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**Persuasive Strategies in Media Discourse: EFL Readers' Perceptions
of Objectivity and Bias in English Newspaper Articles
A Case Study at Mascara University, Algeria**

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A handwritten signature in black ink, appearing to be 'Ali Belabbes', written over a horizontal line.

Dedication

I dedicate this thesis to all my teachers and mentors who contributed to make me who I am today, from a tender age till this day and for more to come, God willing

In loving memory of Professor **Yamina DERAMCHIA**, whose wisdom, guidance, and unwavering support continue to inspire. Her legacy lives on in the hearts of her students and in the pursuit of knowledge she so deeply valued

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Abstract

Critical media literacy (CML) has gained prominence for its potential to counter misinformation, yet it remains unclear whether explicit instruction in critical thinking strategies enhances reading media texts in a critical manner more effectively than general reading comprehension training. Within the paradigm of action case research, a quasi-experimental design was carried out to examine the impact of explicit critical thinking instruction on 55 EFL learners' CML skills. The interdisciplinary intervention integrated Toulmin's model of argumentation and Fairclough's relational approach to critical discourse analysis to teach students to deconstruct persuasive techniques, evaluate bias, and interrogate ideological power dynamics in public health news articles within a CDA framework. Pre- and post-assessments used an adapted California Critical Thinking Skills Test alongside qualitative analysis of students' textual critiques. Findings revealed that structured argument analysis improved students' ability to identify bias and assess authorial intent, with statistically significant gains in evidence-based judgment. However, while students demonstrated sharper awareness of argumentation-persuasion interplay, their ability to contextualize ideological bias fell short of expectations, suggesting a need for deeper engagement with socio-political text-context dynamics. The study underscores the value of explicit critical thinking instruction in CML curricula but highlights gaps in learners' capacity to transfer analytical skills to complex, emotionally charged media. Recommendations include scaffolding meta-critical strategies to resist emotional manipulation and fostering sustained practice with nuanced, ideology-laden texts. Implications for EFL pedagogy and media literacy frameworks are discussed.

Keywords

argumentation analysis, bias and objectivity detection, critical media literacy, critical thinking, EFL learners, persuasive strategies

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List of Abbreviations and Acronyms

CDA	Critical Discourse Analysis
CML	Critical Media Literacy
CTS	Critical Thinking Skills
CCTT	Cornell Critical Thinking Test
CCTST	California Critical Thinking Skills Test
CCTDI	California Critical Thinking Disposition Inventory
EFL	English as a Foreign Language
ELM	Elaboration Likelihood Model
ESP	English for Specific Purposes
GMAT	Graduate Management Admissions Test
LMD	Licence, Master, Doctorate
UNESCO	United Nations Educational, Scientific and Cultural Organization
SAT	Scholastic Aptitude Test (formerly Scholastic Assessment Test)

General Introduction

1. Background

A key aspect of foreign language education is equipping learners with critical media literacy skills to navigate and evaluate the constant flow of information in today's digital world. One of the most pressing discussions in applied linguistics revolves around how to effectively integrate these skills into EFL curricula, fostering deeper analytical engagement with media texts and preparing students for informed participation in a globalized society. Over the past decade, there has been growing recognition of the crucial link between higher-order thinking skills and students' ability to critically assess media messages. Research suggests that critical media literacy plays a vital role in shaping how individuals interpret, evaluate, and respond to the often conflicting streams of information that influence public opinion and societal discourse. In an era where misinformation can rapidly affect democratic processes, public health decisions, and intercultural relations, developing these skills in EFL contexts contributes not only to academic growth but also to the cultivation of socially responsible global citizens. However, the limited integration of critical media literacy in EFL education often leaves students ill-equipped to identify bias, assess credibility, and recognize persuasive strategies in digital media, making them vulnerable to misinformation and hindering their ability to critically analyze news texts.

2. Statement of the Problem

Results from earlier studies demonstrate a strong and consistent association between the explicit integration of critical thinking strategies and concepts into classroom settings and significant improvements in media literacy skills among EFL students. A much-debated question is whether these improvements translate into enhanced ability to detect bias and evaluate credibility through the critical analysis of persuasive language in news texts. One of the most significant current discussions in applied linguistics is how such instructional

practices can be systematically embedded within EFL curricula to ensure the transferability and long-term retention of these critical evaluation skills. Up to now, far too little attention has been paid to exploring these issues within the Algerian higher education context, where critical media literacy remains largely absent from formal EFL instruction. Although extensive research exists on media bias, a review of the literature reveals that few studies have examined how students employ argumentative analysis as a form of textual analysis to identify the logical structure and persuasive strategies within a text, and how such identification influences their ability to detect bias and assess objectivity. Although studies have recognised the importance of integrating critical thinking and media literacy instruction, research has yet to systematically investigate the effect of applying argumentative analysis beyond the textual level to the broader socio-cultural and ideological context, in order to develop students' capacity to detect bias, assess objectivity, and critically evaluate persuasive strategies in authentic news texts.

No previous study has thoroughly explored how argumentative analysis, when extended beyond textual analysis, contributes to the development of students' abilities to discern bias, evaluate objectivity, and critically analyze persuasive strategies within authentic news texts in the Algerian higher education context. Previous studies have failed to demonstrate a causal relationship between the explicit teaching of argumentative analysis and the sustained transfer of critical evaluation skills to real-world media consumption, or to understand the mechanisms by which such skills are internalised and applied beyond the classroom. There is conflicting evidence on the relationship between critical thinking instruction and students' ability to consistently apply analytical skills to overcoming personal bias, whether conscious or unconscious, when confronted with persuasive media messages. This indicates a need to understand the various perceptions of bias detection and critical evaluation that exist among EFL students, as well as how these perceptions influence their engagement with and

interpretation of news texts.

3. Purpose of the Study

The present study has three main purposes. First, it seeks to investigate how explicit instruction in critical thinking, coupled with guiding questions stemming from critical discourse analysis, influences EFL undergraduate students' ability to evaluate credibility, identify objectivity, and detect bias in English-language public health news. Second, it aims to examine how such instruction supports students in recognising and controlling subjective influences, whether conscious or unconscious, when evaluating media content. Third, it endeavours to explore how variations in bias detection ability shape students' perceptions of the persuasive impact of public health news articles.

For purposes of this study, coupling explicit instruction in both argumentation and critical discourse analysis allowed for meaningful connections to be built between the logical structure of texts and the socio-cultural and ideological contexts in which they are produced, thereby enabling students to more effectively detect bias, assess objectivity, and critically evaluate persuasive strategies in authentic news content. Exploring how variations in bias detection ability shape students' perceptions of the persuasive impact of public health news articles is essential for understanding the extent to which these analytical skills influence interpretation of real world media coverage and judgment of news report contents. Such exploration provides insight into whether stronger bias detection skills correspond to a more critical stance toward persuasive messages or lead to greater resistance to potentially misleading content.

4. Research Questions

The research questions were designed to investigate the impact of critical thinking and argumentation analysis instruction on the critical evaluation skills of EFL Master's students at the Department of English, University of Mascara, Algeria. The participants were enrolled in

a course that included Discourse Analysis as a core module. The research examines how such instruction influences students' ability to assess the credibility, objectivity, and bias of English public health news articles and to identify persuasive strategies embedded in them. To put it more clearly, the study examined how two types of critical thinking skills (critical discourse analysis and argument analysis) influence three textual evaluation skills: detecting bias, detecting objectivity, and perceiving persuasive intent. The critical thinking skills are the independent variables, while the textual evaluation skills are the dependent variables.

In a quasi-experimental study, this research seeks to address the following questions:

- RQ1** How do first-year EFL Master Learners perceive their critical evaluation skills for determining the credibility of media news before and after completing a quasi-experimental course?
- RQ2** To what extent does instruction in critical thinking and argumentation analysis help first-year EFL Master Learners identify objectivity and bias in public health news articles published on English newspapers?
- RQ3** To what extent does such instruction help first-year EFL Master Learners mitigate their personal biases, whether conscious or unconscious, when evaluating public health news articles published on English newspapers?
- RQ4** Do differences in students' level of ability to detect bias influence their perceptions of the intended persuasive effects of public health news articles published on English newspapers, and if so, how?

The sequence of the research questions reflects a logical progression from students' self-perceived critical evaluation skills (RQ1) to the measurable impact of instruction on their ability to identify objectivity and bias (RQ2), and then to the control of personal subjectivity in evaluative judgments (RQ3). Finally, the focus shifts to exploring whether differences in bias detection skills influence students' perceptions of the persuasive intent of news articles

(RQ4), thus linking evaluative ability to the interpretation of persuasive strategies.

By addressing these research questions, this study contributes to a deeper understanding of how educational interventions in analysis and critical evaluation of argument can enhance EFL university students' ability to objectively identify and evaluate biased arguments and perspectives in news media coverage of health while improving their skills to specify the argument's role to frame persuasion. By addressing these research questions, this study also contributes to developing students' empowerment and personal growth through scaffolding, guidance, and teacher support.

5. Research Approach

To answer the research questions, the author applied the action case research method, a hybrid combining data creation, interpretation, intervention, understanding and change, (Hesse-Biber & Johnson, 2013; Hesse-Biber, 2019). Action case lies in between case study and action research. It involves collaboration between the researcher and respondents with respect to the goals, process and outcomes of the conducted research. It introduces small-scale intervention with a deep contextual understanding of a case. In this research, the author deemed action case as an appropriate research method for this study, because when studying a complex real world problem that involves sequential decision making, a researcher needs to take a more active role and be involved in creating change in practice or making learning-improvement decisions rather than being merely an observer only looking for specific behaviors, reactions, or interactions, (Greenwood & Levin, 2005).

6. Research Design and Methods

This investigation employed a quasi-experimental action research case study design, integrating these methodologies to explore and enhance first-year EFL Master's students' use of critical thinking skills for deconstructing media messages. This multi-faceted approach aimed to bridge the gap between theoretical predictions and practical applications in critical

thinking and critical media literacy, thereby guiding the study's trajectory. To maximize the quality of the data collected and reduce the chance of misinterpretation, a combination of quantitative and qualitative approaches was used in the data analysis.

The quasi-experiment employed a single-group pre-test post-test design (commonly referred to as a before-and-after study) with a sample of 55 students. To detect changes in critical thinking, the California Critical Thinking Disposition Questionnaire was administered at both stages. Prior to the main study, a questionnaire on prior content knowledge was used to establish a baseline of participants' existing skills and understanding. The research also incorporated verbal protocol methodology—often referred to as verbal reports or think-aloud protocols—to gain deeper insights into the cognitive processes students employed when performing textual evaluation. In this task, participants were presented with newspaper articles and asked to evaluate them using an objectivity/bias scale, identify specific parts of the text demonstrating persuasive intent, objectivity, or bias, and explain the rationale behind their evaluations. At the conclusion of the quasi-experiment, a follow-up questionnaire was administered to capture students' perceptions of how the course had influenced their critical evaluation abilities. To enhance the reliability of the findings, peer observation was also employed as a supplementary data collection method.

7. Significance of the Study

Understanding the link between persuasive strategies and bias helps individuals critically analyze media messages, identify manipulative techniques, and discern the underlying intentions behind the information presented. This awareness enables them to navigate complex media landscapes with greater discernment, thereby promoting informed decision-making and strengthening media literacy. By honing their analytical skills and recognizing the rhetorical and emotional appeals often used to manipulate, individuals can more effectively detect bias, challenge misleading narratives, and make well-informed judgments about the

credibility of media content.

Investigating argumentation in media discourse is critically important in our understanding of ideological or commercial bias embedded into content. By decomposing logical structures within discourse, analysts can identify persuasion techniques, thereby recognizing manipulation tactics and ideological distortion embedded through persuasive intents. Analyzing the interplay between persuasive techniques, argumentative strategies, and narrative structures reveals the author's bias, even if unconscious or implicit. Therefore, this study makes a major contribution to research on critical media literacy and discourse analysis by demonstrating how argumentation can serve as a lens for uncovering subtle forms of bias and persuasion in media texts. The demonstration's argument rests on the assumption that persuasive intent often functions as the vehicle through which bias is embedded and expressed within media messages. Essentially, bias reflects the how and what of the message while persuasion reveals the why, the underlying motive driving the message's construction.

Another important dimension of this study lies in recognizing that bias detection is not solely dependent on the features of the media message itself, but is also shaped by the characteristics of the reader. Research suggests that individuals' ability to identify bias can be influenced by their personal values, prior beliefs, cultural background, cognitive dispositions, and expectations. In other words, what one reader perceives as biased, another may accept as objective, depending on their interpretive framework. This subjectivity highlights the importance of equipping learners not only with analytical tools for identifying persuasive strategies and logical fallacies, but also with a heightened awareness of how their own perspectives may affect their judgment. By addressing both textual and reader-based dimensions of bias perception, this study contributes to a more nuanced understanding of critical media literacy, particularly in EFL contexts where students may bring diverse sociocultural lenses to their interpretation of English-language media.

8. Scope of the Study: Delimitation and Limitation

Theoretically, this study was delimited in several key ways to maintain focus and feasibility. Theoretically, the study adopted Toulmin's Model of Argumentation (1958, 2003) as a pedagogical tool for teaching students how to analyze evidence and evaluate arguments. Additionally, Fairclough's approach within Critical Discourse Analysis (1992, 2003, and 2014) was utilized to develop students' nuanced understanding of the socio-cultural context influencing their interpretation and judgment of media messages. Excluding alternative frameworks was aimed to allow for a structured examination of argumentation and ideological features in media discourse.

Methodologically, the research relied on specific tools (the California Critical Thinking Disposition Questionnaire, verbal protocol analysis, peer observation, and semi-structured interviews) selected to align with the study's focus while excluding broader methods such as large-scale surveys. The content was limited to public health news, with analysis based on selected English-language newspaper articles addressing three controversial issues.

Geographically, the research was confined to a single Department of English within an Algerian university, thereby situating the study in a specific academic and cultural context. The participant group was relatively small, which allowed for closer monitoring of individual progress but also limited the diversity of perspectives represented. Temporally, the investigation was carried out over the course of a single academic semester, ensuring continuity in instruction and data collection while reflecting the constraints of an academic calendar.

These delimitations ensured a manageable and context-specific investigation, though they might limit the generalizability and long-term applicability of the findings. Nevertheless, they provided the necessary boundaries to maintain methodological coherence and ensure that

the study's objectives could be addressed within the available resources and timeframe.

9. Defining Terms

The following section defines five fundamental concepts in the current study. Each will be examined further in the upcoming chapters to clarify their relevance to the research objectives and analytical framework.

Persuasive strategies: refers to the various techniques and approaches employed to influence and convince an audience to adopt a particular viewpoint, take a specific action, or change their beliefs or behaviors (Hoey, 1999; Fogg, 2003).

Media discourse: refers to the ways in which language is used in various forms of media, such as newspapers, television, radio, online platforms, and other outlets, to convey information, shape opinions, and frame reality. It encompasses the language, tone, style, and framing choices made by media professionals when presenting news, stories, or information to the public (Bell, 1991, 1998; O'Keeffe, 2006)

Media bias: Within this landscape, media bias emerges as a significant consideration, involving the systematic favoritism or prejudice in the presentation of information by media outlets, which can result in the distortion of facts or the promotion of a particular perspective (Ward, 1999; Shultziner & Stukalin, 2021).

Media objectivity: Media objectivity represents the ideal of presenting information impartially and without taking sides or favoring any particular perspective or interest, aiming to provide a balanced view devoid of partisan influence (Maras, 213).

Critical thinking: Critical thinking is the cognitive process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication (Ennis, 1989; Elder & Paul, 1994). It involves the ability to engage in reflective and independent thinking, identify underlying assumptions, examining evidence, and considering alternative

perspectives in order to make well-informed and reasoned judgments (Lewis & Smith, 1993).

10. The Structure and Content of the Research

This research is composed of four chapters. Chapter one presents and discusses the core theoretical framework of the research. It deals with theories and research which highlight the relationship between media literacy and critical thinking.

Moving from a broad to narrow focus of attention, chapter two presents an overview of the properties of persuasive discourse and sheds light on various taxonomies of persuasive strategies which have been developed by various scholars and researchers. In addition empirical reviews focusing on the analysis, interpretation, and evaluation of the persuasive uses of language are also reviewed. The study limits its reviews primarily to empirical studies that focus on the effects of language on perceptions of credibility of environmental and public health news.

The attention in chapter three is turned to presenting the methodological procedures followed in conducting this study. It clarifies why combining quantitative and qualitative methods of data collection is appropriate given the nature of the research questions, the research objective, and the topic under study. Furthermore, details are provided on the criteria used to select and apply case study approach. It also presents the setting in which the experimental course was offered and describes the subjects identities in terms of their socio-cultural characteristics and background.

The fourth chapter presents a detailed description of the obtained results of data analysis in this study. The analysis incorporates both quantitative and qualitative data to provide a more thorough understanding of the the topic under investigation. The chapter is subdivided into four sections in order to facilitate the presentation of the result which ought to guide a thorough discussion to be given in the fifth chapter.

The fifth chapter discusses the results of the case study and derives conclusions. The

findings of quantitative methods of data collection are triangulated with the results of qualitative methods to draw conclusions and provide answers to the research questions. To understand more fully the relationship of these findings to those of other studies, the results are compared with findings reported in publications. In the end, the chapter sums up the findings and derives policy and pedagogical implications. The conclusion summarizes the theoretical and practical contributions of the study. It also points towards the limitations of the study. Last, recommendations for further research to be made are articulated.

CHAPTER I

Literature Review (part one)

Foundations of Critical Media Literacy and Critical Thinking

Introduction

This chapter firstly formulates the basic theoretical assumptions of this study, arguing for the link between media literacy and critical thinking. Within its contents, the chapter offers a critical review of essential knowledge related to media literacy and critical thinking, drawing attention to the fact that this relationship is reciprocal. Then, some empirical studies examining this relationship are reviewed. By the end, the chapter is devoted to an exploration of how media literacy & critical thinking are interconnected within teaching & assessing, with the aim to understand how these connections are intertwined, leading to students' learning & achievement.

1.1. Bridging the Gap between Media Literacy and the Development of Critical Thinking Skills

There is an extant of literature which provides recordings of evidence about interactive and bidirectional relations between skills of media literacy and critical thinking. The two are claimed to be interdependent. Critical thinking skills help individuals develop and apply criteria for evaluation of media texts, such as evaluating arguments and persuasive content used in online and in broadcast and print media. The development of such criteria would involve certain difficulties for individuals with critical thinking difficulties. Media analysis, on its turn, embodies the different aspects of critical thinking and makes its complex and abstract content concrete and accessible. It helps individuals develop specific critical thinking skills such as making inferences and drawing conclusions, finding and evaluating evidence that either supports or refutes a particular claim or statement, and identifying prejudicial and bias beliefs. It is due to this independency that media literacy is, most of

the time, grouped with critical thinking. The point of departure for further and deeply development of ideas on this view would be defining the composite term “critical media literacy”.

1.2. Defining Critical Media Literacy

What is critical media literacy? This question cannot be fully answered, unless the meaning of the term ‘literacy’ is crystallized in its modern sense. It is no easy task to define media literacy. The chief problem arises from the ambiguity of the term “literacy” which has been greatly overused, and means different things to different people. Accordingly, before attempting to define the term ‘media literacy’, it is necessary first to define the concept ‘literacy’ in its generic sense.

One of the definitions provided by the *Cambridge Advanced Learner's Dictionary* for the term “literacy” is “knowledge of a particular subject, or a particular type of knowledge.” (2008, p. 1199). This definition appears to be neutral and too ambiguous and broad to draw the lines needed to be followed to pursue a research project on the field. Literacy is one of the hard terms to be defined precisely because its meaning has evolved over time to mean different things at different times for different people and indeed different things in different schools of thought and disciplines.

The existing definitions of this term range in their scope from putting an emphasis on learners acquiring the skills of encoding, decoding, and comprehension of written symbols and texts to literacy as ‘situated social practice’, with the term ‘literacy skill’ being replaced by the alternative term ‘literacy practice’, (Papen, 2015, p. 6).

Taking account of socio-cultural influences, the use of the word 'literacy practice' refers to the ways in which people use knowledge skills to accomplish goals within specific social contexts. Accordingly, literacy skills undertaken in schools must be relevant to needs and literacy practices of the outside of the classroom (Paul, 1990; Brice, 1983; Brian, 1993, 1999). It is also of great importance to note that 'literacy practice' functions differently for different purposes within different cultural settings guided by different discursive practices.

In their seminal book on local literacy, Barton & Hamilton (1998) put emphasis on reading and writing as the engine which drives all literacy practices. They define literacy practices as "the general cultural ways of utilizing written language which people draw up- on in their lives. In the simplest sense literacy practices are what people do with literacy", (Barton & Hamilton, 1998, p. 3). It has been well documented in the literature that all models of literary practices involve cognitive, behavioral, and affective learning (Barton, 1994; Gee, 1996; Heath, 1983; Street, 1984, 1995). This assumption has drawn attention to the role of literacy practices as resources for identifying construction. So, when students read and write, they infuse these practices into their identities.

In this sense, one can conclude that the relation between literacy and identity could be seen as a discursive practice that is both dialogic which implies that both are crucially interrelated components of social practice and interaction. The socio-cultural views of literacy put stress on the fact that people do not only convey messages and transmit information from person to person, but also make statements about who they are through the particular forms of literacy practices they engage in, and the stances they take toward those practices (Brian V. Street, 2001, 1996; James Paul Gee, 1996; David Barton, 1994; Barton & Hamilton, 1998; Shirley Brice Heath, 1983, 1982). This makes the task of examining the wider context within which the literary practices are framed to be the scope of the approaches,

labeled “New Literacy Studies”— A name that was first used in the 1990 by Gee, J. P. in his seminal book *Social linguistics and literacies: Ideology in discourse*.

The New Literacy Studies approach seeks to understand literacy “in its full range of cognitive, social, interactional, cultural, political, institutional, economic, moral, and historical contexts” (Gee 2008a, p. 2). Researchers in the field of ‘New Literacy Studies’ make a particular reference to ‘multi-literacies’ and argue for the recognition of the multiple levels and variety of literacy that people can develop in and out of school (Street, 1984; Gee, 1996; Barton & Hamilton, 1998). The concept of multiliteracies, as defined by the New London Group (New London Group, 1996, p. 63), refers to “the multiplicity of communications channels and media, and the increasing salience of cultural and linguistic diversity in the world today.”

The conceptualization of literacy as a social practice and the emphasis on the close and complex relationships between literacy practices, socio-cultural contexts, identities, beliefs and values have given birth to many new types of literacy required to be integrated in teaching. They extend literacy to go beyond traditional print-based reading and writing to include digital, electronic and visual presentation of information. Due to globalization and the new world of ICT which demand new literacies to prepare students to survive in the challenging twenty-first century environment, new types of literacy have been emerged, explored, and taught in many schools throughout the world. They include, among many others, print, media (television, radio, Internet), multimedia (visual, audio, film), and digital (computer, internet) literacy. Locating literacy within a cultural relativist paradigm, certain cultures (with the aim to foster the democratization of people's way of life) recognize, value, and accept different forms of liter-

acy which may be more or less familiar to members of different cultures. There is no need to go into more details here regarding description of each of these types of literacy, but an enough space should occupy itself thoroughly with media literacy which is the context from which emerges the subject of this research.

It is the significant role which plays media in people's life which has featured media literacy to be a skill carried out in formal educational institutions (Hobbs & Frost, 2003; Manzo, 2000). The advances which witness recent years in the domain of information and communication technologies (ICT) have attracted scholars towards the field of media literacy which becomes a fascinating and an urgent area of research and investigation (Potter, 2011).

Media literacy has been defined in various ways by different scholars. According to one widely accepted definition, "media literacy is the ability to access, analyze, evaluate and communicate messages in a variety of forms", (Aufderheide & Firestone, 1993 as cited in Hobbs & Frost, 2003, p. 334). Other definitions of media literacy focus more specifically on the development of a critical understanding of how the media construct reality and produce meaning (Scheibe & Rogow 2008; Thoman & Jolls, 2005). Media literacy, according to a definition indicated in a report on Media Awareness Network, is "the ability to sift through and analyze the messages that inform, entertain, and sell to us every day. It is about shifting from the role of a passive receiver of media to an active critical receiver of it", (cited in Guerrerom, 2013, p. 300). To be an active critical receiver of media texts, one has to be able to critique and synthesize media contents, its embedded social meanings, and impacts, and use thought to construct own understanding.

More recently, Wu & Wang (2011) proposed a two-continuum analytical framework which serves to define more closely the term “new media literacy”. On one level, this framework is based on a continuum ranging from consuming literacy (i.e. ability to access and use media message) to presuming literacy (i.e. ability to produce media contents), while, on a second level, it ranges from functional literacy (i.e. textual meaning making and primary use of media tools) to critical literacy (i.e. ability to question, analyze, evaluate and criticize media contents). The Center for Media Literacy (a significant organizations that promote and support critical media literacy education) has the following definition of media literacy put at the top of its web page: “the ability to communicate competently in all media forms as well as to access, understand, analyze, evaluate and participate with powerful images, words and sounds that make up our contemporary mass media culture.”

In contesting the accuracy of certain previous definitions of critical media literacy, Livingstone, (2004) arrives at the conclusion that of the four components of media literacy (access, analyze, evaluate, and communicate), it would be better to label the fourth one “content creation” instead of “communicate”. It is because, in her view, all aspects of literacy can help to enhance communication. Hence, media literacy is, in her words, “the ability to access, analyze, evaluate and create messages across a variety of contexts” (Livingstone, 2004, p. 18). Livingstone puts emphasis on *the skill - based approach* for these skills to be taught, practiced, and reinforced. These four aspects require an explanation for a full understanding of the scope of critical media literacy. Accordingly, they are listed below

(1) *Access*: Access is the first step in acquiring literacy skills. Access media literacy skill is about the ability to operate in a number of different media tools to search for information, select it, and use it for particular purposes or needs, Thoman, & Jolls (2005). In order to locate and use digital media tools and applications, one needs to have at least some basis and a certain level of background knowledge (through some combination of experience, help

screens, manuals, or formal training) to manipulate media resources effectively. Such knowledge can affect one's level of access to such resources. Access skills are often given slightly different labels by different scholars. They are often labeled as "information literacy," or more recently, "driver training for the information superhighway" (Heath et al., 2004).

(2) *Analysis*: Once an individual has accessed media content, an analysis needs to be conducted. (Heath et al., 2004) describes analysis as an operation which occurs at two levels: The ability to analyze messages is linked, at one level, to the skills of interpretive comprehension that include the ability of using information from a text to draw and support conclusions; conceptual understanding of textual ideas; determining a work's genre class membership; recognizing cause- and-effect relationships in a text; considering the specific techniques used to organize materials to be consumed; and identifying the author's purpose, point of view, and his stance on the subject: At a secondary level, the ability to analyze media messages and examine their contents critically, calls for a recognition of the historical, political, economic or aesthetic contexts in which messages are generated and consumed.

The Center for Media Literacy, a highly influential educational organization in the United States, articulated in 2005 five principles with corresponding five questions as shown in the table below for guiding media literacy analysis performance. These principles and questions provide a framework for deconstructing and understanding media messages, helping individuals become more critical consumers and creators. This approach, known as the "Five Key Questions", is widely used in media education to foster a deeper engagement with the media landscape.

Table 1.1 *Critical media literacy principles and corresponding research questions*

Principles	Questions
1. All media messages are constructed;	1. Who created this message?
2. Media messages are constructed using a creative language with its own rules;	2. What creative techniques are used to attract my attention?
3. Different people experience the same media message differently;	3. How might different people understand this message differently than me?
4. Media have embedded values and points of view;	4. What values, lifestyles and points of view are represented in, or omitted from, this message?
5. Most media messages are organized to gain profit and/or power.	5. Why is this message being sent?

Note: Adapted from *Five questions that can change the world* (p. 21), by Thomas & Jools, 2005. Copyright 2005 by Center for Media Literacy

(3) *Evaluation*: critical literacy involves more than merely receiving and understanding a message. It includes evaluating and judging the received message and its author's underlying intentions or motives (Stoner & Perkins, 2015). The focus of evaluation is at two levels of analysis. It occurs with respect to content and form. Whereas evaluating content requires interrogating the text for answers to given questions, evaluating form requires focusing on the authors' techniques and rhetorical strategies in a message for judging the ways in which the message is written (Rakes et al., 1989, p. 18). Critical scholars such as Shirley Brice Heath, James Paul Gee, Bell Hooks, Richard Rodriguez, and many others recognize that the student's existing world view, knowledge, attitudes and values intervene, more or less, to provide a basis for evaluation, unlike analysis which requires to depend on students' knowledge perspective outside their personal cultural lens. Accordingly, effective evaluation requires the use of stated criteria to reduce the risk of the evaluator not being objective or even biased.

(4) *Communication*: The fourth media literacy skill is labeled by scholars in the field “communicate”. It includes, but is not limited to, creating media texts and messages to share through media tools (Hobbs, 2001; Schmidt, 2013). As mentioned above, many scholars on the field of critical literacy have used the term critical media literacy as a combination of five literacy skills but in a way that expands the skills of “communication” to include “participation” and define communication as the sharing of experience .This skill is also called “act” (Hobbs, 2001; Milhailidis, 2014). It is currently a common belief in the western world that through involvement in media, communicative acts help to solve problems, strengthen citizenship, reinforce democracy, and give voice to the voiceless. Hence, critical media literacy maintains the focus of learning on helping students to become critical and active creators, rather than passive consumers of information.

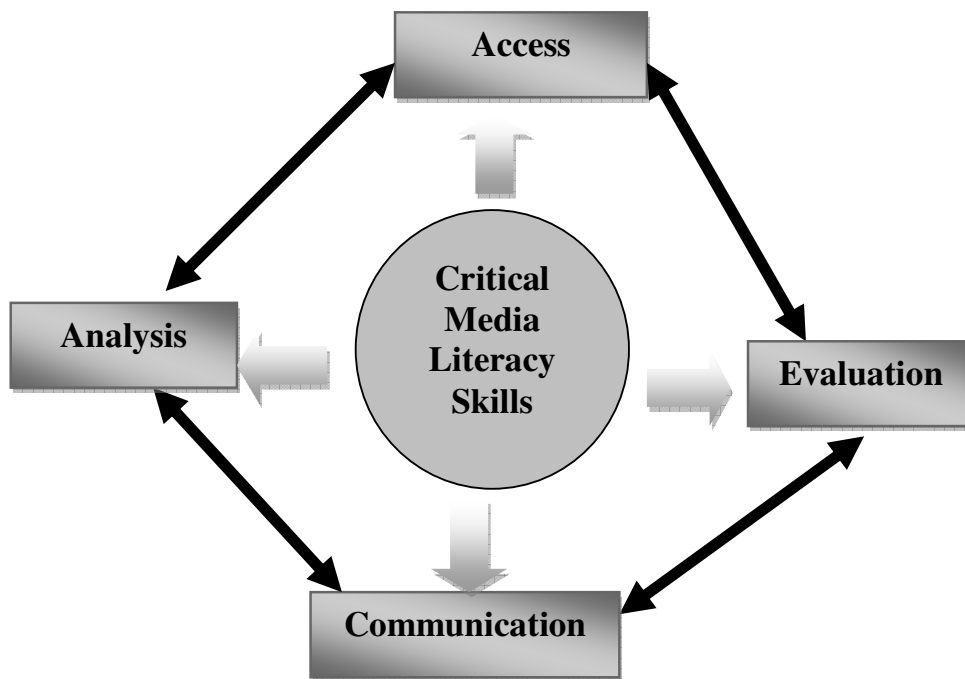


Figure 1.1 Schematic representation of Livingstone’s categories of critical media literacy skills

The four cited critical media literacy skills complement each other and should be taught in connection with one another at all levels of instruction in attempts to connect students' learning with their experiences. According to National Association for Media Literacy Education (NAMLE) Web site, the aim of media literacy education is “to help individuals of all ages develop habits of inquiry and skills of expression that they need to be critical thinkers, effective communicators and active citizens in today’s world” (www.namle.net). Media literacy approach has developed in recent years numerous instructional strategies that best help strengthen students' ability to access, analyze, evaluate and communicate messages in many forms. Strategies to develop these skills require concentrated efforts and an intense engagement in interactions with media texts.

Helping students to gain these skills can greatly increase their opportunities in many aspects of life. As (Hobbs, 2010; Milhailidis, 2014; Potter, 2019) point out, directly instructing digital-age students in media literacy is recognized as a way to empower students to perceive and meaningfully engage in the ideological and cultural struggles to uncover world views. For Western Philosophy of Education, student-centered empowerment approaches are interested to find appropriate pedagogical implications of helping students “experience the pleasures of popular culture while simultaneously uncovering the codes and practices that work to silence or disempowering them as readers, viewers, and learners in general” (Alvermann & Hagood, 2000, p. 194).

As critical thinking and its role in detecting and decoding biases in news reports is the focus of this study, critical approach to media literacy is explained in further details below in a way that would allow us to catch a glimpse of the relation of media literacy to critical thinking.

The pedagogical approaches to teaching critical media literacy have evolved over time. They are extended from instructor-centered “protectionist” approaches to “student-centered empowerment” approaches, (Hobbs, 2010; Kellner & Jeff Share, 2019). The protectionist approaches advocate “an intervention designed to counter the negative effects of mass media (Hobbs, 2010, p.423). Unlike these teacher-centered approaches, student-centered empowerment approaches open grounds for students to engage in critical thinking skills.

Critical media literacy programs that are modeled on the student-centered empowerment approaches require individuals to analyze media critically and examine the way media texts are being structured and how they may ultimately function at the ideological level. But programs that are modeled on the instructor-centered “protectionist” approaches aim to create conditions for citizens and learners to perform as "passive recipients of information and knowledge which protect them from the negative effects of media exposure.

Protectionist approaches have been criticized for limiting space to questioning dominant ideologies and for allowing no freer expression of political views and representation practices in media texts (Brian & Robert, 2014). Accordingly, recent years marked changes which have been taking place in relation to media literacy skills instruction. Current interest in student-centered classrooms has been inclined towards the use of critical analysis of media content with the aim to foster a sense of personal empowerment.

Some authors like Potter (2011) have cautioned against the error of assuming that these approaches are an either/or dichotomy, but instead shall be assumed closely intertwined and work together in practice. What holds these different approaches together is the view of critical media literacy as a social practice which involves identifying what is problematic, not accepting the taken-for-granted version.

Scholars like Keller & Share (2007) argue that critical media literacy rests on both

approaches. They demonstrate how both approaches can be related to each other to meet the essential standards of teaching critical media literacy effectively. The task is teaching individual how to counter the negative effects of cultural manipulation through the media which does not contradict the focus on criticism of ideology and analysis of representation of dimensions such as gender, ethnicity, social class, etc by extending textual analysis so as to include social context and featuring coverage and representations in alternative media productions. Most critical media scholars put too much emphasis upon literacy to include developing the skills of analysis of media codes and conventions and the abilities to identify and criticize stereotypes and prejudices created and framed by news media texts. Thus, the scope of the content of critical media literacy pedagogy articulates the relationship existing between critical thinking skill and media literacy. The basic components making critical media literacy are explained throughout the above sections of this chapter. Before analyzing the relationship between these two concepts, the below sections are geared toward providing a broad conception of critical thinking, as well.

1.3. Defining Critical Thinking

For many educators and researchers, Critical Thinking (CT) is not a new concept with a recent reception and capture of attention from scholars but has been the subject of much discussion and thought for many years (Tyreman, 2000). However, in language teaching it was only recently that a priority of utmost importance has been on strategies that can help students develop their critical thinking abilities. Over the last two decades, there has been continuing debates over how to define critical thinking (CT). Many scholars assert that critical thinking is a vague notion which cannot be clearly defined (McPeck 2016). They make reference to it as tacit skills acquired through informal interactions and practice during the process of socialization (Atkinson 1997).

In his seminal article, “*A critical approach to critical thinking in TESOL*”, Atkinson (1997), makes the claim that critical thinking is a concept which has failed to be operationally definable in education (p.73). He based his claim on the finding of his interview addressed to professors at U.S. colleges and universities which show their inability to provide a clear definition when asked to do so. In response to criticisms, Atkinson (1998) refers to his findings that they only offer evidence that we still lack a clear and adequate understanding of the concept “critical thinking”, rather than presenting evidence that casts doubt on the possibility of its definition. Although it is extremely difficult to have a standard definition of critical thinking, the concept is gaining more and more recognition as an important dimension of learning which requires attempts to describe what it is and what skills required of practitioners.

