



Research Article

Demystifying the Hypodermic Needle Theory: EFL Students' Journey from Passive to Critical Social Media Consumption

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ABSTRACT



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This paper is a critical analysis of the relevance of Hypodermic Needle Theory when applied to digital media usage in EFL students with a view of criticizing the idea of media audiences as passive receivers of media message. Utilizing both the quantitative and qualitative data gathered among students at the Moulay Ismail University, the research examines the process through which EFL student interacts and assesses content in diverse social media sites. The results indicate a very good media activity with the majority of the participants spending more than three hours a day on YouTube, WhatsApp, and Facebook. Although the main usage purpose was established as entertainment, the statistics show that a considerable part of the EFL students are rather critically aware. The respondents often evaluate sources in terms of their credibility, watch out to not be influenced emotionally, compare the data on different platforms, and share their use of social media as educational tools to improve their lives. Such actions represent active thinking and involvement in the media, and they disprove completely the passivity of audiences based on the assumptions of the Hypodermic Needle Theory. The mixed-method approach of the study provides a detailed snapshot of the digital literacy of students and their capability of using the content of the social media sites in a skeptical and thoughtful manner. The study will lead to a more proper perception of the media power in the digital era due to the illumination of the role played by students in constructing their experiences online. The particular relevance of the study is due to its attempt of amalgamating theoretical assumptions with those that happen in the reality, still, with limitations related to the small scale of the studied university as well as the self-reported nature of the setting. However, the results are of great significance to media literacy education and modern communication theory.

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Introduction

This digital communication revolution has altered the very nature of how humans engage with information on a fundamental level, and succeeded in challenging normative notions of media effects in a number of new ways. Living in a globally interconnected era has led to social media sites becoming a potent means of interacting with, accessing and sharing information, as well as expressing oneself, and engaging in public dialogue. These trends have made most of the classical mass communication theories including the Hypodermic Needle Theory extremely imperfect. The Hypodermic Needle Theory always supposes that media messages are readily absorbed by a passive audience, as a result of which it was once viewed as one of the prime examples of media influence. Nevertheless, the media situation of today, when the interactivity, user-generated content, and participatory culture are the norm, requires looking at the movements of the audience with a more differentiated perspective.

Hypodermic Needle Theory was first formulated at the turn of the 20 th century and states that media messages achieve their effects by injecting them into the madding heads of an

unresponsive audience producing uniform and instant effects (Klapper, 1960). This classical school of thought dominated the earlier works in media studies, which has been increasingly shot down with the improvement of media and associated technologies. Theorists like Almakaty (2024) postulate that online platforms have broken the concepts of the one-way flow of information, leading to the emergence of a recipient and producer of the content (users). Today audiences do not just passively follow media sources, but also themselves have an impact on the media terrain. These radical changes therefore necessitate the empirical re-evaluations of conventional models such as the Hypodermic Needle Theory.

The examples of social media, i.e., YouTube, WhatsApp, and Facebook, demonstrate how participatory communication in the modern context can be. Users consume information on these platforms but they also have the opportunity to analyse, design, and share information. The emergence of these tools marks a great change: the turn of the passive audience as the target audience of media influence to an active, thought-provoking and independent digital citizen. According to the recent Pew Research Center

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report (2024), an overwhelming majority of the population does not only consume digital content, it becomes a direct producer of its circulation. This factor has been especially evident among students who- being the most active and digitally literate users of social media- were a major target of these applications.

Although these shifts have occurred, some remnants of the classical theories of communication still exist especially where the discourse is framed in terms of the youthful users as manipulated and potentially misinformed users of social media. Such assumptions are not always thoroughly tested in empirical studies, and play a role in overly simplistic depictions of digital youth. This paper aims to subvert these dominant discourses by investigating the manner in which students are critically exploring social media, are developing informed choices regarding what they trust, and are establishing ownership of their digital spaces. In such a way the research calls the further relevance of the Hypodermic Needle Theory under question and provides evidence of more complicated self-oriented audience behaviors.

In particular, the study examines the processes of EFL (English as a Foreign Language) students at the Moulay Ismail University going through the media-filled social platform landscape. With the method approach of mixed methods, the research will examine both quantitative and qualitative data to investigate the media habits and content-sharing behaviors as well as the methods of students to check the information. The results indicate that a major part of the sample spends a significant share of their time on social media, show critical thinking, and independence in their process of content consumption. Contrary to taking media messages at face value, most participants engaged in proactive information source verification, considerations of possible bias, as well as employing their personal judgment system in determining what information to believe.

The second value of this study is that it is not only that our knowledge about student media engagement is updated but this study also provides us the chance to directly contradict the old theoretical models which are inapplicable to the realities of the digital world. By pointing out students as-thoughtful decide-evaluative and active on social media, the study does add to the more extensive scholarly discussion of media literacy and audience agency. Finally, the study does not place the students in the role of unquestioning recipients of the persuasive messages but in the role of empowered users that have the ability to traverse the media in which they live, interpret their meanings, and modify them.

1. Review of Literature

The section critically reviews existing literature pertinent to the study with a starting point where the hypodermic needle theory which is one of the earliest models in mass communication is conceptualized as direct, immediate and powerful influence of the media. Subsequently, I probe into the fundamental premises of the theory to gain insight into how the theory depicts the audiences a passive group of population that can be easily controlled. The review then goes outside the bullet by indicating major scholarly objections to it as well as other lines of approach, noting that the simplicity of the theory does not hold. Last, the development of interactive media during the digital age is brought to the question, and it is described as a dramatic paradigm shift when audiences cease to be mere passive recipients of media content and meaning, but active contributors to the meaning and context of media content. This is a chronological growth in the thought, which provides a critical background of the changing media theories over the years toward modification of changes in communication technology and the audience behavior.

