Investigating Moroccan EFL 3rd Year University Students' Critical Thinking Skills in Analysing Advertisements

Marwa Merabti

Ibn Tofail University, School of Arts and Humanities, Kenitra, Morocco

Marwa.Merabti@uit.ac.ma

Mohamed Benmhamed

Ibn Tofail University, School of Arts and Humanities, Kenitra, Morocco

Abstract

TV commercials are ubiquitous, with people worldwide continuously exposed to various forms of commercial communication. This study aimed to assess the extent to which Moroccan university students utilize critical thinking skills when watching advertisements. Specifically, it sought to determine whether these students could analyse and evaluate the content they encounter and the impact of commercials on their purchasing behaviour. A survey was conducted with a sample of 70 third-year university students from Moulay Ismail University. Given the study's quantitative nature, data from the survey were analysed using SPSS. The results indicated that the university students are adept critical thinkers, capable of analysing and evaluating the advertisements they viewed. A significant number of students could identify persuasive strategies employed by advertisers. Additionally, there was no notable difference between male and female students in their application of critical thinking skills; both groups could critically analyse a Maroc Telecom advertisement. Moreover, their purchasing behaviour was not influenced by viewing TV advertisements.

1. INTRODUCTION

Advertising has captured the interest of scholars across numerous disciplines due to its central role in many societies (Berger, 2004). People globally are continually exposed to this form of commercial communication. As Berger (2004) notes, "Advertising pervades our lives—from the billboards on our highways to the print ads in the publications we read, the commercials on radio and television, and the designer logos on T-shirts and other kinds of clothes we wear" (p.5). Furthermore, advertising plays a significant role in shaping gender identity and affects the relationship between children and parents by mediating and creating needs (Jhally, 1987). In other words, advertisements influence not only product purchases but also people's identities. Mass media offer a broad array of cultural opinions and standards, presenting various identity examples that individuals can adopt and aspire to. The interpretations derived from media are not fixed but can be reshaped to suit personal needs and identities. Consequently, modern consumers have a heightened responsibility to engage with advertisements critically and analytically.

Researchers generally agree that advertising is one of the most persuasive institutions in media. Robert and Wyer (2002) indicate that "advertisements are social communications. Like other communications, they are intended to inform, and in most instances, to persuade recipients to adopt a certain attitude or behavioural disposition" (p. 693). This means that advertising aims not only to inform people about available choices and product characteristics but also to persuade them to purchase specific products or services. Although advertisements promote their products' advantages over competitors and strive to establish a superior brand image, they achieve this through various persuasive techniques that many consumers are unaware of. These strategies can misrepresent the truth and lead consumers to believe false statements about products.

Today, advertisements specifically target young people and are embedded in their popular culture (Gainer, Valdez-Gainer & Kinard, 2009). Advertisers focus on persuading young people to buy products and services. Mass media texts, including advertisements, reflect certain values even when they appear to be neutral (Evans, 2004). Such texts can influence people's thinking (King and Kitchener, 2007). Therefore, it is essential for students to critically analyse TV commercials in their environment. Despite the increased awareness of young people's extensive media engagement, this has not significantly changed literacy teaching methods in schools (Kellner & Share, 2007).

Liu and Zheng (2023) highlight the significant impact of advertising on consumer behaviour, emphasizing how marketing messages shape perceptions and drive purchasing decisions through various persuasive strategies. Another study by Braca and Dondio (2023) discusses the critical role of persuasive techniques in digital advertising. The study notes that persuasive messages, tailored through advanced technologies like machine learning, significantly enhance advertising effectiveness by targeting specific consumer traits and preferences. This targeted approach increases the likelihood of engagement and conversion, demonstrating the powerful influence of well-crafted advertisements on consumer behaviour.

However, there is a scarcity of studies focusing on students' critical thinking in media consumption within Morocco. Thus, the present study addresses this research gap by examining how students specifically use critical thinking skills when interacting with advertisements. Investigating this can provide deeper insights into their media literacy and cognitive processes. Specifically, exploring how students process the images and messages in ads will provide insights into their use of critical thinking skills. This means understanding if students are aware of advertisers' persuasive techniques and if they can critically evaluate the presented information and decide their response.

The study attempts to answer the following research questions:
1) Do students use critical thinking while watching advertisements?
2) Does gender affect students' use of critical thinking?
3) Do Moroccan advertisements affect students' buying behaviour?

2. REVIEW OF THE LITERATURE
2.1. Advertising

Every day people around the world are exposed to different kinds of media that try to sell products to them. TVs, Radios, newspapers, and the Internet are all full of products and services that tend to attract attention, change people's preferences and, hence, make people buy products. To achieve these aims advertisers, make use of different kinds of persuasive strategies. The first section of the present study sheds light on these persuasive strategies, tries to explore consumers' culture of consumption and presents a model of advertising literacy. The second section mainly focuses on critical thinking skills, its definitions, characteristics, importance, and its major components. This is to have a global idea about this skill and to be able to assess its use. The third section is mainly devoted to the practical realization of the issues discussed in the review of literature. A questionnaire and a video of Maroc Telecom

advertisement are used to assess students' use of critical thinking while watching the advertisement.

2.2. Definitions of Advertisement

Defining advertisements is not an easy task; one may even dare to say that it is a controversial issue. "It is very difficult to offer an unambiguous conceptualization of advertisement. Terminologically, it is often hard to distinguish from one another such concepts as advertising, marketing communication, promotion or corporate communication." Malmelin (2010, p. 132). Cook (1992) stated that there are two major elements that people use to distinguish advertisement from other discourse types, namely the commercials' function, which is to persuade people to buy a specific product, and the products' label. That is to say, an ad must always contain the name of a product. However, Cook (1992) rejected this definition for several reasons. First, advertisement is not only to sell products but it can be used to plead warn or seek support. Second, there are discourses such as songs or poems, which become ads by being used in a particular way. Third, to claim that the only function of advertisement is to persuade is not acceptable. An ad may also amuse, inform, worry or warn. Besides, 'function' can be understood from two perspectives. The function which the sender intends the discourse to have may not be the same as the function it has for the receiver.

