

Review

Effective Communication for Water Resilient Communities: A Conceptual Framework

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Abstract: Communication campaigns to promote the importance of water as a vital but limited resource have evolved in many ways. Nowadays, the resources, techniques and skills to deliver effective communication campaigns are far greater than ever before. Over the past decades, there has been a significant body of research towards improving water conservation campaign communication but with limited success in promoting more resilient behaviours on behalf of water consumers. While the media and technology have rapidly evolved and awareness among consumers may have increased, this has not been sufficient to make the communication effective in changing behaviour. Communications to promote resilience among consumers need to reach a wide audience, capture audiences' attention, build awareness and motivate water consumers to consume water sustainably. This represents a subject in need of further theoretical and conceptual investigation. This research reviews various approaches to effective communication and through a synthesis of the concepts aims to present a new, socio-psychological water conservation conceptual framework. The present conceptual framework integrates emotional appeal, for use on social media platforms and in order to foster more water resilient communities. This framework represents a potentially major contribution in providing guidelines for water sectors to deliver effective video communications on social media platforms.

Keywords: effective communication; water conservation campaigns; marketing communication; social media communication; water-resilient communities; theory of planned behaviour; elaboration likelihood model; emotional marketing

1. Introduction

Study on how to effectively promote water conservation, particularly in terms of which communication methods to employ, how to structure and target messages, and how source credibility influences success, is still lacking [1]. While it is known that decision-making processes involve cognitive processes which are influenced by various factors [2], the field of inquiry in this research investigates how to deliver effective video communication for water resilient communities using social media platforms. Despite being an emerging topic and an interesting area in the marketing context, currently there has been a dearth of research related to conceptual frameworks that incorporate emotional appeal. It is still unclear how emotions can be evoked and how emotional appeal fits into the communication framework affecting online behaviour, attitudes towards advertisements and intention to change.

Demographic changes, urbanisation and climate change are expected to greatly affect water resources, and further exacerbate water scarcity [3]. This means that water supplies that have previously been reliable may no longer be so in the future. Therefore, since

communities are often dependent on water for their livelihood, they need to be resilient to the dramatic effects of sudden changes in the availability of water resources. Although the slowly evolving concept of “water resilience” remains somewhat underdeveloped [4], it is evident that resilience and adaptability are entwined [5] and also linked to vulnerability [5,6]. Communities may become more drought-resilient by implementing water-saving techniques in their houses or other outdoor activities. If the communities take active efforts to decrease risks, they will be able to adapt to the new circumstances, becoming less vulnerable and more inventive towards risk management.

Most water consumers often have low engagement with the water supply system, sewerage, and related environmental service [7]. Quite often, water consumers are either unaware of water-related threats or prioritise other environmental issues and thus water-related issues are often considered as less important [8,9]. Many water consumers are ignorant of the issues and therefore do not consider the need to conserve water. Furthermore, the fact that the issue affects only selected areas means those who live in unaffected areas do not feel that they have to be concerned [10,11]. These perceptions can often make such consumers potentially more vulnerable to water-related threats such as water scarcity.

The effectiveness of water resource management is often reflected through its ability to cater to the increasing demand for water and to provide an uninterrupted water supply, even during drought events [12]. This traditional view of water management assumes that the needs of communities must be met when in fact it is the demands that need to be changed [13]. One way to increase awareness and manage water demand resources is through a water conservation campaign [14,15]. Here, social, psychological and environmental relationships are linked by a complicated and understudied set of behavioural processes, which are nevertheless crucial for designing effective water conservation programs [16,17]. The idea is similar to marketing [9], but instead of encouraging additional consumption by consumers, water conservation programs aim to discourage water consumers, what Kotler and Levy (1971) term “demarketing” [18].

Previous studies reported that the success of water conservation campaigns yields mixed results [19,20]. Due to the fact that water conservation campaigns can be put in place quickly and at a relatively cheap cost, policymakers often use water conservation campaigns as part of water management, especially during supply shortage events. This is when water conservation campaigns become more effective [21]. The effectiveness of general water conservation communication thus remains questionable in terms of research.