1.1 What is the Hypodermic Needle Theory?

The hypodermic needle theory, or magic bullet theory or transmission-belt model, takes the mass media to be an immediate, direct and overwhelming influence on the audience. Based on this earlier theory of mass communication, the media messages are injected into the passive recipients who are willing to absorb the information without thinking or question. It presupposes that the audience is homogenous and responds uniformly just like a patient being subjected to a drug in a syringe, and thus the metaphorical titles given to describe it (Cleopatra, 2012).

The theory has developed in an era of a fast-growing influence of media, especially newspapers and radio, and it was supposed, at least at that time, that media can make significant impressions on the mass opinion and control them in one moment. It is a linear process of communication as proposed by the model because the intended message sent by the sender is received and accepted by the audience. It fails to acknowledge individual differences, interpretations and social contexts. Although the theory has tremendous historical relevance, it has been told to the ground because it simplified the communication process as well as failing to take into consideration the need to actively consider audiences (Cleopatra, 2012).

1.2 Assumptions of the Hypodermic Needle Theory

Hypodermic needle theory relies on some basic assumptions as to how the audiences are influenced by the media. It implies, as Baran and Davis illuminate (2006), that in an equal and consistent manner, media messages can directly target the internal societies through shooting or injecting messages to communicate certain desired message into thousands of mass society members. The theory employs potent metaphorical phrases such as that of a bullet and a needle depicting the rapid and strong transferring of information between the sender and the receiver. The metaphor of a bullet depicts that media messages strike people like a projectile fired by the media gun of a "media gun," and the hypodermic needle metaphor implies that messages are injected directly into the brains of passive recipients where they are absorbed without any delays (Kenechukwu, 2015).

These assumptions present the audience as individuals who are absolutely helpless and unable to oppose or challenge the power the media holds thus reflecting the theory perspective of media as a hazardous means of communication. This is mainly due to the fact that the messages will be conveyed in an unmediated direct manner and hence, the impact cannot be evaded or partial. According to this model, the recipients are thought to believe the information that they get without interpreting it or engaging in critical thinking, thus, making the impact of the media absolute (Baran & Davis, 2006).

1.3 Beyond the Bullet: Evolving Perspectives on Media Influence

As repeated studies in mass communication began to reveal themselves, different thinkers started invalidating and refuting the presumptions of the Hypodermic Needle Theory. Among the first significant works to refute its arguments, *The People's Choice*, was published by Paul Lazarsfeld and Herta Herzog in the forties. This study examined the impact of media propaganda as it related to the voter turnout in 1940 U.S presidential election. By examining the voting behaviors of the presidential campaign of Franklin D. Roosevelt, Lazarsfeld and Herzog found out that voter decisions were more influenced by interpersonal communication (especially that delivered by opinion leaders) as opposed to media messages. Indeed, in most cases, there was no direct influence of the media propaganda on the decisions of the people (Griffin, 2000; McQuail, 2005).

The study was a ground breaking revelation that people are not mere consumers of the media content. Instead, they are able to accept or reject a message or interpret it in their own way. Lazarsfeld together with Elihu Katz subsequently came up with the Two-Step Flow Theory of communication. This model argues that it is opinion leaders who first receive the media messages before interpreting them and passing on to other people. The theory changed how the media influence was perceived since instead of viewing effects of media in purely direct and highly influential way, a more complicated process of socially mediated communication was considered (Griffin, 2000; McQuail, 2005).

The Hypodermic Needle Theory during the early times in the study of media effect was instrumental but in the current media environment, the effect of this theory has largely been reduced. Media and online platforms have proliferated exponentially such that a person now has a much greater ability to control what he or she reads, sees or hears. Human beings are often involved in selective exposures whereby they purposely listen or look at the future material that conveys information that is similar to what they believe in. Although there is still media influence, it is no longer taken as linear but as more interactive in nature. Today audiences are in a position to react, recontextualise and in some cases repackage media messages via social network sites. The individual values, level of education and the social situation influence to a great extent the reception of a message. Amid the overwhelming presence of the media, interpersonal communication continues to be the most potent source of influence in the life of people (Nwabueze, 2014).

More theories have been identified to challenge further the assumptions of Hypodermic Needle Model. They comprise the two by flow theory, the cognitive dissonance theory and the uses and gratifications theory. As an example, the Cognitive Dissonance Theory developed by Leon Festinger in the 1950s states that human beings end up in a state of psychological imbalance when faced with a conflict between ideas or information. To eliminate this tension, then they can manipulate their beliefs, behaviors, or attitude to create balance. According to Smith (1998), individuals normally reduce the tension caused by dissonance either by shifting the attitude, adapting some form of behavior or revising the significance of the problem.

Adding to that, Baran (2012) discusses the interplay of selective processes as they apply in selecting how audiences consume media (selective exposure, selective perception, and selective retention). These processes imply that individuals are not mere victims, they make conscious choices of what to watch/hear as well how to interpret it and which parts to recall. This is in contrary with the depiction of the Hypodermic Needle Theory of audiences who are the powerless recipients of media messages.

The other critical alternative is the Uses and Gratifications Theory, established in 1974 by Elihu Katz, Jay Blumler and Michael Gurevitch. Unlike the earlier approach, as elaborated by Severein and Tankard (1997), this methodology focuses on making the audience central towards its core by arguing that media consumers are active in picking the content they want as it will fulfill a particular individual need: information/knowledge, company, relaxation, or amusement. Unlike the top-down view of the Hypodermic Needle Theory, the model discusses what people make out of media, rather than what media does to people. In the framework of describing the key assumptions of the theory, McQuail (2010) and West and Turner (2007) present the following ones: audiences are active and goal-oriented; people select media to satisfy their own needs, and media competes with the other sources on satisfying them.

1.4 Interactive Media in the Digital Age: A Paradigm Shift

The function of traditional media has undergone a substantial shift due to the rise of the internet and the nonstop nature of modern news consumption. In the digital age, the concept of mass media has grown beyond its original form—radio, television, newspapers, and magazines—to include digital formats such as online news and social media. Two key developments have shaped this evolution: first, the internet allows anyone to create and publish large volumes of content; and second, social media platforms support direct, personalized communication between individuals, in contrast to the traditional one-directional model where a message is delivered from a single source to a broad audience (Sumadevi, 2023).

