

# Role of Social Media in Enhancing Climate Change Literacy Among Egyptian Users

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## Abstract:

Social media can be an effective tool for increasing climate change literacy by raising awareness, promoting engagement, and providing access to information and resources. Through social media platforms like Twitter, Facebook, and Instagram, individuals and organizations can share news articles, research studies, and videos that educate people about climate change and its impact on the environment.

This research aims to investigate the role of social media in educating and informing Egyptians about climate change. Specifically, it seeks to explore the relationship between social media consumption and climate change literacy, examine whether social media has been able to make people feel the urgency of the climate change crisis and investigate the extent to which climate change literacy has increased in Egypt. To achieve its objectives, the quantitative study used the survey tool to assess the relationship between the use of social media and the nature of climate change literacy formation.

The study findings confirmed that the Egyptian audience fully depends on social media as a main source of climate change-related information, and social media has a significant impact on raising awareness and knowledge of climate change issues, as well as shaping Egyptian users' perception of it. Nevertheless, the existence of negative aspects, which were reported by the survey respondents, considering prevailing misinformation on social media websites.

## Keywords:

Social media, Climate Change, Literacy, Education, Awareness, Engagement

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### **Introduction:**

Climate change is one of the most pressing issues facing our world today, with the potential to have a significant impact on the planet and its inhabitants. People must be educated about the causes, effects, and potential solutions to this problem to make informed decisions and take appropriate action. The media has the potential to play a vital role in this process, as it can serve as a powerful tool for raising awareness and educating Egyptian users about climate change.

The term "climate change literacy" refers to an individual's understanding of the science behind climate change, as well as their ability to evaluate and respond to the issue. As such, it is an essential component of climate change mitigation and adaptation efforts. The media can contribute to climate change literacy by disseminating accurate and reliable information, promoting dialogue and discussion, and highlighting the real-world impacts of climate change.

Noting that media literacy experts Elizabeth Thoman and Tessa Jolls argue that media literacy involves critically analyzing media messages and institutions, exploring how representations are normalized in society, encouraging multiple perspectives, and promoting mindful and critical media consumption. It is not simply media bashing, production skills, or teaching with technology. Additionally, media literacy consultant Faith Rogow cautions against conveying pre-ordained denouncements of the media and encourages teachers to foster critical environments that allow for substantiated interpretations that may differ from their own, to avoid creating a cynical attitude among audiences (Malik, 2008). It was mentioned (Share, 2020) that media literacy and environmental education can be effectively united through the framework of critical media literacy. Critical media literacy is based on the six conceptual understandings and questions: social constructivism, languages/semiotics, audience/positionality, politics of representation, production/institutions, and social and environmental justice. This framework allows for the exploration and questioning of media representations, promoting social and environmental justice by critiquing dominant ideologies. While media education has not always supported sustainable practices and environmental perspectives, critical media literacy offers the potential for transformative education.

This research aims to explore the role of media in promoting climate change literacy. Specifically, it will examine how different forms of media (e.g., news, social media, entertainment) are currently being used to raise awareness about climate change and educate the Egyptian users. It will also investigate the relationship between media consumption and climate change literacy, including the potential benefits and drawbacks of different media sources (U.S. Global Change Research Program, 2009) and (Compass Education, 2014).

Ultimately, this study seeks to contribute to our understanding of how media can be harnessed to promote climate change literacy and to facilitate effective action in response to this urgent issue. By shedding light on the role of media in shaping Egyptian users' perceptions of climate change, this study has the potential to inform media practitioners, policymakers, and educators alike.

**Research Objectives:**

- 1- To understand the role of social media in playing its role in educating and informing Egyptians on climate change.
- 2- To investigate the relationship between social media consumption and climate change literacy.
- 3- To find out if social media was able to make people feel the urgency of the climate change crisis.
- 4- To investigate the increase in the literacy of the Egyptians towards climate change.
- 5- To identify the demographics of the Egyptians, mostly affected by social media concerning climate change.

**Research Importance:**

The research on the role of social media in enhancing climate change literacy among Egyptian users is important for several reasons:

1. Climate change is a pressing global issue that requires widespread awareness, understanding, and action. By investigating the potential of social media in improving climate change literacy in Egypt, the research can contribute to addressing the knowledge gap and promoting informed decision-making and action on climate change in the region.
2. Social media has become a pervasive communication tool, particularly among the younger generation, in Egypt and many other countries. Understanding the effectiveness of social media in

facilitating climate change literacy is crucial in harnessing its potential as a communication platform for disseminating accurate and reliable information, fostering discussions, and engaging users in climate change-related topics.

3. The findings of this research can inform the development of targeted interventions and strategies to enhance climate change literacy in Egypt. By identifying the barriers and challenges to using social media for climate change literacy, such as misinformation or information overload, the research can contribute to the design of effective interventions, such as user education, content curation, or community engagement, to improve climate change awareness and understanding among Egyptian users.
4. This research can contribute to the existing literature on information behavior, media studies, and climate change communication by investigating the unique context of Egypt. Research on social media and climate change literacy in Egypt is still limited, and this study can fill this gap and provide valuable insights into the role of social media in the Egyptian context, which may have cultural, social, and political implications.