Various hazard-related studies have focused on how knowledge, awareness, risk perception, adaptation, preparedness and resilience can be interconnected [22–25]. These are then affected by social-cognitive variables such as sense of community and self-efficacy [26] and the individual’s “locus of control” [25]. This means that promoting community resilience is a complex process. Although awareness is often insufficient to influence community preparedness, it is again reflected in the effectiveness of the communication [23,26]. While providing a water conservation campaign potentially increases awareness and knowledge, some studies have highlighted that enhanced knowledge and supportive attitudes often have little or no impact on behaviour, e.g., [27].

In relation to water conservation campaigns, social media has the potential to increase the extent of the audience reach [28]. Social media platforms allow key stakeholders to interact, thus creating a new model of water management [28,29]. This will also enhance awareness of current water-related challenges and motivate the public to participate in preparing their local communities to address water challenges [30]. To a certain extent, social media has the potential to play an important role as a community support system, making citizens more optimistic about water-related threats.

With these concerns and developments in mind, it seems appropriate to consider the use of a water conservation campaign using video on social media as a way to stimulate communities’ resilience to water scarcity. However, the effectiveness of water conservation campaigns depends largely upon how the communication is delivered [31–33]. Therefore, this research aims to build a new, socio-psychological conceptual framework to communi-

cate via a water conservation video on social media platforms. This will integrate elements of effective communication to motivate a change in water consumption behaviour amongst individual members of communities through the integration of emotional appeal.

The paper is organised as follows. Firstly, a definition of effective communication in the context of this research is proposed and the goals of the communication are highlighted. Secondly, a theoretical review of the elements of effective communication in various yet relevant contexts is presented. These elements will be used to develop and elaborate the conceptual framework. Thirdly, the justification to build the conceptual framework will be discussed and the proposed framework is presented. Lastly, the paper provides a conclusion, followed by implications, limitations, and future research directions.

2. Defining Effective Communication

When it comes to communication that requires changes in attitude and behaviour, effective communication becomes critical. This makes the development of effective environmental-related communications more challenging. Communication experts strive to agree to one definition of communication that covers every situation [34] and as such the definition often varies according to the aims and purposes. As this research proposes to develop a water conservation campaign through social media advertising as a “demarketing” effort, defining effective communication should consider various perspectives, from marketing to social media communication and to the water sector.

In the marketing context, effective communication may be defined as the process by which organisations and audiences interact with one another through their preferred medium, influencing audiences’ decision-making processes and encouraging attitudinal, emotional, and behavioural responses [35]. In the context of social media communication, effective communication refers to the extent to which the communication creates an encouraging online behaviour that leads to more likes and shares [36]. Concerning water conservation campaigns, effective communication is achieved when the communication message positively affects consumers’ intention to conserve water and change water consumption behaviour [31].

The term “effective communication” in this research thus refers to the process of delivering a water conservation campaign leading to influencing or changing the audiences’ decision-making processes to perform positive online behaviour and practise water conservation. The campaign needs to reach a wider audience, allow users to respond to the advertisement, encourage positive perceptions, contribute to more awareness and promote behavioural change. The overall process revolves around two important goals: positive advertisement responses (retain viewers and promote likes and shares) and the promotion of resilience (increasing awareness and persuading viewers to change behaviour).

3. Elements of Effective Communication: Theoretical Background

In this research, a conceptual framework to communicate effectively is built based on a synthesis of the existing knowledge and the theoretical background of effective communication. This section reviews several conceptual and theoretical areas related to effective communication from various marketing perspectives, including social media marketing, the environment and water communication. Consistent with the findings, this section offers some generalisations to create linkages between the variables in the framework. These generalisations are constructed based on valid deductive conclusions to serve as the foundation for the conceptual framework. Furthermore, some identified microelements of effective communication, considered as “ingredients” and acting as suggestive guidelines and specifications to advertising development, are highlighted.

3.1. Marketing Context

Water conservation communication strategies are commonly intended to change water consumers’ behaviour, from the position of unawareness of or disengagement with water-related threats to that of consuming water more efficiently. This can be achieved by moving

the target audience through the decision making stages and moving from the ignorance stage to the action stage [9]. This idea is commonly adopted in the commercial marketing sector such as one developed by Lavidge and Steiner (1961) [37]. Hence, it is relevant to consider the elements of effective communication from the perspective of marketing and advertising theory and practice.

As social media is becoming more acceptable as a new means of marketing, it is important to understand what engages social media users in favourable online behaviour, thereby resulting in an effective advertising campaign. Previous studies conceptualised effective marketing in general and in social media as a concept encompassing informativeness, credibility, entertainment and creativity [38–41]. All of these aspects of advertising have the potential to contribute to the development of positive online behaviour and attitudes, as well as sales.

