutions. This was captured in the words of Kwaku Sarpong of CWSA, who stated,

We share pictures and testimonials of the impact of our programs in communication on social media so that members of other communities that resist our interventions can see on our platforms and open up or embrace change.

This idea for sharing pictures of events and programs on social media was also expressed by Ewurabena of Green Advocacy Ghana as she noted:

I am sure that you probably saw some pictures and videos of our e-waste inspection at Agbogbloshie and how we go about e-waste management. We share this to show how it is possible to effectively manage this waste for a better environment.

The use of this frame also suggests the perceived importance respondents attach to the role of visual communication, as part of an integrated and evidence-based approach to science communication (Jensen & Gerber, 2020), which ambit this dissertation falls.

Since undoctored pictures have a high credibility rating, the demonstrative frame is anticipated to have a great potential in terms of persuasive power, as it is capable of eliciting the desired support from the targeted recipients of sanitation messages. This demonstrative frame, proposed by the researcher based on the data analyzed, has a seminal effect on existing framing literature, especially in the areas of environment, science, and health communication, which amplify the ‘show it and not tell it’ concept in visual communication. The addition of this frame, therefore, extends Snow and Benford’s (1988) three-frame rubric (i.e. diagnostic, prognostic, and motivational) applied in analyzing this dissertation’s data.

Limitations and further research

Despite the insights drawn from public relations professionals’ use of social media in environmental organizations in Ghana, the study has its own shortcomings. The use of mixed methods, involving interviews and content analysis, produced uneven data. While the interviews generated rich data from respondents, the basic numerical data from the content analysis was not sufficient to provide the depth required of a typical quantitative study. That said, the qualitative analysis of the posts reached saturation. So, while not generalizable, it provided key insights for this research.

Also, the four organizations selected for the study constituted a small fragment of the ESOs in Ghana. That is, by purposively selecting these organizations, the four ESOs are not representative of the entire population of ESOs in Ghana. The data collected are therefore not generalizable. The topic explored has a wide appeal due to the fact that social media have the

potential to contribute to ESOs' communication goals. However, the study's exclusive focus on the ESOs in Ghana limited its reflection of the general situation on the continent of Africa where it was conducted. A wider coverage of the study would have extended the implications of the findings to the continent and the global south as a whole to help achieve the cause of environmentalism.

In addition, given that this study used nonprofit and governmental organizations, its findings may not be valuable to other categories of environmental organizations that are profit driven, with profit goals. A typical example in Ghana is Zoomlion Ghana Limited, a private profit oriented ESO, whose messaging on sanitation may be financially motivated. Public relations professionals in the for-profit category of ESOs may find the insights from the study less applicable to their organizations' social media goals.

More so, my reflexivity played a role in the interpretation of data. My familiarity with in-house public relations professionals' use of organizational media in Ghana and personal connection with environmental issues influenced the lens through which I interpreted the data. A researcher without any connection with the Ghanaian context will probably make a different meaning from the data, which would have impacted the outcome of the study.

This dissertation used the framing theory through the Snow and Benford's framing perspective on environmental discourse. While this typology of framing was robust for analyzing the data gathered, some other studies have applied the prospect theory in analyzing message framing in health context. Applying a different typology, such as the prospect could have brought forth findings that will provide a completely different understanding of the phenomenon of social media use in the Ghanaian context.

CHAPTER VI

CONCLUSION

Given these findings, and their broader implications on theory and practice, public relations professionals of environmental sanitation organizations should consider cutting the waste on the platforms in terms of maximizing the use of the space covered by “demonstrative posts”(i.e. frame) with messages that convey specific information (or frame) that can influence publics’ attitudes toward sanitation in a positive way. With the efficacy of the prognostic frame in eliciting engagement as well as positive valence, public relations practitioners engaged in disseminating information on sanitation and public health should consider prioritizing this frame in creating messages for maximum message impact.

Audience’s reception to the prognostic frame in the research context seems to reflect a bit about the Ghanaian culture, which among other things, is not so quick to embracing social change although individuals have a high sense of recognition for the need for such change, especially when it will benefit their communities. This culture is seen in citizens’ desire attitude and desire for solutions to social problems, but ironically feel less responsible to contributing directly to the solutions. For example, it is commonplace to see citizens litter the streets of the major cities their communities and rather attribute the cause of filthy streets to the lack of trash bins, which some perceive as the responsibility of government to provide. This culture of receptive attitudes toward solutions is probably the outcome of the data on engagement, which indicated audience’s inclination toward the solution-centered, prognostic frame.

The low engagement across the board raises the question of whether the format of a post (i.e. text, audio, or video) plays a role in nature and the extent of engagement. Future researchers should consider exploring this aspect to determine its potential influence on engagement with sanitation posts.

The asymmetrical model was found in action despite the generally held view in public relations that it limits the fullest realization of the field’s function of establishing mutual lines of

communication. This requires further scholarly exploration to help uncover the actual factors that influence public relations professionals' use of this model instead of the symmetrical, thereby building on this work to further practitioners understanding of how to navigate the hurdles that tie their practice of public relations to the one-way approach to communication.