Overall, the research on the role of social media in enhancing climate change literacy among Egyptian users has significant importance in addressing the urgent need for climate change awareness and understanding in the region, informing the development of effective interventions, and advancing the knowledge in the field of information behavior and media studies related to climate change communication.

#### **Research Problem:**

Climate change literacy is crucial in addressing the challenges posed by climate change, as it empowers individuals with the knowledge and understanding needed to make informed decisions and take appropriate actions. Social media has emerged as a prominent communication tool in Egypt, with widespread usage among the population. However, there is limited knowledge about the effectiveness of social media in enhancing climate change literacy among Egyptian users.

Despite the potential of social media to disseminate information, facilitate discussions, and raise awareness about climate change, it is not clear to what extent social media can effectively contribute to improving climate change literacy among Egyptian users. There is a

need to investigate the role of social media as a platform for enhancing climate change literacy in Egypt, given the urgency of addressing climate change impacts in the region.

This research problem seeks to identify the potential of social media in facilitating climate change literacy among Egyptian users and understanding the factors that may influence its effectiveness. The study aims to contribute to a better understanding of the role of social media in promoting climate change literacy in the Egyptian context and inform the development of strategies and interventions to effectively utilize social media for this purpose.

### **Literature Review:**

#### **Media Literacy and Environment:**

Media literacy studies have emerged as a crucial field of inquiry, as it has become increasingly evident that our society is inundated with an ever-expanding array of media messages that shape our perceptions and attitudes towards the world around us. Through a comprehensive literature review of existing research, it is apparent that media literacy studies offer important insights into how media messages are constructed, disseminated, and consumed, and the impact that these messages have on individuals and society. Such studies have the potential to inform education and policy initiatives aimed at promoting critical thinking, civic engagement, and responsible media consumption among diverse populations.

Both studies, (Reis, Losif, & Reis, 2015) and (Hafez, El-Rafee, & Hamed, 2022), examine the potential of media literacy-based instructional strategies to promote critical thinking skills and awareness of environmental issues among students in different educational settings. While the former study focuses on how media literacy can be integrated into the curriculum of a Brazilian public school to promote environmental literacy, the latter study investigates the role of media education in developing children's skills when using social media sites. Both studies highlight the importance of critical classroom practices in promoting environmental literacy and the need for educators to challenge dominant discourses and promote alternative perspectives towards environmental issues. Additionally, both studies recommend the establishment of media education institutions that support and develop students' skills in dealing with digital media, whether through

classroom instruction or other means. Overall, these studies offer valuable insights into how media literacy and media education can be used to promote critical thinking skills and environmental literacy among students in different educational contexts.

Exploring the extent to which digital literacy frameworks and definitions engaged with the environmental impact of digital activity, and proposed ways to incorporate this important component into digital literacy education according to the (Tiernan, 2022) study. Through examining popular digital tools and services, as well as existing digital literacy frameworks and definitions, the paper highlighted the relative lack of engagement with the environmental impact of digital activity. The paper urged for the inclusion of environmental impact as a separate strand in digital literacy frameworks and proposes ways to achieve this with students. Overall, the paper emphasizes the need for digital literacy education to address the environmental impact of digital activity to promote more responsible and sustainable digital behaviour.

However, examining the limitations of traditional media literacy pedagogy in addressing the complexities of contemporary media contexts and their impact on wider institutional governance and political economy is studied (Nichols & LeBlanc, 2021). It argues that an orientation of "civic media ecology" can provide a wider repertoire of resources for navigating these environments, by considering the imbrication of material, aesthetic, computational, and regulatory actors with wider networks of the agency. Drawing from theories of scalar assemblages, post-humanist performativity, and platform studies, the article suggests that an ecological perspective does not obviate traditional representational concerns of media literacy but augments them by making legible the performative entanglements that constitute and animate processes of media production and consumption.

### **Media and Climate Change**

Recent years have seen extensive documentation of how media influences the public's perception and comprehension of environmental issues.

In (Jan, Khan, & Mahsud, 2020) study questioned the key issue of the role of media in climate change awareness and literacy in Pakistan. Results revealed that "poor climate literacy" and awareness among people are one of the main causes that so far these projects are not effective. It was found that many factors are behind the poor climate

literacy which as the lack of political desire and dedication, conventional education system, no climate curriculum in educational systems, no national program for climate awareness, and lack of media initiatives. Another question was raised in (Nisbet, Cooper, & Ellithorpe, 2015) study which is the presence of a correlation between media usage and audience in the context of depending on it when seeking information about climate change and if this affected by their ideological biases. It was revealed that there is a news and entertainment content belief gap. In addition to a knowledge gap in the edutainment content. It was revealed too that the people who are attracted to political news, lose their attraction towards climate change issues information. However, it only increases when they are exposed to science news only.

The role of media in creating public awareness about climate change was also addressed in (Kakade, Hiremath, & Raut, 2013) where it was examined in the city of Bijapur. Its findings highlighted that most of the citizens said that the media content concerning climate change is appropriate and that they receive comprehensive information concerning climate change through media. It was also highlighted that the citizens in Bijapur depended on the television and seek information about climate change then comes to the newspapers, then radio and lastly the internet.

The role of the media in shaping public understanding and perception of climate change was also identified in the (Schäfer, 2015) study. The ways the media portrays climate change and how this portrayal influences public attitudes and behaviours were also examined in this study. It was found that social media can be a powerful tool for engaging and mobilizing different audiences, but it also poses challenges in terms of accuracy and reliability.