Berger (2004) defines advertisement according to the way the advertisement industry works. He views that the advertising agencies purchase space for print advertisements in newspapers, magazines, or other kinds of publications, or time to broadcast commercials, made for companies selling products or services. Moreover, these commercials or print advertisements are generally designed to attract the attention of people with suitable demographics and proper values and lifestyles for some product or service. Berger (2004, p. 5) added that an "advertiser hopes to convince, to persuade, to motivate, and most importantly, to get people to act, to do something. The something generally involves moving from the desire for products and services to the actual purchase of the products and services."

Along the same line, Pope (2003) and Robert and Wyer (2002) confirmed the persuasive objectives of advertisements. The former stated that advertising attempts to persuade its audience to purchase a good or service. However, "institutional advertising has for a century sought to build corporate reputations without appealing for sales. Political advertising solicits a vote (or a contribution), not a purchase", (Pope, 2003, p. 1). Phrased differently, though the objective of advertisers is to make people buy products, this is done indirectly. There is the use of many tools, strategies and techniques that push people to buy and believe that is their choice. Robert and Wyer (2002, p. 693) said "Advertisements are social communications. Like other communications, they are intended to inform and, in most instances, to persuade recipients to adopt a certain attitude or behavioural disposition". To this end, it can be safely argued that the ultimate objective of any advertisement is to persuade people to buy a particular product or service. Although this may not always be done explicitly, advertisers employ numerous persuasive strategies that can influence consumers' choices and buying behaviour. These definitions align with the current study on critical thinking and advertising by highlighting the need to understand how students recognize and evaluate these persuasive techniques. Investigating how students critically analyse advertisements will shed light on their media literacy and cognitive processes, and reveal the extent to which they can discern and critique the underlying persuasive strategies used by advertisers. The following sub-section sheds light on some of them.

2.3. Strategies Used in Advertisement

As mentioned earlier, advertisements do not exist in a vacuum, they are not neutral, and they are not passive. The messages that are developed in advertisements are in fact designed to persuade. That is to say, they are constructed to appeal to the largest possible audience and

persuade potential viewers to buy particular products or services. To reach this goal, many researchers agreed that advertisers use certain strategies. Some of these strategies have an emotional appeal and others have a rational appeal.

Concerning the rational appeal, it is of great importance when it comes to changing the consumer's beliefs about the advertised brand. According to Kotler and Armstrong (1991, p. 426), rational appeals "relate to the audience's self-interest. They show that the product will produce the desired benefits. Examples are messages showing a product's quality, economy, value, or performance."

Following the same line of reasoning, Taflinger (1996) stated that There are two basic ways of presenting a sales message: intellectually and emotionally.
The former depends on logical and rational arguments to convince a consumer to buy the product or service. In other words, it relies on the power of arguments or reasons for brand qualities. Concerning the latter, Taflinger (1996) sees that in an emotional presentation, the actual function of the product is often not its main selling point. Instead, there is a concentration on other aspects of the consumer's bundle of values: social, psychological, and economic.

In the same vein, Berger (1972, p. 131/132) explained that "Publicity is never a celebration of pleasure-in-itself. Publicity is always about the future buyer" (as cited in Berger, 2004, p. 35). It aims to create the illusion that a company's product or service will enable its buyers to live a luxurious life, where everybody is going to envy him/her about it. In other words, publicity persuades people of such a transformation by showing people who have apparently been transformed and are, as a result, enviable. Therefore, Publicity is about social relations, not objects.

To this end, one could assert that advertisers have more than one strategy to persuade and convince people to buy a product or change a brand. Some strategies call for reason, that is, arguments that show the effectiveness of a brand. Others call for emotions, that is, strategies that make people believe that a particular product is suitable for them and cannot live without it; Berger (2004) called them psychoanalytical methods: methods that make the advertisement more manipulative and people are not conscious of.

2.4. Dimensions of Advertising Literacy

Malmelin (2010) defines advertising literacy through four distinct dimensions: informational literacy, aesthetic literacy, rhetorical literacy, and promotional literacy. Informational literacy involves the ability to obtain and assess information from media, judging its accuracy and credibility. Historically, advertisements focused on providing product information, but contemporary ads aim more at capturing attention and creating positive images. The rise of communication technology has made it easier for consumers to gather information about companies, making it crucial for them to evaluate the trustworthiness and logic of advertisements.

Aesthetic literacy relates to interpreting advertisements as sources of aesthetic pleasure and entertainment. It includes using media for personal needs like relaxation and new experiences and evaluating the artistic expressions within ads. Rhetorical literacy focuses on understanding the persuasive strategies used in advertising. It involves recognizing the target audience and analyzing the tones and visual cues used to appeal to different groups. Since companies constantly evolve their rhetorical strategies, consumers must develop progressive literacy skills to keep up. Promotional literacy encompasses understanding the commercial intent behind media content. It includes evaluating the forms, functions, and objectives of media, and understanding the media economy, convergence, and ownership structures.

Among these dimensions, informational literacy and rhetorical literacy are most relevant to the research on critical thinking and advertising. Informational literacy aligns with CT by emphasizing the evaluation of information accuracy and reliability in advertisements. Rhetorical literacy also connects closely to CT, as it involves analysing persuasive strategies and critically examining the methods used to influence consumer behaviour. Both dimensions highlight the need for students to apply critical thinking skills to navigate and interpret complex messages in advertisements effectively.