3.1.1. Informativeness

Since marketing requires the involvement of audiences, messages should predominantly provide information. In the online commercial marketing context, informativeness refers to consumers' overall perception of whether the online advertisement provides complete, relevant and up-to-date information [42]. This is often factual and product-oriented [35]. As messages with high argument quality provide more complete information, some studies conceptualise "argument quality" instead of "informativeness" [43]. However, the message should be comprehensive, summarised and simplified to save time and space [44].

The Internet is often viewed as a source of information and so informative content is important for Internet advertising. Audiences are often attracted to new information and novel experiences and, psychologically, this makes audiences more curious to find out more information. One common reason for the use of social media platforms is to gain information, because social media offers "newsgathering" [45] and "self-media" opportunities [46]. Therefore, it is not surprising to learn that an informative advertisement draws viewers' attention and motivates engagement with the advertisement [36], and positively affect purchase intention [47]. In relation to social media advertisements, the element of informativeness positively affects attitudes [39,48], and can lead to behavioural response [36], thus demonstrating the value of advertising [40,49].

Generalisation 1. *The element of informativeness in the advertisement may persuade viewers.*

3.1.2. Credibility

Credibility is a critical factor in marketing communication [44] and a critical aspect of message persuasiveness [50]. Credibility can be viewed as source expertness (subject-matter experts), source trustworthiness and source experience (source familiarity) [51]. Appropriate and relevant images, design aspects and quality may affect credibility [52,53]. The consumers, as the audience, evaluate the credibility of the advertisement in different ways: advertiser, design, message, content, and brand credibility are judged separately. This implies that, in order to obtain a favourable response to advertising, the advertisement must meet the consumer's demand for credibility. Regardless of whether the viewer is intending to purchase the product or not, engagement of the consumer depends entirely on the subjective components of believability [44]. A lack of perceived credibility often leads to a refusal to trust and rely on the person, organisation, or brand. Previous studies of social media advertisements argue that the credibility factor affects consumers' perceived value of advertising [40,54] and attitudes towards advertisements [55]. This shows that the credibility factor can influence the cognitive influence of an advertising message.

Social media influencers are social media users who can influence large numbers of followers across one or more social media platforms [56]. Although research suggests that celebrities and social media influencers have a positive impact on raising product awareness and on boosting the advertisement to reach wider audiences and be more

viral [57,58], social media influencers have also been found to be perceived as having a lack of credibility and this, in turn, may cause ultimate negative purchase intentions [59,60].

Generalisation 2. *The element of credibility in the advertisement may persuade viewers.*

3.1.3. Entertainment

People have a strong desire for entertainment. The entertainment experience is related to emotions [61,62] and is known to attract the consumer's attention [42]. Entertainment covers motivations related to diverting from personal issues, emotional relief, relaxation, enjoyment, passing time and arousal [63]. Audiences are naturally targeted by these motivations which effortlessly weave into their experiences and strengthen emotional ties to perceived entertaining items.

Entertainment in marketing helps to meet consumer demands and build mutually beneficial relationships between a business and the target audiences. Previous studies have reported that attitudes and behaviour [48] and advertising value [41] were significantly predicted by the element of entertainment. To some extent, digital engagements are also highly dependent on the social media platform, related to other factors such as entertainment value, negative emotions towards the content and platforms, and other user experiences [64].

Generalisation 3. *Advertising is likely to satisfy consumer hedonic needs through the element of entertainment. This is closely related to emotional appeal.*

3.1.4. Creativity

Advertising creativity is the extent to which an advertisement is original and unexpected [65]. The element of creativity has three dimensions: novelty (unexpected and relevant), complexity (rich in multiple meanings) and aesthetic (design-specific) [66]. In today's world, marketers must keep up with marketing trends and developments, by adapting innovations in new circumstances. This is when the creativity factor becomes crucial from a marketing perspective. Similar and closely related to entertainment, creativity in the advertisement is often related to emotion. This emotional response captures a bigger audience, leads to the development of positive attitudes towards products [67] and may influence favourable behavioural responses to social media advertisements [36].