An experiment by (Damico, Baildon, & Panos, 2018) study was conducted on three pairs of preservice teachers coming from different academic backgrounds and climate change beliefs and was asked to evaluate the "reliability of two media sources that make opposing arguments about climate change." Results showed that the three pairs mentioned three aspects of reliability which are "provenance, purpose, and content" and three reliability stories that the preservice teachers who are having the "other side" represented, wanting more information

or evidence to support an argument, and acknowledging one's own identity and perspectives."

### **Social Media and Climate Change**

The role of social media specifically was examined in various research as several studies have investigated the impact and significance of social media in various contexts concerning climate change.

The impact of the social media revolution on the discourse surrounding climate change was investigated in (Drieschova, 2021) study where it was found that the advent of social media has led to a significant shift in the climate change discourse, with social media platforms providing new avenues for individuals and organizations to engage in climate change conversations. Social media has enabled a more diverse range of voices to be heard, including marginalized communities and non-expert stakeholders. The study also found that social media has facilitated the spread of climate change denial and misinformation, creating challenges to public understanding of climate change issues.

The impact of social media on climate change among African youth was addressed in the (Kachali, 2020) study. The researchers explored how social media is used by Malawian youth to access climate change information and to examine the impact of social media on their understanding and response to climate change. The study found that social media is a crucial source of climate change information for Malawian youth and has the potential to facilitate their engagement in climate action. The study also revealed that social media can contribute to the perpetuation of misconceptions and misinformation about climate change. In addition, youths' beliefs about climate change via social media were addressed (Diehl, Huber, Zúñiga, & Liu, 2021). It was found that social media use is associated with individuals' beliefs about climate change, with social media users more likely to express disbelief or uncertainty about climate change. This association is moderated by news consumption, political ideology, and trust in science, with those who consume more news, have a liberal political ideology and trust in science being less likely to express disbelief or uncertainty about climate change on social media.

In addition, the relationship between social media use and the perceived efficacy of climate change advocacy across several European countries was examined in the (Tuitjer & Dirksmeier, 2021) study. Results



suggested that social media use is positively associated with perceived efficacy, although the strength of this relationship varies among countries. The findings highlight the complex interplay between social media use and individual perceptions of climate change communication effectiveness. Also, the relationship between social media use and the polarization of public opinion on climate change in the United States was explored (Gladston & Wing, 2019). The study found that social media use is significantly associated with increased polarization in public opinion on climate change in the United States. The polarization is largely driven by users' exposure to echo chambers and filter bubbles on social media platforms. These findings suggest that social media platforms play a significant role in shaping public opinion on climate change and may contribute to a growing divide in the perception of climate change issues among the American public. Moreover, (Falkenberg, et al., 2022), it was found that social media platforms have played a significant role in creating echo chambers and filter bubbles that contribute to the growing polarisation of public opinion on climate change. Social media has facilitated the spread of misinformation and has limited the exposure of users to opposing views. This polarization has resulted in a more divided and less productive discourse on climate change issues.

Investigating the potential of integrating social science research with climate education to improve climate literacy was in (Shwom, Isenhour, Jordan, McCright, & Robinson, 2017). The study found that incorporating social science research into climate education can enhance climate literacy by providing a deeper understanding of the social, cultural, and economic factors that influence climate change. The integration of social science research can also help individuals recognize the importance of climate action and promote behavioural changes that can mitigate the impacts of climate change.

In (Ogunjinmi, Ogunjinmi, & Adekoya, 2016) study where the impact of social media was explored on climate change knowledge and concerns among Nigerian users at the Federal University of Technology Akure, Nigeria. Findings pointed out that there is an impact of using social media in obtaining information about climate change, and consequently awareness is increased. While Pakistan was examined in (Ramzan, Shehzadi, Khawaja, & Adeeb, 2019) study where the

findings revealed considerable differences between social media users and non-users regarding awareness about climate change. Also, talking about climate change on social media and identifying whether it's a platform for engagement and behaviour is explored by (Fernandez, et al., 2016) study. It was found that most of the analysed accounts on the Twitter platform pointed out that its users are at the "desirability" stage, however, they want to change, but cannot find out the way yet.

In (Deo & Prasad, 2020) study, the engagement behaviour of Facebook users on a fan-based page related to climate change was investigated. The research analysed user activity data over two years, focusing on patterns of engagement and user demographics. Results indicate that the page attracted a diverse group of users who engaged with climate change content through a variety of actions, such as liking, commenting, and sharing. The findings provide evidence of the potential for social media platforms, such as Facebook, to facilitate engagement with climate change issues among a broad audience.

Also, in (León, Negredo, & Erviti, 2022) study, the researchers proposed a set of principles for an effective visual representation of climate change on social media platforms. Drawing from research on visual communication and climate change engagement, the researchers identified key principles, such as using emotionally compelling images, incorporating elements of familiarity, and using data visualization techniques. The proposed principles aim to enhance social engagement with climate change content on social media by increasing audience understanding and emotional connection to the issue. The authors argued that effective visual representation can play a critical role in facilitating climate change communication and action on social media platforms.