2.5. Critical thinking

Many researchers attempt to provide readers with precise and comprehensible definitions that may help them to have a clear idea about what critical thinking is. Among these researchers are Scriven and Paul (1996) who defines critical thinking as: "The intellectually disciplined process of actively and skilfully conceptualizing, applying, analysing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action" (p. 7).

Scriven's definition reveals two major things. First, critical thinking is a set of mental operations that include conceptualizing, applying, and analysing information that will be evaluated for further action. Second, critical thinking skills are something that people learn from practice, that is, from experience. In the same vein, Dewey (1909, p.9) defines it as "active, persistent, and careful consideration of a belief or supposed form of knowledge in the light of the grounds which support it and further conclusions to which it tends" (cited in Fisher, 2001, p. 2)

According to Fisher (2001), Dewey in this definition describes critical thinking as an active process, in the sense that people involve themselves in asking questions and trying to find information. Thus, critical thinking, here, is contrasted with the kind of thinking in which people passively rely on others to receive information. Besides, in defining critical thinking as 'persistent' and 'careful' Fisher (2001) views that Dewey is contrasting it with the kind of unreflective thinking; in other words, the thinking in which people jump to conclusions or behave without thinking. According to this researcher, "The most important thing about Dewey's definition is in what he says about 'the grounds that support' a belief and 'the further conclusions to which it tends'." (Fisher, 2001, p. 3). This means that what matters are the reasons we have for believing in something and the implications of our belief. In this respect, critical thinking is linked to reasoning.

From the definitions presented, it can be deduced that the main basics that constitute critical thinking skills are:

- Rationally analyse, evaluate, and reflect on information received.
- Creatively reflect and actively act.
- Reasonable reasons for any belief or judgment.
- Knowledge of methodology.

2.6. Characteristics of Critical Thinking

The essential characteristics of critical thinking vary according to the motivation underlying it. Jones and Ratcliff (1993, p.10) argue that "the pillar of critical thinking is metacognition. It is defined as thinking about one's thinking". This includes recognizing which kinds of learning tasks cause difficulty, which approaches to remembering information can serve them better and how to solve different kinds of problems, and therefore use this knowledge to assess, control, and direct what one is doing.

Beyer (1995) elaborates on what he perceives as crucial aspects or characteristics of critical thinking. These aspects are grouped under the following six major concepts:

Disposition: refers to the type of character that a critical thinker has, critical thinkers are open-minded, sceptical, respect evidence and reasoning, clarity and precision, according to Beyer (1995) critical thinkers are ready to change positions only when reason leads them to do so.

Criteria: Beyer (1995) argues that to think critically, certain conditions must be met to judge something as being reasonable and believable. In this respect, he said that although the argument can be made that each subject area has different criteria, some standards apply to all subjects, that is, "…an assertion must.. be based on relevant, accurate facts, based on credible sources, precise, unbiased, free from logical fallacies, logically consistent, and strongly reasoned" (p.12)

Argument: in fact, the pillars of critical thinking involve identifying, evaluating, and constructing arguments.

Reasoning: is acknowledged by many scholars and researchers as one of the crucial aspects of critical thinking.

Point of view: in a search for understanding, critical thinkers view phenomena from many different points of view.

Knowledge of methodology: or what Beyer (1995) named as the procedures for applying criteria; the latter involves the use of many procedures including asking questions, making judgements, and identifying assumptions.

2.7. Interpretive Skills

Hughes (2000) discusses the complexity of language and the challenge of understanding how meaning changes. He outlines three key theories of meaning:

1. Reference Theory of Meaning: Originating with Aristotle, this theory asserts that a word's meaning is derived from what it refers to (e.g., 'dog' refers to all dogs). It faces criticism because our understanding of a word often includes only a small subset of its references, and some words, like "unless" or "if," do not have clear referents.

2. Idea Theory of Meaning: Developed by John Locke, this theory holds that a word's meaning is the mental image associated with it (e.g., 'dog' evokes an image of a dog). This theory is problematic for words that do not form clear mental images, such as "unless" or "yes."

3. Meaning as Use: Proposed by Wittgenstein and Austin, this theory suggests that words have meaning only within the context of sentences. It emphasizes the importance of context in understanding what a speaker intends to convey, as the primary bearers of meaning are sentences, not individual words.

2.8. Verification Skills

Verification skills involve evaluating the truth or falsity of statements or arguments. Three main theories of truth are discussed to illustrate how truth claims can be assessed:

1. Correspondence Theory: This theory posits that a statement is true if it corresponds to facts in the real world. According to Hughes (2000), truth consists of a correspondence between a statement and a fact, and when this correspondence holds, the statement is true; otherwise, it is false.

2. Coherence Theory: This theory argues that a belief or statement is true if it coheres with a system of beliefs or statements. Unlike the correspondence theory, it relies on the consistency of

beliefs as the basis for truth, asserting that justification for believing something to be true comes from other beliefs.

3. Pragmatic Theory: This theory focuses on the problem-solving function of human beliefs. It claims that truth is determined by the practical consequences of a belief or statement. According to pragmatic theorists, a belief is true if it effectively solves a real problem, emphasizing the usefulness of the problem in assessing truth.

2.9.Reasoning Skills

Reasoning skills, as defined by Chesla et al. (2010), involve the process of systematically moving from a problem to a solution using logical steps. These skills require individuals to justify their thoughts, actions, or opinions based on factual evidence and logical conclusions rather than relying solely on emotions. The section explores three main theories of reasoning:

1. Inductive Reasoning: This approach begins with specific observations or evidence and leads to a broader generalization or conclusion. It involves evaluating the logical coherence of conclusions drawn from observed evidence, without guaranteeing absolute truth.