Among the most active users of social media are teenagers and young adults. They frequently turn to these platforms for a wide range of daily activities, including planning outings, completing schoolwork, and sharing personal experiences. Interestingly, even parents are increasingly participating in social networks, often to monitor or stay connected with their children's online behavior (Sumadevi, 2023).

The internet and the World Wide Web—developed by Dr. Tim Berners-Lee around two decades ago—were initially created to facilitate the efficient and reliable transfer of data (Hamat et al., 2012). However, over time, these technologies have evolved into powerful tools for communication, particularly with the rise of social media. These platforms act as digital spaces for social interaction where users—both senders and receivers—actively shape the content being shared. Sites such as Facebook, YouTube, Twitter, Wikis, Badoo, and Myspace allow people worldwide to participate in ongoing conversations, where an initial idea is introduced and then collaboratively developed through shared input.

Kaplan and Haenlein (2009) describe social media as tools that use internet-based technologies to turn one-way communication into interactive dialogue. Hamat et al. (2012) emphasize that the popularity of social networking reflects how deeply integrated sharing has become in everyday social life. What sets social media apart is its interactive nature: both the audience and the message creators influence how content is formed and understood. Amarasinghe (2010) explains that users are driven to engage on social media by various motivations such as helping others, curiosity, a desire to feel effective, enjoyment, reciprocity, social connection, influence, teamwork, recognition, and personal rewards.

Social networking sites have become especially widespread among young people and professionals. Research shows that young adults spend more time on these platforms than any other group, indicating their central role in daily life. As a result, the communication habits of society have been significantly affected. The widespread use of the internet by younger generations has changed the patterns of mass communication in contemporary culture (Kuss & Griffiths, 2011; Euphemia & Emmanuel, 2013).

2. Research Methodology

This is where the methodological framework used in guiding the study is outlined. It gives the research problem that inspired the work after which the focused research objectives and questions that aim at solving it are given. The section outlines the research approach and design adopted whereby an explanation of why the latter was employed is given. Moreover, it elaborates on the sampling process that has been employed to recruit the respondents, whereby emphasis is put on students that use social media, especially EFL students in Moulay Ismail University. The concluding section addresses ethical considerations that will be

observed during the study to make sure that the study is both responsibly and respectfully undertaken.

2.1 Research Problem

Even though the literature on media consumption in the digital era is increasing, numerous conventional communication models, especially the Hypodermic Needle Theory, continue to play an important role in the debates involving media influence, sometimes tacitly placing the audiences in the position of passive consumers of media products. This theory was initially used in the early 20 th century to explain the strong and direct influence of mass media in the life of people and as such it exposes a lack of understanding of the changing and participatory quality of the contemporary digital world environment. In the current society, in which social media networks have become the most powerful entities in terms of the means of information creation, distribution and consumption, users cease to be passive subjects. Rather, they are the curators, commentators and creators, which have the agency to analyze, rebuff or overhaul the messages they face. However, there is a research gap with regards to explicitly comparing the obsolete belief of the Hypodermic Needle Theory with the actual behaviors of the social media users present in the real world, with an emphasis on student groups who are already among the most vibrant digital actors.

This study attempts to fill in this divide by investigating how well students are challenging social media content, how well they consciously navigate platforms and how well they have found their voices online. Although recent media theories recognize the agency of the audience, there is a call to do empirical studies that would place the student as the proactive element, instead of that of the victims of the persuasive messages of media. There is a lack of systematic research studies examining the way students read, decipher, challenge and act in the media messages in their educational, social and personal lives. In this way, this paper may question the relevance of the Hypodermic Needle Theory in the modern media environment and lead to more subtle ideas about how social media both empower and is not used to manipulate the users.

2.2 Research Objectives

The study seeks to achieve the following objectives:

- O1: To examine how students engage with social media content using critical thinking and personal judgment

This objective aims to explore the extent to which students evaluate, question, or reflect on the messages they encounter on social media, rather than accepting them at face value.

- O2: To investigate the factors that influence students' choices of social media platforms and the type of content they consume

This will help identify how students exercise agency in selecting platforms and content that align with their interests, beliefs, or informational needs, challenging the notion of a uniformly influenced audience.

- O3: To assess the interactive role of students in contributing to or shaping media content through comments, sharing, and content creation

This objective focuses on understanding how students participate in the creation and circulation of information, thereby demonstrating their active role in the digital communication process.

2.3 Research Questions

This study is guided by the following research questions:

- Q1: How do students apply critical thinking when engaging with content on social media platforms?

This question seeks to uncover the cognitive processes students use when interpreting media messages, challenging the idea that they passively absorb information.

- Q2: What factors influence students' decisions when selecting social media platforms and the types of content they engage with?

This question aims to explore the personal, social, or contextual reasons behind students' media choices, emphasizing user agency.

- Q3: In what ways do students participate in shaping or responding to media content on social media?

This question investigates the interactive behaviors of students—such as commenting, sharing, or creating content—that demonstrate their active role in digital communication.

2.4 Research Approach

The research takes place in the mixed methods research, in which both quantitative and qualitative research methods will be involved to get a holistic picture of how students communicate through the social media. The justification of the mixed methods approach is associated with the necessity to reveal not only the patterns of behavior (that can be measured), but also the subjective experience of studying students as an active participant of the media. The quantitative branch aspect will be based on using the structured questions to obtain data on the preferences of students using the platforms, their frequencies of interacting with the contents and overall social media consumption trends.

Conversely, open-ended questions will be used to capture the qualitative aspect as participants will be able to express themselves and their views at the time of exposure to media. The combination allows the research to go further than the surface information and explore the critical thinking process and the decision-making students use, which leads to pushing the assumptions of passivity underlying the Hypodermic Needle Theory. Combining those two variants of data, the research is expected to give more comprehensive, contextualized results that will take into account the complexity of digital age media interaction.