Not only Facebook and Twitter which was analysed, but TikTok was also addressed in research such as (Basch, Yalamanchili, & Fera, 2022) study. The researchers investigated the content of climate change-related videos on TikTok and identified the themes, message framing, and engagement patterns of these videos. Results revealed that climate change-related videos on TikTok covered a range of topics, including environmental activism, climate change impacts, and sustainability practices. The most prevalent themes in the videos were personal responsibility, advocacy, and climate change education. The study also found that most of the videos used a positive message framing,

emphasizing the potential for positive change and encouraging viewers to act. The study further revealed that climate change-related videos on TikTok were highly engaging, with many videos receiving high levels of likes, comments, and shares. Videos that incorporated humour, emotional appeals, or creative storytelling techniques were particularly successful in driving engagement.

**Research Questions:**

- 1- Did social media serve as a powerful tool for raising awareness and educating the Egyptian users about climate change?
- 2- Was social media able to make Egyptian users feel the urgency of the climate change crisis?
- 3- Did social media succeed in shaping Egyptian users' perceptions of climate change?
- 4- Which gender is mostly affected by social media concerning climate change?
- 5- Which age is mostly affected by social media concerning climate change?
- 6- Which social class level is mostly affected by social media concerning climate change?

**Research Hypothesis:**

- 1- There is a positive relationship between social media consumption and climate change literacy.

**Operational Definitions:**

- 1- Climate change literacy is defined as the ability to understand and explain the basic scientific concepts related to climate change, such as the greenhouse effect, carbon cycle, and climate system, and to recognize the causes and impacts of climate change on natural and human systems (Eilks & Marks, 2013).
- 2- Climate change literacy is operationalized as the awareness of the socio-economic, political, and cultural factors that contribute to climate change, including human activities such as burning fossil fuels, deforestation, and industrial emissions, and the ability to critically analyze and evaluate climate change information from diverse sources (UNESCO, 2017).
- 3- Climate change literacy is defined as the capacity to identify and implement sustainable solutions to mitigate and adapt to climate change, such as energy conservation, sustainable transportation,

waste reduction, and climate-smart agriculture, and to participate in climate action and advocacy efforts at individual, community, and global levels (Climate Reality Project, n.d.).

**Research Methodology:**

This study will adopt the quantitative method and will apply the survey tool. The researcher will share an electronic survey on the Egyptians to collect data to find out if social media was able to serve as a powerful tool for raising awareness and educating the Egyptian users about climate change, and consequently enhance our understanding of how social media can be connected and linked to promote climate change literacy and to ease call to action in response to this crucial issue facing the world.

**Research Sample:**

For a study that aims to draw inferences about a larger population, probability sampling is generally considered to be the more appropriate sampling method as it ensures that every member of the population has an equal chance of being included in the sample, thereby increasing the representativeness of the sample. Therefore, for a study on the role of social media in enhancing climate change literacy among Egyptian users, probability sampling should be used. The sample consisted of 102 respondents who participated in the survey of this study. The purpose of selecting a sample is to gather data that is representative of a larger population, without having to collect data from everyone in that population, which can be time-consuming and expensive. The size of the sample is determined based on various factors such as the level of accuracy required.

The respondents' number is one of the challenges that faced the researchers as the population of Egyptian social media users interested in climate change literacy may not be very large, making it difficult to collect a larger sample.

**Theoretical Framework:**

**Media Dependency Theory:**

In this study, we adopt the media dependency theory as theory is a communication theory that argues that individuals become dependent on media messages to satisfy their needs and goals. This dependence on media can influence their beliefs, attitudes, and behaviours, as well as their relationships with others. According to this theory, individuals

who are highly dependent on media are more likely to be influenced by media messages than those who are less dependent.

Media Dependency Theory was first introduced by Sandra Ball-Rokeach and Melvin DeFleur in their 1976 paper "A Dependency Model of Mass-Media Effects". In their paper, Ball-Rokeach and DeFleur argued that individuals rely on media messages to meet their needs for information, entertainment, and social interaction. They also suggested that the amount and quality of media exposure individuals receive can affect their level of dependency on media.

Since its introduction, Media Dependency Theory has been used to study a wide range of media effects, including how media can influence political attitudes and behaviours, health behaviours, and interpersonal relationships. The theory has also been applied to various media platforms, such as television, social media, and video games (Ball-Rokeach & DeFleur, 1976).

The theory posits that media use and audience should be examined in the social system where contextual factors are considered.

In Media Dependency theory, the more a person depends on media to meet demands, the more significant media will be in one's life, and thus the more impacts media will have on an individual, to the extent where a study pointed to the impact of the new media referent dependency is more vital than intensity dependency for expecting online content purchases (Yang, Ha, Wang, & Abuljadail, 2015).

#### **Information Seeking Behavior Model:**

This research will also adopt the Information Seeking Behavior Model which is a communication model that focuses on how individuals seek, receive, and use information in the context of the media. It explains the process through which individuals actively seek out information from media sources to satisfy their information needs.

According to (Rather & Ganaie, 2018) book, James Krikelas is credited with founding the first model of information-seeking behavior in 1983. This model identified four main steps: perceiving a need, searching for information, finding the information, and using the information, which can result in satisfaction or dissatisfaction. Subsequent models were developed by T.D. Wilson in 1981, 1996, and 1999, including his latest Macro model which questions the reasons behind users' information-seeking behavior, their dependence on certain information sources, and

their opinions. Wilson believes that information-seeking behavior is driven by the need for information. David Ellis later developed a model that considers information-seeking behavior as a sub-part of information behavior, consisting of eight core sub-processes: starting, chaining, browsing, differentiating, monitoring, extracting, verifying, and ending (Rather & Ganaie, 2018).