2. Deductive Reasoning: Unlike inductive reasoning, deductive reasoning starts with a general principle or conclusion and examines whether specific evidence supports that conclusion. It focuses on verifying the logical validity of conclusions based on the evidence provided.

Understanding these reasoning methods is crucial for developing critical thinking skills, as they provide structured approaches to problem-solving and decision-making based on logical analysis and evidence evaluation.

3. METHODOLOGY

The major purposes of this exploratory study are to investigate students' use of critical thinking skills (analysis, interpretation, and evaluation) in advertisements and to see the extent to which Moroccan advertisements affect their buying behaviour. In fact, the fundamental goal of this research is to help students develop their critical thinking skills. This is through exploring the three major skills that are embedded under the umbrella term of critical thinking skills, and the persuasive techniques used to affect their buying behaviour.

The respondents are 70 Moroccan EFL 3rd year university students at Moulay Ismail University in Meknes. Choosing 70 students is likely based on ensuring adequate representation, statistical power, feasibility, contextual relevance, and alignment with the study's research aims and design. These considerations collectively support the choice of the sample size of the present study. These respondents include both males and females in a homogeneous classroom. The data-gathering instrument used in the process of collecting the data is a questionnaire. In terms of the form, the questionnaire adopted contains two types of questions. It is a combination of closed and open-ended questions, which gives the target sample the possibility to express their ideas freely. In fact, the two types are interconnected since the former makes the target sample limits the answers to the points that are meant to be analysed in the research and the open-ended questions allow them to elaborate more. Students' answers to the questionnaire are based on an advertisement for mobile phones credit called Maroc Telecom, the choice of this video is based on the idea that many students have mobile phones, and such advertisement may attract their attention. The questionnaire is analysed by Statistical Package for Social Sciences, to get the general percentage and frequencies of the respondents' choices (i.e. how many participants select each answer listed in the questionnaire, cross-tabulation tables (i.e. the relationship between variables), and chi-square tests (i.e. to determine whether there is a statistically

significant difference between the expected frequencies and the observed frequencies). The statistical significance is set on the level of,05(95%) for all statistical procedures.

4. RESULTS

The purpose of this segment is to analyse the data obtained from the questionnaire administered to 70 Moroccan university students. The results obtained were analysed employing the SPSS program to calculate the percentage of each answer and to conduct chi-square tests.

This section is divided into two main sub-sections. The first one presents the results of both students' use of critical thinking skills as well as the difference between males' and females' answers. The second one is devoted to the presentation of the results of the third research question, that is, whether the 'Maroc Telecom' advertisement affects students' buying behaviour.

4.1.Learners' use of critical thinking skills

This part presents students' answers that demonstrate whether university students use critical thinking skills while watching ads or not.
According to the data presented in figure1, 53% of the respondents are males, whereas 47% are females.

Figure 1: *The participants of the study*
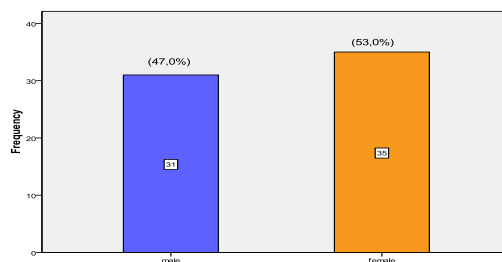
Following the question that seeks to elicit respondents' reactions to the things that attract them to the chosen ad, it was found that there is a slight difference between males and females. 45,2% of males stated that they are attracted by the service in comparison with 28, 6% of females. Moreover, 19, 4% of males claimed that they are attracted by music, whereas only 17, 1% of females stated the same. And when it comes to both service and music, females reported that they are more attracted than males, precisely 54, 3% for females and 35,5% for males.

Table 1: *Cross-tabulation of gender and the question of what attracts students to the ad*

	Music	*Service*	*Both of them*
Males	*19.4%*	*45.2%*	*35.5%*
Females	*17.1%*	*28.6%*	*54.3%*

As this cross-tabulation shows, 57.1% of females reported that the central issue of the advertisement is to advertise the service in comparison with 41.9% of males. Besides, 22. 6% of males reported that the service tends to inform its consumers about the promotion, whereas only 17.1% of females stated so. Concerning the no answers, 35.5% of males provided no answer in comparison with 25.7% of females. Based on these findings the difference between males' and females' responses is insignificant and the table below confirms it.

Table 2: *Cross-tabulation of gender and the central issue of the advertisement*

	Advertising	*Promotion*	*No answer*
Males	*41.9%*	*22.6%*	*35.5%*
Females	*57.1%*	*17.1%*	*25.7%*

Furthermore, the majority of students, 51,5%, agreed that the ad informs them of the reasons for embracing an important issue, whereas 48,5% stated that it does not. Figure 2 proves what has been argued.

As for the difference between males' and females' responses, the Chi-Square test performed indicates that there is no significant difference (as the significance (0,632) is over (0, 05)).

Figure 2: *Whether or not the ad tells them why its issue is important*
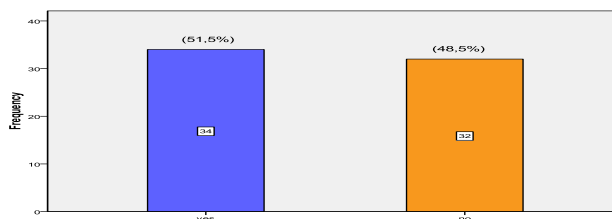
Another important result, that the chart below demonstrates, is the large number of students, precisely 68, 2%, who reported that the reasons provided about the importance of the issue of the ad are not convincing, whereas 31, 8% of the respondents stated the opposite.