Following the limitations outlined thus far, it is further recommended that future studies should consider increasing the number of ESOs and the sample size for extensive data, in order to make those findings more generalizable. In line with this recommendation, the varieties of ESOs, including for-profits, should be included in future studies to have a comprehensive, eclectic view of the problem investigated.

Since the data suggest that the prognostic frame is more effective in eliciting engagement on sanitation, testing the efficacy level of each of the three frames in an experimental study of publics could bring forth new insights or affirm the finding on the prognostic frame. This clarity is central to the robustness or otherwise of the current finding on the frame.

The proposed frame, “demonstrative” or “show it”, is an additional frame that the researcher argues could be a useful persuasive frame when creatively designed to ease audience processing of posts that express this frame. This argument is underpinned by the understanding that visual communication has great communicative effects on audience.

APPENDIX I

(Interview Guide)

The purpose of this guide is to help me have a fruitful discussion of the topic of social media use in your organization, specifically how you use social media in your campaigns. The guide contains a list of questions for your response, which will enable me to understand how you are currently using social media tools and the best ways you can leverage the impact of these tools in your communication on environmental sanitation.

Ultimately, our conversation will result in recommendations on the strategic ways of using social media. This will go a long way to help you in designing more effective social media communication campaign plans for your organizations. The guide is divided into four sections, with each section focused on different variables of interest.

Section A

1. What is your job title and how long have you been serving in this position?
2. What is the area/specialty of your degree or qualification?

Section B

4. What are the sources of information you use in creating your social media messages?
5. What are the considerations/reasons for your choice of sources of information?
6. How would you describe your sources of information?
7. Do you have any challenges with using these sources

Section C

8. What do you intend to achieve with your messages on environmental sanitation?
9. What are your engagement goals on social media when you post these messages?

Section D

10. What are the strategies you use in framing your social media messages?
11. How would you describe these strategies?
12. Do you have a communication plan that contains these strategies and examples of messages that align with these strategies (note: ask for a sample that may contain examples of messages, and check whether the messages are tied into the strategies).

APPENDIX II

(Codebook on frames)

Code	Definition	Example
1. Diagnostic	A diagnostic frame is a frame/message that diagnoses or identifies an event or aspect of social life (here, behavior toward environmental sanitation) as problematic and in need of an alteration/change.	e.g. (1). Open defecation causes water contamination, or results in diarrhea. e.g. (2). Pouring waste into your gutter breeds mosquitoes, which causes malaria

2. Prognostic	A prognostic frame is a frame that stresses a proposed or suggested solution to the problem identified.	e.g. (1). Proper disposal of fecal matter stops the breeding of mosquitoes. e.g. (2). Cleaning your gutters prevent mosquitoes breeding.
3. Motivational	A motivational frame is a “call-to- action frame”. It is used to encourage people/community members to participate in a collective action.	e.g. (1). Let’s support the national sanitation day exercise by the government. e.g. (2). Help clean your community to keep everyone safe from diseases.

Frame Engagement/Reaction	Definition	Example
Positive	When a comment expresses support for, or commends an organization for doing something, or sharing important information on a project or intervention.	e.g. (1). Your organization is doing a great job. E.g. (2). This information is very helpful.
Negative	When a comment expresses dissatisfaction or lashes at the organization for not doing enough, or for oversimplification of the issues/problems.	e.g. (1). I don't think your organization is doing enough to help. e.g. (2). Your organization is not helping us, providing us amenities, or tools like dustbins.
Neutral	When no positive or negative comment is made to a post	

APPENDIX III

(A letter of request for permission to conduct research)



September 9, 2022.

The Chief Executive Officer
Community Water and Sanitation Agency
PMB, Kotoka International Airport
Accra-Ghana.

Dear Sir/Madam,

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Hope this email finds you in good health. My name is Isaac Bisilki, and I am currently a graduate student at the University of Oregon, USA. My research focuses on Strategic Communication, specifically the use of social media in environmental communication/campaigns in the Ghanaian context.

I, therefore, wish to request an opportunity to conduct research on the topic: "Exploring the strategic use of social media in environmental/sanitation campaigns in Ghana" at your organization, Community Water and Sanitation Agency (CWSA). With CWSA as one of my sources of data, I would be grateful to have your approval and support for this study.

The purpose of the study is to understand how the Communication/Public Relations Department of CWSA use social media channels in sharing information on water/environmental sanitation issues in Ghana, and to suggest ways of leveraging the impact of these emerging channels of communication.

After the study, I would be sharing the findings with the Public Relations Department. Hopefully, the study will contribute to the effective use of these channels at your organization.

Hope to hearing positively from you.

Thank you.

Isaac Bisilki, MA, Ph.D. Candidate
School of Journalism and Communication
University of Oregon
1275 13th Ave, 97403 Eugene, OR, USA.