Cottrell (2005) described critical thinking as a cognitive process activity, focusing on argumentation analysis, which requires a careful logical analysis. The concept of ‘Critical thinking’, as stated in Stella Cottrell’s words, is “...a complex process of deliberation which involves a wide range of skills and attitudes”, (Cottrell, 2005, p. 16). According to Facione, critical thinking involves meta-cognition and is a self-adjusting process. He defines this concept as the ability to properly construct and evaluate arguments. According to his view, the core set of cognitive skills required in practice of critical thinking include: 1) analysis, 2) interpretation, 3) inference, 4) explanation, 5) evaluation, and 6) self-regulation (Facione, 1992; Facione & Facione, 1996). In a concise definition which identifies reflection as a key ingredient, Robert Ennis, a recognized authority on the subject, defines critical thinking as “rational reflective thinking concerned with what to do or believe” (Ennis, 1987, p. 9). There exists plenty of empirical research which discusses evidence from data project investigating individual differences in rational reflective thinking (Stanovich & West, 2000; Thomson & Oppenheimer, 2016).

In response to criticism which he has been subjected to, *Ennis* revised his definition of critical thinking in an article entitled “*A Taxonomy of Critical Thinking Dispositions and Abilities*” which was published in 1987. In this seminal *article*, he defines critical thinking as an *ability* (or set of *abilities*) and *dispositions* applicable to a broad array of real-life contexts. *He* also suggests a *taxonomy* of “goals for *critical thinking*,” which is a detailed list of *skills*, *abilities*, and *dispositions* offered to be used as the *basis* for *schools’ curriculum designs*. In his book “*Educating Reason*” (1997), Professor Siegel helps to crystallize the debate by arguing that a critical thinker is one who is able to use reasons to justify and criticize various viewpoints, including one's own. This makes a critical thinker to be a rational person. To be a rational person, in his view, is to believe and act on the basis of reasons. The common element in these definitions is the portrayal of critical thinking as a self-adjusting cognitive process in which the mind is the engine through which one can make reasonable judgments.

Edward Glaser (a recognized authority on critical thinking and founder of and director of research for the foundation for critical thinking), describes critical thinking in terms of its components and their interactions. In his view, the areas of critical thinking are made up of three elements: attitudes, knowledge, and skills. In his words use, the concept “critical thinking” is defined as an ability involving three major interrelated coin to a whole: an attitude of being disposed to consider in thoughtful way the problems and subjects that come within the range of one’s experience, b) knowledge of the methods of logical inquiry and reasoning, c) some skills in applying those methods” (Glaser 1941, p.5).

This view has advanced the understanding of core critical thinking concepts and principles and transformed, enriched, and improved its teaching methodology. Gaining insights from Edward Glaser' view, greater emphasis has been directed toward the understanding of critical thinking as judgment which must be based on sound reasoning principles, not emotions or prejudices. Such judgments help develop open-mindedness and a willingness to explore other alternative possibilities. Inspired by Edward Glaser, many scholars listed skills which can be used to generate, clarify and assess the reasonableness of ideas, and further proposed approaches to teach these skills and make them explicit. These approaches will be discussed in greater detail in the next section. Since conducting this research project is molded on an adaption of the infusion approach to teaching critical thinking, in the next section; the approach will be outlined in greater more detail. Suffice it to say here that these definitions make the assumption that for people to be critical thinkers, a positive and open-minded attitude, relevant skills and knowledge of how to use these skills are all needed to be well developed.

Great efforts have been made in order to establish the particular skill needs of students at all levels of instruction to make them engage in thinking critically (Aretz, Bolen, & Devereux, 1997; Giancarlo & Facione, 2001; Halpern, 1998; Papastephanou & Angeli, 2007). Furthermore, it has been argued strongly that the discipline of critical thinking should be viewed as the center of all disciplines. There has been plenty of empirical evidence for support of explicitly teaching these skills in instructional settings (Abrami et al., 2008; Angeli Charoula & Nicos 2009).

According to Facione (2000), instruction of the skills inherent in critical thinking increases learning how to learn skills and improve literacy. It facilitates comprehension and interpretive comprehension, which involves getting deeper meaning from what is read. Ennis (1991) postulated that critical thinking skills could be classified as belonging to

clarification skills, basic decision-making skills, inference skills or the skills of supposition and integration. Fischer & Parks (1998) proposed that these thinking skills fall into three clearly defined main categories: (1) skills at clarifying ideas; (2) skills at generating ideas—consisting of creative thinking skills; and (3) skills at assessing the reasonableness of ideas—consisting of critical thinking skills. Fisher (2001, p. 8) gives greater detail and specificity in some categories with a listing of seven fundamental skills which he describes as basic to the development of a critical thinking skills performance: 1) identifying and evaluating assumptions; 2) clarifying and interpreting expressions and ideas; 3) judging the acceptability, and especially the credibility, of claims; 4) evaluating arguments of different kinds; 5) analyzing, evaluating and producing explanations; 6) analyzing, evaluating and making decisions; drawing inferences; 7) producing arguments.

To develop these fundamental skills is essential but far from being enough for one to be labeled a critical thinker. Researchers argue that for a full critical thinking process, students need a great deal more. To acquire skills, motivation has come to be viewed as necessary; there is little doubt that motivation is an important factor in stimulating the individual to improve his problem solving and thinking skills (Al-Hoorie & MacIntyre 2020; Al-Hoorie, 2017; Miri et al., 2007; Isen & Reeve 2005). John Chaffee (director for the Center of Critical Thinking at La Guardia Community College and author of the book *Thinking critically*) says, “A critical thinker is not only capable of reflecting, exploring, and analyzing but chooses to think in these advanced, sophisticated ways” (cited by Facione et al. 2000, p. 65).

The purpose of the research on which this thesis is based frame students who have a strong disposition toward critical thinking as ones who are highly motivated to learn and perceive themselves be active and willing to ‘engage in and persist at’ challenging and complex thinking tasks (Halpern, 1998). An approach to teaching that is close to Dewey's

philosophy which emphasizes the development of open-minded attitudes as an important aspect of being a critical thinker is also taken into account in this research (Bailin, 2005, p. 55; Bailin & Siegel, 2003, p. 183; Halpern, 1989, p. 30; Hare, 1985). Being open-minded means being the owner of the ability and willingness to know, understand, and learn from the arguments, evidence, and reasons against one's own views and being able to defend one's own point of view with a good arguments.

Developing each student's willingness to think critically is vital if schools value lifelong learning and seek to foster autonomous learning. In this study, the concept "willingness" is defined as the motivation to put forth time, effort, and strategies into learning. Critical thinking is a lifelong learning process which is less likely to occur when there is a lack of willingness to do so.

More recently, Facione et al., (2000) shed light on the importance of providing students with opportunities to develop positive dispositions toward learning. They advocated the importance of preparing a suitable learning atmosphere for learners to develop dispositions towards becoming critical thinkers and reflective lifelong learners. Recent research on learning dispositions has confirmed that learners' academic progress and their ultimate achievements depend in large part on their attitudinal dispositions to learning (Facione et al., 1995; Ip et al., 2000). A simplified definition by Davis (2015, p. 69) describes the word "dispositions" as the degree of emotional or affective states associated with critical thinking. In his model of critical thinking, dispositions are defined as psychological readiness of the human being for critical response.

In summarizing the above section, one could say that critical thinking is a combination of dispositions and skills which express thought. Research highlights the importance of critical thinking as the key element for building the knowledge base of people and developing their good decision - making skills. Moreover, several research findings indicate that along the course of the critical thinking process, students can become more open - minded while progressing information through the practice experience (Tuckett et al., 2017). Accordingly, learning ability in the form of a combination of skills and dispositions has been receiving an increasing attention from researchers in the last two decades. Using infusion-based lessons, the aim of this study is to develop students' critical thinking skills and increase their disposition towards critical thinking, for both of which to be applied to their reading of media critically.

The various definitions of critical thinking used in most literature are listed in the table below. They vary depending on whether their focus is on the underlying skills, the overarching dispositions, or the ultimate purpose of the process. Some definitions emphasize a specific set of cognitive skills, such as analysis, evaluation, and inference, as seen in the work of Facione (1990). Others concentrate on the essential habits of mind that predispose individuals to think critically, including intellectual curiosity, open-mindedness, and metacognition. A final category of definitions frames critical thinking primarily by its purpose: to form a well-reasoned judgment, reach a sound conclusion, or guide effective belief and action. Despite these different emphases, a common thread unites them: the move from passive reception of information to active, intentional, and reflective reasoning.

Table 1.2 *Definitions of critical thinking*

Author	Year	Definition
Foundation For Critical Thinking	2017	Self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way
Bob Price	2015	A process which enables the consideration of possibilities and examination of alternative arguments in order to arrive at a more cogent, coherent and clearly articulated proposition
Richard Paul & Linda Elder	2005	The set of intellectual skills, abilities and dispositions which lead to content mastery and deep learning
Matthew Lipman	2003	Critical thinking is involved in all responsible interpretation (the production of meaning), and all responsible translation (the preservation of meaning)
Alec Fisher	2001	Estimating, evaluating, classifying, hypothesing, analysing, reasoning are elements of critical thinking
Robert, J. Swartz & Sandra Parks	1998	When we engage in critical thinking, we assess the reasonableness of ideas
Alec Fisher & Michael Scriven	1997	Critical thinking is skilled and active interpretation and evaluation of observations and communications, information and arguments
Robert Hugh Ennis	1991	Critical thinking... means reasonable and reflective thinking focused on deciding what to believe or do
Facione, Peter A.	1990	purposeful, self- regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as the explanation of the evidential conceptual , methodological, criteriological, or contextual considerations upon which that judgement is based
Michael Scriven & Richard Paul	1987	The intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, and/or evaluating information
Robert, J. Sternberg	1985	The mental processes, strategies and representations people use to solve problems, make decisions and learn new concepts
Edward Glaser 1941		A persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it
William Graham Sumner	1940	The examination and testing of propositions of any kind which are offered for acceptance, in order to find out whether they correspond to reality or not
John Dewey	1910	Thinking in its best sense is that which considers the basis and consequences of beliefs

Adapted from *Critical Thinking: Conceptual Perspectives and Practical Guidelines* (p.73), by C. P. Dwyer, 2017, Cambridge University Press

Observing these definitions, one can note that over the course of the past several decades, numerous researchers and educators presented different definitions and perspectives of critical thinking. One can note that these definitions grew out of three different educational disciplines: philosophy, cognitive psychology, and education, respectively. The philosophical approach focuses on the formal rules of logic and the presence or absence of the so-called logical thinking fallacies. In this approach, critical thinking involves meeting certain standards of thinking such as clarity, accuracy, precision, consistency, depth, and logicalness. As its name implies, the cognitive psychological approach focuses more on how people think, what behaviors or actions critical thinkers display, and what procedures critical thinkers employ in decision making. The third approach to critical thinking comes from the field of education, where the figure of John Dewey looms large. Dewey's approach to critical thinking can be traced back to his seminal book, *How We Think* in which he defined critical thinking as “reflective thought”—that is, to suspend judgment, maintain a healthy skepticism, and exercise an open mind.

1.4. Approaches to Teaching Critical Thinking

In addition to the debate on how to define the concept “critical thinking”, hot discussions have been held for a long time about the issue of whether or not it could be taught in a direct, explicit manner, and if so, whether or not it could be taught in L2 classes. The discussions have raised a question of fundamental importance: is there a universal adaptive way of teaching neutral skills of critical thinking? Attempts to answer such questions lie between those who believe that critical thinking is not teachable due to its content and learning process frameworks which are composed of abstract concepts (Devine, 1964; McPeck, 1981; Simpson & Mary Courtney, 2002). On the other side of the issue, are scholars who have offered arguments in support of the view that critical thinking can be teachable (Mark Mason 2008; Carol McGuinness; 1999; O'Hare & McGuinness, 2009). On this issue, the educator T.G. *Devine* made the note that “we cannot teach critical thinking as a process in itself. We can teach about critical thinking. We can select abilities which seem to be associated with critical thinking and we can discuss these abilities as such”, (p. 154).

Although for many years most researchers argued for the teach-ability hypothesis, the domain specificity of critical thinking teaching is still being debated. On the one hand, some scholars argue that the skills of critical thinking may be taught independently of a particular subject domain and they can be generalized across different academic subject with teachers who provide students with general skills related to critical analysis (Ennis, 1992; McPeck, 1981; Norris, 1992). On the other hand, others argue the opposite and call for critical thinking skills to be taught within the context of specific content or subject areas (Lai, 2011). Many other scholars claim that the two approaches are complementary and cannot be used in isolation from each other. In their view, the skills associated with critical thinking can be learned without a need to be connected to any specific discipline or course. Then, they can be

transferred to other areas from one knowledge domain to another one (Ennis, 1996).

The transferability of critical thinking is a controversial issue which is still central to empirical research in the field. Prior research has documented both positive and negative association between students' transfer of their training in general skills of critical thinking to and from one subject area to another (Lai, 2011; Reece, 2002). Many of proponents of the view that critical thinking is a set of skills which can be taught have developed and offered instructional approaches to teach the subject. One example which deserves to be cited is the model of Ennis (2001), which is widely used to teach and assess critical thinking skills. His model classifies four basic approaches: "1) the general approach involves teaching generalized critical thinking skills in a critical thinking course without specific-subject matter content, 2) the immersion approach assumes that students will acquire the subject-specific critical thinking skills implicitly and indirectly through taking the subject course, and 3) the mixed-model approach combines a general course with either an infusion or immersion approach" (Shedletsky, 2014, p.122).

It is generally acknowledged that the teaching of critical thinking is a not common practice in all countries. Many countries particularly the Western ones have recently recognized critical thinking as a subject in its own right and introduced the subject into the curriculum while others, in particular non - Western ones, have not yet show initiation in implementing programs seeking for the development of this subject area. They perceive the skills of critical thinking as an unteachable subject. The controversy as to whether critical thinking is teachable is partly due to socio-cultural, and socio - political contexts.

Many scholars claim that critical thinking is a Western phenomenon based on liberal values of individual freedom and the need to subject beliefs to the most rigorous and extensive possible rational criticism instead to accept things on the mere authority. Tan, argues that the dominant concepts of critical thinking are the product of western cultural values. In his words, “the current conceptions of critical thinking are primarily derived from Anglo-European histories, writing paradigms and experiences” (Tan, 2017, p. 331). In his paper entitled, “*Kinds of Thinking, Styles of Reasoning*”, Peters, (2018) extends the culturally-based argument of critical thinking and argues for its dependency on information processing capabilities which is heterogeneous that would tend to vary across cultures, sub-cultures, languages, and development. If that were the case, then the mental processes used to read and listen to Arabic texts would be very different from the mental processes used to read and listen to English ones.

The effects of emotive and argumentative style of both languages would be different. So, despite recognizing the influences of age, gender, values, interests, socioeconomic background, ethnic background, educational level, and others on critical thinking process, one should bear in mind that language use and discourse style also play an important part to stimulate and provoke critical thinking on the part of users, Malcolm (2004).

Such views of critical thinking which is molded within culturally-based social practice suggest that thinking critically is more likely to exist in Western culture and particularly embedded in Anglophone educational systems than elsewhere over the world, (Atkinson, 1997; Shirkhani & Fahim, 2011). According to such a view, non-Western students seem to be perceived as incapable of performing the process critical thinking and unwilling of taking an interest in doing so performance. This deficit is due to their socialization in very different discursive practices which support interpersonal harmony, respect for authority, and conformity to community customs and norms. Moreover, in the

non-Western countries (Asian, African, and the Arab ones), teachers are referred to as 'authority figures', although the extent to which the practice of this authority varies from country to country as many authors have recently referred to (Littlewood, 1999; Yang, Badger, & Yu, 2006). It is noteworthy that in Algeria, some of the insightful scholars in the theory and practice of teaching have described teachers' class-room management practices as still authoritative, implying less incorporation of democratic principles and free critical exchange of ideas; on the other hand, implying a much less opportunity for students to consciously explore their personal cognitive thought processes related to critical thinking tasks. No one can afford to ignore the fact that the dominant method of instruction in our schools, as is in most non-western-countries, is the lecture with reliance heavily on rote - learning and on the transmission of knowledge and the views of earlier generations of scholars. This point is fully discussed by Jarrar and his colleagues (2016) whose study describes how teaching in the Arab world still mirrors more or less teacher's authoritative classroom management practices. The authors state that "the Arab classrooms, like classrooms in most developing countries, are dominated by the teacher who monopolizes class discussion and plays the role of the "demi-god" (p, 41).

Conventionally, it is believed that students of lower language proficiency are unable to react critically to the information or claims they encounter. They resort exclusively to rote learning and lower order thinking skills (surface approach to learning) and fail to rely on deeper approaches to learning and engage in higher level thinking skills to exercise evaluative reactions and analytical judgment. As emphasized throughout this research, employing teacher-centered approaches with an emphasis on rote learning is to be viewed as an expression of a culturally valued scheme of learning; it does not suggest that non - Western learners do not or cannot think critically.

This view is supported in an empirical research by Vandermensbrugge (2004), showing that there are no convincing data to support the Western traditional claim that those students from Western educational context are better critical thinkers than students from non-Western educational context attributing this to their innate ability differences. Accordingly, to bridge the academic achievement gap that exists between Westerners and non-Westerners is for the non-Westerners the urgent need to examine and revise their current their pedagogical practices. In agreement with this view, recent research in Algeria call the current teacher education programs to strengthen efforts with the aim to engage students in practices of critical thinking and reasoning skills helpful to develop some capacity for judgment which could be carried over into their future life. In his book *“Thinking in Education”*, Lipman (2003) emphasized that practice should be the basis of critical thinking training programs. Critical thinking requires time devoted to practical skills to be greater than theoretic knowledge, for theoretic knowledge alone being inadequate for cultivating analytical thinking skills (p. 76).

It would follow from the foregoing discussion that throughout the different school levels and in all subject areas, teachers can teach students to think critically by introducing the relevant skills, cultivating their dispositions, and creating the appropriate opportunities for them to have an engagement in high-order cognitive processes which involve: reasoning, decision-making, problem-solving, judgment, and abstract thought. In this thesis, the author takes a stand that pedagogy should adopt the position that critical thinking needs to be introduced in non-Western L2/EFL contexts despite the fact that it is deeply rooted in the soil of Western experience and philosophy.

1.5. Assessing Critical Thinking Levels

Any doubt cast on the teach-ability of critical thinking also casts doubt on its assess-ability. Due to their inability to find a satisfactory or comprehensive definition of the word " critical

thinking" to agree upon in, many scholars cast doubt on the assessment of critical thinking with a strong emphasis on the claim that such a concept is so ambiguous and vague that its teaching gives little validity for objective measurement (Halpern, 1998; Kuhn, 1999; Perkins, Jay, & Tishman, 1993; Pithers & Soden, 2000). A vast majority of research, however, has taken the view that the fundamental components of critical thinking are assessable (Ennis & Weir, 1997; Brookfield, 1997). Strong support for this view is provided in the present study which seeks to determine a reliable, assessable framework within EFL context.

There have been some worthy attempts in the published literature to design tests and procedures that can measure critical thinking (E.g. Cornell Critical Thinking Test, California Critical Thinking Skills, and Ennis-Weir Critical Thinking Test). The sections below are devoted to a thorough description of their contents and scope of measurement.

1.5.1. Watson-Glaser Critical Thinking Appraisal Test

The test "Watson-Glaser Critical Thinking Appraisal" (WGCTA) was first published in 1942 under the label the "Watson-Glaser Tests of Critical Thinking", and then developed by Goodwin Watson and Edward M. Glaser (1980) to include two equivalent forms (A and B). It is a test composed of two parallel forms of multiple-choice questions used in assessing the following dimensions of critical thinking: (1) inference (discriminating among degrees of truth or falsity of inferences drawn from data), (2) recognizing assumptions, reasoning by deduction and interpretation (weighing evidence and deciding if generalizations or conclusions based on given data are warranted), and (3) evaluating arguments (identifying and interpreting of arguments). The Watson-Glaser includes 80 items, the total score of which is the sum of the raw scores for five subscales. This test can be scored either by hand (using the hand-scoring template included with test materials) or by an OpScan machine. The test has norms for school grades from 9 through college levels. Its spearman-

brown split-half reliability ranges from .69 to .85, and alternate forms reliability is .75 (Watson & Glaser, 1980, p.10). In a note made by Norris & Ennis (1989), WGCTA does not ask respondents to offer judgments about the credibility of sources, semantics, or predispositions.

1.5.2. Cornell Critical Thinking Test

There are two Cornell critical thinking tests, Level X and Level Z, sharing a common manual. They are aimed to measure critical thinking at different educational levels and do not both cover the same aspects of critical thinking. It is a test of multiple-choice type which measures general thinking skills that asks respondents to choose the best answer among three alternatives for each item (Ennis & Millman, 1985, 2004). The CLZ is a 52 multiple-choice test concerns interpretation, analysis, evaluation, and inference that can be completed in 50 minutes. according to the instructions contained in the booklet, the majority of the 52 test items shed light on deduction (17) and induction (23), while the rest of items (12) shed light on observation, credibility, assumptions, and meaning (Ennis et al., 2004). The CCTT estimates its internal consistency / reliability by both the “corrected split-haves” and “Kuder Richardson” procedures.

1.5.3. California Critical Thinking Skills Test

Facione and Facione (1990) developed a standardized test which they called “the California Critical Thinking Skills Test (CCTST). The testing manual of CCTST states the following: “The CCTST is a standardized, 34-item, multiple choice tests which targets that core critical thinking skills regarded to be essential elements in a college education. The items range from those requiring an analysis of meaning of a given sentence, to those requiring much more complex integration of critical thinking skills” (Facione, 1990, p. 2). The California Critical Thinking Skills Test (CCTST) includes five skills: interpretation, analysis, evaluation, inference, and explanation.

The CCTST includes a companion tool to measure students' dispositions toward critical thinking. The tool is labeled the California Critical Thinking Disposition Inventory (CCTDI) (Facione & Facione, 1992). CCTDI “derives its conception of the disposition toward CT from the APA Delphi Report” (Facione, Sanchez, Facione, & Gainen, 1995, p. 6). This tool of measurement produces 75 likert style response options over seven dispositions, with a total score and sub-scores computation. The seven scales as described by Facione & Facione (1992) are as follows: (1) inquisitiveness, (2) open-mindedness, (3) systematicity, (4) analyticity, (5) truth-seeking, (6) CT self-confidence, and (7) maturity.

Despite its popularity and positive results, the California Critical Thinking Skills Test (CCTST) did not escape criticism, with questions centered on the psychometric characteristics of Forms A and B, and the influences of reading ability and general verbal ability on test scores. Critics like Jacobs (1999, p.211) examined the equivalence of the parallel forms A and B of the California Critical Thinking Skills Test, and declared his dissatisfaction with the reliability of the test pointing on its low reliability in terms of internal consistency, a lack of comparability between the forms, and poor r construct validity (Topping, 2001).

1.5.4. Ennis-Weir Test

Unlike other standardized tests, The Ennis - Weir Test uses essay items to measure critical thinking. The intent of the measure is to determine the degree to which the student can "evaluate a given argument in the format of a written essay" (Adams et al., 1996, p. 29). The Ennis-Weir Test (Ennis, & Weir, 1985) uses essay items to measure critical thinking. The test requires the student to write nine paragraphs in a short essay to which they react to a reading or provide details about a limited topic, within a time limit of 40 minutes. The Ennis - Weir Test uses a scale of 1-10 for scoring each paragraph. These nine paragraphs shed light on the following points: “getting the point, seeing the reasons for assumptions, seeing other possibilities, responding appropriately to and/or avoiding equivocation, irrelevance,

circularity, reversal of if-then, the straw man fallacy, over generalizing, excessive skepticism, credibility problems, and the use of emotive language” (Yeager, 2004, p. 220).

There are many major criticisms of the Ennis -Weir Test. It has been criticized as being very time consuming which could not test all dimensions of critical thinking. This test has been also criticized for its domain-specific nature, not general (Taube, 1997) and for its invalidity due to bias in favor of test takers proficient in writing ability (Adams et al., 1996). Despite such criticisms as these, the Ennis - Weir test is considered by many to be the most valid one in terms of measuring the skills of argument.

Many authors argue that though The Ennis-Weir Critical Thinking Essay Test is designed in its original form for native English speakers, it is very helpful in its contents for adaptation to assess EFL student progress in critical thinking, Dunham, (1997). Without adapting it to the EFL and ESL learners, test takers may experience frustration due to lack familiarity with the topics of writing designed for native English speakers. This view is supported by Stapleton, (2001) who proposed a model designed for use to assess critical thinking in the writing product of L2 learners. This model which is recommended for practical application in L2 classroom teaching is based on The Ennis -Weir Test, but gives teachers opportunity to make the choice of the topics by which they wish to assess their students' critical thinking skills. Using this model, tests should always take into account the students' age, educational background, special interests, and level of language proficiency to select them more suitable topics to demonstrate their critical thinking in their writing and verbal presentations. The model of Stapleton, which has been widely adopted by many authors, needs more studies regarding its reliability and its validity before it can be recommended for clinical use in the EFL context of Algeria.

1.6. The Relationship between Media Literacy and Critical Thinking

The description of relationship between media literacy and critical thinking is made of two sub-sections. The first section deals with a review of theoretical perspectives concerning the use of media texts to teach critical thinking skills. The second subsection cites empirical evidence in support of the relationships between media literacy and critical thinking. There have been two predominant strands of research: One strand is concerned with internal representation of critical thinking into the analysis of language of media and the other is concerned with internal representation of critical thinking into the analysis of arguments in media discourse

1.6.1. Theoretical Review of Media Literacy and Critical Thinking Relationship

Media presents, establishes as well as maintains realities and ideologies through interfering in almost every sphere of our life. Our realities are to a great extent drawn from the ones which media create for us and make their availability through distribution on its multiple platforms. From a critical point of view, many authors draw attention to the fact that the reality of the media often bears little relationship to the reality of life. They argue that media accounts in most cases generate and produce representations of reality rather than present and reflect true reality. This view can be well illustrated by reference to Weber (1991) as expressed in the following words:

The 'realities' that the media present are *edited realities* and often *constructed realities*. Events are seen through the eyes of a number of people—the reporter, the producer, the cameraman, and so on. These 'gatekeepers' direct our viewing and thereby order our experience (p. 109; italics in the original).

Although a media text may be open to many interpretations, the text's structure can dictate to a large extent how to interpret its content from the perspective of the media communicator.

Text here is of course to be understood as encompassing not just written, but all types of media texts – audio, visual, hyper, multimodal, etc. Since public opinion is largely influenced by media, media literacy becomes a pressing need within pedagogical sites for creating a media literate citizenry, without which strong democracy is an impossible ideal.

The most prominent scholars like Freire, Foucault, Chomsky, and Zinn advocate media literacy education and have made important contributions to its study. In his *Pedagogy of the Oppressed* (1979), the Brazilian educator Freire argued for the importance of teaching media literacy to empower individuals against manipulation and oppression (p.114–116). His seminal book has influenced many scholars from Asia, Africa and South America in his emphasis on the principles of education as a practice for freedom. A range of Chomsky's writings has contributed a lot to broaden our view toward new models of education for citizenship and democracy. Although Chomsky does not explicitly call for critical media literacy, his description of the media as a form of propaganda has contributed a lot to contextualize media literacy within the frameworks of many western educational policies. In their seminal book *Manufacturing Consent: "The Political Economy of Mass Media"* (1988), Herman and Chomsky define the word "propaganda" as "any media strategies used by powerful elites to "fix the premises of discourse, to decide what the general populace is allowed to see, hear, and think about" (p. 88). With its interest in issues of power within texts as influenced by institutional forces, critical media literacy borrowed concepts and methods from postmodern philosophers including Michel Foucault and Jacques Derrida, whose ideas inspired educational thought.

There are crucial links between literacy, democracy, empowerment, and critical thinking. In this account, media literacy should be seen at its upper level as an important democratic instrument which empowers individuals to make independent choices, based upon a critical awareness of the media content they encounter. With the ability of critical

awareness, people can get knowledge of a conscious understanding of the media as a tool for propagandistic misinformation to mislead, distract and confuse people, and how is used to encourage or discourage certain interpretations.

Students need to be exposed to the necessary skills and processes for understanding how they are unwitting part of a process of media manipulation aimed to shape societal values (Steinbrink & Cook 2003). According to Potter, (2004), due to their limited ability to pay attention, most consumers of the media do not perceive that media through coverage has the power to influence one's emotional, intellectual, social, cultural, spiritual and moral well-being of individuals. They implicitly process the messages conveyed by media.

Al-Zou'bi (2019) indicates that without awareness and skill training, one could not pay close attention and might miss things and its significance that a media-literate person could notice. Many authors conducted exploration of the role of critical thinking in education as a means of developing students' critical media literacy skills and advocate the two for being part of students' experiences in schooling (Ashley, Maksl, & Craft, 2013).

Media literacy enables learners to be engaged in critical thinking in different ways. The integration of both media literacy and critical thinking calls for questioning texts 'contextual variability with an awareness of their socio-cultural context for the decoding and capturing their authors' intents (Wade, 2014, p. 3). As Frechette (2002) points out, most scholars view critical media literacy as an attempt to practice critical thinking as an integral part of media literacy process. In Hobbs's view (2001) critical thinking and media literacy are most appropriately understood as two sides of the same coin. Accordingly, one could say that in order to be a media literate, one must be a critical thinker literate first. Thus, exercising media literacy skills is applying critical thinking processes to recognize the central purpose while interpreting information received through the media they encounter daily, and to identify strategies that can contribute to strengthening or weakening it.

Most of the emphasis in media literacy educational research has been on using critical thinking as tools to minimize the impact of the brainwashing effect of the media (Facione, 2017). An essential tool of critical thinking which media literacy uses is “inquiry”; that is, the use of skills to view, question, analyze, and understand issues presented overtly and covertly presented by the media. The obtaining of sufficient knowledge, skills and competences makes individuals autonomous persons capable of making rational and unconstrained decisions and acting accordingly. In their seminal article on the development of critical media literacy (2009), Tufte and Enghel state emphatically that failure to achieve such literacy shall make individuals dependent and manipulated media audiences (p. 268). This view implies that an educational pedagogy which aims at developing critical media literacy and critical thinking has to support learners to become independent, autonomous lifelong learners for being protected against misleading information. Little (1991, p. 4) takes a cognitive look at the concept ‘autonomy’ and defines it as a “capacity— for detachment, critical reflection, decision making and independent action”. Corresponding to the policies of autonomous learning, educational research has been directed towards developing media literacy as a dispensable learning, adopting an approach towards assessment that encourages critical thinking.

Critical to the growth of all of these components of literacy is the development of explicit skills of reflection and systematic instruction (Lowood & Nitsche, 2011). These Skills are argued to be always explicitly related to critical thinking. Rogow and Scheibe (2011) argue that media literacy education without explicit instruction in critical inquiry does not produce deep reading or higher-order thinking skills. Critical media literacy, in Allison Butler’s words “makes explicit how the media informs young people's worldview” (2010, p.36). In light of this view, we can say that critical thinking enables conscious use of media and information which is one of the essential components of (adult) education.

The skills of thinking critically about media are essential survival skills in today's digital world to critique dominant ideologies, especially the unarticulated or implicit ideologies to determine what or whom they serve (Powers, 2018). These skills mainly include: analysis, interpretation, synthesis, evaluation, and all of what relate to these abilities such as detection (finding/identifying), description (illustrating/exemplifying), and deconstruction (analyzing). In addition, media analysis engages individuals in specific critical thinking tasks such as finding evidence by an analysis of the information and a detailed statement of the reasoning upon which the finding is based; understanding textual representations of reality compared to the external 'real' world without bias or self-interest; detecting bias, prejudice and poor logic and other evidences of faulty arguments, and drawing conclusions/making inferences, (Donham, 2008; Thomas et al., 2018; Butler, 2010, 2020).

Despite being two separate literacies—media literacy and critical thinking literacy, several scholars concur that the pedagogical practices encouraged in media literacy education are closely aligned with those that foster critical thinking skills development (Vaughn, 2020; Scheibe et al., 2011). By analogy, then, the term 'media literacy' should refer to the application of critical thinking to understanding the messages transmitted through print and electronic media, as this research illustrates.

Many scholars focus on the mutual, reciprocal relationship between media literacy and critical thinking. They acknowledge that in addition to language proficiency level and communication skills, media literacy development is to a large extent determined by critical thinking which contribute to facilitate the ability to interpret context and pragmatic aspects of language use and discern meaning from media texts within a given societal context. This relationship is illustrated in Figure 1.2 below

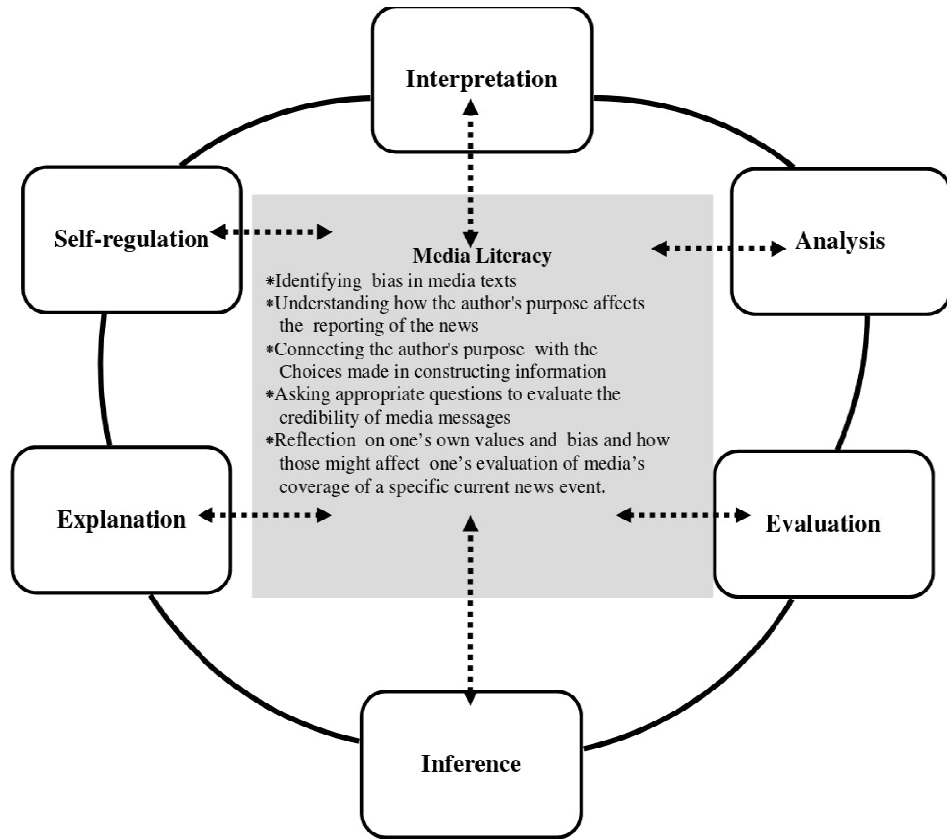


Figure1.2 *Inter-relationship between components of critical thinking and media literacy*

Identifying bias in media texts and engaging in reflection on one’s own bias while evaluating the credibility of media messages are essential skills at the core of media literacy for the reflective citizen as well as the student. Although, as has already been discussed, there are varying definitions of “media literacy” and considerable discussion over those definitions, for most purposes media literacy can be defined—in part at least—as a literacy, which can be learned, involving the critical thinking skills of interpreting, analyzing, evaluating, inferring, explaining, and self-regulation. As has been recognized by many scholars over the last decades, the possession of skills of media literacy make critical thinking a powerful tool for evaluating and enhancing analytical reasoning.

As has already repeatedly been asserted, media is an important part of adolescent

life, and critically evaluate information and news reports are essential for social empowerment and survival in the globalized world of the 21st century. In a complex world of intersexual relations, what today's students especially need is critical education, which must include media literacy and at the core of its curriculum the practice of critical thinking. Such practice may not be an end in itself, but rather a means to identify, question, and interpret the realities presented and produced by media texts. In this context, it will be important to consider Hagood's claim:

Given the dangerous and problematic nature of literacies to produce selective views of the world, critical literacy has been deemed an important and needed aspect of literacy instruction for supporting and interrogating young people's knowledge of how the texts they use—such as grunge rock, fashion magazine, or news accounts—figure into their understandings of themselves and of their everyday lives (Hagood, 2002, p.247).