Figure 3: *Whether or not the reasons provided about the importance of the issue of the ad are convincing*
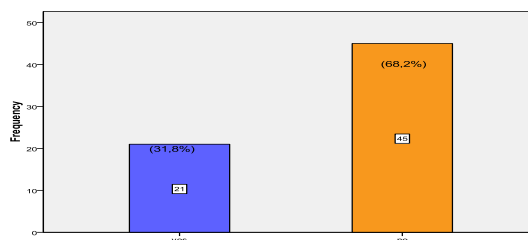
As for the question that displays students' awareness of the persuasive techniques used in the ad, it has been revealed (figure 4) that 63,6% of the students stated that there is the use of a famous singer, 15,2% of respondents said the use of dancers, while 21,2% provided no answer. These results are presented in the graph below.

Concerning the difference between the two variables a Chi-Square test was conducted. Its results demonstrate that the significance (0. 09) is over (0, 05), which means that the variable gender does not affect students' answers to this question.

Figure 4: *The major things that the advertiser used to make the ad appealing to them*
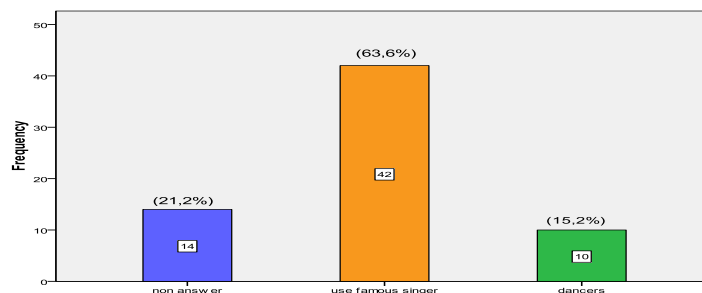

Regarding students' analysis of the commercial form, it has been found (figure 5) that 68, 2% of the students do not find the advertisement presented to them creative, while 31, 8% stated the opposite.

Figure 5: *Whether or not the ad is creative*
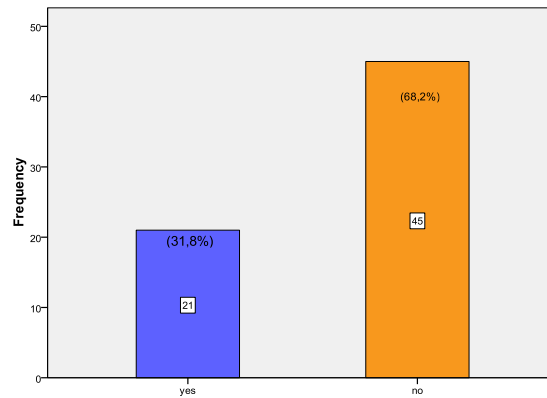
Along the same line, the respondents of this research do not find the service presented to them ethical, because 78, 8% of them answered no when asked: does it respect ethics? Whereas only 21, 2% answered yes.

Figure 6: W*hether or not the ad respects ethics*
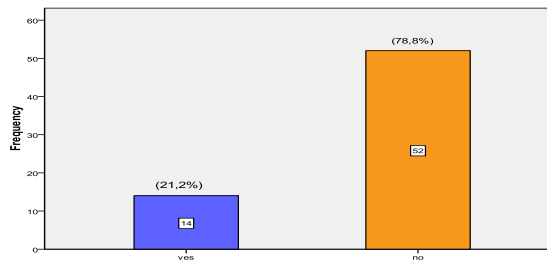
As it is presented in table 3, 50% of the respondents do not find the advertisement ethical because of the use of girls, 13, 6% because of the dance, but 22, 7% find it ethical because of the good images that it contains. And 13,6% provided no answer.

Concerning the difference between males' and females' answers to this question, Chi-Square tests are conducted and show that there is no significant difference, and thereby no correlation between the demographic variable gender, and those of "does the advertisement respect ethics", and its justification.

Table 3: *Justification of whether the ad respects ethics or not*

		Frequency	Percent
	No answer	9	13.6
Respect ethics	The use of girls Dancing	33 9	50.0 13.6
Does not respect ethics	Good images	15	22.7
	Total	66	100.0

Another important question that deals with students' analysis of the commercial form is whether or not the students find the ad entertaining. The chart below demonstrates that 68,2% of respondents argue that it is entertaining, whereas 31,8% of students stated that it is not.

Figure 7: *Respondents' answers of whether or not the ad is entertaining*
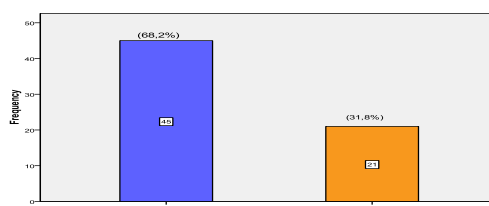
A reading of the results in Table 4 reveals that a great number of respondents, precisely 65,2%, find the advertisement presented to them entertaining because of the use of music and dancers, whereas 15, 2% of students did not find it entertaining because it is boring for them, and 9,1% because they dislike the singer. 10, 6% did not provide any clear-cut answer.

Concerning the difference between males' and females' answers to this question, the Chi-Square tests performed show that there is no significant difference. Hence, there is no relation between the demographic variable gender, and whether the ad is entertaining, and its justification.

Table 4: *Students' views of the most important components of an advertisement*

| components	Rank 1	Rank 2	Rank 3
Ethics	86.4	12.1	1.5
Creativity	9.1	81.8	9.1
Entertainment	4.5	6.1	89.4

As for students' ability to assess the ad arguments. It has been revealed (figure 8) that 77,3% of the students agreed that there is a lie in the advertisement presented to them, whereas 22,7% of respondents stated that there is not.