2.5 Research Design

The proposed research will utilize a convergent parallel mixed methods design that entails data collection of both quantitative and qualitative data at the same time, but does not analyze the two types of data together before integrating the results. Both types of data will be taken into consideration, however, the quantitative aspect will be more emphasized regarding the number of questions. The characteristic feature of this design is that it is especially suited to the study since it enables the widespread cognition of the social media habits of students through statistical data patterns, and yet integrates more in-depth knowledge acquired by students regarding their personal experiences and contemplations.

The quantitative data will provide quantifiable parameters that will be concerned with the preferences of social media platforms, frequency, and interaction trends of students. In the meantime, the qualitative data - even less prevalent in quantity- will serve to offer invaluable background in the form of understanding how students are critical consumers and consumers of social media content, and how they make individual decisions. The pooling of the two types of data will allow the study to create a balanced perspective aimed at disproving the passive audience

presumptions of the Hypodermic Needle Theory. Finally, such a perspective characterizes the multidimensional and dynamic nature of social media use among contemporary students in the age of the digitalized world.

2.6 Research Sampling

The research will utilize the purposive sampling methodology where relevant participants to the research objectives will be identified. In particular, the sample of the researchers will be students of the Moulay Ismail University who are active social media users and are subject to English as a Foreign Language (EFL) courses. The method of purposive sampling is suitable in this study since it enables selection of students who will give the desired information on the topic since they are specifically chosen due to their unique qualities that will offer valuable information on how social media users critically consume online content. Focusing on EFL students, the paper will be able to investigate the interaction between language and social media usage, as this population choice will allow the research problem to be sufficiently well-stipulated. The specified approach will also enable the efficient use of resources and focus on participants to yield maximum results which are likely to provide fit and rich data.

2.7 Ethical Considerations

The research will follow ethical principles that are essential to the research to guarantee the interests and safety of all the respondents. Participants will be provided with informed consent having been given clear information about the aim of the study and what will be involved in the participation. Anonymity will be ensured because data will be stored safely and the only person who will have an access to it is the researcher. The anonymous nature of the research will be ensured since no personal data will be captured that can be used to identify the responses, they may be giving relative to the specific participants. Students will only be allowed to participate fully and at any time they wish, with no penalties on them doing so. To ensure that the process of research is not violated, these ethical guidelines will be adhered to.

3. Data Analysis and Interpretation

This chapter is an incisive assessment and interpretation of the information gathered during the study. It entails giving an in-depth consideration of the quantitative data which is derived due to surveys and insights that have been formed by the qualitative responses. This section seeks to give a balanced picture of the research conclusions by integrating these two forms of data and giving the patterns, trends, and important observation areas in respect to the research objectives.

3.1 Analysis of the Quantitative Data

It is in this subsection that the statistical analysis of the quantitative data collected through the survey instruments of the study is achieved to detail. The data are modelled by means of tables and figures, and they are followed by descriptive summary and statistical interpretation. The analysis will uncover any major trends and patterns depicted by the numerical data, which will serve as a firm basis of the nature of participants and their answers according to the research questions.

3.1.1 Age Breakdown of the Sample

The number of students according to their age groups is demonstrated in Table 1. There are three types of samples the sample will include students aged below 20, between 20 and 30 years old and those above the age of 30 years old. The largest group consists of those between 20 and 30 years of age, followed by a second and smaller group of students younger than 20 and a microscopic share of students who are more than 30 years old. Such age structure offers a description of the demographic orientation of the study population.

Table 1: Distribution of Participants by Age

Age Group	Frequency	Percentage
Under 20	23	11.7%
20–30	158	80.6%
Over 30	15	7.7%

The statistics show that the majority of the students are young adults being under the age of 30 and are more than 80 percent of the sample. This prompts that the research is mostly influenced by the views and perceptions of people in this category of age that could be characteristic to the population being studied. The absence of large proportions of students below the age of 20 and above 30 may be a factor that has an impact on the applicability of results to a wider age range.

3.1.2 Gender Composition of the Sample

Table 2: The sample is gender-differentiated as described in the table. The respondents would be provided with three choices to choose the gender including: male, female, and prefer not to say. Most of the participants were male and then there were a large number of female respondents and the remaining were not willing to determine their gender. This distribution provides an understanding of the gender composition of the sample of study participants.

Table 2: Gender Distribution of Participants

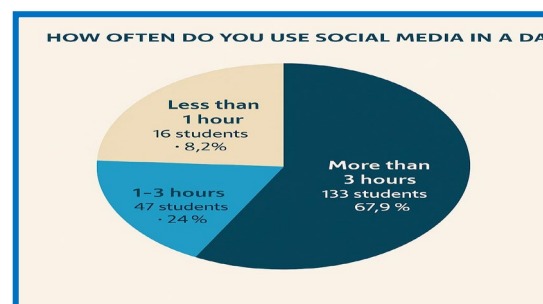
Gender	Frequency	Percentage
Male	114	58.2%
Female	65	33.2%
Prefer not to say	17	8.7%

The information indicates that the male respondents form the majority or largest part of the sample at 58.2 percent whereas 33.2 percent are females. Also, 8.7 percent of the respondents indicated that they did not wish to distribute their gender. This is an indication of a significant gender imbalance in the sample with the majority of males. The fact that there were a group of participants who decided to not provide their gender also indicates the need to provide the option of inclusive response in research tools.

3.1.3 Daily Social Media Usage among Participants

Figure 1 demonstrates how much the participants use social media on a daily basis. Those answers are clustered in three groups: less than 1 hour, 1 to 3 hours, and more than 3 hours. The presence of percentages and frequencies of students who are in any of the categories makes a visual understanding of the figure more prominent, showing common patterns of how students have been using social media among the sample set.