No one can deny that it is of the duty of the educational system to insure that all students have the opportunity to practice their critical thinking skills through meaningful teaching and learning experiences. A more duty of the educational system is to integrate into instruction a comprehensive media literacy curriculum that promotes critical thinking. Promoting critical thinking is widely seen by policy-makers as a major purpose of education policy and media literacy as a best means to achieve this objective to meet the needs of the digital (Arke & Primack, 2009; Celot & Tornero Pérez, 2009). Hence, policy makers should keep a focus on effective implementation strategies for implementing media literacy in educational institutions. To accomplish its goal this focus, they should place more emphasis on strategies to develop the skills and practices of critical thinking. Hence; while educators and policy makers keep a focus on effective implementation strategies for the implementation of media

literacy in educational institutions, they should place emphasis on strategies which develop the skills and practices of critical thinking.

Many scholars have taken the lead in developing innovative strategies to introduce media literacy curricula into schools (Rogow et al., 2011; Goetz, Brown, & Schwarz, 2005; Torres & Mercado, 2006). The common element in these strategies is the pedagogy of self-directed discovery learning which encourages complete student autonomy (Rogow et al., 2011; Schmidt & Wen, 2006). Some of the common strategies in current use are tasks which demand the engagement of students in reading news articles or watching and/or listening to news reports from different sources to practice evaluating sources in terms of bias and credibility. Rather than transmitting objective knowledge, the goal of critical media literacy teaching strategies is to engage the learner in active cognitive processing.

As has already been referred to, there is no unique approach to teach critical media literacy. In the educational system of some countries, it is an as independent subject in the curriculum, while in that of many other countries is still correlated with other subjects of the curriculum, introducing initiatives which are few and sporadic (Parola & Ranieri, 2010). In a seminal booklet entitled “*Basic Ways to Integrate Media Literacy and Critical Thinking into Any Curriculum*”, Rogow and Schneibe (2004) suggestion is of twelve principles of this integration to occur. The general framework of each of these principles with respect to broad goals for teaching is summarized below.

1. Practice general observation, critical thinking, analysis, perspective-taking, and communication skills by

- Teaching students to ask questions about the knowledge passed on to them by media texts
- Making transparency in decision making of how assessing reliability of sources and why choosing what media to use in class.
- Pointing out that different people may interpret the same media message in different ways
- Encouraging students to engage in discussions about media texts by asking them what they notice
- Allowing students to go beyond the curricular issue at hand to identify and comment on incidental aspects of a media message
- Giving students opportunities to construct media messages of their own
- Providing flexibility in assignments by giving students a choice of media formats

2. Stimulate interest in a new topic by

- Asking students to do individual research to surf for information about a topic of their choice
- Displaying video clips in class
- Having students work in small groups to respond to controversial issues
- Selecting a variety of media texts for use(print, graphics, audio, and video) to stimulate class discussion

- Showing students the steps to access the Internet and Search information in different search engines and compare results

3. Identify how students' prior ideas about a topic have been influenced by media messages

by

- Using various internet-based resources and popular media to give students an opportunity to make connections with personal knowledge and experiences
- Asking students to compare between the way topics are treated both academically and in the popular media
- Making students aware that academic writing and media writing may use very different terminology in writing on the same topic

4. Use media as a standard pedagogical tool by

- Designing assignments that require students to use multiple media sources
Providing students with knowledge on a particular topic through access to information from a variety of sources and comparison of the sources on media credibility measures
- Using of image-based instructional videos for conveying detailed information
- Encouraging students to follow current news events across diverse media sources
- Using examples from popular media as a tool to deepen their understanding
- Asking students to share interesting information with the class
- Encouraging students to share their feelings about how media reports information on a given topic
- Asking students to design their own writing projects in a series of work sessions

5. Identifying sources for erroneous beliefs about a topic by

- Analyzing media content that misrepresents a topic or presents false or misleading information about a topic
- Showing students examples gleaned from media of data used in several misleading ways
- Calling the students' attention to the various ways in which language can be used to deceive and mislead while pretending to tell the truth
- Identifying stereotypic attitudes and beliefs using criteria for assessing accuracy

6. Develop an awareness of issues of credibility and perspective by

- Teaching students to identify the source of the message, the writer's purpose, and audience
- Helping students understand the difference between fiction and nonfiction
- Helping students know how to evaluate source and message credibility in different types of media
- Making students aware that credibility could be weighed differently in different media
- Helping students produce their own media messages, taking into account ways in which perspective is introduced through the choice of words and constructions
- Exploring through analysis of various textual features, how a media message reflects the identity of its author and affiliations
- Encouraging students to pursue questions about who benefits or may be disadvantaged by media use and media messages

7. Compare the ways different media present information about a topic by

- Contrasting ways in which the different types of media texts address the same topic
- Analyzing what can media consumers learn from media representations of information
- Indicating and discussing the strengths and weaknesses in messages and materials designed to reach particular target audiences
- Having students produce reports about a topic using different types of media (images, sound, and animation) to reach a desired effect

8. Analyze the effect that specific media have had on a particular issue or topic across different cultures and/or historically by

- Discussing the role that the media have played in formulating and reflecting public opinions on specific issues
- Selecting of topics for helping students compare and contrast news coverage across borders
- Exploring different amount of knowledge about a topic in different cultures and how exposure to media has a significant influence on the respondents' knowledge

9. Build and practice specific curricular skills by

- Using media texts, including Video documentaries, websites, newspaper and magazine articles to improve reading and comprehension skills
- Using media production to engage learners in tasks that involve practicing various skills

10. Facilitate use of a range of media formats to express students' opinions

and illustrate their understanding of the world by

- Motivating students to identify, analyze, and evaluate media messages on issues of particular interest to them
- Encouraging students to develop design and produce their own media
- Encouraging thoughtful analysis and criticism of media productions

11. Use media as assessment tools by

- Encouraging students to find evidence for their interpretations of information as false and misleading
- Having students summarize media information using a variety of print media as sources
- Encouraging students to work in teams to exchange ideas within the classroom

12. Connect students to the community and work toward positive change by

- Encouraging students to plan and formulate collaborative community projects that involve students in the analysis, evaluation, and creation of messages using a variety of media forms
- Encouraging students' engagement to participate in discussion forums

These twelve principles constitute the basis of teaching critical media literacy -not the entire basis but the essential basis. Although these principles appear to put stress on psychomotor goals, they also contribute to cognitive and affective learning domains. The literature has documented many exploratory case studies of how these principles map as an instructional strategy to promote critical media literacy and learning, for example, Stuckey and Kring (2007), Share and Kellner (2019), and Chandrasekharan (2021).

1.6.2. Empirical Review of Media Literacy and Critical Thinking Relationship

Although the importance of studying the relationship between media literacy and critical thinking has been highlighted previously by many scholars, there have been relatively a very few empirical studies which examine this hypothesized relationship (Arke, 2005). Many scholars argue that one reason for this lack of systematic empirical research is due, in part, to media literacy components which they could not be measured reliably. Although several tests, scales, and inventories exist to measure critical thinking, instruments available for measuring media literacy are still limited (Arke & Primack, 2009).

Mira Feuerstein (1999) provides one of the earliest studies to state the relationship between the two concepts. In her experimental study, Feuerstein (1999) provides support for the effectiveness of a media literacy program in the development of critical thinking of students aged 10-12 years in northern Israel. Feuerstein' course used media literacy resources and materials to determine their effect on critical thinking. Her students took pre-and post-tests (language and media tests) across the program. It was found out that the students taught to critically read media perform better on critical thinking test performance and show greater understanding of media texts than the students in the control group. The t- test also carried out for change scores between the control group pre to posttest and the experimental group pre to posttest indicated a significant difference in the cumulative effect of the media literacy program on the experimental group participants.

Arke (2005) conducted a study examining the link between levels of media literacy and critical thinking of undergraduate college students. The researcher developed his own scale to measure media literacy performance. He used the California Critical Thinking

Skills Test (CCTST) to assess critical thinking ability of the students. Results indicated that there was a statistically significant relationship between the subjects' scores on each measure. However, Edward T. Arke states explicitly that his results of the critical thinking scores were not significantly correlated with students' self-reported levels of perceived media literacy competence. As Arke (2005) sees it, this study is a starting frame of reference to develop quantitative measurement of media literacy.

Carrying on a line of research from prior studies, Scharrer (2009) took the initiative to develop a media literacy education program administered to 85 sixth graders and implemented as violence prevention intervention curriculum. The purpose of Scharrer's program was to engage students into tasks requiring critical thinking as mental tools for analyzing media violence and build skills leading to nonviolent conflict resolution. Data used for this study was collected by questionnaires and tests to measure the students' experiences. Pre- and post questionnaires were used as tools for the identification of factors influencing students' attitudes and incidents were used to measure their thinking about conflict media scenarios situations in which the task was to choose nonviolent or violent/aggressive solutions. The results showed that students became increasingly likely to choose to respond non-aggressively to problem solving.

Radeloff and Bergman (2009) addressed this issue, redesigning a course to integrate critical thinking skills through media literacy activities within a women's studies curriculum framework. Magazines, DVD documentaries and websites were used in the course of the experiment. Students' learning was measured via midterms and final examination scores and their critical thinking skills were measured through a pre- and post - test session. Radeloff and Bergman (2009) argue that their media intervention program helped students question critically what they see in television, films and other media and gain a better understanding of the diverse issues related to global feminism and the discipline of

Women's Studies.

In his seminal paper, Sperry Chris (2012) describes a lessons learned system integrating critical thinking and media literacy which has been developed within a team work throughout upstate New York. He describes the project to be designed to be easily updatable, maintainable, and accessible as an integral part of the science curriculum at the senior secondary level. In this article, the author introduces several lessons which these educators developed, piloted, and evaluated to allow students to practice the skills of media literacy and critical thinking. Sperry (2012, p.57) provides teachers with five strategies for integrating media literacy and critical thinking:

(1) “analyze scientific facts versus fiction in the media; (2) conduct lab experiments on claims found in the media; (3) evaluate conflicting views on controversial topics; (4) analyze the sources of information in your classroom, and (5) produce media based on research, analysis and evaluation”.

A further study of examining pre-service teachers ' media literacy and critical thinking was performed by Nalçacı and Şahin (2016) at Ataturk University, Kazım Karabekir Faculty of Education (Turkey). Critical thinking dispositions were measured by the California Critical Thinking Disposition Inventory (CCTDI) and media literacy was assessed using a scale developed by Karaman and Karatas (2009). Based on data analyzed in the study, the conclusion reached was that some statistically significant relationships were found between media literacy and critical thinking levels, though they were not sufficiently strong or consistent across the study. As discussed by Nalçacı and Şahin (2016), there is a great need for applied research to develop methods of education that will most effectively explain the reasons for this relationship.

With the purpose to evaluate a school-based violence prevention media literacy curriculum, Webb and Martin (2012) conducted a study at school districts around southern California which hypothesized that their intervention made students with the ability to think more critically about media better at understanding the harmful effects of violent media. This intervention study used the program called "Beyond Blame: Challenging Violence in the Media", which is a comprehensive multimedia resource program with the use of video produced by the Center for Media Literacy (2006) in Los Angeles. The program embodies the core concepts and corresponding key questions of CML which translates them into an operational plan. These are, as stated in the authors' words: (1) all media messages are constructed, (2) media messages are constructed using a creative language with its own rules, (3) different people experience the same media message differently, (4) media have embedded values, lifestyles and points of view, and (5) most media messages are constructed to gain profit and/or power, and corresponding key questions: (1) Who created this message? (2) What techniques were used to attract my attention? (3) How might others understand this question differently? (4) What lifestyles, values and points of view are represented or omitted from this message? (5) Why was this message sent? (Theresa Webb et al, 2012, p. 434). The empirical study confirmed the general relationship between critical thinking and a good performance at media literacy.

Utilizing a problem based learning approach to pedagogy, Chen and Rattray (2017) examined the correlation between media literacy and critical thinking levels in the context of news media literacy class. Using as a framework Baxter Magolda's model of the development of critical thinking, the study of Chen and Rattray (2017) critically examines the extent to which students shift from a very egocentric view of the world to a more integrative and reflexive view of the world along the process of change in progress of their critical thinking skills to become more sophisticated with advanced problem solving and decision-making

capabilities. The results of this study revealed that media literacy is located at a lower stage of the developmental hierarchy of critical thinking.

Conclusion

This chapter aimed at providing a comprehensive body of knowledge on the relationship existing between critical media literacy and critical thinking. Toward that end achievement, the chapter's content spells out a basic body of knowledge which draws attention to the fact that this relationship is reciprocal. After introducing the major concepts used in later chapters, this review sheds light on methodological approaches to understanding the dynamic interplay between media literacy and critical thinking and the implications of this reciprocal relationship for classroom instruction. To address the question of a possible relationship between the development of CML skills and CT skills, the chapter provides a comprehensive review of the available recent empirical findings published on the topic since the early 1990s. These studies provided evidence that there is a dynamic reciprocal relationship between media literacy and critical thinking.

This review departs from the traditional belief that learners should be taught critical thinking before being introduced to media literacy. Findings argue that media literacy is parallel to the development of critical thinking, for media literacy involving engagements with texts through the same cognitive processes. However, there is also available evidence which indicates that not all levels of critical thinking inform all levels of critical media literacy. Learners' skills in analyzing media and their critical thinking skills could be on different levels.

For a better understanding of this relationship, much more additional research is needed, utilizing the integration of mixed-type studies that put forth both quantitative and qualitative data. All in all, both the theoretical and empirical works suggest that media literacy and critical thinking are inherently related and they should be integrated across the curriculum, especially programs of English as a foreign language with the aim to empower students in so many ways that they can protect themselves from the threats and negative impact of the mass media on their identity development.

CHAPTER II

Literature Review (part two)

Framework for the Study of Bias and Persuasion in News Media

Introduction

The first part of the review of literature (Chapter 1) has offered a wide range of theoretical perspectives focusing on media literacy and critical thinking in a broad way, producing an amalgamated perspective. The current part of the review of literature (Chapter 2) has a narrow focus which is on a review of theories, methods, and instruments for identifying and analyzing of bias in news media sources. It is due to the nature of these two fields which is hard to state within a single case study that the focus is narrowed in its scope.

2. 1. Defining Bias

It is worth noting that the term “bias” is a broad and ambiguous term due to its multiple uses in several scientific fields by different researchers to refer to different phenomena. It can be defined, for example, as a preformed negative opinion or attitude toward a person or a group of persons based upon their social memberships. The same term, however, appears to have a very different meaning in its use in the field of statistics to refer to a measurement error identified in data.

Dictionaries define “bias” in several different ways. *Webster’s International Dictionary* defines “bias” far more broadly, as to be “an inclination of temperament or outlook.” *The Oxford English Dictionary* defines the term, as “a strong feeling in favor of or against one group of people, or one side in an argument, often not based on fair judgment.”

The Cambridge Online Dictionary defines the word “bias” as: “the action of supporting or opposing a particular person or thing in an unfair way, because of allowing personal opinions to influence your judgment.” One can conclude on the basis of these definitions that bias involves a synthesis of emotion, cognition, motivation, and action.

According to McQuail (1992, p. 191) “bias is a consistent tendency to depart from the straight path of objective truth by deviating either to left or right.”

2. 2. Defining Objectivity

As with the definition of bias, the definition of the term "objectivity" is often vague and unclear in terms of what it entails exactly. In *The Cambridge International Dictionary of English*, objectivity is defined as “the quality of being able to make a decision or judgment in a fair way that is not influenced by personal feelings or beliefs." *Merriam-Webster Dictionary* defines objectivity as “the quality or character of being objective: lack of favoritism toward one side or another: freedom from bias."

We see that the core characteristics listed in these definitions are not precise, but anyway they provide a ground for agreement while defining media objectivity. *The Dictionary of Media Studies* (2006) defines objectivity as "the idea that news can and should be reported without opinion or bias" (p.161).The Society of Professional Journalism (1973) defines the term objectivity as "accuracy, distinction between news reports and expressions of opinion, and representation of all sides of an issue", (pp. 260-1).With an emphasis on accuracy in reporting and a balanced representation of opinion, Denis McQuail (1992) defines the term “objectivity” to mean "a balance and evenhandedness in presenting various sides of an issue , accurate and realistic reporting, presentation of main, relevant points, separation of fact from opinion, minimizing the reporter’s attitudes and opinions, and avoiding slant, rancor, or devious purpose" (pp.184-185). It is noted that the characteristics which these definitions entail are necessary for the objective to keep a balance in information seeking and presentation of information on controversial issues.

A basic meaning at the core of the definition of objectivity is "separating facts from values". For "value - free" being an impossible ideal to perform, many researchers in the existing literature have used several alternative words conveying different shades of

meaning, as for example: "impartiality", "balance", "fairness", and also "neutrality" to be characteristics of unbiased news coverage. Objectivity has positive connotations; that is, it imposes obligation to pursuit truth without prejudice, fear, or favor.

It is worthy of note that the two words "objectivity and "neutrality" are often used interchangeably, even though the two terms are not synonyms if used precisely. Many scholars argue that they are not fully synonymous (Franklin & Mensing 2011). While objectivity entails being uninfluenced by emotions or other prejudices, neutrality entails merely being not in favor of one view over another. In the field of media studies, neutrality means that journalists should refrain from promoting particular values. They should keep themselves under a duty of not favoring or disfavoring particular socio cultural values and practices to reinforce certain convictions, because that would mean giving more weight for a certain political legitimacy.

Objectivity and value-neutrality are commonly used while referring to the newsgathering process, in which journalists, reporters, and editors are supposed to aspire to unbiased practice on the one hand, or to the final presentation by which the news copy should not privilege one side over another or represent the interests of some but not others, on the other hand. For being neutral and objective, journalists need to avoid even the hint of the articulation of their own opinion and beliefs in news reports and everything else that might make it appear biased, one-sided, prejudiced, or unbalanced.

The principle of objectivity-although under scrutiny is today a pillar of journalism which has been argued to serve multiple functions. Hackett and Zhao (1998) state that objectivity provides a general model aiming at giving a conceiving, defining, arranging and evaluating news texts and practices; it serves as a normative ideal guiding journalists for skill development capacity building designed to provide factual, accurate and complete information as well as offer an impartial, unbiased, unprejudiced, neutral, and independent

stance on that information driven by an underlying epistemological outlook; it sets standards for legitimizing a set of newsgathering and dissemination; and it offers a lens through which to actively shape and construct public discourse.

Although media has been shown to be strongly evolved and established norms based on the principles of democracy and human rights and freedom of speech and opinion, they are criticized as being still very far from the ideal of neutral and objective journalism in the representation and coverage of events/issues. Whatever the way objectivity is defined and practiced, bias remains inevitable in the media culture and intrinsic to the very nature of journalism. Accordingly, scholars of the mass media now take it for granted that power and ideology are implicated in all media content. In fact, very roughly, one can say that the base of objectivity is much easier to define but harder to attain.

2.3. Defining Persuasion

The major problem addressed in this study involves exploring the relation between bias, objectivity and persuasion within the media context. For a text being persuasive or unpersuasive depends greatly on its readers' evaluation in terms of objectivity or bias. Accordingly, before proceeding any further in our discussion of bias in the news, it might be useful to adequately define the relationship between bias-objectivity dichotomy and persuasion to understand persuasion media effect, particularly the persuasion effect of biased news.

By persuasion, we mean any attempt designed to change or alter individuals' attitudes or behaviors by applying either logical reasoning or emotional and motivational arguments (Verderber & Verderber, 1986, pp. 163–169). A key issue in recent persuasion research is on how media content can influence thought and behavior. The contents of any media product are designed to dynamically communicate information and ideas, and at the same time intended to persuade the making of decisions that directly affect one's own life. Media has

always been cited as the primary channel for persuasion. Although objectivity has always been considered important in journalism, the ability to persuade and influence others is the major criteria of an effective journalist. Accordingly, media power rests upon its power to persuade.

Consumers of media (viewers, readers, and listeners) process news content either as biased or unbiased, either reflecting objective reality as it is or reflecting reality virtually based on biased subjective interpretations. Persuasion in media is thought to be influenced by one's process of news content as biased or unbiased. Consumers of media are persuaded by messages that appear to them objective and unbiased. They generally resist persuasion when a news media text is perceived against their points of views. The relationship between bias / objectivity perception in textual messages and persuasion is illustrated briefly in the figure below.

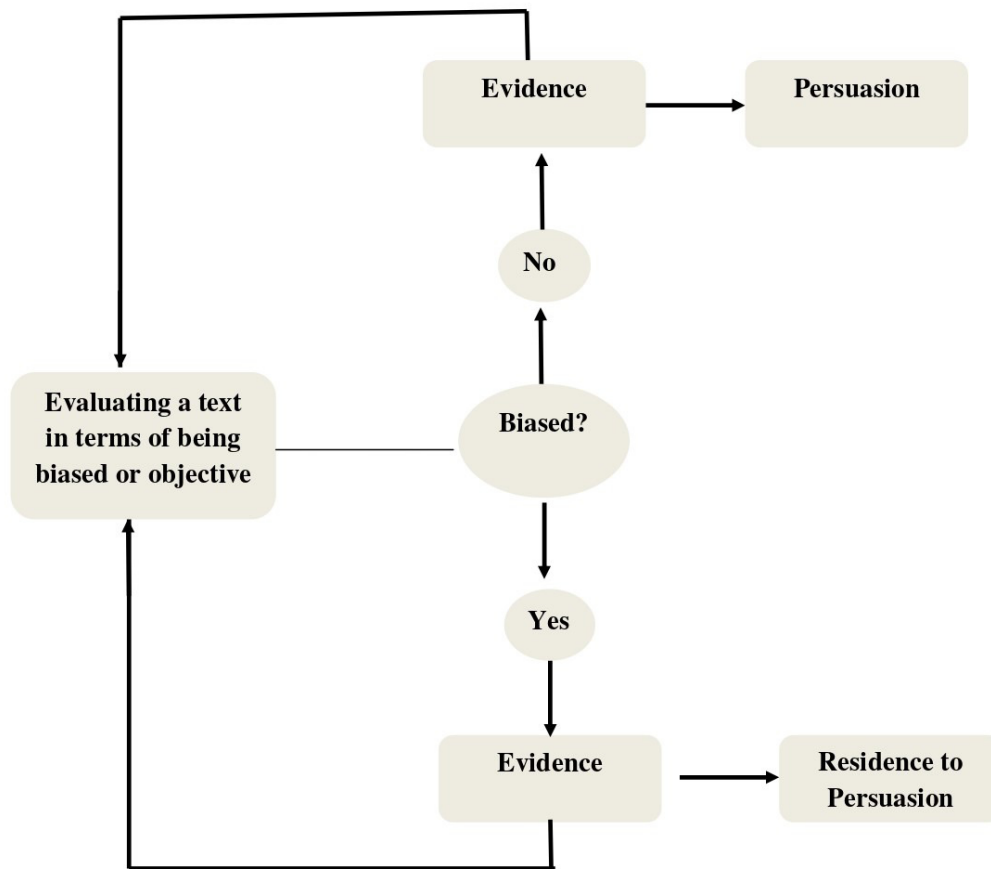


Figure 2.1 Schematic representation of the concepts “bias” and “objectivity” related to persuasion

It is worth noting that the ability to resist media effect is not easy due to the power of the media in shaping people's views of the world which, in turn, influence their behaviors. The findings of several previous studies on media discourse indicate that skillful use of persuasive strategies in journalism is an effective route to create a perception of objectivity along the process of assimilating the knowledge and information conveyed to the reader or viewer (Timothy 2002; Le, 2003).

Within the past few years there exist plenty of studies examining how and why the public perceives bias in the media. Most if not all of these studies lead us irrevocably to draw the following two conclusions: 1) a perception of bias is "subjective". Two individuals may perceive the same media text differently at the same time even under the same socio-cultural environment; and 2) a perception of bias is "relativistic" and defined by the fact that anything which opposes one's world view is perceived biased. If people see the world differently and have somewhat differing values, they are likely to interpret and evaluate events differently. This implies that a reader or viewer's response when judging news stories in terms of bias or objective is not necessarily accurate.

Following the lead of the logical positivists in the early twentieth century, we argue that all descriptions of the world are interpretation given from a biased or self-interested point of view. The word "objectivity," in fact, is misleading primarily meant to persuade rather than inform (Farsetta & Price, 2006). Journalism carried under the label of "objective news" is an instrument used to manage and control difference for facilitating the imposition, strengthening, and contestation of social hierarchies, with the objective to maintain and reinforce a symbolic power. Pierre Bourdieu (1990) defines symbolic power as the power of constructing reality. This includes power to impose a vision on the world as legitimate.

All media products are rhetorical, value-laden, and persuasive (Medhurst & Benson, 1991). Rhetoric has had many definitions throughout history. Aristotle defines rhetoric as "an ability, in each [particular] case, to see the available means of persuasion" (On Rhetoric, pp. 36-37). Burke (1953, p. 41) defines rhetoric as "the use of words by human agents to form attitudes or to induce actions in other human agents." Words are not the only means of persuasion; wordless communication is also persuasive. Far from being a mere bag of linguistic tricks, rhetoric is a form of "interactive, social argumentation" that lies at the center of ethical deliberation (Ward, 2004, p.29). Luca defines rhetoric as "the mobilization of signs

for the articulation of identities, ideologies, consciousness, communities, publics, and cultures" (1999, p.17). Lloyd Bitzer defines rhetoric as "a mode of altering reality...by the creation of discourse which changes reality through the mediation of thought and action" (Bitzer 1968, p.4).

By defining rhetoric as "symbolic and ultimately transformative action" in their analysis of how rhetorical and symbolic action create and reproduce different social orders that are inscribed with different types of hierarchies, Burke (1973) and Bitzer (1968, 1980) carve a new academic space to extend the study of rhetoric with a shift in focus from what rhetoric is toward what it can do. Charles Bazerman in his definition of rhetoric as "the study of how people use language and other symbols to realize human goals and carry out human activities", retains the classical assumption of rhetoric as a goal-directed, purposeful, and intentional activity (1988, p.8).

Building on the existing academic work seeking to formalize the definition of rhetoric, we take a view like Hauser's (1986) that a definition of rhetoric is not limited only to what rhetoric is but also includes what it does and why it does it (pragmatic function of rhetoric). In his *Introduction to Rhetorical Theory*, Hauser writes, "Rhetorical communication is explicitly pragmatic. Its goal is to influence human choices on specific matters that require immediate attention; hence it is" (2002, p.11). The study of rhetoric, especially rhetoric aimed at social change, is the study of who is trying to do, what, to whom, with particular emphasis on how and why they are doing it. This definition has led major implications for the development of existing tools and techniques as well as the development of entirely new methods and approaches for critically evaluating media messages with particular focus on understanding persuasive tactics and recognizing bias in messages to decode the desired consequences designed to be achieved.

Fundamental to the practice of critically reading and evaluating texts is the recognition that texts are written by someone with the intention that they perform a very specific function. Every author has a purpose for writing and every text has a writing reason (Alexander & Fox, 2004). As a basis for measuring objectivity, the existing literature developed models on persuasion to render judgments on the trustworthiness and reliability of the text based on its author credibility, affiliation, expertise, cognitive authority, attractiveness, and likeability as major factors, among others, which greatly contribute to increase the likelihood of reaching the ears of a greater audience and reinforce the message (Petty & Cacioppo, 1984; Aune & Reynolds, 1994; O'Keefe, 2002).

Research also has highlighted several text characteristics that have great influence on the reader in terms of persuasion; that is, influencing them to change their world views or take actions. Argument quality and number of arguments together play a crucial determinant of persuasion. Petty, Harkins, and Williams (1980) differentiate strong and weak arguments as arguments either providing relevant, statistical information or opinions and quotations. Their research indicates that texts' evaluators are more persuaded by the strong arguments and less persuaded by the weak arguments. Plenty of research suggests that the effect of persuasion may differ according to readers' process of understanding and evaluating texts (Hodges, 1994; Jeremy Koay, 2019).

In order to explore how people react to messages with persuasive intent, and examine how their thoughts, attitudes, and actions are changed as a result, Petty and Cacioppo (1981; 1986) developed the Elaboration Likelihood Model (ELM) : a dual-route model of the processing of persuasive communication which has recently become an important model for understanding persuasive message processing. This model recognizes distinct levels of ability while processing messages with persuasive intent. It describes two routes to persuasion—central and peripheral. Central route processing is a process of thoughtful

evaluation of the arguments and scrutiny of the logic of a given message. By contrast, peripheral route processing involves little systematic engagement (low cognitive elaboration) in which one deals only with the more superficial aspects of content. This model contends that individuals who use peripheral route processing could be easily persuaded not only through the use of strong arguments but even through the use of weak ones, caused by their lack of critical evaluating ability and making the necessary connections between text and its context. The figure below describes a process that occurs during interaction with a textual message with a persuasive intent as defined within the theoretical model (ELM) developed by Petty and Cacioppo.

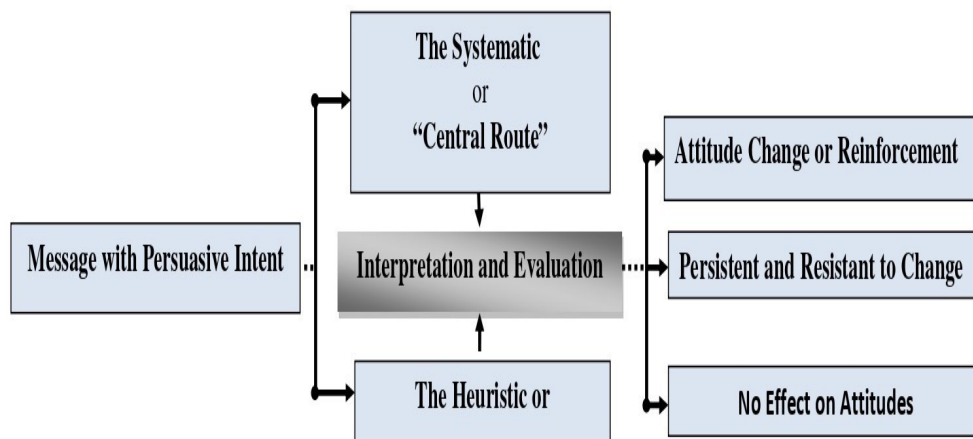


Figure 2.2 *Processing of text with persuasive intent, based on the Elaboration Likelihood Model of Persuasion (Petty & Cacioppo)*

In their description of the process, Petty and Cacioppo (1981; 1986) state that when people think critically about a message, they take the central route to persuasion and are influenced by the strength of the arguments. When people do not think carefully about a message, they take the peripheral route to persuasion and are influenced by peripheral route cues. The route taken depends whether people have the ability and the motivation to fully process the communication.

2.4. Bias in the News Media

Despite the importance to media studies of defining bias, no a fully and satisfactory definition exists. for the purposes for which such study is intended to be used, it might be useful to think of media bias as a sort of systematic production of a distorted representation of social reality. In regard to bias in media' s coverage of events, many different types of bias exist, including partisan and ideological biases which are given greater prominence in media research agendas.

Both the print and broadcast media's news coverage and editorials have to make daily editorial choices and decisions as to which events to broadcast, which message to deliver, and how to present the news in a way which aids audience understanding. The events to be covered in a newscast are subject to various interpretations and are greatly affected by decisions made during the transmission process through which news selection coverage and news reporting styles are made. With regard to the latter point; many scholars assert the view of news as a social construction of reality. Katrin Voltmer in *The Media in Transitional Democracies* (2013) argues that “news is a cultural product that provides an interpretation of social reality through the “gram- mar” of journalism. That is, any material related to any event covered by the media before publication/broadcast as a news piece is first processed by the journalists’ schema system, i.e., the norms, routines and aesthetic judgments.” (p. 65).

The perception that the media is biased is widespread and even news organizations claiming to present the most neutral information can be accused of being bi- as in their news reporting, particularly in their coverage of political matters. Biases in news reports are especially noticeable within reports involving controversial issues, indicating representation of an ingroup or out-group. In-groups are called membership groups; in contrast to outgroups which are often referred to as non-membership-groups.

Psychologists have found that classification of others as either part of one's in-group or out-group is based on identity affiliations: ethnicity, social status, religion, sex, race, and political beliefs (Allport, 1954). The process of this categorization, while a natural cognitive function, can quickly lead to the amplification of differences and the minimization of shared qualities with those deemed to be in the out-group. Consequently, this lays the psychological groundwork for prejudice, discrimination, and intergroup conflict, as empathy and cooperation are often reserved for those considered 'one of us'.

Bias can occur across media representations in different degrees and forms. It can be both intentional and unintentional: it may occur in a deliberate (systematic) form, aimed intentionally at producing a certain effect on the audience, or may occur in an unwitting (systemic) form which is the tendency of journalists to work under consensus, covering the same kinds of stories and using the same kinds of news sources. The burning question this chapter seeks to address is if bias is deliberate, why is it there and who might benefit from it? This question will be answered more exhaustively later in the chapter. Beyond a broad classification of bias types into being intentional or unintentional, there have been many proposed typologies of bias types mentioned in the literature, which seek to provide models for analyzing and detecting biased language.

2.5. Typology of Media Bias

Bias takes on many forms, including omissions, distortions of facts, or privileging some values ahead of others or persons over others (Entman, 2007). Accordingly, attempts at developing useful typologies have been made.

2.5.1. Typology of Denis McQuail (1992)

Denis McQuail (1992) distinguishes four types of bias. Distinguishing more clearly between these four types, his model uses a two-dimensional matrix differentiating between implicitness versus explicitness of biased attitude on one dimension and differentiating

between intended versus unintended bias on the other dimension.

(1) *Partisan bias*: This type of bias is defined as “deliberate practice” with the explicit goal of promoting a political party, candidate or agenda, as, for example, having editorial recommendations supporting one political party or taking positions on political or social controversial issues. Partisan bias can take the form of explicit and persuasive recommendations to vote for one political party or another, often by outlining explicitly the undesirable practical consequences of doing otherwise. Most newspapers and their companion websites are openly partisan or clearly affiliated with one political party or another and make their political affiliations overt with bias reporting on their editorial pages. Research shows that once the source of the information in the news report has been identified, partisan bias is often relatively easy to be detected.

(2) *Propaganda bias*: Propaganda bias is intended to promote certain ideological and political causes or points of views but does so in a hidden and implicit manner. For example, a media report might have a deliberate intention to promote changes in government policy but does so in a hidden way with the objective to influence people more effectively. For example, broadcast news coverage of the Prime Minister's activities may be neutral in tone. However, the impression one might have from watching the report is that he/she is a strong leader who cares deeply about the aspirations of his people and should be deemed worthy to take up the mantle of leadership. Propaganda, with its concern to influence opinion, makes it difficult or impossible to have respondents identify bias in the use of language. For example, a recent survey of Western television programming revealed that televisions' portrayal of the life of LGBT refugees and asylum seekers are reported as real-life news stories, but in such a way as to make the point they are dangerous to Europe's future.

(3) *Unwitting bias*: Newspapers and magazines have limited space and broadcast news has a finite amount of time. Accordingly, choice has to be made as to which news is included or excluded. The choice is inevitable, making all news media biased in varying degrees. This type of bias is labeled “unwitting bias”. In the typology formulated by McQuail (1992), unwitting bias refers to bias that occurs unintentionally which emerges with no specified prior agenda. It involves judgment about the importance of a news piece/issue.

This type of bias has nothing to do with the author’s subjective intention to transmit specific ideological messages. This may happen when evaluating the significance of events, identifying the rank order of news according to their importance, and deciding on which stories to include and exclude in the presentation of the news. These are embedded within everyday routine activities of media broadcasts for covering national and international events. To detect this type of bias, it would be wise to look at what appears to be the standard operating procedure carried out by media newsrooms to see how they provide the criteria in the practices of journalism to decide routinely and regularly on the ranking of news as being more or less newsworthy.

(4) *Ideological bias*: the fourth type of bias indicated in McQuail’s model is labeled “ideological bias”. This type of bias is defined as implicit and unintended, rooted in hidden value judgments and assumption stemming from the enduring values of the newsmakers, which means, this happens when the newsmaker’s evaluation of a piece of news as an interest event that is worthy of consideration is a subjective value judgment. Ideological bias in news texts takes many forms and is often subtle and difficult to detect. It is embedded in both the form and the content of the texts. In this connection, McQuail notes that detection of ideological bias requires readers to understand the text deeply with attention focused on the ‘common sense’ against which news is created. Media representations of gender function as one of the most vivid examples of ideological bias in recent times. Many researchers have criticized me-

dia coverage of sports with regard to gender and the dominance of males on the sport pages (Grace, et al., 2019). Such representations are arguably to articulate a particular ideological view of reality about the male/female dichotomy. Another significant example of ideological bias is the Israel-Arab countries normalization of relations which has been very little covered and misrepresented by media in most Arab countries.