**Figure 8**: *Students' responses to the lie existing in the ad*
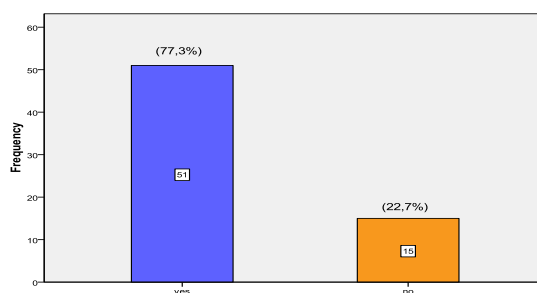
The chart below provides the students' justification of the lie that exists in the ad. 74, 2% of the respondents argued that they did not believe in the promotion, whereas 25, 8% of the students did not provide any clear-cut answer.

Concerning the difference between the demographic variable "gender" and the question "Is there any lie?" and "its justification", the Chi-Square tests were performed to confirm the independence of the variables. That is, gender does not affect students' answers to the previous questions.

Figure 9: *Justification of the lie existing in the ad*
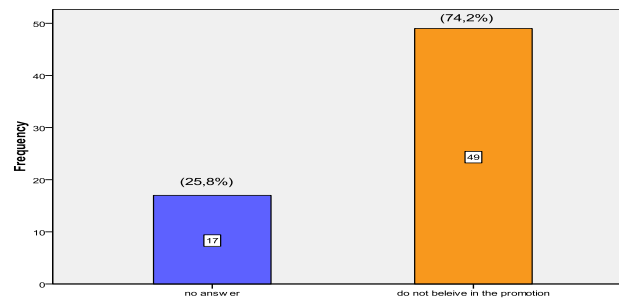
In the same vein, figure 10 demonstrates that the majority of students also insisted that there is misinformation in the advertisement presented to them, precisely (74,2%), whereas 25,8% of the students stated that there is none. As regards the difference between males' and females' answers, a Chi-Square test (table 23) was performed. The result shows that the relation between the variable "gender" and the variable "Is there any misinformation" is insignificant, as (0,993) is over (0, 05). That is to say, being male or female does not affect the informants' answers.

Figure 10: *Students' response to whether there is any misinformation*
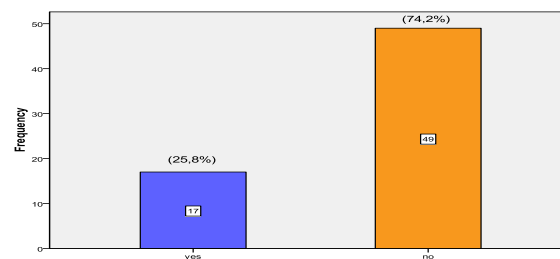
Another question that presents students' ability to assess the ad is when asked that there is no lie or misinformation. Figure 11 shows that 87, 9% of the respondents agreed that there is a lie and misinformation in the 'Maroc Telecome' advertisement, whereas 12,1% of students stated the opposite.

Figure 11: *students' answers to the question there is no lie or misinformation in the ad*
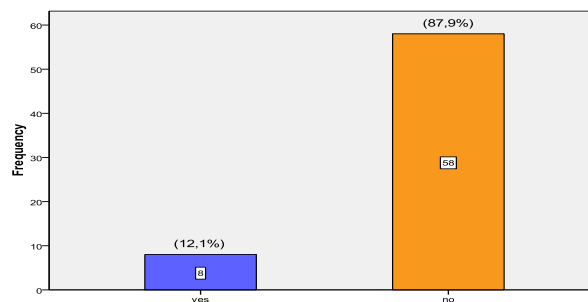
4.2 The effect of advertisements on students' buying behaviour

This section analyses a set of questions related to the impact of a Moroccan TV commercial on their buying behaviour.

Following the question that aims at discovering students' interest in the ad presented to them, it has been found that 53% of the students expressed their interest in Maroc Telecom advertisement, whereas 49% did not. Figure 12 confirms the result presented:

**Figure 12:** *Students' response of whether the ad interests them or not*
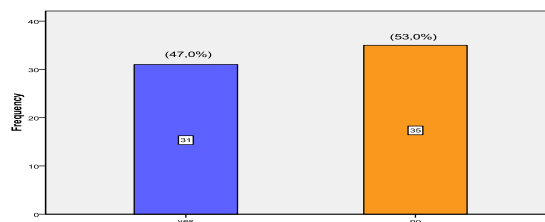
As for the students' justification of why the ad interests them, it has been indicated, as illustrated in Figure 13, that 37,9% of informants justify their interest in the 'Maroc Telecom' advertisement by stating that it updates them, and 6,1% said that they like the singer, whereas 22,7% expressed their lack of interest because they dislike Donia Batma, and 19,7% they use another service. 13, 6% provide no answer.

Figure 13: *Justification of why the ad interests students*
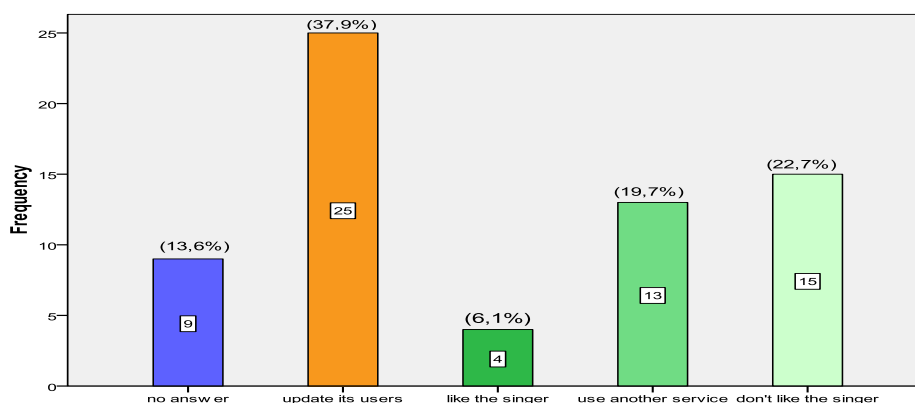
Students of this research also expressed how much the service is important in their life. As is presented in the chart below, 68,2% of the students seem to agree that the service of 'Maroc Telecom' is not essential in their life as it was described, whilst 31,8% of the students stated the opposite.