Generalisation 4. *The creativity of advertising holds a more positive response from the viewers and may evoke an emotional response.*

3.2. Environment and Water Sector Contexts

Environmental communication is communication concerning environmental issues, including water issues. In delivering effective communication in the perspective of environment and water, several elements need to be considered as suggested by the existing literature. Previous elements focus specifically on marketing perspectives. However, it is also equally important to identify elements of effective communication in the context of environmental and water sector communications.

3.2.1. Involvement of Stakeholders

Successful water management requires the active involvement of stakeholders: government, utilities, businesses, and the public [9]. This is because stakeholder engagement and participation play a vital role in promoting social acceptance, which is part of resilience. Excellent engagement with stakeholders, particularly water consumers, potentially encourages positive behaviour change, increases support for sustainability and investment [68] and enhances the development of water resilient communities [69]. In this case, communication is based on stakeholder participation, and that extra knowledge aids complicated decision-making in achieving communication goals.

Communicating during any water-related environmental extremes such as droughts and floods is crucial especially to the affected groups. It is important to integrate the

expertise and actions of relevant stakeholders to increase resilience using effective bi-directional communication [70]. This allows perceptions, knowledge and practices to be shared, mutual understanding to be achieved and trust between the communicators to be extended. Mefalopoulos (2005) claimed that the traditional idea of media and message communication design is inadequate and further suggests that communication should be designed properly, allowing stakeholders to share perceptions, knowledge and practices, and taking into account all the different perceptions, needs, and knowledge [71].

Generalisation 5. *The design of water conservation campaign communications should allow stakeholders to share perceptions and knowledge. This will enhance the credibility of the communication.*

3.2.2. Messaging Strategy

Telling the public what to do might sound like an easy task but often the communication is not effective [72]. This could be influenced by how the advertising message is designed, which involves the art of messaging strategy to establish a connection between what is being advertised and its target audiences. Message design and message strategy ideas are now being adapted in social marketing [73,74].

Any written or spoken remarks, phrase or wording that conveys to an audience is referred to as an advertising message. The public needs clear, on-point messages and non-conflicting information. Moreover, the message must be delivered in a form of subtle wording that appeal to different values, motivate social norms, evoke emotions and trigger certain biases [75]. The design of the message should consider its ability to shift the target audience to respond to the source, promote attitudinal and behavioural change, and further encourage conversations both offline and online, often called “word-of-mouth”.

Transparent. Being transparent in communication is the basic foundation of utility success [76]. Transparent information increases the level of trust towards the management [77]. For example, water consumers may be provided with transparent information about household-level water uses and public behaviour regarding water usage.

The ability to convey how behavioural change can make positive differences. Communication should also be capable of motivating the public to be competent, informing them of the importance of their own contributions in making better conditions [72]. One way to do this is by informing the public about the rewards of pro-environmental actions. This induces positive emotions and eventually leads to disincentives for unsustainable actions [78]. To such an extent, future messages to promote water conservation should also be able to convey how behavioural change can make a difference to the whole community [10] and to focus on the social benefits in order to promote increased change [79].

The ability to portray environmental values. People with a close relationship with nature tend to have a stronger motivational force towards sustainable behaviour [80,81]. Portraying environmental values promotes the sense of connectedness to the environment and thus motivates environmental behaviour [78]. This is because, the greater the perception of environmental value, the greater the motivation to reduce environmental problems.

The ability to portray the environmental impacts of ignorance. Moving people through stages of positive change requires communication to be informative and educative, to help the public to make an informed decision and recognise any potential compromises [78]. Framing the environmental issues may influence opinion and judgment about the issue and thus the capability of responding positively [75]. Hence, the communication should also be able to inform the audience about the environmental impacts of ignorance. This can be done by linking environmental concern with empathy.

The ability to put the audience in the position of imagining life without water. The visibility of drought impacts is a key issue in communications [82]. Hence, the message should be able to put the audience in the position of imagining what it would mean to have no water [10]. This explains why water conservation campaigns are less effective when the drought event has finished [19]. The general public often needs to see the effect of drought and the impact of the “true” picture of a drought event if the impacts are mitigated or hidden before they can be recorded and communicate. A study was

conducted to examine how messages with different temporal frames (present and future framed) influence individuals' perceptions of, and reactions to, water conservation [83]. The study concluded that a present-framed message results in a more positive attitude towards water conservation than a future framework [83]. This explains why short-term natural risk information tends to be effective.