An important insight drawn from this typology is that partisan bias is the most apparent to audience, while ideological bias is the least. This typology helps to draw a distinction between intended and unintended biases. In theory, this may seem obvious, but in practice, it can be quite difficult to apply, Street (2001). In watching, reading, or listening to a media product, it would not be surprising if two individuals end up having two different interpretations—what one perceives as unwitting bias another may perceive as propaganda and another as a fair news reporting. For example, The Daily Show and Last Week Tonight are mock news TV programs which involve implicit criticism of governmental policies. Using a combination of irony and satire devices make viewers' interpretations of the messages vary.

2.5.2. Typology of Robert M. Entman (2007)

More recently, Robert M. Entman (2007) has produced a typology which divides bias into three broad categories: distortion bias, content bias, and decision-making bias, which are explained below.

(1) *Distortion bias*: Distortion bias refers to news that deliberately distorts reality. Distortion bias, in Entman's words, is "applied to news that purportedly distorts or falsifies reality" (p.163). Claims or complaints regarding news distortion are found much more often among those who lament that the media takes side against them in an unfair treatment of events objectively and does not seek to inform the public accurately, such as accusations of media "bias" against Palestinians or against Israelis which have become so a widespread issue that is being discussed in press and across all the media platforms. Many scholars argue that

news, by definition distorts and often misrepresents reality (Ireton, et al., 2018; Leighley, 2004). In some TV channels reality is completely distorted, creating a misleading narrative that manipulates public opinion and primes viewers for specific political or commercial agendas.

It is worth noting that distortion in media reports is not just about the presence of false information; it is also about the absence of information. The news on Western TV concerning the coverage of the 2003 Iraq war was characterized by distortion bias with no comment on the bombing of innocent civilians, including women and children. Detecting distortion bias is difficult but possible if the reader or viewer access to several sources of information.

(2) *Decision-making bias*: Entman (2007, 2010) argued that journalists' 'values' shape their decisions about the news, and he used the term "Decision-making bias" to refer to "the influence of journalists' belief systems on the texts they produce" (Entman 2010, p.393). This type of bias is found in news in which journalists insert their personal prejudices into the content of their news reporting, (Benett 2005, p. 180). Frame analysts of media texts use the term "decision making bias" while addressing "motivations and mindsets of journalists who allegedly produce the biased content" (2007, Entman, 2007, p.163). As such, Entman's "decision-making bias" is similar to a certain extent to McQuail's "ideological bias", which is also a product of a journalist's decision in reporting the piece of news based on his value judgments. The only clear-cut distinction between these two types of bias, as interpreted by many authors, is that McQuail's ideological bias is unintentional, while Entman's decision-making bias is intentional. Language choice and style reflects many aspects of the journalist's stance and world view, causing "decision-making bias" possible to be detected.

(3) *Content bias*: News reporters or editors can also bias the content of the thoughts to support power holders and power seekers to gain or maintain power. To this, Enteman (2007) uses the term “content bias” which he defines as “consistent patterns in the framing of mediated communication that promote the influence of one side in conflicts over the use of government power,” (p.166). Designed to influence the opinions, emotions, attitudes, or behavior; content bias has the power to strongly impact the public perception of topics reported in the news. According to research findings, content bias to reach its purpose is largely determined by the level of trust the news consumers have toward the particular media source that they use (Soules, 2015). Some researchers use the term “editorial slant” as an equivalent alternative to the term “content bias”. In a research by Druckman and Parkin (2005), this concept is used to refer to “The quantity and tone of a newspaper’s candidate coverage as influenced by its editorial position” (Druckman & Parkin 2005, p. 1030). Acquiring a core set of critical reading strategies to understand, analyze, and evaluate media texts is fundamentally demanded of anyone in his/her attempt to identify and classify news content as biased to support the interests of particular political power holders/seekers.

2.5.3. Typology of Dave D’Alessio and Mike Allen (2000)

Dave D’Alessio and Mike Allen (2000) distinguish three types of media bias: gate keeping bias, coverage bias, and statement bias, which are explained below.

(1) *Gatekeeping bias*: D’Alessio and Allen (2000) used “the gatekeeping bias” to refer to media editing performing task to select from multiple stories the ones that will be presented to the public and deselect those stories of which they do not wish the public to hear or read from the media. Thus, the gatekeeper is any person or members of formally organized group with a direct involvement in controlling the flow of information. The media gatekeeper’s activities include “limiting information by selective editing, increasing the amount of information by expansive editing, or reorganizing the information through reinterpretation”, (Cwalina et al.,

2015, p. 57). The tasks of gatekeeping operate for both print and broadcast. Many scholars point out to search engines (such as Google or Wikipedia) as gatekeepers of information on the internet.

(2) *Coverage bias*: According to D'Alessio and Allen (2000), coverage bias refers to count space or time devoted to a particular issue in media. Analysis of coverage bias in newspapers and magazines includes space allocated to reports, including: headlines, cutlines (captions), photos, maps, graphs, comics / cartoons, and puzzles), whereas analysis of coverage bias in television newscasts include the number of appearances and time devoted to each side of the issue. As an example of this type of bias is gender in sports media coverage. Recent research reveals that female athletes receive little media coverage compared to men athletes for whom much space is allocated. Comparing different media organizations, quantitative content analysis is the appropriate research method used by researchers to measure coverage bias.

(3) *Statement bias*: Statement bias is D'Alessio and Allen's alternative use of the term "content bias". This type of bias refers to the tone in news coverage of opposing positions' involvement in social/political conflicts. D'Alessio and Allen (2000) argue that news reporters can't always resist interjecting their own opinions and attitudes into the text of coverage of the issue in focus. This type of bias can take many forms and is usually expressed through the choice of words and arguments / counterarguments, which act as markers of the favorable, neutral, and unfavorable tones in the news report coverage. Many researchers discuss the degrees of biased/ "unbiased" tone in the use of words expressed in the evaluative language choices which reporters make (Bednarek, 2006).

It is hoped that this overview might shed some light on the most important typologies developed to the description of the concept of "media bias". There are many other typologies found in the literature (Dayan & Katz, 1992; Blumler & Gurevitch, 1995; Mullainathan &

Shleifer, 2005), each depending on the particular context and research questions studied. All typologies have in common a focus on arriving at clear approaches to detecting bias and the intention behind it. Although scholars have employed the same set of criteria for typological classification and categorization of bias in media content, they have used several alternative labels and methods in quite different ways to reach their goals.

With regard to media effects, the next section of this chapter will focus on bias in news consumption. A broad focus on this point is required in order to gain a better understanding of the existing approaches in the social sciences to analyze media bias and thereby to fully describe what constitutes critical ability to identify media bias.

2.6. Forms of Bias along the Process of News Production

Distinguishing, not only the various forms of media bias but also understanding at which stage in the news production process these forms, can arise serve as a basis to devise methods that help to reduce the persuasion effect of biased news. In order to develop a satisfactory news article for publication, newsmakers go through the process of news gathering, writing, editing, printing, and delivery. Different tasks are required to be performed for different aims throughout the news—gathering and news—reporting sub-processes of media production.

Across the stage of gathering (also named story selection), journalists select facts and events that make the news. Selection of events has always an underlying ideological basis. It should be noted that all events selected for coverage in news media are aimed to reinforce particular views of the world; they serve to reinforce and justify a certain status quo. Next, journalists select news sources such as press releases, speeches, websites, other news publications, or studies, to be used when writing news. Decisions to include or exclude information have underlying ideological significance which affects which perspective is taken on the news event.

Across the phase of writing, reporters may present information in the neutral style of journalistic writing, or they may use different writing styles in their news content to bias news designed to convince and persuade a public rather than inform. Styles of news writing include the following: choice of words, argumentation style, and rhetorical devices. News makers may choose their style and tone of voice to affect news consumers' emotions, either positively or negatively.

The last stage of the process known as "editing" is concerned with the format of presenting of events of news. This includes, for instance, the position and size of printed and graphic material. Newspaper editors believe that front page story receives more attention media than a page reserved for an exchange of views. They also believe that newspaper reports containing photographs and cartoons draw readers' attention and direct their perception of an event.

Many forms of bias can take place at all stages of the chain of news event process production. For readers to detect if information from media is slanted, then it is relevant to distinguish forms of bias. Literature offers numerous models and typologies as tools for detecting slanted news. They are extensions based on the typology suggested by Baker (1994). The Types of bias which literature records are generally grouped into two: (1) "selection" (i.e., what events are in/ out of a source), and (2) "description" (i.e., how events are reported). However, scholars have further refined these into a more granular typology to better diagnose and analyze specific manifestations of bias (Bennett, 2002; Entman, 2007). These more detailed types can be grouped under the two main headings:

(1) *Bias by events selection*: Journalistic choices concerning which events to cover and their choices of which aspects of an event to report on. The government owned media agencies always perform bias by events selection in their favor of the ruling party and government policies. E.g., Al- Jazeera's editorial line, which is critical of Arab governments, rarely raises

questions about Qatar state.

(2) *Bias by the selection of sources*: Including more sources in a story that support one view over another. This bias can also be seen when a reporter uses such phrases as "experts believe," "observers say," or "most people think", (Braker & Kaminsky, 1994, p.33).

(3) *Bias by commission and omission*: Choices made by journalists concern the omission or addition of facts that support or question a specific perspective of the issue reported as a news event. As a practice, all news reports exist along a continuum (not an absolute of either/ or) of commission to omission.

(4) *Bias by labeling and word choice*: Decisions on the choice of words for use by journalists in reporting events to present their thoughts on the reported issue and describe their point of views in a way to influence a variety of reader /listeners responses. Bias by word choice and labeling occurs when journalists choose words or phrases from ones that belong to the same semantic category, e.g., employing the phrase "be martyred rather than be killed" in a crime incident report.

(6) *Bias by story placement*: Giving prominent placement to stories that support one point of view while "burying" stories that support the opposite one (Paul Ruschmann, 2006, p.50). News and reading matter placed on the front page that contains an editorial receives more attention than being placed in the middle or last pages in which generally receives less attention.

(7) *Bias by size allocation*: This type of bias can occur when a news story is provided with large space, with large headlines printed in attractive ink color. It is likely aimed to attract reader interest and make the facts clear than a small news story in which facts are often ambiguous and incomplete.

(8) *Bias in picture/image selection*: Decisions on the choice of images (pictures, cartoons, posters) for use by journalists to incorporate into their news reports to express their thoughts

on the reported issue in a way to affect public opinion. Images serve to encode meaning and have ideological effects. They generally uphold the ideological grounding of the organizational affiliation of the news reporter of the event.

(9) *Bias in image caption*: Decisions about information and writing style in the caption. The use of captions is designed to provide an additional source of meaning for the image accompanying a news report. Captions serve the purpose to narrow down the choice of meanings of the published image.

(10) *Bias by spin*: The report expresses on the whole an extremely unbalanced bias. A news article's spin is essentially a combination of all previously mentioned forms of bias combined to form a positive or negative impression of the news story.

2.7. Effects of Biased News Coverage

Within the social sciences, the study of 'media effects' has been one of the most popular approaches to understanding how the forms of bias work within media texts. The ideal way to address the issue of biased news coverage is to shed light on the different research methods that have been developed to study media effects and tease out the major key themes and concepts that have emerged from this research. In terms of effects, the core assumption in research on media bias is that biased news stories are intended to influence and manipulate people's attitudes which might in turn affect behavior. Media effects studies offer a great deal of theoretical perspectives and methodological tools applicable to analyzing bias in news media sources and understanding the interplay of media bias and persuasion.

2.7.1. Theoretical Approaches to Understanding Media Effects

During the second half of the 20th century and continuing over the first decade of the 21st century, social scientists have conducted a great deal of research that deal with how people receive and perceive messages in the media with a great focus on the influence of media on people's knowledge, opinions, attitudes, and behaviors (Lazarsfeld et al., 1948; .

McCombs & Shaw, 1972) Media bias has been found to exercise strong impact on how people process information and how they perceive events, and in such a way most often shape political decisions or events (Bernhardt, 2008; Gerber, 2009).

Much of the focus of media studies on “bias influence on opinions” has been concerned with identifying such influences in both modern and traditional media sources. Despite the rise in the popularity of social media network sites, newspapers are still the primary source of information about current events for many people who tend to find the news more trustworthy than those published on social media. Journalism on the internet, it is argued by many scholars, is no more than parasitic on the stories and opinions that traditional media provide (McNair, 2009, p.165).

Most online news content, evidence show, comes from traditional sources. Without regard to whether the Internet is a primary or secondary news source, no one can afford to ignore social media networks as a source of many up to date news and information about current events. However, no one can deny that bias and misinformation can easily infect social media with the intent to shape consumers’ worldviews and influence public opinions.

In terms of examining the effects of biased news consumption, there has been a raging debate among scholars regarding the differences between bias news media texts and biased news readers. (Hamborg et al., 2018, p. 393) make the note that most media scholars hypothesize that if the reporting of a news outlet is biased, readers are reasonably expected to also prone to adopt biased views. Today, the effects of biased or slanted news coverage and the impact of fake news stories are amplified through social media, in which readers/viewers generally tend to “follow” only certain types of media coverage and ignore others (generally, the news coverage which falls within the framework of their world-view). Social media allows its users to find an “echo chamber,” where their internal biases are strengthened and reinforced.

Research has shown that nearly all news consumers are inevitably affected by media bias, which may, for example, influence voting decisions (Napolitan, 1972; Meyrowitz, 1986; Hamborg et al., 2018). Another effect of media bias which has attracted considerable research attention in media studies is the polarization of public opinion (Weakliem, 2020). Some investigators have shown that exposure to biased news coverage have positive effects for one interest group but produce severely negative effects causing political and social unrest that may lead to schisms and confrontation (Zaller, 1992). Media bias in the coverage of “the Arab Spring” take over in Tunisia, Egypt, and Libya is a prime example.

For understanding of how individuals perceive and respond to media coverage of their political and social worlds, scholars of mass communication introduced three key ways of media effect on audience which have received a great deal of attention: priming, agenda setting, and framing, (Scheufele, 2000; Sheaffer, 2007). Figure.2. 3 provides insights on these theoretical frameworks as described more thoroughly below. They are presented in terms of linked goals directed towards the construction of 'common sense', where a particular set of beliefs that make up the dominant ideology seen as natural and common sense.

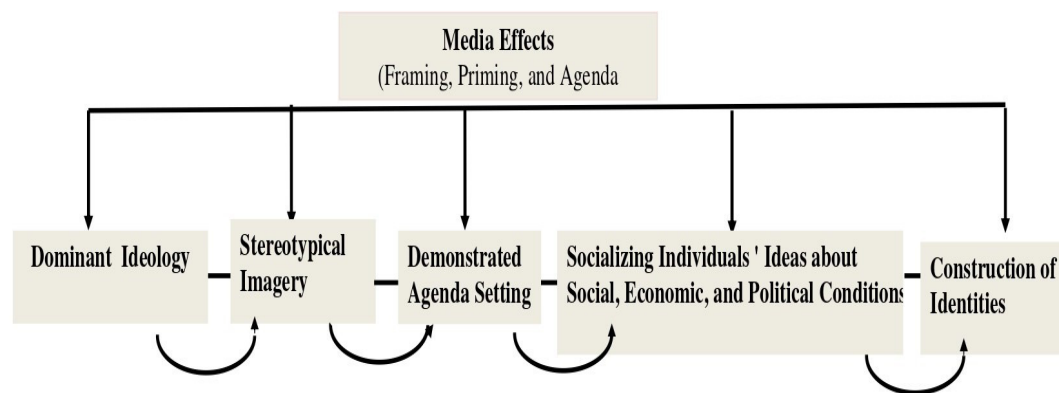


Figure 2.3 *The integration of theoretical approaches to understanding media effects*

2.7.2. Media Priming Approach

The term “Priming”, as defined in *The Encyclopedia of Communication Theory*, “refers to the way media offer a prior context by which an audience will interpret subsequent information, thus creating frames of reference for audiences,” (Karen, et al., 2009, p. 408). Priming mainly focus on news consumers’ evaluation of the topic exposed to as determined by their pre – existing perception of the way in which the specific issues that were portrayed in news pertain- ing to that particular topic.

The theory of priming has its origins in cognitive psychology in its exploration of the structure and representation of information within memory (network models of memory). It was then introduced to the study of political communication by Iyengar and his workcolleagues (Iyengar & Kinder, 1987; Iyengar et al., 1982; Iyengar & Simon, 1993). At the core of the theory of priming is that information is stored in memory as “nodes” and those nodes are intercon- nected via associative/ semantic pathways.

There are two ways in which nodes stored in memory may influence other nodes to which they are connected: either through enhancement, which increases activation of other nodes, or suppression mechanism, which decreases activation of other nodes (Collins & Loftus, 1975). It is needless to offer further details on this point. On that basis, the media-priming process is described as a two-step process. First, information received through media coverage activates preexisting associated knowledge stored in the mind of the receiver. This activation makes previously existing knowledge in the mind accessible and available for use in the process of interpreting and evaluating a subsequently encountered stimulus. The second step of media priming process occurs when the receiver applies the retrieving information from memory in the course of evaluating the target stimulus and s/he would not otherwise have done this. In such a case, the second step is the consequence in the process of priming, (Rothenbuhler et al. 2016). For media being either a tool to change or reinforce people's

already existing attitudes and beliefs, this two-step process is evaluated as a useful tool which allows researchers to measure the effect of biased news on opinions.

2.7.3. The Agenda Setting Approach

Agenda-setting refers to the ability of the mass media to signal to the public what is important, (Rothenbuhler, 2016, p. 53). Based on Lippmann ' book *Public Opinion*, published in 1922, Agenda Setting Theory was first stated by Maxwell McCombs and Donald Shaw in a seminal article in 1972. Since then, thousands of empirical studies have been conducted. The basic assumption of Agenda-setting Theory is that what is covered in the media affects what the public thinks about, Michael Schudson (1995). The premise of Agenda-setting Theory is that, whether consciously or unconsciously, media makers generally create a particular image of reality, and then engage with audiences on issues raised of this vision of reality in efforts to entertain, inform, influence, or persuade mass audiences. Media promote certain news topics as more newsworthy than others (in the same way that an agenda of topics is set for a meeting). They choose to omit certain issues while deciding to emphasize others in order to create a particular way for media users to think about reality. The news media has a very strong power to set the agenda for the public's attention on specific issues around which public opinion is shaped, (Kehinde & Omotoso, 2016, p.92). Analyzing media based on Agenda Setting Theory enables better understanding of how media enable the construction of societal beliefs and how supporting the dissemination of values while devaluing others.

What makes Agenda Setting Theory specific and most noticeable within mass media effects research is the shift in its attention away from emphasis on direct, immediate effects of the media on 'attitudes' to a concern with longer term effects of media exposure on cognition (Weaver, 1981). At the core of this statement is the meaning that news media are quite effective at telling the public what to think about. In the words of Holbrook & Hill, news media do not tell "viewers what to think" but they are persuasive in "guiding viewers what to

think about” (2005, p. 278). This view has been influential to advance the development of mass media effects research (Carroll, 2010; Mazur & Lee, 1993).

In his *Theories of Mass Communication*, Babatunde (1998) cites four elements associated with agenda-setting: (1) the extent or frequency of reporting, (2) the degree of conflict generated by the reports, (3) the level of prominence which media coverage attribute to issues and (4) the development and change over time of the media's effect on collective thinking, cited in Abiodun (2016, p. 180). The media's ability to draw attention to the importance of an issue and implement ideas to stimulate people's mindset (or ways of thinking) depends very largely on these four elements.

In defining agenda setting, some researchers have described two levels on which the effect of media works on. The first level refers to the transfer of salience (i.e., noticeable) of certain issues from the media to the public by emphasizing certain issues over others while the second-level is the process of competing for attention of the simultaneous display of various attributes, or characteristics of an issue (McCombs et al., 1972, p. 704). The first level of agenda setting is the transmission of object salience which tells us what to think about. The second level (also called “attribute agenda-setting”) is concerned with the transmission of attribute salience, (McCombs, 2000). Much of the more recent research on agenda setting has been devoted to this second level.

Some authors have claimed that the second level of agenda setting is similar to framing. Weaver et al., (2013, p. 7) claim that “frames and attributes can be used interchangeably when we are dealing with the second level of agenda setting”. However, other researchers such as Scheufele (2000) argue that each of framing and agenda setting owns its distinct theoretical boundaries, they both involve distinct cognitive processes (accessibility vs. attribution), and each can be linked to different outcomes (perceptions of issue importance vs. interpretation of news issue).

2.7.4. Framing-Effects Approach

News consumers' (readers or viewer) evaluation of topics is furthermore based on the perspectives portrayed in news media reports, which are also called frames. The concept "frame" was first developed in anthropology by Gregory Bateson in (1972) and elaborated by Erving Goffman in (1974). Much has been made of efforts to define framing. This section must limit itself to the definitions given by the most frequently cited researchers.

Goffman is recognized as the first who established a standard definition of this concept. Frames, or frameworks, for Goffman are "schemata of interpretation" through which individuals "locate, perceive, identify, and label a seemingly infinite number of complete occurrences" (1974, p.21). Following Goffman's conception of frame, Entman defines the act of framing as "to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and /or treatment recommendation". The most concise and comprehensive definition of framing is attributed to Gamson & Modigliani which is in their words "a central organizing idea that provides meaning to an unfolding strip of events" (1987, p.143). Also, Dieter and Neidhardt situate framing in the context of media effects and define the concept as a "collective patterns of interpretations with which certain definitions of problems, causal attributions, demands, justifications and value-orientations are brought together in a more or less consistent framework for the purpose of explaining facts, substantiating criticism and legitimating claims" (2002, p.11). Hallahan (1999) defines framing as a "window or portrait frame drawn around information that delimits the subject matter and, thus, focuses attention on key elements within" (p. 209). Framing, in such a way, involves processes of inclusion and exclusion as well as emphasis" Research on media framing has provided thousands of definitions. This section must have limited itself on the ones most frequently cited.

Framing analysis emphasizes the importance of cultural context in its performance. It highlights how frames are shaped by cultural values and norms, influencing the way issues are perceived and understood. Newsmakers often utilize multiple frames for a single issue to cater to diverse audiences and manipulate public opinion. This strategic approach underscores the power of framing in shaping public discourse and influencing decision-making.

Almost all of these definitions are derived from Goffman's conceptualization. One way to conceptualize these definitions is to think of framing in terms of patterns which are almost always defined in terms of process. Accordingly, frame analysis keeps a focus on the process through which framing patterns are obtained. For Chong & Druckman (2007), framing is a "process by which people develop a particular conceptualization of an issue or reorient their thinking about an issue" (p. 104).

Today, framing is no longer exclusive to sociology and anthropology, but has been adapted by many other disciplines. Within the field of media studies, framing refers to Newsmakers' techniques to present a topic from their perspective which leads to "promote a particular interpretation" (Entman 2007, p.164). It is the process in which media construct a message in a specific manner that encourages the content of that message to be perceived in a particular way (Kuypers, 2005). Unlike social sciences, for media studies researchers framing is a deliberate and conscious process in communication.

There have been many attempts by researchers to classify the frameworks used by the media in presenting the issues of concern. A distinction between two basic types of media frames has been made by many researchers: episodic and thematic frames (Gross, 2008; Iyengar, 1990, 1991).

(1) *Thematic Frame*: Thematic frame provides a general and comprehensive meaning about the issues it presents, without delving into the analysis and interpretation of that particular issue, but through a general overview.

(2) Episodic Frame: Episodic frame presents issues through specific case studies with great emphasis placed on “illustrative” examples. In their seminal study ‘Framing European politics: A content analysis of press and television news’, Semetko and Valkenburg (2000) made an identification of five fundamental categories of framing frequently used in news stories. These are listed as follows: 1) the Conflict Frame, 2) the Human Interest Frame, 3) the Economic Consequences Frame, 4) the Morality Frame, and 5) the Responsibility Frame.

(3) Conflict Frame: Framing of a news event to reflect conflict sheds light on issues involving disagreement and division, as for example, the division between elites from different ethnic backgrounds or dispute between two (or more) parties. Coverage focuses mainly on the causes, participants, impact and likely outcomes. Bias is always in question in analyzing news reports of conflict.

(3) *Human Interest/Personalisation*: Framing personalization of news uses emotional or personal reactions to the content in the media coverage of events. This type of framing limits information to persons who are victims of wars, natural disasters, and other humanitarian crises to which it brings more attention than to facts and figures that are difficult (or impossible) to understand. Coverage of political news is generally characterized by personalization used to criticize existing government policy by showing the consequences of policy decisions.

(4) The Economic Consequences Frame: The economic consequences frame presents and describes events, problems, or issues in terms of the economic consequences they may have on an individual, group, institution, region, or country (Semetko & Valkenburg, 2000). One good example of this frame category could be media framing of the economic consequences of immigration with a focus on the controversy over whether asylum migration is economically beneficial or harmful. While often focusing on economic ramifications of events, consequences can be wide ranging with potential to have significant media effects.

(5) *The Morality Frame*: The morality frame is an interpretation or evaluation of an event or issue in the context of religious tenets or moral prescriptions (Semetko & Valkenburg, 2000). One of the best examples of this type of frame is Israeli and Palestinian media in covering their conflict which most often takes religious tone. An issue of which much coverage was made based on morality was the treatment of prisoners at Guantanamo Bay in Cuba and at the American-run Abu Ghraib prison in Iraq.

(6) *Responsibility Frame*: Responsibility frame presents the event by highlighting its causes and proposed ways to solve it. This framework helps the public to explain the problems they are going through by analyzing them in a detailed and causal manner, with an emphasis on the need to intervene immediately. A good example could be framing crime as the result of frustration due to blocked opportunities, which prevent success.

In framing theory, a strong claim is that news can be framed in various multiple ways, with a chosen frame being a significant determinant of how people understand and interpret the news given (Warre 2008, p. 403). Accordingly, examining frames is important as they shape the public's understanding of news and generate their persuasion.

2.8. Theoretical Approaches to Analysis and Interpretation of Media Bias

The social sciences have done considerable work on developing analytical methods for the identification and quantification of media bias in news coverage using content analysis, frame analysis, and meta-analysis (D'Alessio & Allen, 2000; Gilens & Hertzman, 2000). In this section, first, the concept and workflow of content analysis are being described. Next, a discussion is provided of how one can shed light on media bias through the application of frame analysis. Lastly, this section introduces meta-analysis, in which researchers combine the findings from several studies and analyze general patterns across these studies.

2.8.1. Content Analysis

Content analysis is defined by most scholars as a term which refers to the set of techniques that are applicable for systematically identifying, measuring, describing, and making inferences about specified characteristics expressed in texts, whether written or spoken (Denzin & Lincoln, 2000; Miles & Huberman, 1994). Leedy and Ormrod (2005) define content analysis as “a detailed and systematic examination of the contents of a particular body of material for the purpose of identifying patterns, themes, or biases” (p.144). One widely cited definition of content analysis is Bella Martin & Bruce Hanington 's (2019) in which the concept is stated as “the systematic description of form and content of written, spoken, or visual materials expressed in themes, patterns, and counted occurrences of words, phrases, images, or concepts” (p. 52).

In its substantive origins, content analysis dates back to the work of the Greek philosophers being concerned with the analysis of the rhetorical uses of language (Brickhouse & Smith, 1994). It is since the 1930s that the term “content analysis” has been used by modern social science researchers studying the characteristics of messages delivered through the mass media with the objective of understanding the processes through which persuasion and propaganda operate. Content analysis has been used as a technique by both qualitative and quantitative researchers, and distinctions have been made between inductive as well as deductive approaches (Elo & Kyngäs, 2008). It should be noted that most social science researchers argue and advocate for the view that there are many areas of research where quantitative and qualitative methods should be used to supplement each other (Braun & Clarke, 2006).

The qualitative approach is probably the most prominent form of content analysis in social sciences research. Kimberly. A. Neuendorf, one of the most influential scholars of content analysis methodology, considers content analysis to be an exclusively quantitative

method based on numerical data and statistical methods. In a brief definition, Neuendorf (2002) describes content analysis as a “summarizing, quantitative analysis of messages that relies on the scientific method” (p.10). Within the paradigm of quantitative approach, Stemler (2001) defines content analysis as “a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding” (p.138). Both these definitions, among many other highly cited ones, view content analysis as essentially a quantitative method since all the data are eventually converted into frequencies, though developing appropriate themes or categories into which findings are to be fitted requires applying qualitative approach techniques to move from raw data to thematic categories.

Quantitative content analysis has been extensively used to quantify bias in the traditional print and broadcast media by performing an identification and characterization of news texts instances (Devereux, 2003). The process for undertaking content analysis begins with establishing objectives for the content analysis research; then, formulating the research questions and/or hypotheses before starting the process of collecting the relevant news data. To extract meaningful content from an entire corpus of text in a systematic way, a careful and well designed coding scheme is an essential prerequisite. Coders have to systematically read the news texts, annotating parts of the texts that appear revealing stances of media bias relevant to the unit of analysis being studied or measured. Afterward, the researchers construct and analyze their data to use the findings for either confirming or rejecting a null hypothesis. These procedures are crucial for conducting an analysis of media bias exercised within a systematic frame of credibility and worthiness.

For making inferences and drawing reliable conclusions, content analysis requires the researcher to devise a coding frame (coding book) to guide his/her textual analysis. The coding book describes the procedures for analysis and contains

coding rules and explicit code definitions described and illustrated with examples. It must be coherent, reliable, and valid. A researcher can choose to either create one's own code system or can reuse and adapt an existing system that is deemed suitable to the task at hand. Reuse and adaptation of an existing code system to categorize units of analysis help researchers save money, time and energy.

In conducting an inductive content analysis, coders are required to read the texts without coding instructions, provided only with full explanation of the research purpose which should be well-defined and of clear scope (Groseclose, 2005). Since high quality data and statistically sound conclusions can only be drawn from the results of deductive content analyses, researchers most often perform inductive content analyses in early phases of their research before the data collection process (Van Gorp, 2010). They do so to derive the appropriate concepts for constructing a codebook.

Research on detecting bias in news media can use the two types of content analyses—quantitative and qualitative. Generally speaking, qualitative research is grounded in the belief that reality can never be completely known because it is constructed by each individual (Nicholls, 2009a). Accordingly, applying the qualitative approach as a tool for analyzing media bias is seeking to find evidence (signs) of bias in news texts, including finding subtle instances that can be left open to multiple interpretations depending on contexts (e.g. readers' cultural background and visual and textual reading ability).

The study of media bias by means of quantitative approaches is widespread across the social sciences relying very much on statistics. Generally speaking, the quantitative approach is founded on the principles of the positivist paradigm. Research using quantitative approach involves numerical data and relies on numerical evidence to draw conclusions or to test hypotheses. A quantitative analysis of media bias seeks to determine the frequency of specific words or phrases being used within a given corpus of written or

spoken texts, and cross-index them into a set of categories (usually aspre-specified in the codebook). Quantitative content analysis of media bias may also provide statistical descriptions of other, non-textual elements of news articles, such as counting the total number of articles published by a news outlet on a specific issue or a certain event, or measuring a newspaper article's size or the length of a TV news report covering a given news event.

Drawing upon existing social science literature and mainstream sources, it seems apparent that the majority of studies on media bias conducted by social scientists use qualitative content analyses. This is largely due to the findings which are more likely to provide a more comprehensive account. Despite the privilege of qualitative over quantitative research in social sciences, no one in analyzing media bias can ignore the advantages derived from the use of the quantitative approach since it makes research carried out and completed more quickly. Furthermore, data within the quantitative approach can be designed not only for manual but also partially automated operation by applying modern educational technologies (Schreier, 2012). Notwithstanding these advantages of using quantitative content analysis approach, we should not ignore that it may make researchers miss perceiving several subtle forms of bias. Accordingly, in recent years increasing numbers of social scientists have been combining quantitative and qualitative methods in various ways to analyze bias in media discourse.

2.8.2. Frame Analysis

The meaning of the term “frame” has already been defined in section 2.7.4 while addressing models of media effects: agenda setting, framing, and priming. The present section is devoted to frame as a theoretical approach to media analysis. Due to the sheer number of publications dealing with this approach, a disproportionate amount of space is devoted to the Anglo-Saxon tradition use of the frame approach to the level of discourse analysis

Previous literature in social sciences has conceptualized and used the concept

“framing” in different ways, distinguishing two fundamental types of frame—encoded and decoded frames (Entman 1993; Iyengar & Simon 1993; McCombs & Ghanem, 2001). Using alternative terms, Druckman (2001) differentiates between frames in communication and frames in thought, separating the external portrayal of an issue from its internal conceptualization by an audience.

The first type (frames in communication) refers to discourse as generated at the elite level, which is often labeled “elite-generated frames”, e.g., the framing of public opinion by political elites. Framing in this sense is “the process by which a communication source, such as a news organization, defines and constructs a political issue or public controversy” (Nelson et al., 1997, p. 567).

The second type (frames in thought) refers to “the individual and the individual’s “internal structure of mind”, that is, the frames which are given in the memory of an individual and which are activated by framing messages” (Dieter & Klingemann, 2011, p. 46). In other words, frame in thought refers to cognitive structures for organizing and interpreting information, and making sense of reality (Rein & Schön, 1994).

Research makes both types of frame interdependent and linked together like two sides of the same coin which come together to provide a more comprehensive frame work for understanding framing effects. Accordingly, framing effects have been defined as the process through which frames in communication shapes frames in thought (Druckman, 2001). In other words, the way people interpret information differs depending on how that information is framed or contextualized.

Utilizing frame analysis theory and Erwin Goffman’s conceptions, media studies use aspects of frame analysis to explore how media consumers perceive information expressed in written and spoken texts (Entman, 1993). When performing a frame analysis, one can go beyond analyzing media texts to include consumption (how media texts are interpreted by

audiences) and examine the specific interactions between individual readers/viewers and media texts.

In describing Framing as a theory of media effects, Scheufele (1999) distinguishes between “media frames” and “audience frames”. Media frames are modes in which journalists choose to transmit information to the audience. Decisions (choice) are motivated by a desire to find the most efficient way of reaching the target public. At the core of media framing is emphasizing some subjects and virtues while neglecting others. Scheufele (1999) shows that researchers whose focus is on “audience frames” (schemes people use for processing information) look at how people understand an issue, event, or situation transmitted via the media (television, radio, the press, the Net). Plenty of research on media framing shows that there is a deep relationship between media coverage and framing of public opinion (Entman, 2009). Media frames, to put it in other words, can greatly influence individual perceptions of a particular issue and attitudes towards it. The manner in which media frame issue influences the way people think about it. Accordingly, media are usually instrumentalized by policymakers to exercise political influence over people’s perceptions of issues and modeling their attitudes, decisions and behaviors or actions.

What is chosen to be inserted inside a frame will actively impact how the audience (a reader, a viewer, or listener) interpret and respond to messages. Journalists make use of various linguistic devices and discursive strategies in a way to be effective to influence the public's perception. Generally speaking, the audience extracts and interprets message meaning through “the presence or absence of certain keywords, stock phrases, stereotyped images, sources of information, and sentences that provide thematically reinforcing clusters of fact or judgment” (Entman, 1993, p.52). Further devices include the use of rhetorical devices and the use of signs, symbols, and semiotic systems which have a powerful ability of influence to stir the emotions. They all work to serve highlighting some features of reality

while ignoring others.

On the basis of prior research, Gamson and Modigliani (1989) identify five devices to help identify frames: (1) metaphors, (2) exemplars, (3) catch-phrases, (4) depictions, (5) visual images. Tankard (2001) reviewed the literature on framing and suggests eleven of framing devices. (1) headlines and kickers, (2) subheads, (3) photographs, (4) photo captions, (5) leads (the beginning of news stories), (6) selection of sources or affiliations, (7) selection of quotes, (8) pull quotes(quotes that are blown up in size for emphasis), (9) logos (graphic identification of the particular series an article belongs to), (10) statistics, charts, and graphs, (11) concluding statements or paragraphs of articles. Tankard's list of devices has been widely instrumental in framing research to provide adequate descriptions and analysis of frames in news (p. 101).