Figure 14: *Students' answers of whether or not Maroc Telecom service is essential in their life as it was described*
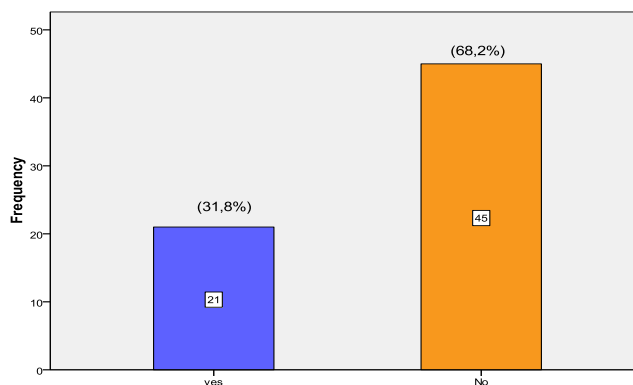
Another important answer that demonstrates the impact of the chosen ad on the students is the one presented in Graph 15. As presented in the histogram above, 37,9% of the respondents

agreed that the 'Maroc Telecom' service is somehow effective, 27,3% found it effective, 25,8% reported that it is not effective, while 9,1 stated that it is very effective.

Figure 15: *the effectiveness of the ad in terms of affecting students' buying behaviour*
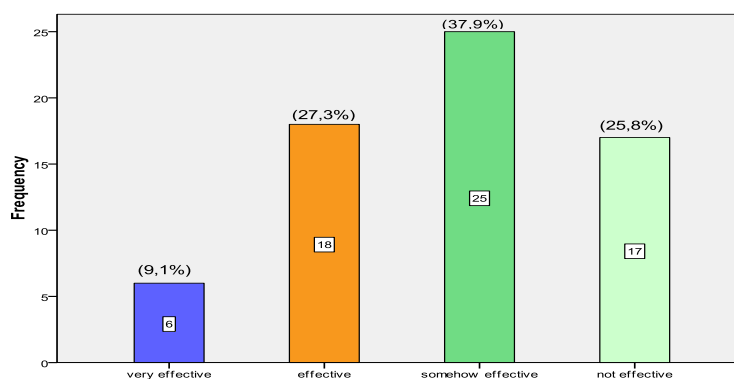
5. DISCUSSION

The main focus of this section is to discuss and interpret the data obtained from the questionnaire administered to 70 Moroccan university students. In other words, this section attempts to provide some possible answers to the research questions raised at the beginning of the study.

5.1. University students' use of critical thinking while watching advertisements

The data obtained in the previous section reveals that third year university students at Moulay Ismail use critical thinking skills while watching advertisements. Through the questionnaire administered to them and the video they saw, it is proven that they are aware of many things that were happening in the advertisement of Maroc Telecom. In other words, the questions that were asked to assess their critical thinking demonstrate that Moroccan students possess certain skills that enable them to analyse advertisements. Among the questions that bring to light this fact is when asked about the things that attract them in the advertisement. The high percentage received goes to both music and service, precisely 45,5%. A plausible explanation of this result is that Moroccan students are conscious of the function of advertisements; also the choice of music demonstrates their aesthetic literacy, that is, they saw the advertisement as an entertainment source. Besides, a chi-square test was performed to see whether students' gender affects their answers. That is, whether being male or female affects the students' choice. The chi-square test of independence indicates that 0,277>0,05 which means that there is no relation between the demographic variable "gender" and the question "What attracts you in this advertisement".

Moreover, 50% of the respondents were able to detect the central issue of the advertisement, as they said that the aim behind the Maroc telecom advertisement is to advertise its service. In addition to this, the chi-square test confirms the independence of the variable "gender" and the variable "the central issue of the advertisement" as the significance of the Chi-Square test (0,467) is over (0,05), a fact which reveals that there are no differences between males' responses and females'. Additionally, 63,6% of the students reported that to make the product appealing to the audience, the advertiser makes use of a famous singer (Dunia Batma) and 15,2% said they make use of dancers. A logical explanation for these findings is that Moroccan students are aware of some of the persuasive strategies used in Maroc Telcom service, namely singers, dancers, and colors. Moreover, the chi-square test, that was conducted, confirms that males' and females' answers are similar as the significance (0,09) is over (0,05).

Along the same line, the majority of the respondents were able to evaluate the commercial form. It is revealed that a considerably high number, 68,2%, of the participants claimed that

the advertisement is entertaining, whereas 78,8% reported that it lacks ethics and 68,2% stated that creativity is absent from it. One can deduce from these results that the use of music, dancers and a famous singer makes the advertisement entertaining for students, but at the same time, the majority did not find the use of these things as something creative. Put differently, the increased number of advertisements of many products and services makes the viewer more demanding about the quality of what s/he watches. Concerning ethics, it is claimed that the use of girls as dancers makes it unethical. This result is supported by the fact that most of the respondents, 86,4%, reported that ethics is the most important thing that should be present in any advertisement. This finding can be interpreted by stating that the environment of Moroccan students affects their principles. In other words, being in a conservative society influences students' thinking and decides, generally, about the priorities that should be respected in any advertisement. Concerning the difference between males' and females' responses to these questions, the Chi-Square tests show that there is no significant difference, revealing that the variable "gender" does not affect the variables "creativity, ethics, and entertainment of the advertisement", "their justification", as well as "Students' views of the most important components of an advertisement".