Generalisation 6. *A positive advertising effect is related to the design of the message. This may affect the informativeness and credibility of communication. Depending on the message design and framing, the messaging strategy may be closely related to emotions.*

3.2.3. Story-Telling Manners

Social media allows content marketing in which storytelling becoming the key to attract and retain customers [84]. Story-telling can be regarded as narrative [85], and this will help the audience to process the content, and thus enhances self-brand connections. Storytelling in advertising is one of the important factors for effective communication [86]. Water utilities should consider becoming storytellers about the investment, engineering, and science behind sustainable water supplies [76]. This kind of communication effectively pushes the audience to respond to the advertisement, and ultimately elicits an emotional response [86], mainly as a result of either factual or emotive narratives [87].

Furthermore, the audience's interpretation of the information is based on their experiences that they can fit into the narration. This is related to the self-reference strategy. It has been suggested that something can be better remembered when it is familiar and relatable to [88]. This represents a way of persuading customers by encouraging the audience to relate themselves or their own experiences to the marketing contents and thus helps them to recall the presented information [89,90]. Similarly, it has been suggested that the persuasion of viewers can be increased if the information is linked to personal experiences and memories [89]. Connecting to the advertisement through memory and experience may lead to a positive relationship with brand attitudes and positive behavioural intentions [91].

Generalisation 7. *Storytelling promotes a positive viewers' response to an advertisement. Depending on the content, the audio and the storyteller, the narrative nature of advertisement is related to the elements of informativeness and credibility, and may ultimately elicit an emotional response.*

3.3. The Missing Element: Emotional Appeal

There exists considerable literature in the field of psychology and behavioural science that links emotions to decision making, judgement and persuasion [92–95]. While both communication and emotion may seem to have little in common, emotions play a big role in communication [96]. In the marketing sector, communications have been found to have a greater impact if they make an emotional connection, as emotions are known to power decision making. This is why advertisers tend to emphasise the role of emotion and consider using it for diversified advertising strategies. For these reasons, this research proposes that emotional appeal is the main element of effective social media advertisement communication.

Previous studies have integrated emotion into their communication framework [36,97,98]. For example, Mankad (2012) proposes a model to understand the adoption of decentralised systems and demonstrated that emotions are influenced by the message framing technique which then affects decision making [98]. In the context of social media marketing, although Lee and Hong (2016) argue that emotional appeal does not affect clicking and sharing advertisements, their study only used still-images rather than video in their advertising campaign [36].

Specific to water conservation campaign communication, the use of emotional appeal as an element of effective communication remains underexplored. There are, however, two identified studies that indirectly use emotional appeal. Albertarelli et al. (2018) indirectly evoke emotions through entertainment by implementing a water conservation game to induce behavioural change [99]. Tijs et al. (2017) indirectly evokes emotions

through environmental and monetary appeal and reported that environmental appeals led to a larger reduction in showering frequency than monetary appeals [100].

3.3.1. The Role of Emotion in Marketing and Advertisement

As the world has become more digital and globalised, consumers have become exposed to various types of media and at the same time have increasingly gained control over what, when, where and how they consume this media. For example, audiences tend to develop a negative attitude towards intrusive advertisements and will often avoid them whenever possible. This is because audiences are goal-oriented and judge online advertisements even more harshly than those in traditional media, such as television [101]. It is therefore imperative to incorporate emotional appeal in a communication strategy to attract the audience's attention, make connections, increase the advertisement exposure, affect decision-making and promote behavioural change.

Marketing strategy uses background music, colour, cinematography and message design to develop messages that persuade target audiences by affecting both emotional and rational motives. A great deal of research exists on the role of emotions in influencing the behaviour of respondents through emotionally appealing advertisements. Emotional appeal is significantly effective in the context of green products [102], advertisement viewing time [103] and sales [104]. For example, humorous content with higher violence intensity appears to elicit greater involvement with the advertisement message, better information retention, higher pass-along probability, and greater advertisement likability [105]. In addition, anger helps raise the perceptions of consumers and promotes more participation concerning politically-related advertising [106].