APPENDIX IV

(An example of an email response from WaterAid Ghana)

9/9/23, 3:16 AM

Mail - Isaac Bisilki - Outlook

Re: Request to conduct research at WaterAid Ghana

Akosua Ogyiri <AkosuaOgyiri@wateraid.org>

Tue 9/6/2022 11:49 AM

To: Isaac Bisilki <ibisilk2@uoregon.edu>

Hello Isaac,

We acknowledge receipt of your request.

We are happy to help with your research.

Do you have any more information you would like to share.

Let us know how you want to proceed with the questioning so we can plug it in our calendar.

On standby.

Best regards



Akosua Kwafo Ogyiri
Communications & Media Manager
House No. 37 Kinshasa Ave, East Legon, Accra
P.O. Box 16185, Kotoka International Airport

0209989518
030 702 1555 - Accra
037 202 8119 - Tamale
AkosuaOgyiri@wateraid.org

*Ending the water, sanitation, and hygiene crisis
together - for everyone, everywhere.*



<https://outlook.office.com/mail/id/AAQkADE5ZWNiMDQ0LWJjMGYtNGVmNS1hZDZmLTNlMTJjMTE4Y2YzZQAQAkoNnrzwO4VGt0TTLzr%2Bw9g%3D>

1/1

APPENDIX V

(Intercoder reliability test)

Crosstabs

[DataSet0]

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Rater_1 * Rater_2	25	100.0%	0	0.0%	25	100.0%

Rater_1 * Rater_2 Crosstabulation

Count

		Rater_2			Total
		None	Prognostic	Motivational	
Rater_1	None	3	0	1	4
	Prognostic	0	6	0	6
	Motivational	0	0	15	15
Total		3	6	16	25

Symmetric Measures

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Measure of Agreement	Kappa	.926	.072	6.164	.000
N of Valid Cases		25			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

CROSSTABS

/TABLES=Rater_1 BY Rater_2

/FORMAT=AVALUE TABLES

/STATISTICS=KAPPA

/CELLS=COUNT

/COUNT ROUND CELL.

APPENDIX VI

(IRB Approval letter)

EXEMPT DETERMINATION

August 11, 2023

Isaac Bisilki

ibisilk2@uoregon.edu

Dear Isaac Bisilki:

The following research was reviewed and determined to qualify for exemption.

Type of Review:	Initial Study
Study Title:	Exploring the strategic use of social media in environmental sanitation campaigns in Ghana
Principal Investigator:	Isaac Bisilki
Parent Study ID:	STUDY00000683
Documents Reviewed:	• application_-_exempt_determination_2018_RAP (1).pdf, Category: IRB Protocol; • Consent Form.pdf, Category: Consent Form; • Worksheet 2, Category: IRB Protocol;
Approval Date:	7/26/2023
Effective Date:	8/11/2023
Expiration Date:	7/25/2024

For this research, the following determinations have been made:

- This study has been reviewed under **the Pre-2018 Common Rule** and determined to qualify for exemption under **Title 45 CFR 46.101(b) ((2)(ii) Tests, surveys, interviews, or observation (low risk))**.

For this research the following contingency applies:

- Please note that since this research will be conducted in the country of Ghana, this IRB approval is contingent upon obtaining authorization from human subject research review agencies in that country if required by that country's human subject research policies. Documentation of authorization or confirmation that authorization is not required for this research should be obtained from a relevant ethics or regulatory body or designee prior to beginning this research. Please keep a copy of that documentation for your records so it can be provided in the event of an audit.

The research is approved to be conducted as described in the approved protocol using the approved materials. Approved materials can be accessed in the protocol workspace in the IRB module of the research administration portal (RAP).

All changes to this research must be assessed to ensure the study continues to qualify for exemption. Research Compliance Services has developed [specific guidance](#) to help you understand when a modification is required before a change can be implemented. It is your

responsibility to ensure modifications are submitted when required and approval secured before implementing changes to the protocol

Continuing Review is not required for this study. **An institutional approval period has been established based on your application materials.** If you anticipate the research will continue beyond the approval period, you must submit a **Continuing Review Application** at least 45 days prior to the expiration date. A closure report must be submitted once human subject research activities are complete. Failure to maintain current approval or properly close the protocol constitutes non-compliance.

With the submission of your request, you agreed to uphold the responsibilities of the Principal Investigator and have agreed to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB module of the RAP.

If you have any questions regarding your protocol or the review process, please contact Research Compliance Services at ResearchCompliance@uoregon.edu or (541)346-2510. The University of Oregon and Research Compliance Services appreciate your commitment to the ethical and responsible conduct of research with human subjects.

Please consider completing our [user satisfaction survey](#). It only takes a few minutes, and we would like to hear about your experience working with our office!

Sincerely,

Research Compliance Services
on behalf of the Committee for Protection of Human Subjects

cc: Dean Mundy

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