In essence, such examples represent clear evidence that Moroccan students use critical thinking skills. In other words, students' ability to identify the persuasive techniques used in the Maroc Telecom advertisement shows that Moroccan students are not easy to persuade and to convince them, there should be pertinent, reliable, and trustworthy arguments. Hence, the first hypothesis is confirmed, and as it is mentioned earlier the chi-square tests refute the second hypothesis. Put differently, Moroccan students, either male or female, demonstrate extreme capacity to analyse and criticize Maroc Telecom advertisements. As a matter of fact, the subsequent section will closely probe the effect of Moroccan advertisements on students' buying behaviour.

5.2. The Effect of Moroccan advertisement on students' buying behaviour

The third research question, which is "Do Moroccan TV commercials affect students' buying behaviour", has been, to a certain extent, answered in this section. A significant number of students, 53%, stated that they were interested in the advertisement presented to them. 37.9% of the respondents justified their answers by saying that it keeps them updated. That is to say, Maroc Telecom's advertisement enables them to receive the most recent information about its services. Alternatively, these results can be explained by the increased number of people, all over the world, who have mobile phones and are so interested in finding a suitable service that will help them to get cheap credit for their mobiles. Accordingly, these results may not mean that students' interest, here, will lead automatically to buy Maroc Telecom service, but it can just be a way to discover, as they do with many other services, the options that it presents and then, decide whether to buy it or not. This claim can be supported by two results. The first one is 68.2% of the students who stated that such advertisement is not essential in their life as it was described. In other words, Moroccan students are tremendously aware of the objectives of Maroc Telecom advertisement and can decide what is essential and cannot live without and what is dispensable. The second result, which is clear evidence that indicates that Maroc Telecom advertisement does not have a great effect on their buying behaviour, is 37.9% of the respondents stated that such advertisement is somehow effective and 25.8% reported that is not effective, instead of 27.3% found it effective, and 9.1% stated that it is very effective. Therefore, it could be said that Moroccan students are not easy to convince and are highly aware of their needs as well as the objectives behind the advertisement presented to them. Thus, such significant findings refute the third hypothesis.

To conclude, the results obtained from the data analysis generated several findings. First, Moroccan university students are critical thinkers. In other words, their answers to the questionnaire revealed that they possess critical thinking skills. They were able to analyse,

evaluate and criticise the commercial they saw. Second, males' and females' answers were identical, which uncovered, in turn, that students' gender does not affect the use of critical thinking skills. Put differently, both males and females were able to evaluate the advertisement presented to them in the same way. Third, Moroccan university students do not show great interest in the advertisement presented to them; in other words, though the advertisement contains many persuasive strategies, it could not have a great influence on students' willingness to purchase the service.

REFERENCES

Braca, A., & Dondio, P. (2023). Developing persuasive systems for marketing: The interplay of persuasion techniques, customer traits, and persuasive message design. *Journal of Marketing Research and Strategies*, 2023, 369–412.

Berger, A. A. (2004). *Ads, Fads, and consumer culture. Advertising's impact on American character and society, second edition*. London: Rowman & Littlefield Publishers, INC.

Beyer, B. K. (1995). *Critical thinking*. Bloomington, IN: Phi Delta Kappa Educational Foundation.

Cook, G. (1992). *The discourse of advertising*. London and New York:

 Routledge.

Chesla, E. L. & Learning Express Staff. (2010). *Reasoning skills success in 20 minutes a day, 3rd ed*. New York: Learning Express, LLC.

Evans, C. (2004). Exploring the relationship between cognitive style and teaching. *Educational Psychology*, 24(4), 509 – 531.

Fisher, A. (2001). *Critical thinking: An introduction*. Cambridge: Cambridge University Press.

Hughes, W. (2000). *Critical thinking: An introduction to basic skills,3rd ed*. Toronto: Broadview Press.

Jhally, S. (1987). *The code of advertising*. London: Routledge.

Jones, E. A. & Ratcliff, G. (1993). *Critical thinking skills for college students*. National Center on Postsecondary Teaching, Learning, and Assessment, University Park, PA. Eric Document Reproduction Services No. ED 358 -772.

Kellner, D. Share, J. (2007). *Critical media literacy, democracy, and the reconstruction of education*. New York: Peter Lang Publishing.

King, P. M., & Kitchener, K. S. (2007). *Developing Reflective Judgment: Understanding and Promoting Intellectual Growth and Critical Thinking in Adolescents and Adults*. San Francisco: Jossey-Bass.

Kotler, P. & Armstrong G. (1991). *Principles of marketing*, 5th ed. New York: Englewood Cliffs, NJ: Prentice Hall, Inc.

Liu, X., & Zheng, X. (2023). The persuasive power of social media influencers in brand credibility and purchase intention. *Journal of Marketing Research and Strategies*, 2023, 278–304.

Malmelin, N. (2010). What is advertising literacy? Exploring the dimensions of advertising literacy. *Visual Literacy, 29,* 129-142.

Pope, D. (2003). *Making sense of advertisements*. Retrieved on Mai 22, 2013 from http://historymatters.gmu.edu

Scriven, M. & Paul, R. (1996). *Defining critical thinking: A draft statement for the National Council for excellence in critical thinking*. [Online exclusive]. Retrieved on June 13, 2013, from http://www.Critical thinking.org/University/univlibrary/library.nclk

Taflinger, R, F. (1996). *An Overview of Advertising*. Retrieved on June 20, 2013 from http://www.wsu.edu/~taflinge/advertis.html

Wyer, R. S. (2002). Language and advertising effectiveness: Mediating influences of comprehension and cognitive elaboration. *Wiley InterSeienee, 19,* 693-712.

About the Author

Marwa Merabti *is a high school teacher and a doctoral candidate at Ibn Tofail Kenitra University –Faculty of Arts and Human Sciences- in the Department of English. She is a master's holder in applied linguistics. She is interested in English language teaching, applied linguistics, critical thinking, and ICTs.*