Figure 1: Daily Time Spent on social media by Participants



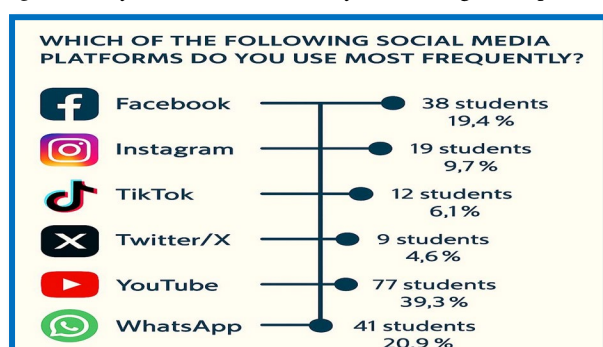
The statistics indicate that a considerable number of respondents (67.9 percent) are more than three hours of daily

social media users, which can be considered an amount of engagement with the websites. The lower percentages (24 percent) spend up to three hours and only 8.2 percent use social media less than an hour every day. It indicates that social media has a central situation in the everyday life of the majority of respondents, and that has a potential impact on their interaction with learning, time management and digital customs.

3.1.4 Most Frequently used Social Media Platforms

The figure 2 indicates the top most social media platforms used by the participants. The choice was between Facebook, Instagram, Tik Tok, Twitter/X, YouTube and WhatsApp. The percentage and absolute value of the students who talked about each platform as their most frequently used provide a clear snapshot of personal social media preferences within the sample, and this figure looks like the following one.

Figure 2: Preferred Social Media Platforms among Participants

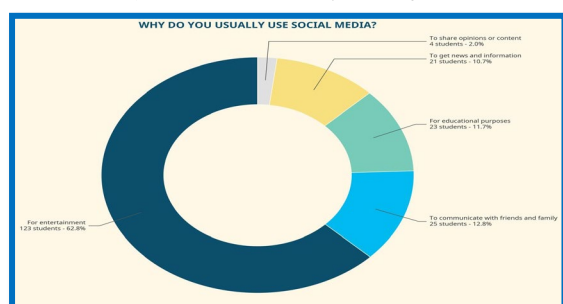


The statistics demonstrate that YouTube Instagram is the most popular social media platform among the participants, and 39,3 percent of the respondents chose it as their first preference. WhatsApp is on second position with 20.9%, and Facebook is the next on the position with 19.4%. Other platforms are Instagram (9.7%), TikTok (6.1%), Twitter/X (4.6%), and less popular. This distribution proves that video-based (YouTube) and instant messaging (WhatsApp) platforms are the most preferred because the participants are interested in content-rich and communication-oriented platforms rather than photo or short-form videos.

3.1.5 Primary Purposes for Social Media Use

The main motivations of the participants in applying the social media are stated in figure 3. The respondents were requested to choose the most important reason why they use social media which was followed by an informational gathering, entertainment, communication, education, and sharing of content. The diagram is a summary of the way the different motivations make the participants to use the social media in their daily lives.

Figure 3: Participants' Main Reasons for Using social media



The statistics clearly indicate that, entertainment is the key consideration in use of social media among the participants as 62.8 % identified it as the primary purpose. Communicating with friends and family, (12.8) percent, getting news and information,

(10.7) percent and educational purposes (11.7) percent are also the other notable reasons. Very minimal (2%) said they mostly share opinions or content by using social media. These results imply that social media have both a various number of functions and leisure/entertainment needs are on the principal stage and the educational/ information needs take a minor role.

3.1.6 Critical Engagement with Social Media Content

Figure 4 shows the frequency with which the participants ask questions or think over the information they digest on social media. The range of response is 5-point: Always to Never, which represents how critically various users initiate the consumption of the information online. The figure assists in giving an illustration on how participants evaluate and comprehend the content found on the social media content on their everyday consumption.

Figure 4: Frequency of Participants' Reflection on Social Media Content

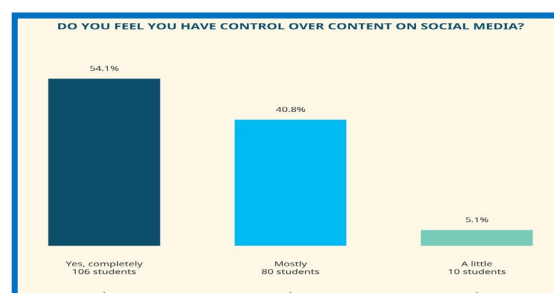


The statistical data indicate that the majority of the participants reflect frequently on the information they observe in the social media, of whom 50.5% answer they do it quite often, and 44.4% answer that they always think about it. Very few endorsed a little (4.6%) or not at all (0.5%) and none completed answered with an affirmation to always. This indicates that most of the respondents are self-aware critically engaged users, which means that they already feel relatively well aware and immovably doubtful when viewing any online material. This kind of reflectivity in their behavior can add value to their digital literacy and decision-making.

3.1.7 Perceived Control over Social Media Content

Figure 5 presents participants' perceptions of how much control they feel they have over the content they consume on social media. The response options range from full control to no control, providing insight into how users view their ability to manage and filter their online experiences. The figure summarizes the extent of perceived user agency in content consumption.

Figure 5: Participants' Perception of Control over Consumed Social Media Content



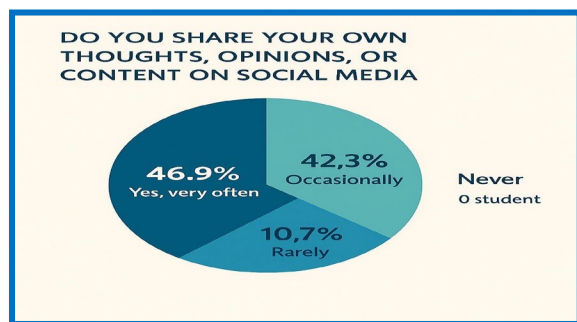
The results show that a majority of participants feel they have a significant level of control over their social media content. 54.1% reported having complete control, and 40.8% indicated they mostly do. A small percentage (5.1%) felt they had only a little control, and none of the participants reported having no control

at all. This suggests that most users believe they can actively manage the types of content they engage with, which may reflect their digital habits, platform settings use, or content filtering strategies.