According to Information Seeking Behavior Model, individuals have specific needs and motivations that drive them to seek information from media sources. These needs may be related to various aspects such as personal, social, cognitive, or emotional needs. Individuals engage in a purposeful, active, and selective process of seeking information from media channels to fulfil these needs.

There are several key concepts in Information Seeking Behavior Model (Kundu, 2017):

1. Information needs: These are the gaps in an individual's knowledge or understanding that create a need for information. Information needs can arise from various factors, such as curiosity, problem-solving, decision-making, or entertainment.
2. Information seeking behavior: This refers to the actions and strategies that individuals use to search for and obtain information from media sources. Information seeking behavior can be active or passive, and it can involve different media channels such as print, broadcast, online, or social media.
3. Media selection: This refers to the process through which individuals choose which media sources to access and use for information seeking. Media selection is influenced by various factors, including personal preferences, perceived credibility of the source, availability, and accessibility of the media.
4. Information evaluation and use: Once individuals obtain information from media sources, they evaluate its relevance, credibility, and usefulness. They may also use the information to make decisions, form opinions, or engage in further information seeking.

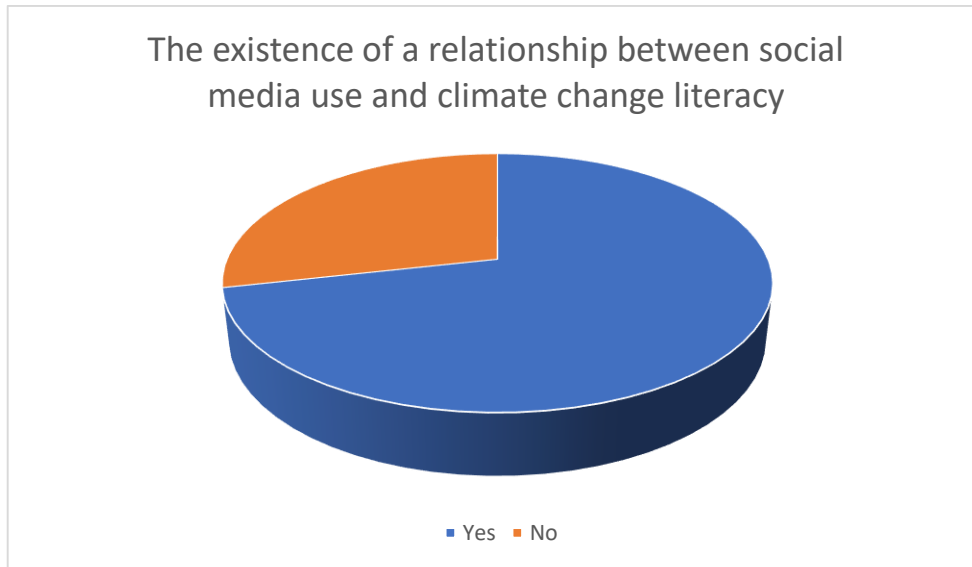
Information Seeking Behavior Model has important implications for media practitioners, researchers, and policymakers. It helps media practitioners understand the needs and motivations of their audience, and design media content and channels that meet those needs. Researchers can use this theory to study how individuals engage with

media in the information-seeking process, and policymakers can use it to shape media policies and regulations that promote informed decision-making among the Egyptian users.

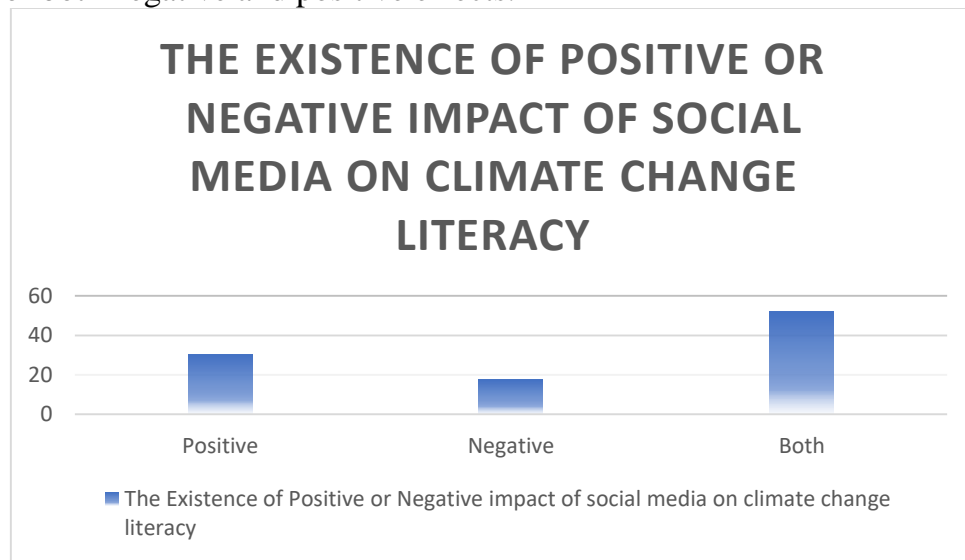
Using Information Seeking Behavior Model in the context of the role of social media in enhancing climate change literacy among Egyptian users can be important for several reasons where one of them is enhancing media literacy: Information Seeking Behavior Model can contribute to the development of media literacy skills among Egyptian social media users. Media literacy, including critical evaluation of information sources and media content, is crucial for enhancing climate change literacy and promoting informed engagement with climate change issues on social media platforms. It can also guide the design and delivery of climate change-related content on social media, promote critical thinking, and empower users to make informed decisions about climate change issues based on reliable information.