Doing frame analysis employs both quantitative and qualitative methods as instruments to explore media coverage and goes towards reaching empirically robust conclusions. In order to achieve more balanced coverage and in more discursive detail, doing news framing analysis needs relying more on qualitative than quantitative research, selecting a smaller sample and unpacking its content in more depth and detail (Cushion, 2012, p. 59). Framing analysis, in this respect, can incorporate some data and quantification but, as commonly held by frame analysis researchers, the main aim is typically qualitative which necessitates interpreting the salient aspects of a news story. Or, as Entman (2000) has put it in his words, “to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the term described” (p. 12). In this way, Entman clarifies that framing is not merely about what is said, but about strategically constructing reality to guide audience interpretation.

2.8.3. Critical Discourse Analysis

Critical Discourse Analysis (formerly known as critical linguistics) is a multidisciplinary approach to language study that focuses on the use of language as a tool of social practice (Wodak, 2001). Language as a social practice puts a great emphasis on the the instrumentalized use of language for legitimating patterns of ways of life and thought to maintain social relations for social, political and cultural objectives. Some illustrative examples of social practices include: legitimating running the nation's economy according to capitalist principles, legitimizing an account of religious norms in setting the rules of behavior that constrain the individual's interactions with others, and legitimizing U.S. intervention into foreign affairs for human rights. Numerous other examples could be cited regarding legitimating social practices. However, the above are sufficient for illustration. Critical Discourse Analysis is particularly interested in investigating relationships between language and power, accentuating the need to examine texts in relation to ideological beliefs and structures (Fairclough, 1988).

One can define the concept "power" as being an action reflecting authority to get things done. Within CDA area of research, the term refers to social power rather than personal power. Social power involves control, namely, (members of) one group over (those of) other groups (van Dijk 1993b, p. 252). Power can be realized in discourse when "powerful participants controlling and constraining the contributions of non-powerful participants" (Fairclough, 1989, p. 46). The focus of Fairclough on power and its theoretical implications have been considered among his most contributions to CDA. Being influenced by Marxist Philosophy, he uses Bourdieu's theory of power and Foucault's conceptualizations to conceptual his CDA framework.

In common within CDA studies, "power", as Wang, J. said, is conceptualized as "an ability to control and constrain others, as the capacity to achieve one's aim, as the freedom

to achieve one's goals, and as the competence to impose one's will on others" (Wang, 2006, p. 531). It should be noted that such ability is not only about having self-determination but also requires being equipped with the appropriate knowledge, skills, and tools which are critical to the success to pursue the intended goals.

The term Critical Discourse Analysis (CDA) is not a single method but a broad methodological approach or research design, a good way to think about it is as an umbrella term for an interdisciplinary set of approaches. Whatever differences there may be between them, CDA approaches all share in common a concern with studying the form and function of language use (whether verbal, textual) in connection to social and institutional structures that are either oppressive or liberating.

In the application of CDA, research is particularly interested in finding out the relationship between dominance, power and ideology, and seeks to identify or deconstruct the veil of the ways in which the use of language contributes to reinforcing the phenomenon of repression and stabilization, as a product of economic and political power. Accordingly, the field of CDA is categorized as a part of the humanities and social sciences which aim to critically studying, explaining and understanding social issues (Van Dijk, 1993). Thus, CDA in the context of media studies, examines how powerful elites use media broadcasts to control the minds of the masses and provide legitimacy to specific social practices

In his discussion of the fundamental principles underlying Critical Discourse Analysis, Van Dijk (1993) refers to CDA as a sub-discipline of critical linguistics and points out that it is a deep analysis which "requires true multidisciplinary, and an account of intricate relationships between text, talk, social cognition, power, society and culture" (p. 253). Adopting multimodal analysis, Critical Discourse Analysis aims to shed light on the text-context relationship and discuss "intertextuality" concerning the nature of the text. Note that "intertextuality" is a word coined by the French semiotician Julia Kristeva in the mid

1960s to refer to the shaping of a text's meaning through its reference to other texts. The word has been extended and also used to refer to an author's borrowing and transformation of a prior text or to a reader's referencing of one text in reading another (Berry, 2007).

In this regard, practitioners who make use of a CDA framework as the context for intervention consider that the approach embodies a distinct advantage of bringing together both text and its intertextuality for an integrated analysis and decision making on its evaluation and interpretation (Chouliarki, 2003). By adopting such perspective, Fairclough (2003) developed the basis for CDA using a detailed analysis of selected texts to demonstrate how discourse is generated through the interaction of multiple texts manifested within a single text which takes place within a social context. In this way CDA is perceived to involve three dimensions: text, interaction, and social context, (Fairclough 2003, 2014).

One cannot grasp the worldview of a text unless considering the social context in question. One's own ability to do so is, according to Chouliarki (2003), is the ability to bring together "the discursive with the textual, through a conjunction of analysis of both text and its intertextual context" (p.297).

To make effective use of linguistic tools for CDA, analysts must pay attention to the use of vocabulary, grammar or sentence structure, as well as the broader structure of the text itself (Fairclough, 1992, p. 75). In order to be engaged in effective textual interpretation, the analyst must pay particular attention to choices in mood, modality and theme which correspond to Halliday's three metafunctions of language: ideational, interpersonal and textual, (Oktar, 2001, p. 313). Due to the multitude of perspectives, views and voices within texts and within cultures, CDA places texts within the framework of sociocultural and sociopolitical framework in which the publication occurred. The act of analysis goes beyond a focus on language in use to include extra linguistic features such as culture, ideology and society as being of influential power in shaping the meanings which can be derived from the

message of a given text, (Wodak, 2001). CDA can be thoroughly performed through asking questions, such as “Who speaks? / Who writes? / When and where? / With or to whom? /, and under what institutional and historical constraints?” (Clifford 1986, p.13). Fairclough and Wodak (1997) describe CDA as, not a new approach but an extension in its analytic focus to address social problems (p.271–280). Scholars point out that the question of the relationship between ideology and language has been at the center of many philosophical debates and can be traced back as far as the time of Plato and Aristotle. It is needless to go back further in history to elaborate this point. The important point is that these framing mechanisms remain highly relevant today, evolving in new paradigm spaces where ideology creates new layers of selective emphasis and exclusion.

in its interests in analyzing structural relationships of social structure (dominance, discrimination, power and control) as manifested in language use, Critical Discourse Analysis (CDA) has been evolved as an interdisciplinary scientific approach through its interrelationship with a wide range of other sciences, including the Du Boisian sociology, Labovian sociolinguistics, Halliday's social semiotic view of language, and Foucault's philosophy. Such overlapping is due to a common focus which is on the social contexts of language use as determinant of pragmatic meaning.

Fairclough's approach to Critical Discourse Analysis has been widely used in applied research for investigating text, practices and contexts in which critical thinking on issues related to language use is implicated. Since the late 1990s it has begun to have an impact on the analysis of mass media discourse and communication dominated by a focus on representation. Since Fairclough's publication of his book 'Media Discourse ' (1995) in which he looks at some of the ways language is used in media texts, the objective of media studies has been framed and conceptualized within the paradigm's boundaries of how language, power and ideology are negotiated in media texts.

Media representations of cultural identities have been theorized via the key concepts of CDA (power, dominance, and ideology) and how they manifest in visual and audiovisual texts. The application of Fairclough's CDA methodology for interrogating media representations stands on the view that ideology serves to organize, maintain, and stabilize particular forms of power and dominance. Although a huge number of papers regarding ideology exist, there is no consensus about a single definition of this particular term. Broadly speaking, ideology can be defined as "a set of consensually shared beliefs and doctrines that provide the moral and intellectual basis for a political, economic, or social system" (Jost et al., 2004, p. 265). In the same vein, Anthony Giddens defines the term "ideology" as a set of "shared ideas or beliefs which serve to justify the interests of dominant groups" (Giddens, 2006, p. 1020). These definitions denote the idea that a total set of political opinions, values, principles, attitudes, and behaviors that together point toward the core values of a particular political system can be regarded as what ideology means (Jost et al., 2009). This does not prevent us from saying that ideology remains a complex, contentious, and relational concept.

It is fairly easy to derive from Fairclough's approach to CDA the idea that power and ideology are both closely intertwined, insofar as ideological systems serve to legitimize the power held by certain groups, (Giddens, 2009, p. 1121). Accordingly, central to be analyzed in CDA is the variable "ideology" as a construct by the political dominating elite and enforced through the exercise of hidden symbolic power over a population by the use of strategies and tactics for the achievement of mass persuasion. Ideologies, of course, go unnoticed and unquestioned. They are largely invisible to most people because they are profoundly embedded into their 'commonsense' of their everyday lived experience (Fairclough, 1992; vanDijk, 1998b).

Despite its popularity in alternating the way discourse analysis has to be practiced, CDA has not escaped criticism amongst scholars and academic commentators. The most frequently cited critics of this approach in the literature are (Stubbs, 1997; Toolan, 1997; Martin, 2002; Widdowson, 2004; Blommaert, 2005) Widdowson's is perhaps its major critic whose arguments have generally been appreciated for being most significant. A common criticism by authors involves their view of analysis of texts within CDA as a task involving subjective decisions and judgments.

In his discussion of CDA, Widdowson (1995, 2004) argues that what Fairclough and his followers do is not analysis in the true sense of the word but interpretation which should be replaced with a thorough analysis of discourse for the sake of objectivity and the conduct of systematic scientific inquiry. He points out that CDA analyses are partial and selective in performing textual interpretations. In his words, "it presents a partial interpretation of text from a particular point of view. It is partial in two senses; first, it is not impartial in that it is ideologically committed, and so prejudiced; and it is partial in that it selects those features of the text which support its preferred interpretation" (Widdowson 1995, p. 169).

An aspect of CDA that captured the most attention of critics has been related to the quantity of texts used for analysis which is very limited. Analysts using CDA have been perceived to deal with the analysis of only a small number of texts, working generally with the ones that best fit their political affiliations or ideological principles, employed to offer arguments to support their claims (Widdowson 1995, 1997; Stubbs 1997, 2001b), among others. In response to this criticism, some researchers have argued for the combination and use of techniques from corpus linguistics in supporting CDA (Debbie, 2005; Baker, 2006; Charlotte, 2014; Baker & McEnery, 2019) and other scholars.

The second aspect of CDA which sparked the most heated sorts of debates, capturing and holding the attention of critics, has put Fairclough's approach within the scale of 'bias/ 'objectivity' evaluation. CDA studies have been criticized for their inherent cultural biases, largely as a result of the fact that their tools are derived from research evidence collected within Western countries, and generally more individualist cultures. The Chinese scholar Shi-xu (2005, 2012) notes that most critical discourse studies are marked by the West-centric bias and West-centric interpretations. That is, while CDA provides an insight into cultural issues and perceptions it is not universal and easy to be applied within the non-western context. To overcome this limitation, Shi-xu (2005, 2012, 2014b) proposed his cultural approach to discourse studies which has been viewed as being useful and valuable in recent years.

Another valuable contribution to the criticism of CDA was made by Kieran (2017). She has criticized CDA for failing to explicitly address author's bias and the reader's bias to influence interpretation. She notes that CDA does not equip practitioners with the necessary knowledge and more explicit techniques to control bias in their effort to "separate out how their political attitudes might be directing what they notice as distortion/obfuscation from distortion/obfuscation which is in a text regardless of their political attitudes" Kieran 2017, p.35). Such a view has attracted so much attention and generated so much discussion.

Drawing his inspiration from such rigid criticism, Norman Fairclough in collaboration with Isabela Fairclough (2012) develop a new method for doing discourse analysis being promoted as a “new paradigm” set of techniques within CDA for more effective analysis, understanding, and interpretation of political discourse in terms of its potential for persuasion. This method integrates analysis of arguments into critical discourse analysis within the context of political discourse analysis and provides illustrative examples on how analysis of ‘practical arguments’ can be integrated within CDA for textual analysis and evaluation of political speech. This model is built on two fundamental assumptions: (a) argumentation is expression of reasoning, and (b) social practices find their roots in argumentation.

The approach of Faircloughs (2012) rests on the view of political discourse as primarily a form of “practical argumentation” (argumentation which aims at telling us what to do), which is using practical reasoning in an effort to make possible the fulfillment of persuasive intentions, and accordingly, so high can be the effects of political decisions. This version of CDA admits that the mental process of practical reasoning is related to the corresponding process of practical argumentation. Practical reasoning is, generally speaking, reasoning about what to do. It may be distinguished from theoretical reasoning, which is reasoning about what to believe (Fairclough & Fairclough 2012, p. 13). Researchers argue that the two aspects of reasoning are distinct but interrelated. Practical reasoning is characterized by the use of theoretical reasoning.

The primary purpose of political speeches is to achieve persuasion rather than transmit information or entertainment. Accordingly, discourse analysis sees the development of strong rational arguments in this genre category and text type as an extremely high degree of necessity. By engaging in argumentation, political leaders and media spokesmen seek to legitimize specific goals and delegitimize alternative goals of action. Before going any further, it is worth reminding ourselves of the meaning of the word

“ argument”. Generally speaking, an argument is a set of propositions in which one is the conclusion and the other(s) are premises offered in its support. Fairclough and Fairclough (2012) contrast theoretical argument with what they call practical argument. Practical argument, they say, is made up of a set of statements, one of which is the conclusion, or claim to action, while the others are premises (Fairclough & Fairclough 2012, p. 36).

The main point to note within the structure of argument is that there are various types of premises. Commonly used types, as has been pointed out by Fairclough and Fairclough (2012), include values (religious, social, moral, political, etc.), actual state of being, goals for a desired future state of affairs, and circumstances (political and socio-economic). Political speech most often uses actual or existing state of affairs to compare a future state of affairs which is desired to motivate people to work towards its achievement. Premises function as a way of strengthening the claim of the argument. It is a usual practice, for example, for political leaders to argue through explaining the background of circumstances leading to adoption of policies. The judgment on which an arguments is based is to be determined to be either strong or weak depending on whether it achieves its final goal or not.

The Faircloughs (2012) summarize the framework of their approach as follows: "the hypothesis that action (A) might enable the agent to reach his goals (G) starting from his circumstances (C) in accordance with certain values (V) leads to the presumptive claim that he ought to do (A)" (Norman Fairclough and Isabella Fairclough, 2012, p. 44). To illustrate how arguments lie within political speech, the Faircloughs (2012) use extracts from Tony Blair's speeches on austerity. This analytical framework will be elaborated more fully in the next chapter.

2.9. Integrating Content Analysis, Frame Analysis, and Critical Discourse Analysis

Combining the three theoretical approaches facilitates an understanding of media texts and identifying their framing intentions based on the assumption that texts do not simply distribute information and 'present' reality but, within the context of discourse, shapes world views and transmits ideologies that circulate power in society. The use of these three theoretical approaches into a tripartite approach for the analysis and interpretation of bias is to address different questions which are not independent of one another; but supplement each other. They bring together tools for use to identify linguistic patterns in which biased patterns of thought and beliefs are embedded: An identification of a sort which helps then to explore the value systems, sets of beliefs, and patterns of thinking which reside in texts; to explore, as the linguists van Dijk, 1998; Fairclough, 2010, and Wodak, 2012, have pointed out, "ideology in language use". However, use of these three theoretical approaches does not only help detecting bias and underlying ideologies, but also permits an understanding of the persuasive power that can be exercised by language use to formulate, reproduce and reinforce ideological perspectives.

Given below (figure 2.3) is a schematic representation which sums up the three theoretical approaches applied to the analysis and interpretation of media bias. Combining the three theoretical approaches facilitates critically analyzing media texts, enabling a rigorous process that moves from descriptive quantification of content, to the interpretation of thematic frames, and finally to a critical examination of the underlying social and political power dynamics they represent.

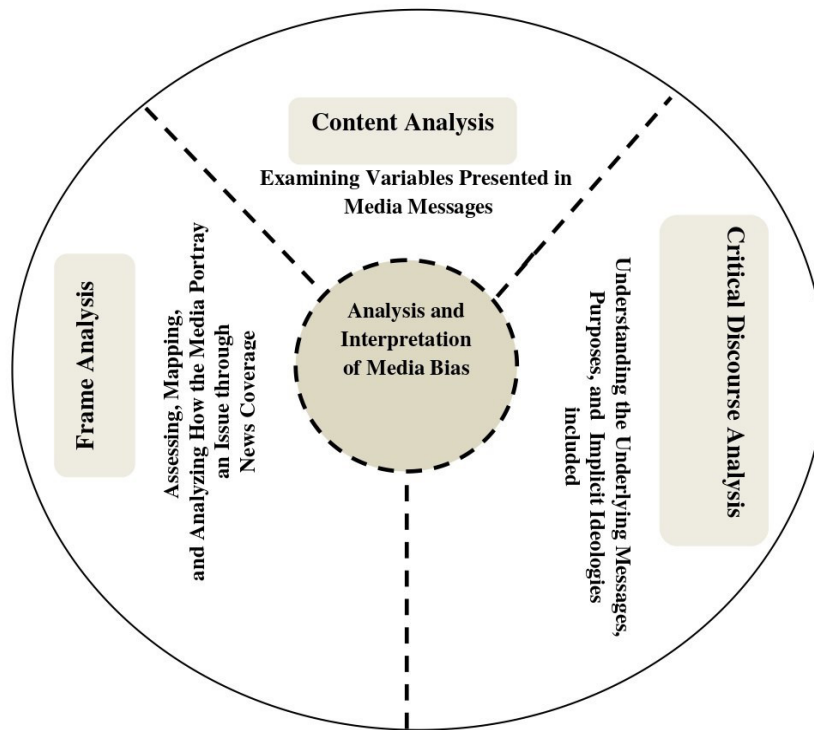


Figure 2.4 *Approaches to the analysis and interpretation of media bias*

Conclusion

For decades, researchers have found strong relationships between media coverage of news and public opinion, i.e., between directing public attention toward some matters, and away from others (agenda setting) and influencing their perception and evaluation of news event (priming effect) through the process of selecting certain details, excluding others while emphasizing and elaborating upon others for the sake of creating a perspective for thinking about topics covered in the news (framing). Such forms of media bias have been extensively studied in allied science disciplines, such as linguistics, communication studies, philosophy and the social sciences for various applications.

This has resulted in an extensive literature on different forms, types, and sources of bias that media might take to manipulate opinion formation. In tandem, various well-established research methodologies have emerged to study and understand bias employing

humanities and social sciences methodologies in their work, with the well-used ones being content analysis, frame analysis, and critical discourse analysis.

Despite the similarities between these approaches research distinguish between the three, as they can be used to address slightly different research questions and entail different techniques of coding and analysis. While content analysis provides a systematic and focused methods for counting themes, words, or even syntactic or semantic traits, framing analysis goes further in its systematic approach to focus on how different linguistic levels interact in a process with non-linguistic levels of discourse for assembling and expressing of information that encode meaning embedded in texts. Critical Discourse Analysis (CDA) extends beyond both approaches in a view of texts as product of discursive struggles, stressing in its focused methods how the choice of frames is guided by ideology; thus, making visible the workings of sociopolitical forces through language use. These three approaches share in common the belief that language is not neutral but a choice, being governed by pragmatic intentions.

No educator can ignore that the process of curriculum development requires being selected based on not only educational goals but also a theoretical framework. Accordingly, Critical discourse analysis, qualitative content analysis, and frame analysis (identified as the most suitable conceptual framework) have been used in this project to provide a support for a model for the determination of English language learners' critical ability to identify media bias in written press. Aspects of these methodologies have been used as guiding tools to map the design and development of a quasi-experimental course explicitly linking critical thinking with media literacy.

CHAPTER III

Methodology

Introduction

Within the development of a practice course that emphasizes using methods of critical discourse analysis to critically analyze media texts, this study investigated the effects of implementing critical thinking skills for EFL students to help them identify and assess media bias in English news texts. Many approaches for developing critical thinking skills exist. However, there are no formal and planned educational practices for relating the development of these skills with media literacy in our school and university English language curriculums. In an urgent call for incorporating media literacy across the EFL curriculum in Algeria and teach students to be independent, skilled, and reflective thinkers, this ongoing study explores students' critical thinking skills involved in critically analyzing media texts. If students are learning about persuasive language in media texts, it would be very useful for them to engage logically in the practice of how to comprehend, analyze, and respond to arguments. Analyzing arguments is typically required for students to be able to weigh evidence and detect bias. This chapter explains the statement of the research problem and describes the research design, the setting, the participants, and the procedures for data collection methods including materials, tests, coding, variables of the study, and data analysis.

3.1. Statement of the Problem

The purpose of this study was, in general, to examine EFL readers' evaluation of objectivity and bias in media discourse; in particular, to examine the functional importance of the evaluation of argument to uncover bias in persuasive media texts. As is generally known, media has the potential to be powerful sources of persuasion and influence on attitudes, beliefs, and behaviors. All news media, as critical scholars recognize, are either intentionally or unintentionally biased. They are not neutral or value-free, or hence Critical Discourse

Analysis, qualitative content analysis, and frame analysis. It is often defined as an entity which resides in readers' or viewer's perception (Manglik, 2023). The truth of the matter is that journalists cannot be totally free to furnish unbiased news reports and unselective recording of events. Their intentional bias in news plays a very important role in enabling the spread of misinformation and thereby the manipulation of people's perceptions to distort their awareness and decision making. Accordingly, educational researchers have expressed deep and strong concerns about media bias detection and advocate the integration of media literacy in education with a support of the critical thinking skills necessary in the 21st century.

Despite there are plenty of research publications on the use of critical thinking to identify persuasion, bias, spin, misinformation, or missing information in media messages, there is still a lack of established frameworks or published curricula for teaching these skills in EFL classrooms. So, the critical question in this respect could be what skills do EFL learners need to critically question media messages in order to identify bias of journalist's persuasion? Reviewing the available research literature, it seems there is still not sufficient evidence available to predict if pedagogies that incorporate explicit instruction on the analysis and evaluation of the construction of arguments used in media messages will improve EFL learners' perceptions of bias in media coverage of events.

Realizing this gap, this study attempted to explore the needs of EFL university learners in the context of the Algerian educational system in regard to the development of their ability to conduct unbiased and comprehensive textual analysis of media texts within which assessing arguments in terms of the degree of objectivity / bias shown in the authors' language use. The researcher's interventions included argument mapping based on Toulmin's model to help students acquire basic concepts, better understand of how arguments are constructed, and enhance critical thinking. They also included aspects of the

analytical framework of argument developed by Fairclough in his CDA to allow students evaluating and criticizing practical argumentation and developing strategies to detect bias which in turn reveal persuasive intent and differentiate it from informative intent. These training interventions were supplemented with course work that involved lectures.

3.2. Research Questions

For this thesis, the researcher was seeking answers to questions involving developing EFL readers' ability to perceive Persuasiveness, bias, and objectivity in media news reports through explicit instruction in critical thinking. The research questions that guided this study were as follows:

RQ1-How do first-year EFL Master Learners perceive their critical evaluation skills for determining the credibility of media news before and after completing a quasi-experimental course?

RQ2-To what extent does instruction in critical thinking and argumentation analysis improve first-year EFL Master Learners identify objectivity and bias in public health news articles published on English newspapers?

RQ3-To what extent does such instruction improve first-year EFL Master Learners mitigate their personal biases, whether conscious or unconscious, when evaluating public health news articles published on English newspapers?

RQ4- Do differences in students' level of ability to detect bias influence their perceptions of the intended persuasive effects of public health news articles published on English newspapers, and if so, how?

This action research employs a case study methodology, utilizing both exploratory and explanatory approaches to comprehensively investigate EFL master's learners' evaluation of objectivity and bias in persuasive public health news articles. The study is guided by the

following research questions: RQ1 explores shifts in learners' self-perceptions of their critical evaluation skills following an instructional intervention. RQ2 examines the extent to which instruction improves learners' capacity to identify bias in news texts. RQ3 investigates the degree to which instruction aids learners in mitigating their own personal biases during evaluation. Finally, RQ4 seeks to explain the relationship between learners' ability to detect bias and their understanding of persuasive intent.

The questions were motivated by the need to explore whether aspects of critical thinking while evaluating arguments were evident in EFL learners' perceptions of media bias. It was hypothesized that subjects' ability to analyze argumentation schemes and techniques in persuasive texts affects their perceptions of bias in meaningful and significant ways while performing an evaluation of media texts contents. The ability to evaluate and analyze arguments using critical thinking reduces biased perceptions and increases perceptions of media bias in coverage of news. During the course of this study it was also hypothesized that if a reader perceives media texts as an unbiased source of information with little or no intent to persuade, he/she then may be more susceptible to framing effects, and the reverse is true. Critical thinkers are less susceptible to persuasive strategies, and hence framing effects.

3.3. Setting

This study was conducted during the second semester of the academic year 2020-2021, which began on January and ended on May. It took place at the University of Mascara—a state-university situated in the North-West of Algeria. It was established in 1986. The reasons for making the choice of this site for the study were convenience and availability. It was undertaken with students attending the Department of English at the Faculty of Letters and Languages. The Department was established in October 2003 under the so-called “classic system”. It shifted to an implementation of the 'LMD' system in 2010.

In line with norms, prescribed by the Ministry of Higher Education, the Department now offers degrees at Licence, Master, and Doctoral levels. Like all other universities in Algeria, the University of Mascara offers admission at the EFL Licence degree program for a limited number of students with the degree of the baccalaureate of secondary education and a grade - point average of not less than 10/20 on the baccalaureate EFL test. The administrative support staff of Faculty put students' applications in order of rank from highest to lowest scores to achieve a maximum student enrollment which varies from year to year; actually is of 200- 250. The number of teachers and the number of classrooms at the Department are the major basis for annually determining the number of applications for enrollment at the Licence degree program.

The Licence level program involves three years (six semesters) of full - time study. The structure of study program at this level is characterized by grouping credits into ten modules: 1) oral expression and listening comprehension, 2) writing and reading comprehension, 3) grammar, 4) phonetics, 5) research methodology, 6) linguistics, 7) literature, 8) cultural studies, 9) ESP, and 10) TEFL/English didactics. The seventh and eighth modules take place in the third through sixth semesters and the ninth and tenth modules take place in the sixth semester. A minimum of 30 semester hours of credit is required for the Licence degree. More emphasis at this level is put on the objective of developing students' practical language skills with two sessions every week on modules one-four; each last a duration of one hour and half. For earning a Master's level degree in the Algerian universities, the study involves two years (three full semesters of classes and one semester devoted to writing a thesis) beyond the degree of Licence degree. It requires a total of 120 credit hours.

The Department of English Language and Literature at the University of Mascara in Algeria currently offers Master's programs in Applied Linguistics and ELT, Literature & Civilization, ESP, and Translation (English/Arabic/English). Each academic year, the Department allows a limited number of applicants with an EFL licence degree to take studies leading to the Master degree, which is actually up to a maximum number of 100-120 students. Such limitation depends more strongly on available space, equipment and staff availability. Applicants for Master's degree programs are chosen on the basis of their academic record. Their selection is determined by their performance ratings over the three years of study at the Licence level study.

Prepared by a committee of teachers' representatives, the Department offers teachers pamphlets to guide them in designing and implementing their course curricula. The pamphlets present the main purposes in teaching each module, the main topics under which outlines are made, together with some suggested references of a general sort. The pamphlets also present the number of credits for each module, the distribution of practical and theoretical hours for each module, as well as the organization of courses across semesters or academic years. Teaching is not based on official textbooks designed by the Ministry of Higher Education.

Students' assessment is based on a set of indicators which capture their achievements, involving continuous monitoring of their progress, end of semester exams and several homework assignments. These all together contribute differently to produce the final grade for a course. Giving students more chance of being successful, the compensation system for the courses belonging to the same unit and between different units is made an integral part of the assessment process.

The determination of the general average mark of each semester is obtained through the averages of the courses covered in the semester. In the Algerian universities, the

grading scale ranges from 0 to 20. Scores below 10 indicate a failure. So, a student is considered to have passed if she/he gets a total average of 10/20 or more. Students who get less than that average fail, but they still have the right to get catching-up opportunity which is made into a session scheduled at the end of each semester.

After this short overview of teaching EFL at the licence's and master's levels, attention shall be given to the doctorate level as part of the Licence Master Doctorate (LMD) system. Based on the international and European LMD model, Doctorate LMD is the final phase of the new architecture of the Algerian higher educational system. Due to the number of graduate students which is strictly limited (generally a maximum number of 15 in Algerian universities); a competitive national written test and an evaluation of the applicant's records are requirements for admission to a doctoral program.

Doctoral programs usually require a minimum of three-to-four years to complete research and writing of a thesis. There is no specific program of courses prescribed for the doctorate. During the first academic year, students are required to attend courses and seminars in their subject matter specialization given by associate professors (Maître de Conférences) and full professors. They also need to publish one to two journal articles for permission to defend the production of their thesis in an oral defense Viva-Voce examination. As far as EFL doctorate programs at the the University of Mascara is concerned, the Department of English opened its first program in 2016 with a specialization in Applied Linguistics and ELT. Since then, three programs have been initiated and undertaken within the same specialization. The first program was undertaken in 2018; the second was undertaken in 2019, and the third in 2025 each with the admission of nine students. An interdisciplinary doctorate program is being initiated in the Department, offering specialization in the areas of Applied Linguistics and ELT, Literature and Civilization, and ESP, each with the admission of three students.

3.4. Choice of Methodology

In light of current educational changes recognizing the reality of diversity and heterogeneity at the individual and cultural levels, use of new educational research methods to meet the needs of students in terms of providing them with the necessary literacy practices is relevant to the future. In current modern research methods and techniques, teachers are no longer regarded as passive consumers of information and recipients of external pressures influencing their decisions. Alternatively they should become researchers in their own right, continually exploring and discovering what best suit their own classroom school settings. There are plenty of research publications arguing for the worthwhile and significant change in teaching practice that can occur when teachers critically examine their own beliefs and practices and engage in inquiry, problem solving and theory building (Bransford, Derry, Berliner, & Hammermass, 2005; Hawley & Valli, 1999; Richardson, 1990, Belong 2002). Because of this very fact, action case method research thus becomes an ideal vehicle for teachers to engage in continuous spirals or cycles of observation, reflection, and action for the objective of developing their own professional growth and profiles through understanding and improving their practices and student learning, as Kemmis and Taggart (1988, p.21) point out, "Action research is a systematically evolving process, a living process changing both the researcher and the situation in which he or she acts."

The light principle of action research, as stated by Kemmi and McTaggart (the principal advocates of critical educational action research), is a straightforward strategy for identifying a problem, posing and implementing a solution, measuring the progress, reflecting on the findings, and then starting the whole process again over a cycle of processes which have neither their absolute beginning nor absolute ending either. Kemmis and Taggart, (1988, p.29) depicted this process diagrammatically, as shown below in Figure 3. 1

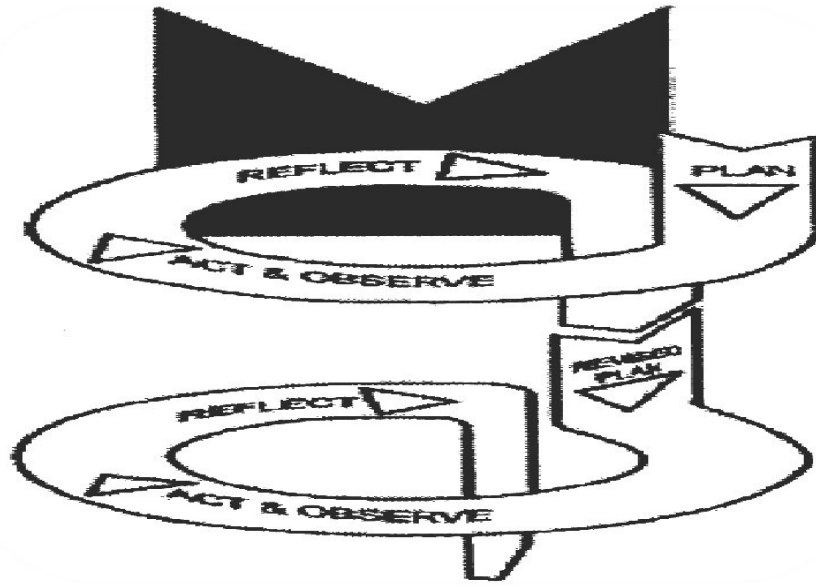


Figure 3.1 *The action research spiral*

Note. From *The action research planner* (3rd ed., p. 29), by S. Kemmis & R. McTaggart, 1988, Deakin University Press.

Methodologically, Kemmis and Taggart (1988; 2005), stress that action research needs to be applied, not as a linear standard set of procedures, but as a cyclical or spiraling process achieved across: planning a change; acting and observing the process and consequences of the change; reflecting on these processes and consequences; replanning; acting and observing again; reflecting again and so on. Similarly, Zuber-Skerritt's (2001) introduced a model describing the processes of action research and illustrating how action research moves along a cyclical process of 1) strategic planning, 2) implementing the plan (action), 3) observation, evaluation and self evaluation, 4) critical and self-critical reflection on the results of (1)— (2), and making decisions for the next cycle of action research—that is a revised plan, followed by action, observation and reflection, and so on (Zuber-Skerritt 2001, p. 19).

Another fundamental characteristic of action research approach is the collaboration between researchers and practitioners, all of whom are involved in the change process. Adopting a Habermasian approach, Robin McTaggart in his excellent textbook “Participatory

Action Research” (1997) makes a claim that "participatory action research establishes self-critical communities of people participating and collaborating in all phases of the research process: the planning, action, observation, and reflection" (p. 35). In the same vein, PercMarland (1997, p.64) reports the view that action research is “a collaborative or group activity. It grows out of concerns shared by a group about their own individual practices and requires the involvement of all members of the group in the pursuit of improvements."Of course, the view of action research as a group activity does not deny the dimension of classroom research as an action which could also be an individual activity, undertaken by one person with a focus on one's own practice without reference to others. Donald A. Schön uses “reflective practicum” as a descriptive term for action research as being individualistic and develops a seminal model of individual reflective practice (Schön 1983). The basic tenets of the so-called “individual reflective practice model” is the need to critically reflecting on one's own practice. Note that most of the existing models of reflection available in the literature have been influenced by the seminal work of Donald Schön (1983). Far from being irreconcilable opposites, individual and group action research can be viewed as two aspects of one trend, together combined to provide the necessary tools for evaluative practices underlined by the objective to enhance the personal development of individuals and to improve the effectiveness of organizational functioning (McIntosh 2010).

No one can ignore the fact that action research is, in a certain sense, political (that is not to say that there is research that is not political!). Action research is political in the sense that it demystifies; that is, it raises consciousness and also can change consciousness when it makes people perceive situations and new “realities” in a new light. It does that in ways that lead to a need of reform. Teaching practices are always framed and re-framed within wider socio-political and ideological context by engaging into an effort to contribute in reinforcing or challenging current hierarchies and power structures. Action researchers explicitly seek to challenge underlying assumptions and attempt to challenge established programs to develop new ones through projects aiming at transformation.

Consequently, this study takes it important to consider these four key tenets of action case research which are assumed to provide directions in establishing a solid basis for a research design and strong strategies for analyzing data relevant to the problem statement and research questions that are addressed in this study.

3.5. Participants and Sampling Method

The study focused on two specific, intact classroom groups within the educational setting. Due to the small total population size ($N = 55$), a census sampling approach was employed, whereby all members of the target class participated in the research. This method was deemed appropriate to provide a comprehensive view of the group's dynamics and performance without exclusion, thereby forgoing the need for statistical sampling from a larger population.

3.5.1. Students' Participation

Participants taking part in this study were graduate students studying English as a Foreign Language at the Universities of Maseara. They were two classes enrolled in two Master's programs, the first of which entitled “English for Specific Purposes”(ESP) and the second “Applied Linguistics and ELT”. They were 55 participants aged between 23 and 36 years old whose mother language was Arabic, although three of them were bilingual native

speakers of Arabic and Berber. They came from rural and urban areas of Mascara city, which is a province located in the center-northwest of Algeria, about 70 km from the Mediterranean Sea and to 430 km west of the capital Algiers. I limited the study to this geographical area because of my familiarity with the programs, the teachers, and the administrators.

Placing this work in the context of 'action case research', a total of 55 students, as has already been indicated, participated in this study, of which 22 students were of Applied Linguistics and ELT" specialization and 33 were students of ESP specialization. Their distribution is shown below in Table 4.2.