3.1.8 Participants' Willingness to Share on social media

Figure 6 illustrates how frequently participants share their own thoughts, opinions, or content on social media. Response options ranged from frequent sharing to never sharing, allowing an assessment of how actively participants contribute personal content to online platforms. The figure helps capture the degree of user-generated content among the sample.

Figure 6: Frequency of Participants Sharing Their Own Content or Opinions on social media

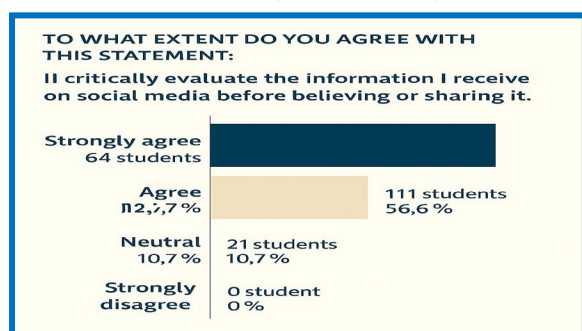


The results indicate that a large portion of participants are active content contributors. 46.9% reported sharing very often, while 42.3% said they share occasionally. A smaller group (10.7%) stated that they rarely share, and no participants indicated they never share. These findings suggest that most participants are not just passive consumers but also active participants in social media spaces, regularly expressing their thoughts or creating content.

3.1.9 Participants' Critical Evaluation of Social Media Information

Figure 7 presents the participants' level of agreement with the statement: "I critically evaluate the information I receive on social media before believing or sharing it." Responses were ranging from "Strongly agree" to "Strongly disagree." The figure notes the attitude of participants in order to verify and evaluate the reliability of information on the social sites.

Figure 7 Critical Evaluation of Social Media Information



The statistics indicate that the overwhelming majority of the participants state that they critically analyze the content of social media. 56.6 percent confirm them to agree with the statement, and 32.7 percent have strongly agreed, which implies a high degree of critical consciousness. More participants agreed (73.3%) and less neutral (10.7%) in a smaller group, whereas none disagreed or strongly disagreed. These reference findings indicate that participants tend to be considerate and cautious when they find information on the Internet, which could be a sign of high digital literacy or attention to the threat of misinformation.

3.2 Analysis of the Qualitative Data

This part is the analyses of the qualitative data collected during two open-ended questions placed at the end of the online questionnaire. The purpose of these questions was to allow participants to share their opinions openly and to further explain their use of social media, in respect to such factors as the topic of trust and critical thinking. Although no thematic analysis and coding were used, the responses were thoroughly evaluated to point out essential points, topical trends, and the retrospective views. In the next section, findings of this interpretation based on each question are discussed.

3.2.1 Trustworthiness of Social Media Content

This section deals with responses to this question by participants:

What criteria do you use to determine what content to rely on and what to disregard on the social media in your own words and style movement?

The respondents displayed a critical and evaluative attitude in measuring what is reliable on the social media. Most said checking the source or the credibility of an account, and this can be observed through the answer, I check whether the account is verified or widely known. Such were the common responses as: I seek credible sources in the article, and I believe information that has either references or citations.

Some of the respondents cited content that seemed emotional and sensationalist to evade it. One student expressed, "I ignore the ones that are highly emotionally manipulative" and another student observed, "I ignore headlines that are sensationalistic and that do not seem realistic." Language quality and presentation were also given some consideration with some exclaiming, I do not read content with many spelling mistakes.

Other interviewees reported applying personal strategies of judgment and comparison: I use my own knowledge to decide whether the content is reasonable or not and I compare the information to other reliable web sites. These responses indicate that these participants are not indiscriminate recipients of any kind of information as they practice thoughtful vetting, which is a positive indicator of probable high levels of both digital literacy and critical thinking.

3.2.2 Social Media Use as a Reflection of Critical Thinking

The section discusses the responses of participants to the following question:

How do you feel about your use of social media as a way of showing your independence or critical thinking as a student?

From the interview responses we see that most of them take social media with a high degree of critical awareness and individual responsibility. One student cited, I always put two pens on what I'm seeing, which demonstrates a person who makes a conscious decision to take a pause and consider. A second echoed this outlook, saying, I do not just accept the information but question it.

Others related what they do on social media to their academic or intellectual growth. As an example, some of them stated that they make the right election of content, where one commented that, I select material that makes me a better scholar. These remarks show that social media is not only perceived by the students as social tool; rather, the students become strategic in their use of social media in their learning.

Others concentrated on the fact that they got independence in navigation in the online information. One of the participants stated, I do not want to emulate what other people do but only make personal choices, and another replied, I will use social media

as a tool not the truth. Some of the responses also indicated a sense of bias awareness and receptiveness to diversity, including, "I consider the prejudices in the material I encounter" and, "I attempt to learn about different cultures and other mindsets."

All in all, the answers indicate that the responses are conscious and purposeful. They exhibit character of independent thought, scepticism and reflective judgment which are all major aspects of critical thinking on digitized spaces