**Research Results:**

To achieve its objectives, the study surveyed a sample of 102 respondents. Firstly, the respondents were asked whether they experience a relationship between their knowledge and perception of climate change and their use of social media. The majority reported the existence of a relationship with a percentage of 71.5%. This indicates that the correlation between social media and climate change literacy is an existent one.

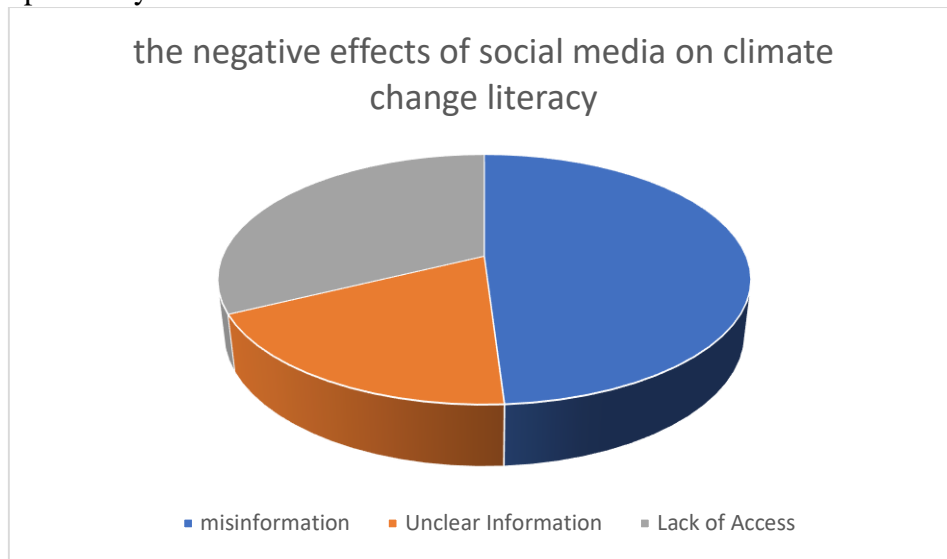


Secondly, the survey questioned whether social media have a positive or negative impact on climate change literacy. The choices included Positive, negative, and both. The majority of the respondents chose “Both”, with a percentage of 51.9%, which means that despite the existence of a relationship between the use of social media and the levels of climate change literacy among the audience, the effects can be argued to be double-sided where the respondents reported the existence of both negative and positive effects.



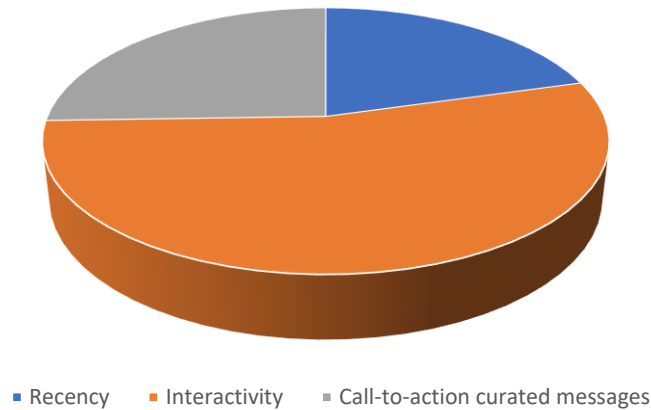


The respondents were asked about the negative effects of social media on climate change literacy, where the choices included: misinformation, unclear information, and lack of access. Most respondents chose “misinformation” with a percentage of 49%. This indicates that the problem of fake news poses a challenge to climate change literacy in the cases of dependency on social media as a source of climate-related information.



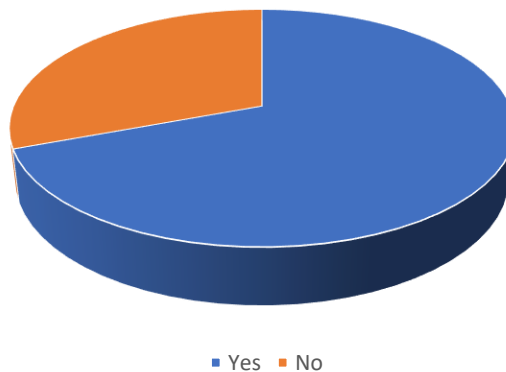
As per the positive effects, the respondents were asked about the positive effects of retrieving information about climate change from social networking websites where the choices included: recency, interactivity, and call-to-action curated messages. Most of the respondents chose “interactivity” with a percentage of 53.9%. This means that the ability to give feedback, ask, and interact with the information provided through social media about climate change makes it outweighs other media in terms of raising literacy levels and responsiveness to the provided messages.