Master grade was chosen as the focus grade of the study for two reasons. Firstly, because reading media messages from a critical point of view require that students use different higher-order thinking skills. At the graduate level, students take upper level courses through which they are expected to be much more engaged and involved in higher order thinking skills. Secondly, because discourse analysis was a part of the Master-grade curriculum, with the objective to provide the students with practice in skills related to textual analysis. This course was the suitable space to embed this action case research. Even though the researcher had to follow the prescribed syllabus of this course, he was able to negotiate a space available to include activities designated to strengthen students' textual analysis skills of media discourse. Also, a letter was sent to the coordinator of the department requesting for permission to change the course content with a promise to preserve the scope and objective of the prescribed program.

It is lastly worth mentioning that the participants in the present study reported that they had limited experience with critical reading, and no experience in analyzing arguments and thinking critically about the structure of arguments in media texts. Critical reading is being taught superficially in the literature curriculum with many of its aspects ignored. It is

taught through lecture-based courses, employing novels, short stories, and poetry.

Table3. 2 *Participants' demographic information*

Participants(<i>n</i> =55)		
Students with specialization within Applied Linguistics and English Language Teaching (ELT)	<i>n</i> =22	Males (<i>n</i> =07) Females (<i>n</i> =15)
Students with specialization within English for Specific Purposes(ESP)	<i>n</i> =33	Males (<i>n</i> =15) Females (<i>n</i> =18)

3.5.2. Peer Observers

For the goal to reduce researcher's bias and collect a reliable and rich set of data that thoroughly address the research questions, the researcher integrated peer observation in this study. Research argues that the hallmark of a "good action case research" is a process in which researchers invite peers into their classrooms to make observations and expose their work to the scrutiny of other colleagues. Peer observation of teaching is growing in importance and is widely recognized as one strategy for academic development (Barnard et al., 2011). The peer review process referred to in this study is supposed to reduce bias in the researcher's claim to distance himself from the data and make the findings as objective as possible, though the researcher recognizes that objectivity is an ideal, which can only be approximated.

The teaching staff at the Department of English Language was invited through an email message to take a voluntary part in this research study. They were invited to offer commentary on classroom management, teaching tasks, lessons contents, and interactive communication in class. They were informed of the study's purpose and of their right to withdraw at any time during the action research. Due to time constraints, only six members (three males and three females) out of the thirty five-member teaching staff consented to actively participate in this study. They were divided into pairs of male and female for presence of each in at least three sessions throughout the semester. The rationale for this

pairing was the possibility that males and females respond differently to classroom environment.

Coding was taken throughout the research study to protect the identity of the observers. Each observer was given a unique code (i.e. 01-01) that consisted of two pairs of numbers. The first pair indicated the gender of the observer (01=female, 02=male). The second pair was the order of lectures in which the observers were present (01=female, 04=fourth lecture).

Only the researcher had access to this information. The identities of the participants were kept in a password-protected file on the researcher's home computer. For the sake of ethics, all written materials contain only the observers' codes and no other personal identifying information.

3.5.3. Role of the Researcher

Action case research, as has already, stated, combines approaches from case studies but includes direct involvement of the researcher. With this approach, the researcher is less of an observer but instead takes an instrumental, interactive and error correcting approach (Järvinen, 2001, p.12). A common element between action research and case or field studies is the immersion of the researcher in the environment where the study takes place. On such basis, the researcher of this study took multiple roles. He planned and designed the study, and developed the teaching and testing materials. He was the teacher of an intervening course in the learning process, and also the primary rater of the pre- and posttest. During data analysis period, he was the primary coder for the coding and analysis. To ensure objectivity and to reduce researcher bias, the study included a second rater and coder. Rater agreement was estimated and reported.

3.6. Description of the Course

As has already been stated in the introduction, the objectives of this course were to develop students' critical thinking skills and enhance their comprehension in reading media texts by supporting students in making connections between texts and contexts, by considering multiple interpretations of media texts, by examining gaps and silences in the texts, and disrupting the taken-for-granted assumptions found in these texts. All directed towards the objective of assessing readers' evaluation of media texts in terms of objectivity and bias.

3.6.1. Course Objectives

Inherent in that curriculum were goals or objectives that might be classified as short-range and long range goals. It should be noted that long-term goals are broad and short-term goals are detailed. The short term goals of the course were to give the student an opportunity to acquire new skills and to demonstrate competence in performing the skills of analyzing media texts. Students had to learn how to do semiotic, framing analysis, content and discourse analysis in the context of persuasive texts genre. They also had to learn to engage with debates about the politics of media coverage for becoming critical consumers of informative and persuasive media messages. Related to the short-term goals, there were twenty two long term goals outlined for the course. They are categorized into cognitive goals (designed to increase understanding and knowledge), affective goals (designed to change attitudes), and psychomotor goals (designed to develop skills).

Box 3.1 Objectives and learning outcomes of the intervening course

COGNITIVE OBJECTIVES

A. Understanding objectives

1. To have students understand how arguments are structured with the intention to have persuasive effects
2. To have students understand the power of an argument resides in the author's choices regarding his use of evidence, reasoning, and stylistic persuasive elements
3. To have students understand that examining the structure and the sequence of arguments provide more accurate classification of media texts as biased or objective
4. To have students understand that readers' bias may inherent in the process of texts' interpretation

B. Knowledge objectives

1. To develop students' background knowledge of the general characteristics distinguishing sound from fallacious arguments
2. To develop students' background knowledge of the strategies of language use for the expression of persuasive intent
3. To develop students' background knowledge of how, when, where, and why author's use of language to appeal to emotions

SKILL OBJECTIVES

1. To determine the distinction between hard and soft news
2. To develop key skills necessary for critical reading of media texts
3. To analyze media coverage of controversial issues through linking CDA and argumentation analysis
4. To evaluate the impact of word choice in media texts
5. To identify techniques and rhetorical structures author's use to persuade an audience
6. To develop basic skills of analyzing arguments and awareness of the author's point of view

AFFECTIVE OBJECTIVES

1. To develop self-awareness, recognizing one's own bias and influences
2. To develop tolerance for the view points of others
3. To develop students' approaching of newspaper texts with open-mindedness and empathy
4. To develop positive attitudes, such as interest and curiosity
5. To help students develop an inquisitive mind, a desire to learn more about issues before passing judgment

3.6.2. Course Materials and Requirements

To ensure methodological reliability, this action research was conducted using only the course's standardized, copyrighted materials, which included a required textbook, video lectures, and official assessments such as the GRE, GMAT, and SAT. The choice was methodologically designed as a balanced adaptation, carefully aligning these fixed resources with the dynamic objectives of the research and the evolving needs of the participants.

3.6.2.1. Textbooks

The lesson plans developed for conducting this study were based on an extensive review of currently used textbooks. At the core, the study used adaptations from Stella's textbook *Critical Thinking Skill* (2005) and Melanie's textbook *Persuasive Language in Media Texts* (2008). The course also used a series of lectures led by Oxford University's Marianne Talbot. The course was in need of a reliable textbook that presents principles of argument analysis along with practical learning strategies and applications based on theory. The ideal textbook from the researcher's perspective would introduce the theoretical concepts to those with little or no background in argument analysis. Accordingly, the major contributions came from Snider. (2006) textbook: *Influencing through Argument*. Adaptations were made so that the materials focused on persuasive language in media texts which were the main interest of the current study. The researcher supplement these textbooks with selected examples of practical applications from textbooks on the standardized tests of AP English Language and Composition and SAT which are required for admission to colleges and universities of English-speaking countries. These tests were chosen on the basis of their contents which include sections seeking to measure critical thinking ability and critical reading of media passages. Analyzing arguments is a large part of the reading section in these tests.

3.6.2.2. Printed Handouts

Handouts represented an important part of this action case research. Their use was with the intention to engage students and facilitate their learning. All lessons were taught partly using a lecture-based format and partly using a task-based approach, where handouts were made available to students covering both parts. The researcher-teacher made students receive the weekly lesson's handouts in a PDF format through their mails before the lesson's day to help them guide their note taking for the lecture's theme. The handouts served to reinforce concepts and provide an opportunity for students questioning the teacher.

3.6.2.3. Power Point Presentations

To encourage students' thinking and create a more open and more interactive classes, the researcher used a set of self-prepared Power Point slides corresponding to each lesson in the program. Their contents highlighted key concepts, ideas and skills integrated with questions, activities, and assessment tasks designed to provide a more thorough coverage of learning targets. The use of Power Point (like of class handout) was a supplement to effective and successful teaching, not a substitute for it. i.e., their use was as an aid for effective realization of the teaching objectives.

3.6.2.4. Instructional Videos

In addition to printed handouts and Power Point presentations, the researcher used in his teaching existing YouTube videos of expert lecturers, freely available and posted on YouTube. Their use was as supplemental materials about topics covered in the classroom. Students were instructed to watch the videos before class, so that classroom time could be devoted to problem-solving tasks. Watching the videos was part of the homework assignment questions.

3.7. Methods for Conducting the Case Study

This study was developed in two stages: pilot study and main study. A pilot study was intended mainly to test the adaptation of a variety of research methods and techniques to establish validity and reliability prior to the main study being conducted. It is important to note that critical media literacy and the associated critical thinking measures used in this study were developed in Western countries by Western scholars. Thus, due to the interest of the researcher within this project to make course adaptations applicable to an Algerian context, his research necessitated careful pilot studies to select appropriate measures that could be used reliably. The methods and techniques were piloted on EFL master's students (who were not subjects in the main study) to check the procedure of the main study and test whether the tasks were manageable and had validity. This step helped the researcher to formulate the plans for the main study described below on the rest of the chapter.

3.7.1. Pilot Study

Prior to the intervention study and as part of the preparation for the main study, the author conducted two pilot studies with two different groups of students enrolled in master's degree programs. Each of the two pilot studies was of duration of 2 weeks, delivered once per week. The first pilot study was undertaken during the academic year 2017-2018 and the second one during the academic year 2019-2020. Members within both groups were enrolled in either Applied Linguistics Master or ESP Master Programs, both at the University of Mascara in Algeria. Implementing the pilot study twice was intended to ensure valid, reliable as well as credible results. The purposes of the pilot study were: (i) to make a preliminary evaluation of the appropriateness of the teaching intervention and (ii) to verify the suitability of data collection tools for the target subjects. As this study adapted standardized testing practices in its attempts of making an incorporation of argumentation analysis into teaching with the aim to enhance EFL students critical thinking (CT) and the analysis of media texts,

the levels of reliability and validity of the measurement tools were thoroughly assessed during the pilot study phase.

After the tryout it was found that the students were unable to answer the tests with ease and confidence. This failure was attributed to lack of practice and training. They also found it difficult to comprehend media texts due to their problem with vocabulary, text structure, comprehension, and so on. The results of the pilot study had an important influence on the final version of the texts and the tasks adapted for the main study. Due to these results, the researcher varied in the main study his teaching strategies and designed more activities to provide greater motivation for the students and to reinforce their willingness to be productive members within the classroom. Due to the role of dictionary use in effectively determining word meaning, the researcher allowed learners to use dictionaries to solve reading comprehension test. Plenty of research publications (Goodman, 1967; Anderson & Pearson, 1984; Shanahan & Shanahan, 2008) argue that critical reading does not depend on understanding the meaning of every word and phrase in the text, but on higher order analytical reasoning skills.

3.7.2. Main Study

After potential problems had been identified and alternative approaches found for solving various aspects of the problems before the main project started, the researcher engaged in performing the research strategy which was organized in three phases; pre-intervention, intervention, and post-intervention phase within which collecting reliable, valid, and relevant data to answer the formulated research questions. These phases are in detail described below.

3.7.2.1. Pre-Intervention

The preintervention stage consisted of two-phases. In the first phase, this research used a self-developed questionnaire addressed to students for the purpose to detect their individual differ-

ences, including background knowledge, motivation, prior learning, and so on. They completed a section of survey questions about their media use and interests including textual, visual, and digital uses. They also completed a “personal abilities self-evaluation” section which was part of the questionnaire designed for the objective to determine respondents' views of their pre-existing skills, knowledge, and dispositions regarding the interpretation, analysis and evaluation of media texts. In the second phase of the pre-intervention stage, a two-part pre-test was administered. The first part was given involving involving the students in a test of critical thinking, using the California Critical Thinking Dispositions Inventory described later in this chapter. The second part was given involving the students in a task of evaluation of two news articles retrieved from two online news sources. They were asked to evaluate the articles on an objectivity/bias scale, indicating the parts of the text that demonstrated objectivity or bias, and then describe why and how they made their decisions.

3.7.2.2. Teaching Intervention

The teaching program began a week after pretesting terminated. The program included fifteen training sessions twice a week for a total of eight weeks. Each training session was of ninety minutes long in length led by the researcher. The program had a total number of class sessions equal to the number of credit hours awarded for the course.

For the objective of linking theory and practice, the overall format of the lesson plans was divided into teacher-centered training (i.e., Day one of each week) and student-centered training (i.e., Day two of each week). The teacher played a leading role in the teacher-centered training day; in other words, on day one of each week, the teacher introduced and explained the key concepts to the class, and provided demonstrations by offering examples. On day two of the same week, the training switched to student-centered where the students were given a set of exercises to practice the concepts they had learned on day one. The teacher's major task on the student-centered day was monitoring students' learning process,

mainly by answering questions and offering help and feedback when needed.

Embedded within the lectures to be attended as part of the teacher-centered training were contemporary approaches which media discourse uses for analyzing texts. The students were introduced to content analysis, semiotics, and critical discourse analysis approaches. The focus of the class on each lecture was on generic concepts that are critical to an understanding of media texts. Understanding the principles that underlie these approaches enable students to engage with different texts critically and understand how language use can have inclusive and exclusive social effects and can empower or dis-empower people. Accordingly, each lecture placed considerable emphasis on the five core concepts of media literacy introduced by Abreu (2007) which include (i) understanding that all media messages are constructed, (ii) media messages use creative language, (iii) different people experience the same media differently, (iv) and media messages are embedded with values and a point of view and are constructed to gain profit and / or power (pp.7-10).

Embedded within the lectures to be attended as part of the students-centered training were exercises designed to build the key skills and knowledge required for success in measuring argument quality. The skills the students were developing through these exercises were critical thinking skills and problem solving skills, applicable to identifying bias in media texts. In each classroom task, the students were asked to analyze an argument text retrieved from media to understand how the author uses words choice, claims, and reasons to formulate a convincing argument and make writing persuasive. It was hypothesized that students with the highest gains on understanding of argument texts would be ready to explore the nuances that make arguments compelling and credible. To accomplish these tasks, Toulmin's six-step model of argument analysis was used as the theoretical framework with some analysis required using Fairclough's practical approach to argumentation (2012) which he outlined from the perspective of critical discourse analysis.

To complete weekly progress reports, each student was asked to select a piece of information from the news media and evaluate to be either “objective” or “biased”. They were asked to send their selections to the teacher via their email accounts. These selections were assembled into a corpus, and then analyzed. It was hypothesized in this regard that the practice of critical thinking would considerably support accurate text interpretation with unbiased and objective evaluation by means of argument analysis and evaluation which reduce the use of judgmental techniques (deciding emotionally what sounds right).

3.7.2.3. Post-Intervention

After the eighth week of intervention, the students in the study were post-tested to examine whether there were any changes in their ability to responding to media texts and making critical judgments within which detecting statements of objectivity and bias compared to their pre-test ability. The post-intervention consisted of two-phases as described below.

The first phase involved multiple post tests. In one session, a test of critical thinking was administered using again the California Critical Thinking Dispositions Inventory. The data obtained from the post- critical thinking test was analyzed using a t-test by comparing the obtained scores to the pre-test scores yielding to quantitative results.

Upon completion of this post test, the students were given a test consisted of a pair of newspaper texts dealing with a wide range of topics related to caffeine-related health issues. The text passages contained 200 to 350 retrieved from English newspaper articles. For each of the two texts passages, the students were asked to read each text carefully, with consideration of the author's arguments and determine in writing whether the author’s provided information at the issue was biased or objective. The students were required to provide evidence to justify their answers.

To examine the extent to which the texts were influential, readers' perceived knowledge, beliefs, and interests concerning topics covered in the reading passages were measured before and after reading the texts using a multiple-choice questionnaire. They were then asked to use evidence from these texts to write a well-developed argument designed to convince the reader of an opinion. The purpose to do so was to determine if the information in the text changed how they thought or felt about the topics.

By the end of the course, the students answered questions relating to five aspects of the learning experience, including satisfaction questions about teaching, course methodology, learning sources, classroom activities, and learning resources. At the end of the term, they wrote a short report about problems and issues related to their involvement in the course. In addition, individual interviews were conducted with fourteen students throughout the process (eight of thirty three females, six of twenty two males). The interviews included open and closed questions to allow flexibility in the research.

3.8. Data Collection Tools

The researcher addressed four research questions through the collection of great amount of data using five different datatools: classroom analytical tasks (multiple choice and open-ended), retrospective verbal reports, classroom peer observations, open ended questionnaire, and a researcher's field notes, each given at every stage of the pre while post stages of the process of this action research project. As explained in what follows, each one of these data tools was deliberately chosen to provide a deeper look into specific aspects of EFL readers' process of evaluating media texts in terms of objectivity and bias. For a more thorough understanding of the problem being studied, this study employed mixed methods design in which both quantitative and qualitative research approaches and methods were used in analyses of the data collected. The table below (Table, 3.4) gives a visual representation of the research questions and the corresponding data collection instruments the

researcher used to answer these research questions.

Table 3.4 *Research questions and corresponding data collection instruments*

Research Questions	Research Instruments Used
How do first-year EFL Master Learners perceive their critical evaluation skills for determining the credibility of media news before and after completing an experimental course?	Self perception questionnaire
To what extent does instruction in critical thinking and argumentation analysis help first-year EFL Master Learners identify objectivity and bias in public health news articles published on English newspapers?	Pre-test and post test of critical thinking Pre-test and post test of critical media literacy Retrospective verbal reports Peer observation
To what extent does such instruction help first-year EFL Master Learners mitigate their personal biases, whether conscious or unconscious, when evaluating public health news articles published on English newspapers?	Pre-test and post test of critical thinking Pre-test and post test of critical media literacy Retrospective verbal reports
Do differences in students' level of ability to detect bias influence their perceptions of the intended persuasive effects of public health news articles published on English newspapers, and if so, how?	Textual analysis Quality of pre and posttest Questionnaire

Research Question 1 focused on student self-perceptions regarding their skills of determining the credibility of the media news they consume. Accordingly, a survey of two versions included multiple choice and open-ended questions was designed to achieve that purpose. One version was administered before the teaching intervention and the other after. Then, these two versions were compared for difference or similarity. The second version was extended to focus on the students' perceptions of the changes in their knowledge, skill, dispositions, and attitudes after direct instruction in analyzing media texts and the practice of argument evaluation. Descriptive statistics were used to analyze the survey data to determine mean scores and frequency counts. Charts and graphs were being incorporated into data analysis to provide insights into the data and make useful conclusions.

Research Questions 2–3 focused on the teacher's implementation of engagement practices in the classroom and on the effectiveness of these interventions. Accordingly, a set

of multiple data analysis techniques were employed, each was determined by the nature and scope of the practices that were undertaken. Question four focused on investigating the relationship between a student's critical reading skill in identifying media bias and their ability to perceive persuasive intent, using standardized public health news articles as the primary text for analysis.

3.8.1. Process of Instrument Development and Validation

This study employed a multi-faceted methodological approach, combining quantitative and qualitative instruments. The validity (the accuracy of what is measured) and reliability (the consistency of the measurements) of each instrument were established through specific, rigorous procedures.

1. Standardized Tests and Performance Tasks:

To ensure a reliable and valid baseline measure of critical thinking aptitude, the study utilized adapted sections from standardized tests (SAT, GMAT). The use of these copyrighted, standardized instruments provides inherent statistical evidence of reliability and validity. Parallel-form reliability was demonstrated by employing different but equivalent versions of the CCTST for pre- and post-testing.

2. Text Evaluation Rubrics:

The validity and reliability of students' text evaluations, drawn from verbal reports and written responses, were ensured through the use of detailed, criterion-referenced rubrics (e.g., an adaptation of Cargas, 2020). These rubrics provided a structured framework for scoring, which was essential for achieving a high degree of inter-rater reliability and objective assessment of qualitative data.

3. Retrospective Verbal Reports:

Coding schemes were developed and applied to the analysis of retrospective verbal reports. This process transformed qualitative participant responses into quantifiable, analyzable data,

ensuring the consistency (reliability) and accuracy (validity) of the interpretation of cognitive processes.

4. Questionnaires and Scales:

The internal consistency reliability of all Likert-scale questionnaires was statistically verified by calculating the Cronbach's alpha coefficient. Furthermore, a pilot study was conducted to pre-test all questionnaires, allowing for the refinement of ambiguous items to enhance clarity, validity, and reliability prior to full administration.

5. Instructional Materials and Fidelity:

The validity of the lecture content was established through the use of standardized, copyrighted textbooks and video lectures, ensuring all participants received instruction based on authoritative, high-quality sources. Furthermore, peer observation was used to validate the instructional delivery, confirming that the implementation of the lectures and interventions adhered to the planned design and was consistent across sessions.

This study, through its meticulous use of a combination of standardized tools, statistical measures, structured rubrics, and observational checks, establishes a high degree of methodological rigor. This comprehensive approach isn't just about using multiple methods; it's a deliberate strategy to ensure the trustworthiness and reproducibility of the findings. By integrating these distinct but complementary components, the research effectively mitigates potential biases and strengthens the validity of its conclusions, providing a robust framework that allows other researchers to replicate the process and verify the results, thereby contributing to the cumulative body of knowledge in a meaningful and reliable way.

Table 3.5 *Rubric for assessing students' overall responses to newspaper texts*

Criteria	Exemplary 3	Satisfactory 2	Unsatisfactory 1
A	Student states the important claim(s) correctly.	Restatement of author's claim(s) is only partially correct, or it could be correct but is not a central claim for the author's main argument.	Does not state the author's claim (s) correctly.
B	Student cites and specifies the correct data or evidence to support the claim. Offers a quote from the text.	Some aspect of the answer is correct, but another aspect may be incorrect, vaguely stated, or otherwise insufficient.	Did not provide evidence or data from the text or provided the wrong evidence for the claim(s) cited.
C	Student cites what is strong or weak about the argument and data/evidence provided.	Notifies what is adequate or problematic, but answer also has some aspect that is incorrect or incomplete.	Incorrect answer or overstates the results; does not address any strength or weakness.
D	Student draws accurate conclusions from the combined readings based on the strengths and weaknesses of the texts.	Conclusions are based on readings but only partially correct. Something incorrect might be included in the answer. (For example, putting words in the author's mouth.).	The conclusion drawn is not based on a synthesis of the texts. For example, it might be based on student opinion.

Note. **A**= Claims Made, **B**= Evidence, **C**= Evaluation, **D**= Synthesis, Integration

3.9. Data Analysis Procedures

Once the data had been collected, the next step for the researcher was to conduct data analysis. For data analysis, a three-step procedure was used: a thorough reading, classification, and coding. Utilizing recommendations from Morse (2011) and Creswell (2003), the researcher implemented mixed method (quantitative and qualitative methodologies) with the intention to “explore and obtain depth of understanding of the research problem at hand. By undertaking different research methods, data can reveal insights that would not have been evident when using a single research method.

The classification step in the procedures of data analysis was to organize the data so that they could be easily retrieved for analysis. According to the focus of the different research questions, the researcher used different methods of data classification. In this respect, the obtained data (after careful revision) was first divided into two broad classifications, the first involving quantitative-type products and the second qualitative type products. Quantitative categories included data from survey, tests, corpus, and self-evaluation questions. Quantitative categories, in turn, included obtained data from peer observation, protocol analysis, interviews, and textual analysis.

In the case of the quantitative methods, the sequences of data analysis procedure were as follows: In the first phase, all participants' answered tests were first scored using multiple choice and true false items, the items were typically scored dichotomously as right (1) or wrong (0) and true (1) or false (0). The pre-test and post-test scores were calculated using T-test. In the second phase, all participants' answered questionnaires were cross checked for errors and then classified into meaningful categories. The measurement scale (nominal, ordinal, interval, and ratio) was applied by which the data was quantified using statistical tools and formulae. After collecting the test scores and the completed questionnaires, the data was analyzed and processed by different statistical methods. The Statistical Package for the Social Sciences (SPSS version 20) computer software was used in the data analysis stage. The descriptive statistics were used to derive tables of frequencies and percentages.

In the case of the qualitative method, that is data in the form of words and narratives, the sequences of data analysis procedure were as follows: In the first phase, the obtained data were subjected to thematic analysis techniques. The respondents were classified on the basis of specific qualitative characteristics, each one on the basis of whether or not he/she possesses certain attributes. The metacommentaries of the respondents (their texts' evaluations) were classified in terms of the degree to which they match each text's evaluation

to the following five elements: (1) authorship, (2) format, (3) audience, (4) content, and (5) purpose. The researcher's purpose was to examine the levels of thinking the students used to draw conclusions on their evaluation of texts in terms of objectivity and bias. The central focus that emerged in investigating the presence of each of these five elements in students' meta-commentaries was determining the extent to which the author's bias arise in reader's perception from understanding the author's word choice and argument use. Moving to the second phase, coding was undertaken in which each section of the data was coded for making easy identification. It was undertaken after a careful reading and rereading of the data to develop cohesive categories, themes, and patterns. The data gathered was analyzed qualitatively for themes (patterns) to capture the critical points related to all areas of the phenomenon under investigation.

Conclusion

This chapter has set out in detail the methodological framework adopted in this study to investigate the ways in which the practice of analyzing arguments influences EFL readers' evaluations of objectivity and bias in persuasive news texts. It began by presenting a clear description of the study population and the instruments employed, followed by an account of the pilot testing procedures, the overall study design, and the steps taken for data analysis. Particular attention was given to justifying the methodological choices, especially the adoption of theoretical triangulation as a guiding principle. By combining different theoretical perspectives, the study was able to mitigate the limitations inherent in each individual framework and to capitalize on their complementary strengths, thereby ensuring a more comprehensive and balanced approach to addressing the research questions.

Furthermore, the chapter elaborated on the strategies employed to secure reliability across the various stages of the research process. The concurrent triangulation design adopted for this investigation was shown to provide an effective means of integrating quantitative and

qualitative approaches, enabling the findings to be validated through comparison and cross-verification. In this way, the methodological choices not only enhanced the rigor of the study but also increased its capacity to generate nuanced insights into the complex processes of critical reading and evaluation.

In line with this design, the subsequent chapters will present the results obtained from both strands of the research, demonstrating how the two sets of data complement and enrich one another. The chapter will also highlight the key findings, provide syntheses across different methods, and discuss the implications of the results in relation to the study's objectives. Taken together, these findings will offer a solid foundation for understanding how argument analysis can contribute to fostering EFL students' critical awareness of bias and objectivity in media texts.

CHAPTER IV

Data Analysis and Research Findings

Introduction

In the previous chapter the data collection tools and methods of data analysis used in this study were described. This chapter will introduce the findings of the study reflecting the impact of a teaching course on EFL students' critical thinking skills applied to identifying media bias in written press. The principal objective of the course was to determine the extent to which critical thinking skills affect English language learners' reading comprehension of media texts and to test out if training in analyzing arguments use and word choice improves English language learners' ability to identify bias in newspaper texts. In this intervening program, the researcher has hypothesized generally that the students' ability to perceive the persuasiveness of argument is likely to vary depending on their varying ability to identify bias. In this study, quantitative and qualitative data sources were combined to provide cross-validation. The changes in students' achievements were assessed on the basis of standardized tests of critical thinking and an examination of integrating verbal protocol to reading media texts used to provide a lens for viewing comprehension processes during texts' comprehension. To understand the changes and developments in students' thinking about critical media literacy were also corroborated through data collected from interviews which were mainly used to reveal their attitudes towards and perceptions of the received training on analysis and evaluation of arguments.

4.1. Quantitative Data Analysis

This section presents the results of the quantitative data analysis and provides their subsequent interpretation. The findings are organized and presented to directly address the research questions outlined in the general introduction. Following the presentation of key descriptive statistics, the results of inferential statistical analyses are detailed. The section concludes with interpretation of the findings on which discussing their significance, how they align with or contradict existing literature, and their implications for the broader field of study.

4.1.1. Measuring Critical Thinking and Its Components

This study highlights that a reader's evaluation of texts in terms of objectivity and bias requires skills for interpretation, analysis, and evaluation. Accordingly, to measure the extent to which critical thinking ability influences EFL readers' evaluations of media texts, a paired-samples t-test was employed to analyze the differences between the pre-test and post-test scores of the participants' critical thinking abilities following the instructional intervention.

In the present study, detecting bias in media texts was treated as one dependent variable where two variables (bias and persuasion) were manipulated simultaneously in order to study their effect of each variable on the dependent variable "critical thinking". The participants were given pre-test on both dependent and independent variables. Thereafter, treatment in the form of argument analysis in the content of Discourse and Textual Analysis module were given to the participants. Post test was administered to the participants on both independent and dependant variables. After 15 days of the conduct of post test, a retention post delayed test was administered to the participants to find out the changes in the mean scores between post test and retention test and also to know whether the intervention or treatment given had created any results on the dependant variable.

It is obvious that when one considers how he or she might make engagement with integrating critical pedagogy in the classroom setting, he or she has to make use of the various existing CT innovation taxonomies available in the scientific literature. Possibly the most well known ones for language educators, as they have already been mentioned in previous chapters, are Bloom's taxonomy (1956); Kennedy, Fisher and Ennis (1991); Facione (1990); and Anderson and Krathwohl (2001). For the purposes of this study, it is the taxonomy designed by Facione that was considered to be the most practical. This research used his six categories of interpretation, analysis, evaluation, inference, explanation, and self regulation for teaching and measuring students' critical thinking. Indeed there is a resemblance between aspects of Facione's critical thinking dimensions and Toulmin's model for the analysis of argumentation. By combining both, one can devise a framework for guiding students through the process of critical reading and evaluating media texts on a bias and objectivity evaluative scale. Accordingly, both pre-and post tests of the current study took an extended dimension based on an organizational framework developed with Toulmin's argument model.

The six dimensions of critical thinking were measured based on reading passages that using a set of true/false questions. The questions were designed using simple and unbiased wordings whereby respondents could easily understand the questions and provide answers based on their abilities. Questions were adopted from earlier studies with many modifications where needed. Details of each section, what it measured are presented below. The five-point Likert scale (very low, low, average, high, and very high) was used.

Table 4. 1 Pre-test, post test percent variance of students' skills in analysis as measured by the California Critical Thinking Skills Test (CCTST)

		Skills in Analysis					
		<u>Pre-test</u>	1	2	3	4	
		<u>Post-test</u>	very high	high	average	low	
			4	4	4	4	
			very low	very low	very low	very low	
Examining Ideas and Purpose	Decode the relationship between the author's purpose (s) of a communication and his/her addressed issue	0.00%	0.00%	0.11%	3.48%	2.87%	34.9%
		0.00%	1.00%	6.27%	1.91%	2.88%	
	Assess constraints in practical applications of text's information to solve problems that arise in real life situations	0.00%	0.00%	3.09%	4.78%	3.27%	
		0.00%	0.00%	4.17%	3.02%	2.75%	
	Identify the ideas being discussed in the text and assess the interests, attitudes, values, and opinions contained in those ideas	0.00%	0.00%	5.08%	4.12%	2.14%	
	0.00%	0.10%	9.39%	2.29%	2.14%		
Examining Ideas and Purpose	Identify the stated, implied or undeclared author's purpose (s) based on message's content	0.00%	0.00%	3.04%	5.74%	3.14%	
		0.00%	0.05%	4.69%	3.63%	2.70%	
Detecting and Analysing Arguments	Examine a message that the author is communicating and determine whether or not it expresses a reason(s) in support of or in opposition to some conclusion, opinion, or point of view	0.00%	0.00%	9.28%	1.91%	1.74%	
		0.00%	0.15%	7.82%	1.68%	1.68%	
	Identify the main conclusion of an argument	0.00%	0.00%	6.96%	3.83%	1.34%	
		0.00%	0.00%	8.34%	2.42%	1.70%	
	Determine if the conclusion is supported with reasons and identify those that are stated or implied	0.00%	0.00%	6.18%	3.64%	1.96%	
		0.00%	0.00%	6.26%	1.93%	1.94%	
	Identify the background information provided to explain reasons which support a conclusion	0.00%	0.00%	4.64%	5.01%	2.62%	
		0.00%	0.00%	6.28%	3.22%	2.25%	
	Identify the unstated assumptions of an argument	0.00%	0.00%	0.06%	2.55%	2.93%	
		0.00%	0.00%	3.14%	1.75%	2.50%	
	Mean	0.00%	0.11%	41.81%	34.45%	23.63%	
		0.00%	1.25%	53.36%	21.85%	20.54%	

p < .05

English language dictionaries define the concept “analysis” as: a process of detailed examination, aimed at developing a greater understanding of the thing being examined. In Bloom's Taxonomy, the use of the word "analysis" refers to the ability to break down material into its component parts so that its organizational structure can be understood. The ability to analyze requires a student to breakdown information, view the relationships among the parts, recognize the effects, and understand the meaning of information (Bloom, 1956, p. 144). In Facione's words, to analyze is to identify the intended and actual inferential relationships among statements, questions, concepts, descriptions or other forms of representation intended to express beliefs, judgements, experiences, reasons, information, or opinions (Facione, 1990,p. 12). The contents of the current study's pre-and post-test sections pertaining to the testing of critical analysis skills was structured based on these definitions. An analysis of the respondents' ability in terms of their score gains is shown in Table 4.1.

Table 4.1 presents the pre-test and post-test scores for participants' (N = 55) analytical skills based on a 9-point assessment. The instrument comprised nine multiple-choice questions with true/false statements, designed to measure two core skills: (a) examining ideas and purposes in texts, and (b) detecting and analyzing arguments. Example statements included, “determination of the author's purpose and point of view” and “analyzing the author's arguments.”Each correct answer was scored as "1" and each incorrect answer as "0," yielding a total score between 0 and 9. These raw scores were then categorized using a five-point qualitative scale: Very High (8-9), High (6-7), Average (4-5), Low (2-3), and Very Low (0-1).

As shown in Table 4.1, the mean pre-test score was 3.25, falling within the "Low" range. The score distribution revealed that most participants (34.54%) were in the "Low" category, followed by 30.90% in the "Average" category and 21.81% in the "Very Low"

category. Only 12.72% scored in the "High" range, and no participants achieved a "Very High" score. Six participants (10.90%) scored zero. Following the intervention, the mean post-test score rose to 4.76, which is within the "Average" range. This represents a clear improvement. The distribution of scores shifted markedly upward: the majority of participants (58.18%) were in the "High" category, and one participant (1.81%) achieved a "Very High" score. The proportion of participants in the lower categories decreased substantially, with only 10.91% in the "Low" category and 16.36% in the "Very Low" category.

The analysis of pre- and post-test scores indicates that the explicit teaching of argument had a significant positive effect on the development of analytical skills in EFL learners. The rise in the mean score from the 'Low' to the 'Average' range, coupled with the majority of participants (58.18%) scoring in the 'High' category post-intervention, provides robust evidence to affirm the primary research question that the intervention effectively improves the ability to examine ideas, detect arguments, and analyze authorial purpose. Furthermore, the drastic reduction in the number of participants in the 'Very Low' category suggests the intervention was successful in raising the baseline skill level across the cohort. However, the persistence of lower scores for a minority of students indicates that individual differences play a role in the acquisition of these complex skills, suggesting an area for future investigation into differentiated instruction.