Evoking emotions in advertisements efficiently induces more social points in terms of attention and social sharing. As the goal of marketing is to make a viral sensation, many have succeeded admirably by integrating emotional appeals into the advertisement. For example, in terms of attention and social sharing, content that induces high arousal tends to be shared more frequently [107]. Some studies argue that there is a positive relationship between advertisements that evoke positive emotions and social sharing [108]. Additionally, elements of surprise and joy effectively capture attention and retain viewers [103]. Embedding the elements of a drama, such as surprise, likeable characters, and a plot, significantly affect positive uplifting emotions and enhance more sharing [108]. The basic line is that people will only watch and share materials if it resonates with them, and their decisions are based on emotion.

3.3.2. The Role of Emotion in the Environment

Water in the environment is commonly linked to a range of positive experiences, perceptions and emotions [109,110]. Environmental emotions are divided into two parts—the sense of duty and the sense of belonging, with both having a significant impact on behaviours towards the environment [111]. This shows that emotion can be a powerful element to move people to practice sustainable behaviour. For example, emotions play important roles concerning the adoption of sustainable technologies that are perceived as risky by the general public [98]. Similarly, Kollmuss et al. (2002) suggest that stronger emotional reactions will potentially have higher expectations to engage in pro-environmental behaviour [112].

In relation to the current climate change phenomena, the opinions of individual citizens towards climate change are usually influenced by emotion rather than scientific evidence [113]. Roeser (2012) argues that emotions are often the missing link in climate policy communication [114]. This explains the fact that, even though there is an increasing number of people accepting the facts about climate change, very few do anything to change their behaviour in response.

Generalisation 8. *Emotionally appealing advertisement plays an essential role in advertising.*

Generalisation 9. *When making a decision, both positive and negative emotions affect information processing.*

4. Building an Effective Communication Framework

Behavioural change measures the success of any campaign. Similar to the decision to stop smoking or start exercising, behaviour change in water conservation is a process that involves individual decision-making processes. In a water conservation campaign, providing information and educating water consumers are expected to be necessary, but this is insufficient to promote behavioural change [115]. This is because behavioural change requires decision-making, and decision-making is affected by “internal” factors such as attitudes and habits and “external” factors such as the environment and social norms [115].

Water conservation can be viewed as a pro-environmental behaviour [116] influenced by sociodemographic factors, most commonly age, education, income, and gender; and psychological factors such as attitudes and beliefs e.g., [117]. It is known that the driving forces of behavioural change in water conservation may include normative influence, personal involvement and activity [118–120], as well as household characteristics [121,122]. Hence, in order to conceptualise other key driving forces of behavioural change in water conservation, this research further uses several strands of literature to develop a new framework.

When water consumers are exposed to a water conservation campaign video, it is important to raise a question of what exactly influences the decision to positively respond to the video and start conserving water. The individual as a member of a community may start forming an opinion about the video and questioning whether or not conserving water could be beneficial. Individuals may also pass information to others about water conservation through word-of-mouth and start judging their own capability and confidence in practising sustainable water consumption. The individual may then eventually start conserving water. One theory that could explain and predict such behaviours is the Theory of Planned Behaviour (TPB).

Furthermore, it is also known that social media platforms offer effective marketing strategies by employing “persuasive” communication. When a persuasive message is presented, the viewers will have to take the time to elaborate. This is part of the decision-making process. The question is—how likely is the individual to elaborate? For this reason, this research also uses the Elaboration Likelihood Model (ELM), a theory of persuasion, to develop the conceptual framework.

4.1. Theory of Planned Behaviour (TPB)

As elaborated by Icek Ajzen, TPB involves the psychological theory that assumes intention to perform desired behaviour is governed by “motivational factors” [123]. TPB’s central factor is the intention of the individual to change behaviour which is influenced by three core components: attitudes toward the behaviour; subjective norms, and perceived behavioural control. These variables have been used in previous studies as predictors of water conservation behaviour [124–126]. The first determinant is “attitudes toward behaviour”. Here, the individual tries to make judgements about the behaviour. Secondly, in terms of “subjective norms”, the individual tries to make judgments based on what other people think about the behaviour. This focuses on everyone around the individual such as his or her social network, friends, and family. Lastly, “perceived behavioural control” defines how easy or hard it is to display certain behaviour.

4.2. Elaboration Likelihood Model (ELM)

ELM was developed by Petty and Cacioppo in the 1980s [50,127]. ELM has been used in various disciplines such as health [128], tourism [129], transport [130], products [51] and water conservation campaigns [31]. ELM proposes that message receivers can be persuaded in one of two ways: a central route to persuasion or a peripheral route to persuasion.