The positive effects of retrieving information about climate change from social networking websites

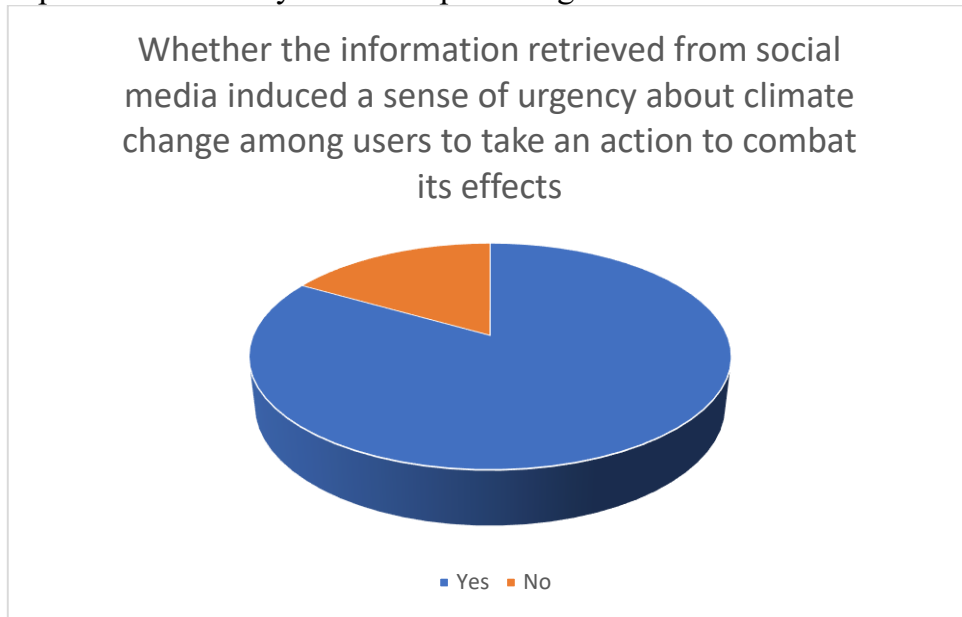


The sample was asked whether they believe that the information they get from social media about climate change is sufficient to make them fully aware of the issues related to the topic, and most of the respondents chose “yes” with a percentage of 69.3%. This means that the audience considers full dependency on social media as a source of information about climate change.

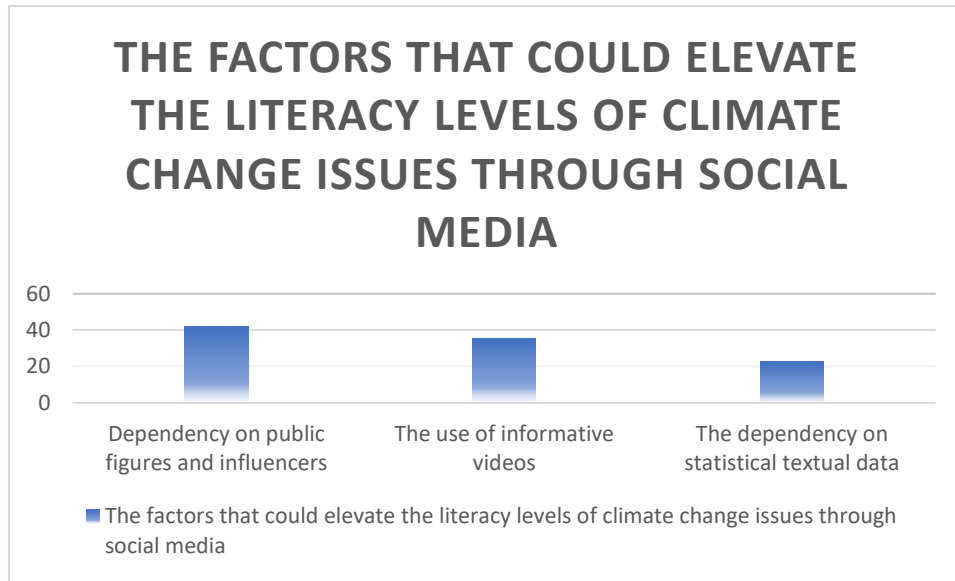
If the information received from social media about climate change is sufficient to make the users fully aware of the issues related to the topic or not



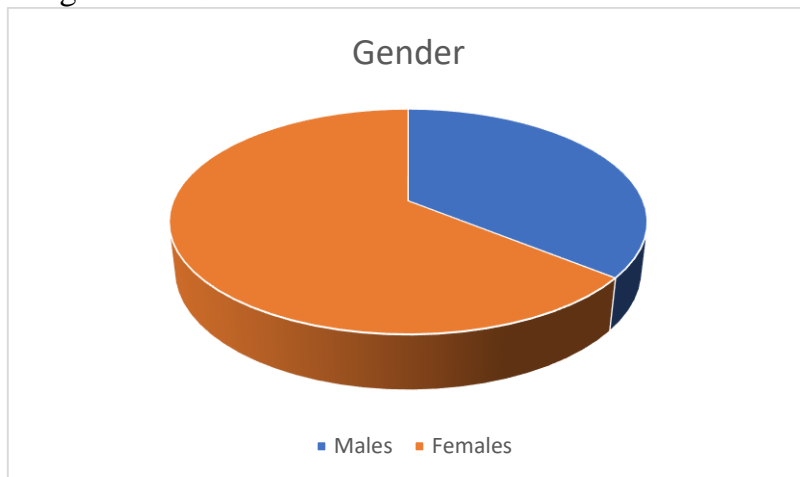
Moreover, the surveyed sample was asked whether the information they retrieved from social media about climate change made them feel the urgency to take an action to combat its effects. The majority of respondents chose “yes” with a percentage of 83.3%.