4. Key Findings of the Study

- Majority (67.9% of the respondents) claimed to spend over three hours using social media daily. It is a sign of a very active level of involvement, and social media are at the focus of their everyday activities. This can cause implications on their learning habits, time management and Online behavior since they are used very often.
- The most commonly used platform was YouTube (39.3%), after that came WhatsApp (20.9%) and Facebook (19.4%). Such a preference shows that participants are attracted by the platforms providing video content and instant communication, but not those centering on images or short-form videos.
- Using social media to entertain people was the most popular use of social media as 62.8 percent of the respondent's cited entertainment as the main purpose. Although communication, education, or information updates could also be the reasons to resort to social media, the general tendency shows that the primary function that students attribute to the platforms is their association with leisure.
- The majority of participants claimed that they continually think of things that they read online. Most of them claimed to make some assessments, in most cases, even always, saying they assess what they see. This deliberative style could assist them in taking rather judicious and judicious choices as they maneuver internet domains.
- Participants did not feel much in control over the forms of content they were exposed to. Over 50 percent responded that they had total control and a good percentage responded that they did mostly. This points to the fact that students are content to be in control of their digital world and design and customize their experiences in the digital world.
- The creation of own content shared on social media is active among many participants. Almost half reported to post very frequently and a fair number said they do so occasionally. This degree of engagement implies that students do not always act as consumers only but are also participants in online discourses and communities.
- Many people said they seriously analyze information before trusting or even sharing it. The majority either agreed or strongly agreed with this behavior, so it also reflects intellectually interacting with online material and a deliberate attempt to avoid misinformation.
- In the open-ended responses, the participants explained their method of evaluating trustworthiness of content. Others cited source verification, citation search, and credibility check, stating, e.g. "I look to see if the source is verified or reputable" and "I believe information that has references or citations." Some did not post something sensational or emotionally manipulative as one student stated, "I ignore posts that have a strong-emotional manipulation aspect."
- Participants also declared that they employ their own judgment in making decisions to trust. One of the respondents said that they applied their knowledge on

evaluating whether the information was sensible or not, and another observed that instead, they cross-check the information obtained with other reliable websites. These are answers to mature and self-determined engagement with the content on social media.

- Students also articulated the implications of their decisions to use social media as an image of independence and sophisticated thinking. Others explained how they do not accept information blindly e.g. (I question information rather than accepting it blindly). Some participants associated their media use with academic development as one stated, "I always select the content that will enhance my academic development."
- A number of the responses were self-wage and lack of trust. As an example, one of the participants stated, I make my personal judgments instead of following others, and another individual explained that I do not use social media as a source of truth but use it as a tool. A good deal also displayed signs of understanding bias and the importance of different ideas, such as stating that they would consider the prejudices in the material they watch by saying things like, I consider the prejudice in the stuff I watch, or trying to learn about other cultures and ways of thinking by saying, I attempt to learn about alternative cultures and other perspectives.

5. Discussion

The discussion part questions the findings of the study with reference to the hypodermic needle theory, and hence refutes the presumption the study had concerning passive reception of media by learners. It emphasizes the presence of active and mindful exploration of social media content and proves that students are critical thinkers and autonomous. In addition, the section discusses the implications of those findings to the wider scope of digital literacy and education. Further, it discusses the implications of the research in practice, the limitations of the research and recommendations in future research and practice.

5.1 Refuting the Hypodermic Needle Theory: Students' Critical Engagement

The hypodermic needle theory or magic bullet theory locates the idea that the messages of the media directly and homogeneously are injected into the passive audiences and they are consumed uncritically and without objection. It implies a one directional intensive influence whereby people simply internalize whatever they are exposed to through media without critiquing or processing it on their own. The results of the given study, however, show quite strong evidence contradicting these major assumptions thus proving the idea that students are by no means passive consumers of the information offered through social media.

The results indicate that the students are reflectively and deeply using social media. An overwhelming majority have indicated asking reflective and critical questions and scrutinize what they read, hear and see, with a considerable portion adding that they reflect critically on some information prior to believing it, and many of those saying that they do this often or always. Those surveyed had well thought out plans on ensuring credibility checking, they included verifications on authenticated accounts, bearing in mind credible sources, and not sensational information or emotionally coercive, and cross-correlating information with reputable sites. Such active audience undermines the concept of passive audience just taking in what it sees and reads in the media unquestioned. Rather, students are highly digitally literate and have the lack of critical awareness testing and filtering what they read.

Furthermore, the results show that the learners have self-regulation in regard to their media content exposure and they are also assured of controlling their online spaces. There was a good deal of a feeling of agency in terms of the control of the content that one consumes what they view and that they are even the ones producing content. Forth five of respondents said that they often share their personal thoughts and ideas with other people via social media, which demonstrates the idea that they are not social media consumers but active members of the online society. Their comments on their experience of social media also call out to independent thinking and critical thinking with a focus on judgment, skepticism, and ability to consider contrary views. Statements like, I challenge information as opposed to blindly accepting information and, I choose the path of making my own judgment as opposed to aping others highlight this sense of independence.

Collectively, these results call into question the structural beliefs behind the hypodermic needle theory of social media consumption by evidencing how students engage with social media content in a sophisticated, skeptical and self-regulated way. They are significant critics and active participants in their media consumption, creation and disintegrate the idea of a homogeneous, unanalytical audience present in the theory. This research contributes to an emerging line of evidence suggesting that media effects may be socially nullified through subjective interpretation and reflexivity and agency and the need to consider digital literacy in more modern media contexts.

5.2 Significance of the Study

The research is relevant as it gives an insight on the nature and extent of the way social media is being utilized in the lives of students in day to day living. The fact that most of the respondents dedicate more than three hours a day to social media informs the research that these platforms are at the heart of the life of the modern-day student. This observation is significant because it shows the necessity of educators, policymakers, and researchers to pay more attention to the fact that social media should be perceived as one of the key processes affecting learning habits, attention span, and information consumption patterns of students. Recording the preferences of students to utilize platforms of various natures (i.e., YouTube and WhatsApp) also allows the study to cast light on the kind of digital environments that students are likelier to participate in, which can inform the creation of interventions and digital literacy initiatives that are most constructively designed to adopt the online behavior pattern of students.

In addition, the way the study examines critical action of the students in relation to the social media materials also creates a meaningful contribution of information regarding their digital literacy and autonomy as a learner. The facts that the majority of participants actively consider information, question the sources, and meditate on biases prove that students are not passive users of information because they are logical and critical users of the information. This puts into question the stereotypic views of young people as social media users that lack critical thinking and implies certain refinement in their involvement with online activities that are worth studying. The study incorporates the voices of students themselves to understand how they come to know what they should trust and their reflection on using social media and their relationship to critical thinking enhances the knowledge of the cognitive and reflective behaviours related to the use of digital media. This information is relevant to teachers who wish to help students become sound-cognitive thinkers that can be applied in various aspects of their life other than the ordinary classroom learning.