Central Route to Persuasion. The central route persuades viewers mainly by rational, reasonable, and sound messages. This route involves careful, thoughtful, logical, conscious,

and deliberate thinking. Hence, this requires the individual to have the ability to process the message to allow counterargument, resulting in increased involvement [127]. Here, individuals will think about any issue-relevant information, for instance, water issues, how to conserve water, and the benefits of water conservation. Attitudinal changes via this route are more often to be permanent but difficult to achieve [127].

Peripheral Route to Persuasion. The peripheral route is mainly based on emotional appeal. Hence, it is sometimes termed the “Emotional Route to Persuasion” [131]. As opposed to the central route, viewers make a decision simply using his or her heart rather than his or her brain. Individuals taking the peripheral route to persuasion are influenced by some simple cue independent from the information presented. For example, advertisers may use images or background music to evoke emotional appeal. Individuals may also use the peripheral route when experiencing trouble in understanding the message and thus be less motivated to perform central processing [50]. Additionally, individuals may also be diverted to this route if they have little time available to think about the message and decide not to elaborate further on the decision. At times, the receiver decides to agree with the message simply because the source appears to be an expert. Unfortunately, attitude changes in the peripheral route tend to be temporary [127].

4.3. Conceptual Framework

Drawing on the literature reviewed and generalisations in the previous sections, the proposed conceptual framework is presented in Figure 1. The conceptual framework integrates TPB and ELM to help analyse how social media users (water consumers) form an intention to conserve water based on the given persuasion routes.

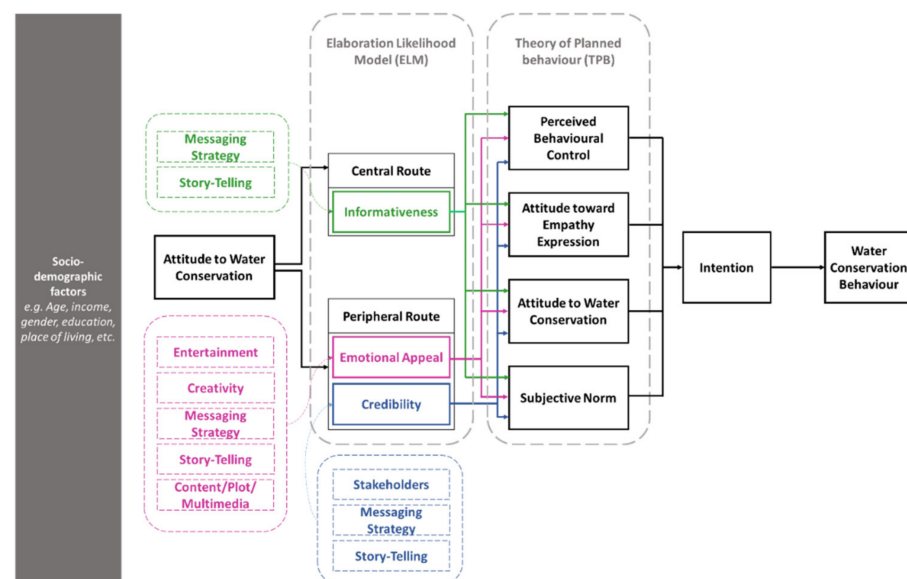


Figure 1. A socio-psychological water conservation conceptual framework for use on social media platforms.

Since the communication is intended to gain positive advertisement responses and promote resilience, the attitude toward the behaviour in the TPB is further divided into two strands: the attitude toward empathy expressions and the attitude to water conservation. Attitude toward empathy expression can be defined as an inclination to respond favourably or unfavourably about the presented communication [36], such as clicking the “likes” and “share” buttons associated with the video. A high level of perceived behavioural control, positive attitudes toward empathy expressions and water conservation, and favourable social norms will all form a behavioural intention and in turn lead to displayed behaviour. In other words, if that individual believes that water conservation is manageable, displays a favourable manner about the advertisement, thinks that water

conservation is a good idea, and believes that everyone else thinks it is a good idea, the behavioural change will be more likely to occur. If one of those determinants is unfavourable, then the probability of behavioural change will be lower.