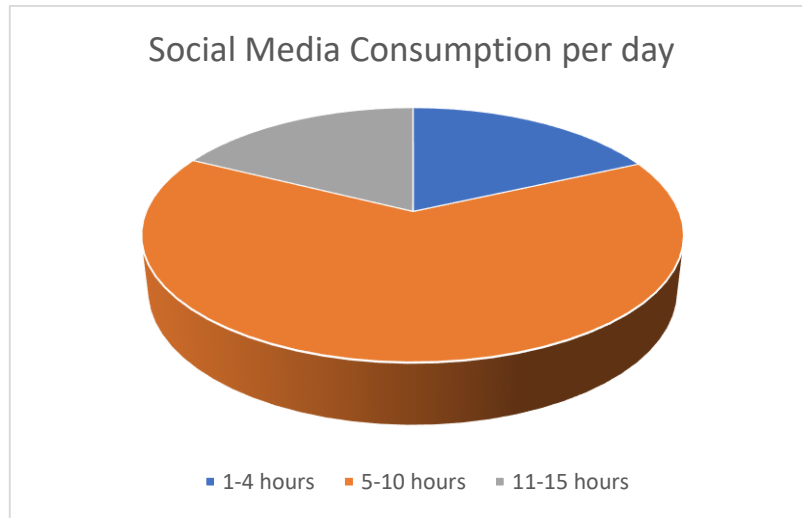


The survey posed a question about the factors that could elevate the literacy levels of climate change issues through social media. The choices included: Dependency on public figures and influencers, the use of informative videos and the dependency on statistical textual data. 42.1% of the respondents chose “Dependency on public figures and influencers”, which means that the endorsement still represents a major contributing factor to raising awareness and literacy levels.



The demographic questions revealed that the most affected age group by social media in terms of their climate change literacy were teenagers whose ages ranged from 15 to 22 years. In terms of gender, females represented the majority of the survey respondents with a percentage of 64.2%. As a social class indicator, income level was questioned where the majority of the respondents belonged to the 5000-7000 category of monthly income, with a percentage of 68.6%. Additionally, the social media users who spend from 5 to 10 hours per day navigating social media platforms represented the majority of the surveyed sample with a percentage of 46.5%.





To conclude, the survey results point out that there is an existent relationship between the use of social media and climate change literacy. However, the effects of social media on literacy levels were reported to be both positive and negative. Misinformation represents the top chosen negative effects by the surveyed sample. Conversely, Interactivity represents the most positive effect chosen by the survey respondents. In terms of the sufficiency of the information provided by social media to achieve climate change literacy, the survey results indicate a full reliance on social media as a source of climate change information. Furthermore, the results showed a relationship between the climate change information provided on social media and the sense of urgency developed by users to take conservation actions. Public figures and influencers represent the most chosen attraction factor for social media users to obtain information on climate change. Females aged 15 to 22 years who belong to the middle social class and spend from 5 to 10 hours on social media per day represent most of the affected group by social media in terms of climate change literacy.

#### **Discussion of the results:**

As per the comparison with the study **objectives**, the study findings confirm the prevailing reliance of Egyptian users on social media as a main source of informing and educating them about climate change. Even though the existence of a relationship between social media consumption and climate change literacy among Egyptian users, this relationship is still controlled by some negative and positive aspects that

affect the users' receiving of information. Additionally, this relationship correlates with the development of a sense of urgency among Egyptian users. In terms of the demographics of the social media users whose responses revealed the above-stated presence of a relationship between social media usage and the rise of climate change literacy, it was found that females whose ages range from 15-22 represent most of the surveyed sample. As per the social class, it was found that the middle social class represent the most affected segment with climate change literacy through social media as well as those who spend from 5-10 hours on social media on daily basis.

In comparison with **the literature review**, the survey findings of the current study agree with the powerfulness of social media as a tool for spreading climate change-related information as well as the presence of reliability challenges that are highlighted through the widespread misinformation. Additionally, the results of the conducted survey confirm what the literature review included regarding the additional benefit provided by social media in climate change literacy through interactivity and increased possibility for engagement. However, the study findings contradict the literature review in terms of the action taken upon acquiring climate change information from social media. Meanwhile, the literature review proposed that the users' reaction to climate change content on social media stops at the level of desirability, the findings of the current study revealed that the developed sense of urgency among social media users regarding climate change issues situates them at an action-taking stage.

Considering **the media dependency theory**, the study findings confirm that the audience fully depends on social media as a main source of climate change-related information as it satisfies their need for knowledge and influences their climate change literacy formation.

As per **the research questions**, the study findings prove the existence of a relationship between the use of social media and raising awareness and knowledge of climate change issues. Additionally, it was found that social media users developed a sense of urgency in terms of acting regarding climate change. Success in shaping the Egyptian users' perception of climate change was achieved through social media, as well. The most affected gender was females, the age group was 15-22 years, and the social class was middle class.

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