5.3 Implications of the Study

The results of the study present significant concepts of educational practice, especially integration of social media in the learning environment. As students spend quite some time on social media, it is an opportunity for the educators to learn to exploit the power of these platforms as a powerful engagement and learning tool. Realizing how social media used in the form of YouTube and WhatsApp are largely the choices recommend a paradigm shift that involves the addition of video-based educational material and communication to the pedagogical approach, which may be more in line with current habits and preferences of students. Furthermore, the realization that entertainment is the main source of social media use can also emerge that the educators should perform to produce the educational aspect not only informative but also entertaining to draw the attention of the students amid floods of other events in the virtual world.

Moreover, the presence of above-average critical reflection and content evaluation skills among the participants is also indicative of the fact that there should be a capitalization on such skills during digital literacy projects. Teachers and curriculum writers will be able to introduce specific interventions to enhance students in critical thinking of information sources, detecting sources of bias and misinformation. This has the potential of making students more savvy consumers and producers of content both in the academics and in their personal lives. The implication of the study is that promoting independence and reflective thoughts among the students online can be used to facilitate the overall intellectual growth of the student, which shows the importance of continuing the process of ensuring the students develop critical digital citizenship as an effective aspect of modern education.

5.4 Limitations of the Study

A weakness of this study is that the data used was collected through self-reported responses of the participants. Self-reporting is a frequent and helpful technique of collecting individual insights and self-perceptions, even though it is vulnerable to bias in the form of social desirability, misdemeanor, or discrimination. Insufficient or excessive social media use and critical engagement might have been over or underscored by the participants and that may hinder accuracy of the findings. Moreover, self-reported information does not provide a direct chance to observe and find out the actual behaviors, and it is harder to construct definite conclusions regarding the social media uses of students in the real world.

The second limitation is the study scope as it only targeted students at Moulay Ismail University. Such localized sample lowers the applicability of the results to other universities, geographical areas or cultural settings. Since experiences, preferences and critical thinking ability may vary at Moulay Ismail University compared to other universities, the differences in academic settings, in access to technology, and the differences in culture might create dissimilarities among the students. Accordingly, the findings need to be treated cautiously, and the upcoming research can be enriched with a study of a heterogeneous and larger sample within various institutions that would give a better picture of how students engage with social media and how they use it as part of their digital literacy.

5.5 Future Recommendations

Recommendation of this study is that educational institutions should inculcate digital literacy training such that their students can gain better critical thinking abilities pertaining to the use of social media. Courses or workshops, which would teach students to assess the credibility of content they find online, detect

misinformation, and learn how to control the digital footprint, would help them move through social media better and with more accountability. It is also important that during the teaching process educators do not disregard such popular websites as YouTube and WhatsApp to strengthen and interest the students to connect with teaching material using their natures and established tendencies.

Moreover, future studies ought to seek answers on how these digital literacy interventions influence the academic achievements and general digital behavior of the students. Universities are also advised to engage in a periodic measurement of student behavior when it comes to the use of social media and in regard to critical thinking abilities so as to determine emerging requirements and provide support that will be aligned with those requirements. The extension of research to incorporate a variety of people over and above a specific university envision a wider picture of the role of social media in the educational sphere and will formulate guidelines that will design safe, social and educational spaces in the online field.

Conclusion

It purposed to explore how EFL students relate to the contents of social media they use critically with a view to upsetting the beliefs of the Hypodermic Needle Theory. In this early theory of communication, audiences are considered as the passive recipients of media messages, they accept messages in uniformity and in uncritical mode. Nevertheless, the results of this study, based on both quantitative and qualitative support, describe a much more complex situation. The participants of the given research turned out to be highly engaged, discerning, and autonomous in their relationships with social media, which disproved the premises of the Hypodermic Needle Theory on the whole.

The statistics pointed at the fact that although students dedicate a lot of time (even more than three hours per day) to social media, they do not use it passively. Answers suggested by many interviewees included that they assessed a regular digestion of the material they came across, and that they could control and sift the material subjected to inflow. Furthermore, students did not simply adopt the sources and check them on their credibility and reliability but also used their common sense and knowledge. That they shared content with reflection and regularly added their idea strengthens the notion that these users are active participants and not consumers. Such actions indicate the increasing level of digital literacy and the ability to think independently on the part of the participants.

These findings are important because they rebuke the old media theories as well as because they further the ongoing debate as to the consumption of media in the education scenes. When the study highlights the critical thinking and media awareness of the students, then it can be said that educational institutions can enhance these powers to further incorporate media literacy in the curriculum. Such implications are especially significant to teachers, curriculum developers, and policy makers who want to teach students who are informed, self-reflective and can make decisions with a sense of responsibility and autonomy in a digital realm.

Although it provided its contributions, the study has its limitations. The data also included self-reports, and thus distortions or bias might appear because the perception of the participants or its memory would be subjective. Moreover, the study targeted only students at the University of Moulay Ismail, and this fact restricts the applicability of findings. Future research that may involve a larger and more diverse samples of students across multiple institutions and some mixed methods, such as

observational or behavioral data, may facilitate the knowledge of social media use among them.

Resting on these findings, it is possible to compile a number of recommendations to be made in the future. It is also suggested that researchers focus on the nature of the critical engagement of students with the social media that changes over time and various cultures. Teachers need to think about such issue as including the critical media literacy in the classroom as a way of adding to the student's reflection and evaluation students developed. Also, further research can be carried out on correlation between academic performance of the students and their media habits. This work is therefore conclusive that the assumptions of the Hypodermic Needle Theory do not apply in the contemporary media environment, at least, not in this population group among the students of the University of Mpumalanga who have emerged to be reflective, critical and self-governing in their usage of social media.

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