Table 4. 2 Pre-test, post test percent variance of students' skills in evaluation as measured by the California Critical Thinking Skills Test (CCTST)

		Skills in Evaluation				
	<u>Pre-test</u>	1	2	3	4	4
	<u>Post-test</u>	very high	high	average	low	very low
Critically Evaluating Arguments	Assess the importance of an argument and determine if it merits attention	0.00%	0.00%	3.03%	1.84%	2.05%
		0.00%	0.60%	3.69%	1.55%	1.72%
	Evaluate an argument in terms of the persuasive force it involves	0.00%	0.00%	2.93%	1.64%	2.95%
		0.00%	0.50%	3.28%	1.16%	2.48%
	Evaluate information sources for accuracy and reliability	0.00%	0.00%	1.88%	1.96%	3.68%
		0.00%	0.25%	2.25%	1.86%	2.76%
	Determine if an argument rests on false logical premises, or biased, ideological assumptions	0.00%	0.00%	1.76%	3.28%	2.87%
		0.00%	0.25%	2.05%	3.00%	2.07%
	Understanding and evaluating statistical arguments used as evidence to support a claim	0.00%	0.00%	2.64%	2.81%	1.23%
		0.00%	0.25%	2.87%	3.49%	1.08%
	Assess how well an argument anticipates possible objections to a position and provide a counter - argument for each	0.00%	0.00%	0.15%	2.87%	3.38%
		0.00%	0.00%	1.23%	2.66%	3.01%
	Determine how new data might lead to the further confirmation or questioning of a conclusion	0.00%	0.00%	2.47%	2.09%	2.95%
		0.00%	0.00%	2.46%	2.03%	1.73%
	Determine and evaluate the strength of an analogy used to warrant a claim or conclusion	0.00%	0.00%	2.56%	2.46%	1.96%
		0.00%	0.28%	2.81%	2.76%	1.64%
	Determine whether an argument makes sense	0.00%	0.00%	2.75%	2.05%	1.96%
		0.00%	0.50%	3.07%	1.75%	1.55%
	Assess bias, narrowness, and contradictions when they occur in an authors' point of view	0.00%	0.00%	1.92%	2.50%	2.80%
		0.00%	0.25%	2.44%	1.99%	2.53%
Assess the degree to which the language, terminology, and concepts employed in an argument are used in a clear and consistent manner	0.00%	0.00%	2.51%	2.10%	1.64%	
	0.00%	0.45%	2.76%	1.94%	1.38%	
Judge the consistency of supporting reasons and evidence, including their relevancy to a conclusion and their adequacy to support a conclusion	0.00%	0.00%	1.83%	2.94%	2.49%	
	0.00%	0.30%	2.15%	2.99%	2.07%	
Determine and judge the strength of arguments that suggest there is a causal link between two events or occurrences	0.00%	0.00%	1.65%	2.95%	2.46%	
	0.00%	0.00%	1.84%	2.80%	2.41%	
Determine whether an argument relies on false or doubtful assumptions or presuppositions and then determine how crucially these affect its strength	0.00%	0.00%	1.46%	3.07%	2.10%	
	0.00%	0.00%	1.64%	2.75%	2.58%	
	Mean	0.00%	0.00%	30.90%	34.55%	34.55%
		0.00%	3.63%	34.54%	32.73%	29.10%

p < .05

Evaluation is defined as the making of judgments about the value, for some purpose, of ideas, works, solutions, methods, material, etc. (Bloom et al., 1956, p . 185). To evaluate, in Facione’s words, is "to assess the credibility of statements or other representations which are accounts or descriptions of a person’s perception, experience, situation, judgement, belief, or opinion; and to assess the logical strength of the actual or intended inferential relationships among statements, descriptions, questions or other forms of representation" (Facione, 1990, p. 12). Evaluation has the aim of determining"the efficiency, effectiveness and scope of the system under investigation, to define its strengths and weaknesses and thereby to provide a sound basis for decision" (Linsay, 2002, p. 113).

In its critical thinking assessment, the evaluation questionnaire contained 14 questions, measuring 14 points. All the questions used to measure students’ evaluation of arguments. This test consisted of 14 short text passages, dealing with a wide range of topics. The text passages were of 200 to 350 words in length, taking the form of newspaper articles. For each of the texts passages, the students were given 4 statements. For each statement, they were asked to determine whether the statement is “true”, “false”, or “can’t tell” based on the information provided in the text.

Table 4.2 reveals the range of scores together with the mean or average score for each level of measurement. As indicated in the table, participants’ pre-test scores were low with an average mean score of 3.63 out of a maximum of 14 points. In their ability to perform critical evaluation of arguments, most respondents scored in the the low levelwith an average mean range of 43.6 %. Results of the statistical analysis and the distribution of score variation denote that a score of 0 to 2 points out of the total of 14 was assigned to 21 students among the 55 ones. A number translated into (38.18%) which indicates a very low level. No respondents scored beyond 8 points, indicating a highest level obtained with (18.18 %)—a number located within the average level of the scale assessment used.

With regard to the mean post-test scores in evaluation skills, the results indicated that participants' post-test scores of this ability were significantly improved with an average score of 5.34 out of a maximum of 14 points. As can be seen in Table 4.2, a majority of the students reported an increase level in evaluating arguments with a mean value of 6.04 and an increase in assessing the importance of an argument with a mean value of 7.82, showing a remarkable change compared to pretest results. The test results indicated that 45.45% of the respondents scored in the average range. In the indicator based assessment scale, 20.0 % were rated low while 14.5 % scored high, representing the highest achievements. Two students showed no gain (3.63 %). High achievers' scores were between 9—10 points obtained by eight students (14.54 %). Although test score gains were not outstanding and some groups showed no gain, the results were considerably better than might be than before.

These results suggest that, prior to the intervention, students struggled particularly with assessing the credibility of statements and determining the logical strength of an argument. Following the intervention, a significant overall improvement was observed, reflected in the higher mean post-test score. The data shows a clear positive shift, with a substantial portion of the cohort moving from lower to higher performance categories. Strong gains were also made in specific sub-skills like evaluating arguments and assessing their importance. Despite these improvements, scores remained below the maximum possible, indicating that while the intervention was effective, further development of these advanced skills is needed.

Table 4. 3 *Pre-test, post test percent variance of students' skills in explanation as measured by the California Critical Thinking Skills Test (CCTST)*

Pre-test Post-test	1 very high	2 high	3 average	4 low	4 very low
Being able to present in a cogent and coherent way the results of one's reasoning	0.00%	1.05%	8.00%	4.77%	3.62%
Being able to justify one's reasoning decisions by pointing to (citing) evidence	0.00%	1.00%	7.78%	4.24%	3.46%
Being able to present one's reasoning in the form of cogent arguments	0.00%	1.00%	5.55%	7.63%	2.17%
Being able to explain why one's cited evidence supports the findings made and conclusions reached	0.00%	1.00%	5.33%	5.10%	2.04%
Being able to justify and explain one's reasoning clearly and to support the answers with evidence representations (proof)	0.00%	0.75%	5.00%	8.50%	3.26%
Being able to create illustrations of key concepts and theoretical perspectives	0.00%	1.65%	8.34%	7.95%	1.81%
Mean	0.00%	5.45%	40.00%	38.19%	16.36%
	0.00%	7.27%	47.27%	36.37%	9.09%

p < .05

Drawing from Facione's definition, explanation is to determine how the results of reason are conveyed to justify a conclusion in terms of evidence, method, and procedure. An individual is engaged in explanation when he or she is able to "state the results of one's reasoning; to justify that reasoning in terms of the evidential, conceptual, methodological, criteriological, and contextual considerations upon which one's results were based; and to present one's reasoning in the form of cogent arguments" (Facione, 1990, p. 12). Sub-skills are stating results, justifying procedures, presenting arguments.

This study investigated students' skills of explanation in terms of five abilities required to make one's reasoning evident. Table 4.3 gives the mean and range of each level of performance

on each of the sub skills of explanation. This table also shows differences in average scores achieved on the pre- and post-tests.

Table 4.3 shows the descriptive statistics of the explanation section of CT test results of the students in the pre-and post- measurement. In the overall result of the test' section, the re- spondents scored between 0 and 4 points in the pre-test measurement, averaging 1.27 points (SD = 1.03) out of 6 points which could be attained. Using a scale of 1 to 5, where 1 = very high, 5 = very low, the frequency distribution indicates that there were no respondents who had very high and high category scores (0.00 %). It was found that 10.90% of the students fall in the middle range of ability while 60.00% on the low and 29.09 % on the very low.

With regard to the mean post-test scores related to the third dimension of the CT test (explanation), the results indicated that participants' post-test scores of this ability were significantly improved with an average score of 1.70 (SD = 1.08). The comparison (or difference) of mean scores of pre-test and post-test indicates that also no respondents who had points to fall within the very high and high category scores giving a (0.00 %). It was found that 25.45% of the students were placed on a scale that located them in the middle range scale of ability and a 69.09 % at the low level while 5.45 % at the lowest as can be seen in table 4.3.

Overall, while the intervention led to measurable improvements in explanation skills for some learners—particularly by reducing the proportion of very low performers—the generally low post-test averages suggest that this skill set may require more extensive, targeted practice and scaffolding. Future instruction might benefit from explicitly modeling and practicing the subskills of explanation, including how to justify reasoning with clear evidence, describe procedures, and present arguments persuasively.

Table 4. 4 Pre-test, post test percent variance of students' skills in inference as measured by the California Critical Thinking Skills Test (CCTST)

		Skills in inference				
		Pre-test	1	2	3	4
		Post-test	very high	high	average	low
			4	very low		
Questioning Evidence	Determine what is the most significant aspect of a problem or issue under examination that should have immediate attention and ought to be addressed thoroughly	0.01%	0.06%	22.00%	32%	39%
		0.01%	8.00%	29.00%	28.00%	34.00%
	Formulate a plan for locating information on all aspects of a problem or issue under examination for purposes of justifying if a given view is more or less reasonable than other opposing or conflicting views	0.00%	0.05%	17%	36.00%	42.00%
		0.00%	0.05%	25.00%	30.00%	40.00%
	Combine disparate pieces of information into a whole (synthesizing) whose connection is not obvious, but when combined provides meaningful insight into aspects of an issue	2.00%	7.00%	21.00%	30.00%	40.00%
		2.00%	10.00%	29.00%	66.00%	34.00%
	Determine whether to have enough useful background information to develop a persuasive argument in support of one ' s view	1.00%	7.00%	24.00%	34.00%	34.00%
		1.00%	10.00%	29.00%	66.00%	34.00%
	Determine if one is grounded in basic facts and has enough background information and evidence to form a conclusion	2.00%	9.00%	28.00%	30.00%	31.00%
		2.00%	13.00%	36.00%	23.00%	26.00%
Developing alternative hypothesis	Developing alternative hypothesis regarding an issue that are perceived to offer more satisfactory explanations	0.00%	0.04%	18.00%	43.00%	35.00%
		0.00%	0.07%	23.00%	38.00%	32.00%
	Seek the views of others and look for alternative possibilities for decision on one ' s self-views	0.02%	11.00%	37.00%	30.00%	20.00%
		0.04%	15.00%	45.00%	23.00%	13.00%
	List alternatives and consider their pros and cons of each view as well as rationale for each being included	0.00%	0.03%	19.00%	39.00%	39.00%
		0.00%	0.08%	27.00%	32.00%	33.00%
	Project alternative hypothesis regarding an event or issue which is being addressed	0.01%	0.03%	28.00%	41.00%	27.00%
		0.01%	0.09%	36.00%	36.00%	18.00%
	Understand the need to isolate and control variables in order to make strong causal claims	0.01%	0.09%	28.00%	30.00%	31.00%
		0.03%	13.00%	36.00%	25.00%	23.00%
Provide the best possible evidence-based information to confirm or disconfirm alternative views on the issue which is being addressed	0.00%	2.00%	18.00%	30.00%	50.00%	
	2.00%	11.00%	36.00%	25.00%	26.00%	
Think about risks of each relevant alternative and how to balance it against benefits	0.00%	1.00%	8.00%	35.00%	56.00%	
	2.00%	9.00%	15.00%	26.00%	48.00%	
Mean		0.83%	5.58%	22.33%	34.16%	37.00%
		1.05%	9.83%	30.05%	31.66%	30.08%

p < .05

Inference refers to the process of drawing cautious and valid conclusions from premises. Facione (1998) identifies inference as one of the main skills of critical thinking and defines making inferences as the ability "to identify and secure elements needed to draw reasonable conclusions; to form conjectures and hypotheses; to consider relevant information and to deduce the consequences flowing from data, statements, principles, evidence, judgments, beliefs, opinions, concepts, descriptions, questions, or other forms of representation" (Facione, 1990, p. 9). The three sub skills of inference are: 1) querying evidence, 2) conjecturing alternatives, and 3) drawing conclusions.

The above table shows the descriptive statistics of the five levels of the respondents' ability of performing inference. It sheds light on the gains of the students in the pre-test and post-test measurements. The overall result of the data analysis of the pre-test shows that the respondents' scores lie between 0 and 7 points, averaging 2.43 points (SD = 2.16) out of a maximum of 12 points which could be attained.

Ranked on a linear scale of 1 to 5 (where 1=very high and 5 = very low), the frequency distribution of the post-test gain score indicates that the respondents were more or less evenly distributed between average, low, and very low levels. The data does not indicate the possession of an ability to make inference on very high and high levels among the respondents, indicating (0.00 %). It was found that 12.72% of the students fall in the middle range of ability while 29.09% on the low and most of them 58.18% on the very low.

With regard to the mean post-test scores related to the students' ability to draw inferences, the obtained results indicated that the participants' post-test scores of this ability were significantly improved with an average score of 5.32 (SD = 2.71). The participants seemed to improve greatly in questioning evidence in which they need to weigh evidence carefully and apply thoughtful analysis in probing the claims and arguments embedded in text. The comparison (or difference) of mean scores of pre-test and post-test

indicates that no respondents who had points to fall within the very high category scores giving a (0.00 %). As can be seen from Table 4.4, 38.18% of the students were placed on a scale that located them in the middle range scale of ability and a 30.90 % at the low level while 18.18 % at the lowest as shown in the table. The most substantial skill-specific improvement materialized in the area of questioning evidence. Post-intervention, students demonstrated a markedly greater ability to deconstruct claims and arguments by critically evaluating the quality, relevance, and sufficiency of the supporting information presented to them. This suggests the instructional methods were particularly effective in moving students from a passive acceptance of information towards a more active, skeptical engagement, a fundamental pillar of critical thinking.

However, this progress stood in stark contrast to the persistent struggles with higher-order inference skills. The continued absence of high-level performance and the stubborn prevalence of scores in the low range indicate a significant cognitive gap. While students could better assess the evidence placed directly in front of them, they still found it exceedingly difficult to move beyond it—to form complex hypotheses, integrate background knowledge, predict implications, or engage in the nuanced reasoning required to draw original, well-supported conclusions. This indicates a developmental threshold beyond which individuals are still unable to synthesize basic analytical skills into genuine, independent critical thought. Consequently, these advanced inference skills are not likely to develop through short-term intervention alone; they necessitate extended, targeted practice that challenges students to consistently build, test, and refine their own logical predictions and explanation.

Table 4. 5 Pre-test, post test percent variance of students' skills in interpretation as measured by the California Critical Thinking Skills Test (CCTST)

		Skills in Interpretation				
		1 very high	2 high	3 average	4 low	5 very low
		<u>Pre-test</u>				
		<u>Post-test</u>				
Detecting Indirect Persuasion	Distinguishing fact from opinion	10.00%	16.00%	22.00%	14.00%	38.00%
		11.00%	18.00%	29.00%	18.00%	24.00%
	Recognize the devices used to hook the emotions of the recipients (viewers, readers, listeners, depending on the medium involved)	2.00%	4.00%	12.00%	21.00%	59.00%
		9.00%	11.00%	28.00%	28.00%	24.00%
	Detect the use of strong emotional language or imagery designed to trigger a response and stimulate reaction in an audience	0.00%	3.00%	14.00%	19.00%	64.00%
		9.00%	10.00%	20.00%	28.00%	33.00%
	Detect the use of inflammatory language calculated to arouse strong emotions	0.00%	0.00%	7.00%	14.00%	79.00%
		7.00%	8.00%	21.00%	48.00%	16.00%
	Identify leading questions that may bias responses, leading towards eliciting a specifically intended response from the the recipients	8.00%	17.00%	29.00%	32.00%	14.00%
		9.00%	28.00%	28.00%	32.00%	3.00%
	Reasoning with conditional ("if-then") statements (if cause, then effect) and recognizing logically equivalent formulations of such statements	1.00%	9.00%	10.00%	14.00%	66.00%
		3.00%	18.00%	19.00%	38.00%	38.00%
	Identify misleading language	0.00%	3.00%	14.00%	72.00%	11.00%
		0.00%	8.00%	28.00%	57.00%	7.00%
Detect instances where irrelevant topics or considerations are brought into an argument that divert attention from the main issue	5.00%	13.00%	14.00%	14.00%	54.00%	
	12.00%	22.00%	27.00%	14.00%	54.00%	
Clarifying Meaning	Recognize how confusing, vague or ambiguous use of language can be misleading, thus requiring clarification to improve comprehension	1.00%	6.00%	9.00%	57.00%	27.00%
		6.00%	15.00%	22.00%	39.00%	18.00%
	Ask relevant and penetrating questions to seek clarification	3.00%	6.00%	6.00%	30.00%	55.00%
		9.00%	13.00%	30.00%	25.00%	23.00%
	Identify and seek additional resources needed for accurate credibility assessment of textual claims	2.00%	6.00%	21.00%	40.00%	31.00%
		0.00%	18.00%	28.00%	31.00%	23.00%
	Develop analogies and other forms of comparisons to clarify meaning	1.00%	2.00%	6.00%	56.00%	35.00%
		16.00%	12.00%	16.00%	28.00%	28.00%
	Recognize contradictions and inconsistencies in language and evidence use	0.00%	3.00%	14.00%	41.00%	42.00%
		2.00%	4.00%	18.00%	38.00%	38.00%
Provide examples for removing vagueness and ambiguity	1.00%	6.00%	17.00%	40.00%	36.00%	
	9.00%	11.00%	28.00%	23.00%	29.00%	
	<i>Mean</i>	2.05%	6.71%	13.90%	33.14%	43.64%
		9.30%	14.00%	24.40%	31.90%	23.05%

p < .05

Interpretation is widely defined as comprehending and expressing the meaning of information (decoding significance), not evaluating it. The skill of interpretation incorporates the ability of the learner to understand and explain the meaning of a variety of input, such as experience, data, beliefs, and rules. Texts interpretation involves the reader integrating his or her own relevant knowledge with the author's words choice to construct his or her interpretation. Facione (1998) defines interpretation as the ability “to comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules procedures, or criteria. The three sub-skills of interpretation are categorization, decoding significance, and clarifying meaning”.

Table 4.5 presents the descriptive data of the five levels of the respondents' skills of interpretation. This table sheds light on the relative levels of gains of the students in the pre-test and post-test measurements. Pre-test data analysis results indicate that the respondents' scores lie between 0 and 8 points, averaging 2.70 points (SD = 2.44) from the maximum amount of 14 points which could be attained.

Adopting a five-rank scale to measure the respondents ability to make interpretation of information presented within texts, the frequency distribution of the pre-test gain score indicates that the respondents' score gains made them lie more or less between average, low, and very low levels. It is clear from the data presented in the above table that the possession of an ability to make interpretation on very high and high levels among the respondents is not indicated, giving (0.00 %).

Analysis of the pre-test data indicated that approximately 16.36 % of the respondents scored in the average range in their interpreting skills. A total of 29.09 % of the respondents had low level of gain scores and 34.54. % had very low level of gains. Post-test data analysis

results indicate that the respondents' scores lie between 0 and 12 points, averaging 5.70 points (SD = 3.21) from the maximum amount of 14 points which could be attained.

As presented in Table 4.5, a majority of the students reported an increase level in all aspects of interpretation, showing a remarkable change compared to pretest results. From the table, we can see that a total of 29.09% of the respondents scored in the average range. In the indicator levels rating scale, 16.36 % were scored high while 5.45 % rated very high, representing the highest obtained achievements. It was found that 30.90% of the students were placed on a scale that located them in the low range scale of ability and 18.18% at the lowest as can be seen in Table 4.5. The percentage of very low and low levels decreased and at the same time the percentage of very high, high, and average levels increased dramatically between the pre- and post-tests, indicating improvement in students' abilities.

Changes in students' performance indicate a substantial enhancement in students' ability to interpret information—integrating their own background knowledge with textual cues—across all sub-skills (categorization, decoding significance, and clarifying meaning). The data strongly suggests that the instructional intervention was effective in fostering students' capacity to comprehend and express meaning, with particularly significant gains at the higher proficiency levels.

Table 4. 6 Pre-test, post- test percent variance of students' skills in self-regulation as measured by the California Critical Thinking Skills Test (CCTST)

	Self-Regulation				
	1 very high	2 high	3 average	4 low	5 very low
<u>Pre-test</u>					
<u>Post-test</u>					
Applying the reasoning skills of interpretation, analysis, and evaluation to confirm or disconfirm ones' prior beliefs	1.00%	3.00%	16.00%	30.00%	50.00%
	2.00%	6.00%	31.00%	24.00%	37.00%
Applying the reasoning skills of interpretation, analysis, and evaluation to correct ones' misconceptions	2.00%	5.00%	20.00%	35.00%	38.00%
	2.00%	7.00%	33.00%	21.00%	37.00%
Acknowledging one's own bias and knowledge deficits	1.00%	3.00%	16.00%	30.00%	50.00%
	2.00%	6.00%	31.00%	24.00%	37.00%
Acknowledging strengths and weaknesses of one's own claim while applying reasoning skills to draw conclusions, judgments, or inferences	1.00%	3.00%	15.00%	34.00%	47.00%
	2.00%	8.00%	32.00%	26.00%	32.00%
Acknowledgement of the value of an opposing claim	2.00%	6.00%	27.00%	36.00%	29.00%
	3.00%	8.00%	36.00%	26.00%	27.00%
Mean	1.04%	4.00%	27.00%	33.00%	42.08%
	2.02%	7.00%	32.06%	24.02%	34.00%

p < .05

Self-regulation (also referred to as self-control) is a cognitive process that is at the core of critical thinking skills. It is the ability to monitor one's own thinking and use the sub-skills of self-examination and self-correction of one's reasoning. Facione defines self-regulation as the ability to "self-consciously monitor one's cognitive activities, the elements used in those activities, and the results deduced, particularly by applying skills in analysis and evaluation to one's own inferential judgments with a view toward questioning, confirming, validating, or correcting either one's reasoning or one's results. The two sub-skills of self-regulations are self-examination and self-correction", (1998, p. 7). The assessment

instrument which was developed for this study to measure the student's self-regulation thinking was adopted from Facione's development of the California Critical Thinking Skills Test.

Table 4.6 presents the results of the descriptive statistics of the five levels of the respondents' skills in self regulation to illustrate the level in which they fit. This table sheds light on the relative levels of gains of the students in the pre-test and post-test measurements. Results of pre- test data analysis indicates that the respondents' scores lie between 0 and 3 points, averaging 1.63 points (SD = 1.16) from the maximum amount of 5 points which could be attained. For post-test data analysis, the results indicates that the respondents' scores lie between 0 and 4 points, averaging 1.78 points (SD = 1.05) from the maximum amount of the 5 points which could be achieved.

By looking at the data in Table 4.7, one can see that the students' pre-test gains spread over three levels (average, low, very low). From data presented above, it is clear that students of a very high and high levels in making self-regulation is of 0.00% (N=0). The data indicate that approximately 32.72 % of the respondents showed gains at the average range (N=18). A total of 21.21 % of the respondents had low level of score gains (N=12) while 45.45 % had very low level of gains (N=25).

Data presented in Table 4.7 show that some students reported an increase level in all aspects of self-regulation, indicating a remarkable change compared to pre-test results. Some students did perform at the high level (N=14), giving a percentage of 9.09 %, with no students scoring very high (N=0). Approximately 16.36 % of the respondents showed gains at the average range (N=12). It was found that 21.81 % of the students were placed on a scale that located them in the low range scale of ability and 52.72% at the lowest as can be seen in Table 4.7. It could be inferred from the Table that the percentage of students' with an average

level decreased with an increasing in their high level, indicating a demonstration of improvement in their ability of self- regulation.

Overall, the data suggest that while the intervention had a positive effect for a subset of students, particularly in elevating some from average to high self-regulation, further instructional emphasis and extended time may be necessary to achieve more substantial and widespread improvements across the cohort.

4.1.2. Analysis and Significance of Pre-Post Intervention Gains in

Critical Thinking Skills

The pre-test and post-test data reveal a compelling and positive shift in students' self-reported critical thinking skills across all six core competencies. The most pronounced improvement is evident in the Interpretation skill, where the percentage of students in the two lowest categories ("Low" and "Very Low") collapsed from 76.78% to 55.40%, while the "Very High" category saw a dramatic increase from 2.05% to 9.30%. Significant gains were also made in Inference and Explanation, where the combined "High" and "Very High" ratings increased, and the "Very Low" responses decreased substantially. Similarly, in Analysis and Evaluation, the data shows a clear migration from the lower tiers into the "Average" and "High" categories, indicating a solidification of foundational skills. While the Self-Regulation data presents a more complex picture with an increase in both the highest and lowest categories, the overall trend across all skills demonstrates a successful intervention. The post-test results consistently show a contraction in the percentage of students selecting the lowest ratings and an expansion in the middle and higher ratings, strongly suggesting that the study's methods effectively enhanced the students' perceived competence in critical thinking.

The significance of these findings is substantial, extending beyond the immediate metrics. Cultivating critical thinking is a central goal of modern education, as these skills are

paramount for success in academia, the workplace, and informed citizenship. The observed progress, particularly the move away from "Very Low" and "Low" self-assessments, suggests the intervention successfully built foundational confidence and cognitive ability in students. This is crucial because students who perceive themselves as capable critical thinkers are more likely to engage deeply with complex material, question assumptions, and persist through challenging problems. The improvement in specific skills like Interpretation (understanding information) and Explanation (articulating reasoning) indicates that students are better equipped to process information and communicate their conclusions effectively. Ultimately, these results suggest that the pedagogical strategies employed are not only effective in shifting self-perception but are also likely fostering the deeper, transferable cognitive skills necessary for lifelong learning and adaptability in an increasingly complex world. Graph 4.1 below shows this result.

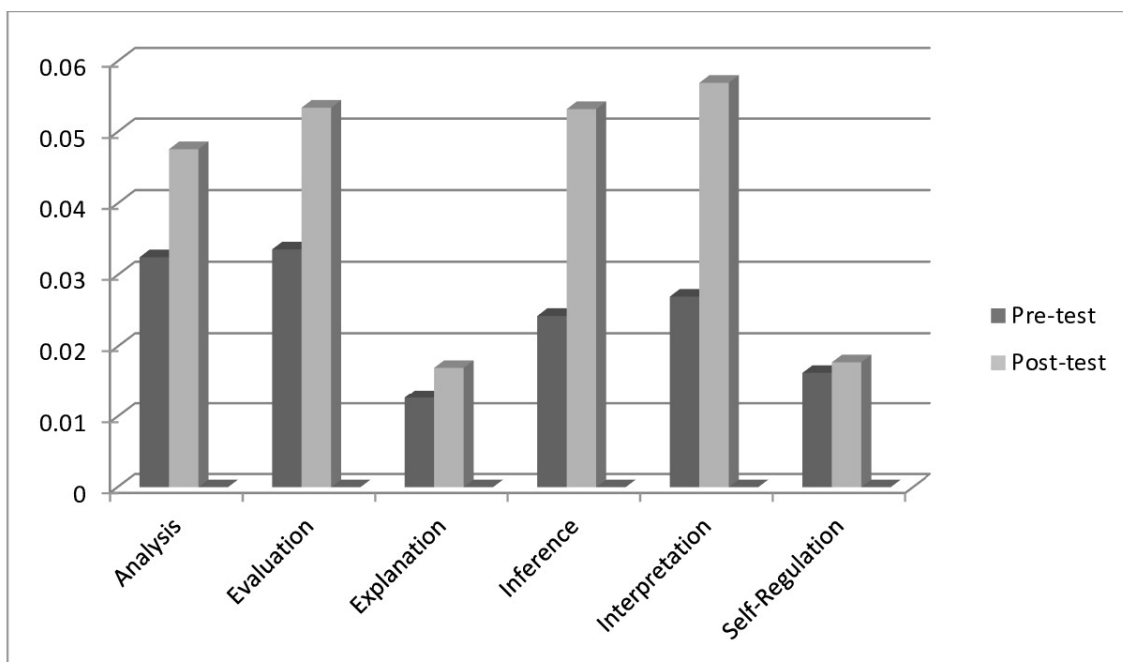


Figure 4.1 Mean differences between pre-and post-tests of students' skills of critical thinking skills

Based on the provided data from the pre and post-test of 55 students on their critical thinking skills, a significant improvement was observed in most categories. The analysis reveals a substantial increase in critical thinking abilities across the board, with t-values indicating a statistically significant difference between pre and post-test scores for analysis ($t=3.67$, $p<0.01$), evaluation ($t=4.18$, $p<0.01$), explanation ($t=2.13$, $p=0.03$), inference ($t=6.18$, $p<0.01$), and interpretation ($t=5.51$, $p<0.01$). While there was some improvement, the change in self-regulation was not statistically significant ($t=0.71$, $p=0.48$). These results collectively suggest that the intervention or instruction received by the students was highly effective in enhancing their critical thinking skills in nearly all measured domains. Table 4.7 below shows a graphic representation of t-tests scores.

Table 4.7 Summary of t-tests Comparing Pretest and Posttest Scores of Students' Critical Thinking Skills

Dimintions of critical thinking skills	N	Pre-test			Post-test			MD	SED	DF	t-value	p-value
		MS	SD	SEM	M	SD	SEM					
Analysis	55	3.25	1.96	0.26	4.76	2.33	0.31	1.51	0.411	108	3.67	0.00
Evaluation		3.36	2.12	0.28	5.34	2.80	0.37	1.98	0.474	108	4.18	0.00
Explanation		1.27	1.03	0.13	1.70	1.08	0.14	0.43	0.201	108	2.13	0.03
Inference		2.43	2.16	0.29	5.32	2.71	0.36	2.89	0.467	108	6.18	0.00
Interpretation		2.70	2.44	0.32	5.70	3.21	0.43	3.00	0.544	108	5.51	0.00
Self-regulation		1.63	1.16	0.15	1.78	1.05	0.14	0.15	0.211	108	0.71	0.48

* $p < 0.05$

Notes

1. N=Number of participants, MS=Mean Score, SD= Standard Deviation, SEM=Standard Error of Measurement, SED=Standard Error of the Difference, t= t-value, p= p-value
2. $df=N1 + N2 - 2 = 55 + 55 - 2 = 108$

4.1.3. Longitudinal Analysis of the Effect of Critical Thinking Skills on Readers'

Perceptions of Persuasive Tone

A survey was conducted to examine how the perception of different text features affects readers' expectations about newspaper texts. The core rationale for this longitudinal analysis is predicated on the hypothesis that skill in argumentation analysis is foundational to advanced critical reading. It is posited that as students become more adept at deconstructing the structural components of an argument—such as identifying claims, evidence, warrants, and potential fallacies—they concurrently develop and refine highly and more sophisticated level of perception and understanding & analysis of media texts. This heightened analytical awareness directly translates into a greater capacity to discern authorial bias, uncover underlying assumptions, and critically evaluate persuasive intent within a text. By repeatedly practicing argumentation analysis, students are not merely learning a discrete skill but are cultivating a meta-cognitive approach to reading, whereby they actively interrogate a text's purpose and credibility rather than passively consuming its content. This study therefore seeks to empirically track this proposed developmental link between the mastery of argumentation and the evolution of critical reading observation and perception over time which are crucial for raising any thought of interpretation.

This specific investigation into the development of critical reading ability and perceptions was situated within a larger research project on EFL students' skills of examining persuasive media texts from a critical perspective so that they can determine objectivity and bias. The primary textual intervention for the broader study consisted of English-language public health newspaper articles, which were strategically selected to vary in their argumentative structure; specifically, the corpus included both one-sided articles, which present a single perspective, and two-sided articles, which acknowledge and attempt to refute counter-arguments. Within this framework, the longitudinal analysis aimed to determine how

the repeated practice of critically analyzing these varied persuasive texts influenced students' meta-cognitive awareness of the strategies they employ to detect bias and authorial intent.

4.1.3.1. Questionnaire Validity and Reliability Analysis

This section tested the reliability, validity, and normality analysis based on the study data. There are three types of measurement reliability: test-retest reliability, alternative form reliability, internal consistency reliability (Netemeyer et al, 2003). To measure internal reliability, the questionnaire data collected during the pilot study were subjected to reliability test using Cronbach's Alpha test (Cronbach, 1951; 1971)

The data collection instrument was a researcher-developed Likert scale questionnaire, which was piloted beforehand. This questionnaire consisted of 18 questions based on six-sudimensions of EFL learners critical reading identified by Clark (1995) to ensure the validity of the questionnaire, two language teaching experts from the University of Sidi belabbes and one statistical expert from the University of Mascara, confirmed its validity. The validity analysis resulted in KMO value of 0.773, higher than 0.5 (>0.5). The KMO value test shows that there is a correlation between the variables of the item.

To ensure the credibility of the questionnaire survey data, the reliability analysis and testing of the questionnaire were conducted using the Cronbach's alpha method of SPSS software. The test results are shown in table 4.7. The closer the cronbach's alpha value is to 1, the higher the credibility and internal consistency of the questionnaire data. It can be seen from Table 4.7 that the overall cronbach alpha coefficient is 0.91, and the cronbach's alpha coefficient for each indicator are 0.78, 0.85, 0.82, 0.71, 0.89, and 0.80, indicating that the credibility of this questionnaire is high and the survey results are reliable.

Table 4.8. *Internal consistency measurement (Cronbach's alpha coefficients)*

Indicators	Number of items	Cronbach α coefficient	Internal consistency	Overall cronabach coefficient	Interpretation
Identification of core argument	3	0.78	acceptable	0.91	Excellent
Evaluation of supporting evidence	3	0.85	Good		
Detection of bias & perspective	3	0.82	good		
Analysis of reasoning and fallacies	3	0.71	Acceptable		
Synthesis and connection	3	0.89	excellent		
Self regulating and monitoring	3	0.80	Good		

4.1.3.2. Analytical Procedures for the Questionnaire Data

To understand the sample's characteristics and the initial response patterns, a comprehensive analysis of descriptive statistics was performed. This involved calculating measures of central tendency—specifically, the mean, median, and mode—to identify the most typical or average value for each variable. To complement this, measures of dispersion such as the standard deviation and range were computed to illustrate the spread or variability of the data. For categorical variables, frequencies and percentages were used to summarize the distribution of responses across different categories. Collectively, these descriptive analyses provided a foundational overview of the dataset, offering key insights into the sample composition and the initial distribution of responses before any inferential tests were conducted. Given below is a cumulative frequency distribution table.

Table 4.9 Frequency distribution of readers' perceptions of persuasive techniques in newspaper texts

Number of Items	Frequency Distribution (%)																	
	Text one			Text two			Text three			Text four			Text five			Text six		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1. Are the author's purpose, tone, and intended audience clear for you?	11%	39%	50%	18%	31%	51%	37%	13%	50%	41%	10%	49%	48%	9%	63%	56%	5%	39%
2. Does the text reflect the author's perspective or viewpoint in the text?	17%	21%	30%	33%	16%	51%	41%	10%	49%	46%	9%	45%	46%	9%	45%	61%	6%	33%
3. Does the text reflect persuasive writing strategies?	79%	21%	0%	88%	12%	0%	88%	10%	2%	91%	8%	1%	97%	3%	0%	97%	2%	1%
4. Are there any indicators of persuasive strategies use in the text?	12%	34%	55%	27%	24%	49%	32%	20%	48%	34%	15%	51%	42%	4%	54%	52%	3%	45%
5. Does the text include figurative language devices?	3%	9%	88%	11%	9%	80%	14%	13%	73%	15%	11%	74%	21%	6%	73%	27%	4%	69%
6. Does the text include sensory imagery?	1%	6%	93%	5%	5%	90%	7%	7%	86%	10%	7%	83%	13%	7%	80%	15%	6%	79%
7. Does the text include rhetorical figures of speech?	9%	19%	71%	11%	17%	72%	13%	17%	70%	14%	13%	73%	21%	5%	74%	20%	5%	75%
8. Does the text include an informal language register (slang, swearing, and derogatory language)?	0%	0%	100%	0%	2%	99%	0%	4%	96%	1%	5%	94%	1%	6%	93%	6%	6%	88%
9. Does the text include high-modality language (expressed by using words like "should not", "forced into")?	2%	6%	92%	1%	8%	91%	0%	3%	97%	9%	4%	87%	16%	4%	80%	17%	4%	79%
10. Does the author quote or cite the opinions or published work of experts or other authors?	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
11. Does the author appeal to emotions without providing convincing evidence?	11%	21%	68%	16%	20%	64%	21%	11%	68%	23%	10%	67%	26%	8%	66%	31%	9%	60%
12. Does the author consider opposing viewpoints?	27%	31%	42%	39%	16%	45%	42%	12%	46%	52%	12%	36%	73%	13%	14%	78%	13%	9%
13. Are there any indications of how the author wants the reader to react to what he/she says in the text?	5%	8%	87%	13%	7%	80%	20%	11%	69%	29%	9%	62%	33%	9%	58%	40%	8%	52%
14. Has the author attempted to convince the reader that something must be avoided by highlighting the undesirable consequences?	37%	6%	57%	56%	5%	39%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
15. Does the author use selective preferences for certain kinds of evidence while excluding important others?	69%	10%	21%	98%	2%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%

(Table continues on next page)

Table4.9 (Continued)

Number of Items	Frequency distribution (%)																	
	Text one			Text two			Text three			Text four			Text five			Text six		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Has the author convinced you to change your mind, or at least to be open to a different point of view?	98%	2%	0%	80%	14%	6%	70%	14%	16%	63%	13%	24%	64%	16%	20%	43%	37%	20%
If you already agreed with the author's claim (the argument), has the author strengthened your belief through his support and evidence?	86%	10%	4%	90%	10%	0%	90%	10%	0%	94%	6%	0%	80%	11%	9%	71%	28%	1%
Does the author appear to have an unfair bias?	2%	0%	92%	14%	2%	84%	21%	3%	75%	25%	2%	73%	43%	5%	52%	100%	0%	0%

Note:

a)

The texts analyzed are numbered as follows:

- (1) "Public Health England maintains vaping is 95% less harmful than smoking" (*The Guardian*)
- (2) "Science, not e-cigarette makers, must tell the public whether vaping is safe" (*Chicago Sun-Times*)
- (3) "Health secretary tells social media firms to protect children after girl's death" (*The Guardian*)
- (4) "Social media is making teen girls depressed, study says" (*New York Post*)
- (5) "A Jolt of Caffeine" (*The New York Times*)
- (6) "More Consensus on Coffee's Effect on Health than You Might Think" (*The New York Times*)

b)

Response options were coded as:

1 = Yes (indicates critical perception), 2 = No (indicates a failure to perceive it), 3 = Don't know (indicates uncertainty or a lack of skill).