The identified elements of effective communication are believed to play a substantial role in forming viewers' behavioural responses. Therefore, in the ELM part of the model, this research proposes that the element of informativeness is the central route to shift viewers. Here, it is vital to consider what sort of message needs to be incorporated, hence, messaging strategy plays a significant role. The message may also be presented in a storytelling manner. Water consumers are more likely to start conserving water, for example, if they find the content of the video highly informative and relevant. Although previous studies have observed that informative water conservation campaigns provide mixed results, in general informative campaigns may provide awareness and knowledge and eventually leads to attitude change and enhance resilience [23,132]. Highly informative messages provide more complete information with stronger arguments and thus will positively influence the way viewers perceive water conservation behaviour, attitude toward empathy expression, attitude toward water conservation, and subjective norms.

By contrast, this research suggests that viewers who are influenced by the elements of credibility and emotional appeal will take a peripheral route to process the message. This study uses emotional appeal as the main cue in the peripheral route in which the emotions can be evoked by other microelements such as entertainment, creativity, how the message is designed, the narrative nature and the content. Alternatively, credibility may be based on the inclusion of stakeholders and further messaging strategies as well as the role of the storyteller. Both peripheral cues act as predictors of perceptions of water conservation behaviour, attitudes toward empathy expression, attitudes toward water conservation and social norms.

5. Conclusions

Effective communication concerning social media marketing can be challenging, in that the number of "views", "likes" and "shares" can be interestingly high enough, but there is no correlation in terms of sales or behavioural change. In terms of water conservation campaigns, the success of the message can be viewed when the targeted audience start to conserve water. Therefore, marketing campaigns aimed towards bringing about water conservation behaviour need to allow users to respond to the advertisement. This may extend the advertisement to a wider audience, contribute to more awareness, induce positive perceptions, create the word-of-mouth effect and finally lead to the efficient consumption of water. Building on the evidence drawn from the existing literature, this research presented a social media water conservation framework that is capable of developing an emotional connection with the target audience to spark new behaviours and actions, capture the viewer's attention and reach wider audiences. Although previous literature has provided various important clues on achieving effective water conservation campaigns, this research suggests that the conjunctive use of informativeness, credibility factors and emotional appeal offers more effective communication. A particularly promising application of such an integrative approach is the use of the element of emotional appeal. While all three elements (informativeness, credibility and emotional appeal) may persuade viewers, the element of emotional appeal pushes the target audiences to the ELM's lower end of the continuum to engage with the advertisement and affect their decision making.

6. Implications, Limitations and Research Directions

This research has proposed a new conceptual framework for effectively communicating with water resilient communities. It contributes to the literature by identifying the elements of effective communication for water-resilient communities using social media platforms. The main theoretical implication is that this study improves the understanding of effective communication in various contexts.

Various governments and agencies have recently published short-term and long-term strategies suggesting that better communication between water companies and water consumers is crucial. From a practical perspective, this framework will serve as a set of guidelines for the water sector industry to communicate with domestic water consumers. The framework may also be useful for the marketing sector to develop future effective communication.

However, the current research has a few limitations. The proposed conceptual model is purely based on the existing theory and evidence in the literature. Some studies do not see any correlation between the two variables in the framework. For example, Lee and Hong (2016) hypothesised that emotional appeal is positively related to attitude toward empathy expression; the study, however, found that the hypothesis was not supported [36]. Since it is known that both video and images play a different role in marketing strategy [133], the visual elements of the video are expected to influence attitudes differently. In addition, Maduku (2020) interestingly found a negative association between perceived source credibility and attitude to water conservation [31], but highlights the importance of credibility to persuade water consumers, even if, often, the credibility of the available water conservation campaigns does not sufficiently trigger enough persuasion [31]. Future research is needed to investigate and test the relationships in the framework.

The practical application of the presented conceptual framework may be limited as the elements of effective communication may not be exhaustive. Further research is then required to explore other elements of effective communication. It would also be worthwhile to replicate this study using traditional platforms such as television.

The intention to perform a new set of behaviours is influenced by socio-demographic background. The proposed conceptual framework itself is independent of the socio-demographic factors and assumes that one water conservation video fits everyone regardless of different socio-demographic backgrounds. Therefore, the determinants in the conceptual framework may consider socio-demographic background in order to account for heterogeneity.

In addition, the agricultural sector is the most dominant global freshwater user, where farmers are the main affected communities and suffer most from water scarcity and drought. This research, however, focuses on individuals as members of water resilient communities. Future water conservation communication research may focus on communicating with agricultural and even industrial water consumers.

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