The study utilized a repeated measures design where students responded to a questionnaire on their reading strategies immediately after reading each of six different newspaper texts. The questionnaire, which took approximately 10 minutes to complete, measured various types of reasoning, including logical, critical, and contextual. To compare the differences in these reasoning variables across the six texts, a six-level repeated measures ANOVA was conducted using SPSS version 28 (IBM Corp, 2023). A full description of the procedure can be found in Chapter 3.

A six-level Repeated-Measures ANOVA was conducted to evaluate the change in self-reported critical reading strategy use across the six textual interventions. The results revealed a statistically significant main effect of Time, $F(5, 95) = 22.84$, $*p* < .001$, $\eta^2 = .55$, indicating that strategy use scores changed significantly over the semester.

4.1.3.3. Overview of the Texts Used in the Context of This Study

This section provides an overview of the newspaper texts selected for analysis by students in the context of this study. Each article is presented in a separate box and accompanied by key descriptive elements, namely the title, source, date, theme, key features, political leaning, argument type, and a short summary. The inclusion of these elements was made on the basis of peer-review recommendations to ensure clarity, transparency, and the avoidance of subjectivity in the analysis.

Box 4.1 *Overview of Text One used in the study*

Text One

Title: *Public Health England maintains vaping is 95% less harmful than smoking*

Source: *the Guardian*

Date: 28 December 2018

Theme: public health and smoking

Key Features: Persuasive framing; reliance on expert authority (PHE); reference to visual evidence (comparative video)

Political Leaning: Center-Left

Argument Type: One-Sided

Summary: The article reports on Public Health England's campaign encouraging smokers to switch to vaping, stressing the claim that it is 95% less harmful than smoking. While it acknowledges concerns about long-term effects and youth uptake, it highlights the UK's stricter regulations and the absence of evidence linking vaping to higher smoking rates.

Box 4.2 *Overview of Text Two used in the study*

Text Two

Title: *Science not e-cigarette markers, must tell the public whether vaping is safe*

Source: *Chicago Sun-Times*

Date: 28 August 2019

Theme: scientific consensus on the health risks of e-cigarette vaping.

Key features: Reliance on independent authorities (CDC, FDA, scientific studies). Use of alarming evidence (lung illnesses, deaths, neurological symptoms) to strengthen cautionary stance

Political leaning: Center-Left

Argument type: One-Sided

Summary: The editorial warns about the health risks of e-cigarettes, citing cases of severe lung illness and one death in the U.S. It criticizes the vaping industry's credibility, questions its marketing to teens, and calls for independent scientific research and stricter regulation to protect public health.

Box 4.3 *Overview of Text Three used in the study*

Text Three

Title: *Health secretary tells social media firms to protect children after girl's death*

Source: *The Guardian*

Date: 26 January 2019

Theme: Online health and safety to protect youth mental health

Key Features: Persuasive framing; Emphasizing risks of harmful online content.

Government pressure on social media, Protection of youth mental health

Political Leaning: Center-left, progressive

Argument Type: One-Sided

Summary: The article reports on Health Secretary Matt Hancock's call for social media companies to take stronger action against harmful content linked to self-harm and suicide, citing the case of Molly Russell. It warns that failure to act could lead to government legislation to protect young people's mental health.

Box 4.4 *Overview of Text Four used in the study*

Text Four

Title: *Social media is making teen girls depressed, study says*

Source: *New York Post*

Date: 4 January 2019

Theme: Link between social media use, depression, and anxiety in teenagers

Key Features: evidence from large-scale UK study involving 11,000 14-year-olds,
social media contributes depression more strongly to depression
among girls than among boys

Political Leaning: Center-left, progressive

Argument Type: One-Sided

Summary: The article reports on a large UK study linking social media use to higher rates of depression among teenagers, especially girls. The findings point to contributing factors such as sleep problems, body image concerns, and cyberbullying, and highlight the need for guidelines and tighter regulation to ensure safer social media use for young people.

Box 4.5 *Overview of Text Five used in the study*

Text Five

Title: *A jolt of caffeine, by the can*

Source: *The New York Times*

Date: 23 November 2005

Theme: The rising popularity of energy drinks has also raised health concerns

Key Features: Both high-caffeine, high-sugar brand of cola can lead to addiction.

Despite bans in some countries, U.S. sales continue to rise, boosting industry profits.

Political Leaning: Center-left, progressive

Argument Type: two-sided non-refutational argument

Summary: The article examines the rapid rise of energy drink sales in the U.S., making them the fastest-growing sector in the beverage industry. While highlighting their profitability, it raises concerns over high caffeine and sugar content, addictive potential, health risks for teenagers, and controversial marketing strategies.

Box 4.6 *Overview of Text Six used in the study*

Text Six

Title: *More consensus on coffee's effect on health than you might think*

Source: *The New York Times*.

Date: 11 May 2015

Theme: Debunking caffeine myths and highlighting its health benefits

Key Features: Challenges beliefs about addiction to caffeine, support of coffee's positive health effects

Political Leaning: Centrist with a progressive tilt.

Argument Type: two-sided refutational argument

Summary: The article highlights the health benefits of coffee, debunking long-standing myths that it is unhealthy, highly addictive, or stronger in darker roasts. It emphasizes the importance of educating consumers to better understand coffee's positive effects and informed consumption.

Students engaged with Texts One and Two during the first two weeks of the semester, followed by Texts Three and Four in the subsequent two weeks, and finally Texts Five and Six during the last six weeks of the semester. The intervals between these reading tasks were explicitly devoted to the teaching and practice of various skills; including analysis, interpretation, and the appraisal of argumentation (see Chapter Three of this thesis).

4.1.3.4. Students' Responses to Text One

The descriptive analysis of the eighteen survey items reveals notable variations in students' ability to identify critical reading elements within the first text. Regarding awareness of basic textual features, only 11% of respondents reported that the author's purpose, tone, and intended audience were clear, while a majority either answered "No" (39%) or "Don't know" (50%). Similarly, only 17% recognized that the text reflected the author's perspective, with 21% responding "No" and 30% indicating uncertainty.

By contrast, persuasive strategies as a general concept were more readily detected. A high proportion (79%) acknowledged that the text reflected persuasive writing strategies, and persuasive impact was also high: 98% said the author changed their mind or made them more open to a different perspective, and 86% felt their existing agreement with the author's claim was reinforced. However, the ability to pinpoint specific indicators of such strategies was much lower (e.g., only 12% could identify explicit persuasive strategy markers).

When asked about stylistic and rhetorical devices, recognition rates were generally low. Only 3% noted figurative language, 1% sensory imagery, and 9% rhetorical figures of speech. Informal language register was universally absent (0%), and high-modality language was reported by just 2%.

On the question of evidence use, all respondents (100%) affirmed that the author quoted or cited the work of experts, indicating a strong presence of authoritative sourcing. However, 11% believed the author appealed to emotions without convincing evidence, and

27% stated that the author considered opposing viewpoints. In relation to authorial intent, only 5% recognized cues about how the author wanted readers to react, and just 2% perceived unfair bias, with the overwhelming majority (92%) uncertain. This suggests that while students could identify overt persuasive effects, they were less adept at detecting the underlying motivations or ideological positions shaping the text.

4.1.3.5. Students' Responses to Text Two

The analysis of the eighteen-item questionnaire, which measured respondents' perceptions of various textual features and persuasive elements, revealed notable trends. For message clarity (Q1), only 18% affirmed that the author's purpose, tone, and intended audience were clear, while 31% disagreed and 51% were uncertain. Similarly, 33% perceived the author's perspective as evident (Q2), whereas nearly half (51%) remained unsure. By contrast, recognition of persuasive writing strategies was high, with 88% affirming their presence (Q3), although fewer (27%) identified specific indicators of such strategies (Q4).

Regarding stylistic devices, the majority did not perceive the inclusion of figurative language (only 11% said "yes" in Q5), sensory imagery (5% in Q6), or rhetorical figures of speech (11% in Q7). Informal register use was almost entirely absent (0% in Q8), and high-modality language was rarely identified (1% in Q9). Notably, source-based credibility was strong, as 100% confirmed the author's use of expert citations (Q10).

In terms of emotional appeals (Q11), only 16% believed the author appealed to emotions without evidence, while most respondents were either uncertain or disagreed. Consideration of opposing viewpoints was acknowledged by 39% (Q12). Indications of intended reader reaction (Q13) were minimal at 13%. However, 56% observed attempts to deter readers from certain actions by emphasizing negative consequences (Q14).

Concerning evidence selection bias, 98% agreed that the author showed selective preference for certain evidence types (Q15). Persuasive impact was considerable: 80%

reported a shift or openness to different views (Q16), and 90% felt their pre-existing agreement with the author's claim was reinforced (Q17). Finally, perceived unfair bias was low, with only 14% affirming its presence (Q18).

Overall, the data suggest that while respondents clearly recognized persuasive strategies, expert citations, and selective evidence use, they were less likely to detect stylistic devices or informal language. Persuasion appeared effective in shaping or reinforcing opinions, though clarity of purpose and detection of bias were less consistently perceived.

4.1.3.6. Students' Responses to Text Three

The analysis of responses to the eighteen-item questionnaire, designed to assess participants' perceptions of the text's clarity, persuasive features, stylistic devices, and potential bias, reveals distinct patterns. In terms of clarity and perspective, 37% of respondents affirmed that the author's purpose, tone, and intended audience were clear (Q1), while 41% identified the author's perspective or viewpoint (Q2). Detection of persuasive writing strategies was markedly high, with 88% confirming their presence (Q3), though only 32% were able to identify specific indicators of such strategies (Q4).

When examining stylistic and rhetorical devices, relatively low proportions reported on the use of figurative language (14% in Q5), sensory imagery (7% in Q6), and rhetorical figures of speech (13% in Q7). Informal language registers were virtually absent (0% in Q8), and high-modality language was rarely detected (Q9: 0%). By contrast, source credibility was strongly established, as all respondents (100%) confirmed the inclusion of expert quotations or citations (Q10).

Regarding emotional appeals and argument structure, 21% agreed that the author appealed to emotions without sufficient evidence (Q11), while 42% believed opposing viewpoints were considered (Q12). Only 20% detected explicit indications of the author's desired reader reaction (Q13). However, every participant (100%) acknowledged that the

author attempted to discourage certain actions by highlighting negative consequences (Q14), and an equally unanimous 100% confirmed selective evidence use (Q15).

The persuasive impact of the text was evident: 70% reported a shift in perspective or increased openness to alternative viewpoints (Q16), while 90% of those already in agreement stated that their belief was reinforced (Q17). Perceived unfair bias was comparatively low, with 21% affirming its presence (Q18).

Overall, the findings suggest that while the text was widely recognized for its persuasive strategies, strong reliance on expert evidence, and capacity to influence or reinforce opinions, stylistic devices and modality markers were less frequently perceived. The unanimous identification of selective evidence use and consequence-based persuasion points to a deliberate rhetorical approach, though clarity of intent and detection of bias were not universally acknowledged.

4.1.3.7. Students' Responses to Text Four

The analysis of the eighteen-item questionnaire revealed varying levels of recognition of persuasive and rhetorical elements in the examined texts. Regarding clarity of communicative intent, 41% of respondents agreed that the author's purpose, tone, and intended audience were clear, while a notable proportion (49%) expressed uncertainty, suggesting that the intended message was not always explicit. Similarly, 46% perceived that the text reflected the author's perspective or viewpoint, but 45% were unsure, indicating potential ambiguity in authorial stance.

In terms of persuasive techniques, a high proportion (91%) agreed that the text contained persuasive writing strategies, and 34% noted explicit indicators of such strategies, though over half (51%) remained uncertain about their presence. Figurative and sensory language were less frequently recognized; only 15% and 10% of respondents, respectively, acknowledged their presence, with the majority selecting "don't know," indicating either subtle usage or limited reader detection of such devices. Similarly, rhetorical figures of speech

were identified by 14%, whereas informal register (e.g., slang or derogatory language) was almost absent, with 94% denying its presence.

High-modality language was also rarely detected (9%), while citations and references to expert opinions were unanimously recognized (100%), suggesting that evidential support was overt and prominent. Appeals to emotion without supporting evidence were identified by 23% of respondents, but 67% were unsure. Regarding argumentative balance, 52% agreed that opposing viewpoints were considered, while 36% could not determine this.

Indicators of the author's desired reader reaction were noted by 29% of participants. However, targeted persuasive tactics, such as warning against undesirable outcomes (100%) and selective use of evidence (100%), were unanimously acknowledged. Furthermore, 63% reported being convinced to reconsider or be open to a different perspective, and 94% indicated that their existing agreement with the author's position was strengthened. Finally, only 25% perceived the author as having an unfair bias, with a substantial majority (73%) expressing uncertainty.

Overall, the findings suggest that while certain persuasive elements—particularly explicit warnings, selective evidence, and expert citation—were strongly recognized, subtler rhetorical strategies such as figurative language, modality, and emotional appeal were less readily identified by participants, often resulting in high rates of “don't know” responses.

4.1.3.8. Students' Responses to Text Five

The results of the eighteen-item questionnaire indicate varying levels of recognition of authorial intent, rhetorical strategies, and persuasive techniques in the analyzed texts. Nearly half of the participants (48%) agreed that the author's purpose, tone, and intended audience were clear, though 63% expressed uncertainty, suggesting that clarity of communicative intent

was not always apparent. Similarly, 46% perceived the presence of the author's perspective or viewpoint, while an equal proportion (45%) remained unsure.

Persuasive writing strategies were strongly acknowledged, with 97% confirming their presence. However, only 42% reported noticing explicit indicators of these strategies, and more than half (54%) were uncertain, possibly reflecting subtle or indirect use of persuasive cues. Figurative language devices (21%), sensory imagery (13%), and rhetorical figures of speech (21%) were relatively under-recognized, each showing high "don't know" responses (73–80%), indicating that such stylistic elements were either minimally employed or not readily identified by readers. Informal language registers were almost absent, with only 1% confirming their presence and 93% denying it. High-modality expressions were noted by 16% of respondents, but 80% were unsure of their occurrence.

Expert citation was a salient feature of the texts, with unanimous agreement (100%) that the author quoted or cited other works. Emotional appeal without convincing evidence was recognized by 26% of participants, while two-thirds (66%) could not determine its presence. Consideration of opposing viewpoints was confirmed by 73% of respondents, suggesting a notable degree of argumentative balance. Indicators of the author's desired reader reaction were acknowledged by 33% of participants. Certain persuasive tactics were strongly detected: all respondents (100%) agreed that the author attempted to convince readers to avoid something by highlighting undesirable consequences and that selective use of evidence was employed. Persuasive impact was also notable, with 64% reporting that the author influenced them to reconsider or be open to a new perspective, and 80% stating that their existing agreement with the author's claim was strengthened.

Perceptions of unfair bias were more mixed: 43% agreed the author appeared biased, 5% disagreed, and over half (52%) were unsure. Overall, while explicit and overt strategies—

such as selective evidence, warnings, and expert citation—were widely recognized, more subtle rhetorical devices, including figurative language, modality, and indirect persuasive cues, were far less frequently identified.

4.1.3.9 Students' Responses to Text Six

The analysis of the eighteen-item questionnaire revealed clear patterns in participants' perceptions of the text's communicative and persuasive features. More than half of respondents (56%) agreed that the author's purpose, tone, and intended audience were clear, although 39% remained uncertain. Similarly, 61% identified the presence of the author's perspective or viewpoint, while one-third (33%) were unsure.

Persuasive writing strategies were strongly acknowledged by 97% of participants, with 52% also reporting explicit indicators of such strategies in the text. However, a substantial minority (45%) were uncertain about their presence, suggesting that while persuasive intent was apparent, some cues may have been indirect or subtle. Recognition of stylistic features was more limited: figurative language (27%), sensory imagery (15%), and rhetorical figures of speech (20%) were identified by relatively few respondents, with high "don't know" rates (69–79%), indicating either low salience of these devices or difficulty in detecting them. Informal language registers were rarely noted (6%), and high-modality expressions were recognized by only 17% of participants.

Some elements were unanimously or near-unanimously perceived. All respondents (100%) agreed that the author cited the opinions or published work of other experts, employed selective preferences for certain evidence, and attempted to convince readers to avoid something by highlighting undesirable consequences. Similarly, appeals to emotion without supporting evidence were acknowledged by 31%, while 60% were unsure, suggesting these

appeals may have been subtle. A strong majority (78%) agreed that opposing viewpoints were considered, indicating a perception of argumentative balance.

In terms of persuasive impact, 43% of participants reported that the author influenced them to change their mind or consider a different perspective, while 37% disagreed. Among those already in agreement with the author's stance, 71% stated that their belief was reinforced through the provided evidence. Notably, all respondents (100%) perceived the author as having an unfair bias, highlighting a unanimous recognition of partiality despite the acknowledgment of balanced viewpoints in some responses.

Overall, the findings suggest that overt persuasive techniques—such as selective evidence, citation of experts, and highlighting negative consequences—were highly visible to readers, whereas subtler rhetorical devices, including figurative language, modality, and informal register, were far less frequently detected.

4.2. Synthesis of Findings on Students' Responses across the Six Texts

Analysis of student responses across six texts reveals a clear pattern: students were highly adept at recognizing overt persuasive strategies like citing experts, using selective evidence, and warning of consequences, with near-universal detection rates. However, they consistently struggled to identify more subtle elements, including stylistic devices like figurative language, sensory imagery, and informal register, as well as implicit cues regarding the author's intended reaction or emotional appeals. This was evidenced by very low recognition rates and a high degree of uncertainty for these features.

While a gradual improvement was observed from the first to the final text in recognizing the author's purpose and viewpoint, uncertainty remained a dominant feature for less explicit elements. The results indicate a significant disparity between sensing a text's persuasive nature and being able to pinpoint the specific linguistic techniques that create that

effect, with students far more proficient at detecting obvious rhetorical moves than subtle textual markers.

Table 4.10 *Mean Percentage of Response Types by Text*

Text	% Yes	% No	% D'ont know	Total
One	31.61	13.5	54.89	100%
Two	38.8	11.11	50.09	100%
Three	44.22	8.78	47.0	100%
Four	47.06	7.44	45.5	100%%
Five	51.11	6.39	42.5	100%
Six	56.33	7.00	36.67	100%

The longitudinal analysis reveals a significant and positive shift in student response patterns. The data indicates a clear migration from uncertainty and dismissal towards confident critical agreement. The most substantial change was the marked decline in 'Don't Know' responses, which fell from 54.89% (Text One) to 36.67% (Text Six), indicating a strong increase in student decisiveness and confidence in their judgments. Concurrently, 'Yes' responses increased steadily and significantly from 31.61% to 56.33%, demonstrating a improved ability to critically engage with and identify key elements in the texts. The fact that this gain in critical agreement came primarily from a reduction in uncertainty ('Don't Know') rather than a shift from outright dismissal ('No') provides robust evidence that the repeated practice fostered more accurate and confident critical evaluation skills.

4.3. Students' Analysis of Arguments in Texts Using Toulmin's Model

In order to trace students' progress in critical examination of argumentative structures, their responses to six selected texts were analyzed using Toulmin's Model of Argumentation. This framework allowed the researcher to investigate how students identified both the explicit components of arguments (such as claims and supporting data) and the more implicit ones (including warrants, backing, qualifiers, and rebuttals). Presenting the results by text offers a clearer view of students' evolving ability to engage with arguments of varying complexity and

provides insights into the developmental trajectory of their critical reasoning skills over the course of the semester.

4.3.1. Text One

At the beginning of the training, students' responses to Text One were analyzed to examine their ability to identify key components of arguments, including claims, grounds, evidence, warrants, and counterarguments, according to Toulmin's Model. The table below displays the frequency with which students recognized each component, providing a baseline of their argument analysis skills prior to receiving targeted instruction.

Table 4.11 *Students' examination of Text One arguments using Toulmin's framework*

	Elements of Argument Presented Within The Text	Number of Correct Answers
Claim	The main assertion presented in the text is that vaping is significantly less harmful than smoking and could be an effective method to help smokers quit.	(54) 98.18%
Grounds	The grounds supporting this claim include evidence from Public Health England (PHE), such as their assertion that vaping is 95% less harmful than tobacco. They also mention a demonstration involving an experiment showing the stark difference in the accumulation of tar in the lungs of a heavy smoker compared to a vaper.	(32) 58.18%
Warrant	The warrant here is the underlying reasoning connecting the grounds to the claim. In this case, it's the idea that because vaping produces fewer harmful substances and significantly less tar compared to smoking, it is a safer alternative and a potential tool for smoking cessation.	(30) 19%
Backing	There is supporting evidence and authority cited in the text, such as the director of health improvement at PHE, Prof John Newton, and Dr. Lion Shahab from University College London, who advocate for the reduced harm potential of vaping compared to smoking. They refer to studies and experiments to reinforce their claims.	(28) 50.90%
Rebuttal	The text addresses counterarguments and opposing viewpoints. For instance, it mentions skepticism generated by scientific studies and media headlines that highlight potential risks associated with vaping, especially over the long term. It also acknowledges studies suggesting that vaping could harm lung cells, though they maintain that the risks are significantly lower compared to smoking.	(21) 38.18%
Qualifier	Throughout the text, there are qualifiers used to moderate the strength of the claim. Phrases such as "likely to pose only a fraction of the risk," "relatively safe," and "boost your chances of quitting successfully" indicate a degree of uncertainty or acknowledgment of limitations in the claims made.	(17) 30.90%

Note. Text One: “*Public Health England Maintains Vaping Is 95% Less Harmful Than Smoking*” by S. Boseley (*The Guardian*).

The analysis of student responses to the Toulmin model components for The Newspaper Text “*Public Health England Maintains Vaping Is 95% Less Harmful Than Smoking*” by S. Boseley (*The Guardian*) reveals notable variation in the recognition and articulation of argumentative elements. Identification of the main claim—that vaping is significantly less harmful than smoking and could serve as an effective cessation method—was almost universal, with 98.18% (n = 54) of respondents accurately identifying it. This near-complete recognition suggests that when a central assertion is explicitly stated and contextually reinforced, EFL learners can readily locate it.

Recognition of the grounds supporting the claim was less consistent, with 58.18% (n = 32) identifying key evidence from Public Health England (PHE), such as the “95% less harmful” statistic and findings from a comparative tar accumulation experiment. While more than half of the participants were able to locate factual support, a substantial proportion either missed these elements or did not explicitly link them to the claim.

The warrant—the implicit reasoning connecting the evidence (reduced harmful substances in vaping) to the conclusion (vaping as a safer alternative)—was identified by only 19% (n = 10), representing the lowest recognition rate among all components. This finding reflects a persistent challenge in critical reading: making the inferential leap from explicit facts to underlying logical connections.

Backing, in the form of expert endorsements from figures such as Prof. John Newton (PHE) and Dr. Lion Shahab (University College London), was recognized by 50.90% (n = 28) of respondents. This indicates that while many students notice expert citations, fewer fully grasp their function in enhancing the credibility of the argument.

The rebuttal—which included opposing perspectives on vaping’s long-term safety and studies indicating possible harm to lung cells—was correctly identified by 38.18% (n = 21).

Although this suggests moderate awareness of counterargument integration, the fact that over 60% failed to detect it highlights the need for greater emphasis on recognizing dialectical structures in media discourse.

Finally, qualifiers, expressed through hedging phrases such as “likely to pose only a fraction of the risk” and “relatively safe,” were identified by 30.90% (n = 17). The relatively low recognition rate here suggests that linguistic signals of uncertainty or limitation remain less salient to readers, despite their importance in evaluating argument strength.

Overall, the results show that while students excel at detecting explicit, surface-level components—such as the claim and direct factual grounds—their ability to identify implicit, structural, and rhetorical features declines sharply. This pattern underscores the importance of explicit instruction in connecting evidence to claims, identifying counterarguments, and interpreting hedging language in persuasive health-related media texts.

4.3.2. Text Two

Following their initial training, students analyzed Text Two to further develop their ability to identify argument components, including claims, evidence, warrants, and counterarguments, in line with Toulmin’s Model. During this stage, students demonstrated greater awareness of how arguments are structured, paying closer attention to the way authors connect evidence to claims and how counterarguments are addressed or omitted. They also began to notice more subtle forms of reasoning, such as implicit warrants and qualifiers, which they had often overlooked in their earlier analysis of Text One. This deeper engagement suggests that students were not only applying the model mechanically but also refining their critical reading strategies. The table below summarizes the frequency with which students recognized each component, reflecting their growing skills in argument analysis compared to Text One.

Table 4.12 *Students' examination of Text Two arguments using Toulmin's framework*

Elements of Argument Presented Within The Text	Number of Correct Answers
Claim Science, not e-cigarette makers, must tell the public whether vaping is safe.	(36) 65.45%
Grounds The text provides various pieces of data to support this claim: a) Cases of Severe Lung Problem associated with vaping, b) Lack of Identified Cause linked to all cases c) The vaping industry blames "black market" products for the problems but lacks substantial evidence to support this claim. d) Studies conducted by independent scientific institutions, suggest harmful effects of vaping on blood vessels, emphasizing potential long-term consequences. e) FDA Investigation reports of seizures or other neurological symptoms associated with vaping.	(19) 34.54%
Warrant a) Emphasizes the importance of trusting organizations like the CDC to provide unbiased, reliable information regarding vaping safety. b) Points out the conflict of interest for e-cigarette manufacturers, as their claims of safety might be influenced by their financial stakes. c) Draws parallels between the tactics used by the vaping industry and those employed by Big Tobacco before scientific evidence established the harmful effects of cigarettes.	(12) 21.81%
Backing The text supports the claim by highlighting the need for independent scientific research, specifically citing the CDC as a trusted authority, and referencing studies from reputable institutions that illustrate the potential harms of vaping.	(11) 20%
Rebuttal The text counters the claims made by the vaping industry, which blames "black market" products for the health issues, by stating that there's no solid evidence supporting this assertion.	(19) 34.54%
Qualifier The text acknowledges some uncertainty about the exact causes of the reported illnesses associated with vaping while emphasizing the need for further investigation to determine the full extent of the risks.	(28) 50.90%

Note. Text Two: *“Science, Not E-Cigarette Makers, Must Tell the Public Whether Vaping Is Safe”* by C. Sun Times (CST) Editorial Board.

The analysis of responses to the Toulmin model components for *The Newspaper Text “Science, not e-cigarette makers, must tell the public whether vaping is safe”* by the C. Sun Times (CST) Editorial Board reveals moderate to low recognition rates across the three key argumentative elements. The main claim—that science, not e-cigarette manufacturers, should

be the authority in determining the safety of vaping—was identified by 65.45% (n = 36) of respondents. While the central assertion was relatively explicit and thematically reinforced throughout the article, over one-third of participants did not clearly distinguish it from supporting evidence or secondary commentary.

Recognition of the grounds was notably lower, with only 34.54% (n = 19) accurately identifying the range of supporting evidence presented in the text. These included reported cases of severe lung problems linked to vaping, the absence of a single confirmed cause, the vaping industry's unverified attribution of harm to "black market" products, independent research demonstrating negative effects on blood vessels, and FDA investigations into seizures and neurological symptoms. The relatively low detection rate suggests that many respondents either overlooked individual pieces of evidence or failed to recognize them collectively as the factual foundation of the claim.

The warrant (linking the grounds to the claim through reasoning about trustworthiness, conflicts of interest, and historical parallels with the tobacco industry) was identified by only 21.81% (n = 12), marking the lowest recognition rate among the three components. This indicates a significant difficulty in detecting the implicit logic that connects evidence to conclusion. In particular, the underlying reasoning that independent scientific institutions (e.g., the CDC) are more credible than profit-driven industry actors was often missed, as was the analogy to Big Tobacco's history of misinformation.

Overall, the results indicate that while explicit and central argumentative elements such as the main claim were more readily identified, more complex supporting grounds and especially implicit logical connections were less frequently recognized. This mirrors trends observed across other texts in the study, suggesting that while EFL readers can engage with overt assertions, they often struggle to extract dispersed evidence or articulate the underlying

reasoning. These findings underscore the pedagogical need to strengthen students' skills in identifying warrants, a critical competence for informed engagement with public health discourse.

4.3.3. Text Three

At this stage of the training, students analyzed Text Three to continue developing their skills in identifying argument components—claims, evidence, warrants, and counterarguments—following Toulmin's Model. The table below presents the frequency with which each component was correctly recognized, illustrating students' progression in argument analysis compared to the previous texts.

At this stage of the training, students analyzed Text Three to continue developing their skills in identifying argument components, following Toulmin's Model. A detailed analysis of their responses to the newspaper text "Health secretary tells social media firms to protect children after girl's death" (Savage, *The Guardian*) reveals a clear pattern: participants were highly capable of recognizing the explicit main claim but demonstrated significantly lower accuracy in identifying more implicit argumentative components, such as the underlying warrants and nuanced counterarguments. This disparity points to a critical developmental threshold where basic analytical skills are not yet being synthesized into genuine, independent critical thought. Students can successfully locate the overt, surface-level elements of an argument but struggle to deconstruct the deeper logical connections and assumptions that constitute its foundation. The table below presents the frequency with which each component was correctly recognized, illustrating this progression—and its limitations—in their analytical capabilities compared to the previous texts. This data underscores that moving from mere identification to true comprehension requires mastering the synthesis of these discrete components into a coherent understanding of the argument's overall structure and

persuasiveness.

Table 4.13 *Students' examination of Text Three arguments using Toulmin's framework*

Elements of Argument Presented Within The Text		Number of Correct Cnswers
Claim	The main claim in the text is that social media companies need to take more significant measures to protect children from harmful online content, particularly content related to suicide and self-harm.	(54) 98.18%
Evidence	The evidence provided includes the case of Molly Russell, a 14-year-old who took her own life, and whose social media accounts contained distressing material about depression and suicide. The health secretary, Matt Hancock, references the rising levels of self-harm among teenage girls and the fact that suicide is now the leading cause of death for young people under 20.	(38) 69.09%
Warrant	The implied warrant is that exposure to harmful online content, especially content promoting self-harm and suicide, contributes to mental health issues among young people.	(21) 38.18%
Backing	The backing for the argument comes from the health secretary's position and authority, as well as the acknowledgment of the severity of the issue by referencing research and statistics on suicide rates and self-harm.	(34) 61.81%
Rebuttal	While not explicitly stated, the text anticipates potential counterarguments by mentioning the benefits of new technology and the need to balance these benefits with concerns about risks. It also addresses potential objections from social media companies by warning them of legal consequences if they fail to act.	(19) 34.54%
Qualifier	Qualifiers in the text include phrases such as "I am in no doubt about the harm this material can cause" and "It is time for internet and social media providers to step up." These expressions convey a sense of urgency and emphasize the gravity of the situation.	(17) 30.90%

Note. Text Three: *“Health Secretary Tells Social Media Firms to Protect Children After Girl's Death”* by M. Savage (*The Guardian*).

The analysis of student responses to the argument structure in the newspaper text “Health secretary tells social media firms to protect children after girl’s death” (Savage, The Guardian) shows that participants were highly capable of recognizing the explicit main claim but demonstrated lower accuracy in identifying more implicit argumentative components.

The main claim—that social media companies must take more significant measures to protect children from harmful online content, particularly suicide- and self-harm-related material—was identified by 98.18% of respondents (n = 54), indicating near-universal

recognition. Similarly, evidence supporting this claim, which included the widely publicized case of Molly Russell and statistical references to rising self-harm rates among teenage girls and suicide being the leading cause of death for those under 20, was detected by 69.09% of respondents (n = 38). This relatively high rate suggests that participants were responsive to concrete, real-life examples and statistical information when linked clearly to the claim.

In contrast, recognition of the warrant—the underlying reasoning that harmful online content contributes to mental health deterioration in young people—was considerably lower, at 38.18% (n = 21). This result aligns with patterns observed in other analyzed texts, where students often struggled to identify implicit causal connections between evidence and claims. The backing, which drew authority from the Health Secretary’s official position and from research on suicide and self-harm prevalence, was correctly identified by 61.81% (n = 34), indicating moderate awareness of how authoritative sources strengthen an argument.

The qualifier, expressed through emphatic statements such as “I am in no doubt about the harm this material can cause” and “It is time for internet and social media providers to step up,” was identified by 30.90% (n = 17). This shows limited recognition of language that signals certainty and urgency, possibly because students focused more on factual content than on rhetorical indicators. The rebuttal, which indirectly addressed potential counterarguments by acknowledging the benefits of technology while stressing the need to mitigate risks and warning of possible legal consequences for non-compliance, was identified by only 34.54% (n=19). This low rate suggests that students may have difficulty detecting counterargumentation when it is not explicitly marked.

These findings reinforce a recurring pattern across the dataset: while explicit claims and concrete evidence are generally well-recognized, implicit reasoning, hedging or qualifying language, and counterarguments remain challenging for learners to identify. This highlights the pedagogical importance of targeted instruction in unpacking underlying

warrants and recognizing nuanced rhetorical elements in news discourse.

4.3.4. Text Four

At this point in the training, students analyzed Text Four to further enhance their ability to identify and evaluate argument components, using Toulmin’s Model. The table below presents the frequency with which students correctly recognized each component, highlighting their continued development in argument analysis skills.

Table 4.14 Students’ examination of Text Four arguments using Toulmin’s framework

Elements of Argument Presented Within The Text		Number of Correct Answers
Claim	Excessive use of social media is linked to depression in teenagers, particularly girls.	(55) 100%
Evidence (Data)	The study in the <i>Lancet’s EClinical Medicine</i> journal involving over 11,000 14-year-olds in the UK. Statistics showing that girls who spent more than five hours a day on social media were nearly 40% more likely to show signs of depression compared to boys.	(45) 81.81%
Warrant	1 st The assumption that a correlation between social media use and depression implies a causal relationship. 2 nd The idea that the study's findings are applicable to the broader population of teenagers.	(31) 56.36%
Backing	The statement by Stephen Scott, director of the National Academy for Parenting Research at King’s College London, supporting the idea that excessive social media use leads to poorer confidence and mental health.	(32) 58.18%
Rebuttal	The text doesn't explicitly address potential counterarguments or alternative explanations for the observed correlation. It could explore other factors influencing depression, independent of social media use	(27) 09.36%
Qualifier	The use of phrases like "it is likely" and "it seems" acknowledges a degree of uncertainty and does not present the findings as absolute truths.	(38) 69.09%
Note. Text Four: “ <i>Social Media Is Making Teen Girls Depressed, Study Says</i> ” by H. Sparks (<i>New York Post</i>).		

Analysis of student responses to the argument structure in the newspaper text “Social media is making teen girls depressed, study says” (Sparks, *New York Post*) indicates that the main claim was the most easily recognized component, while more nuanced argumentative elements were identified with varying degrees of success.

The main claim—that excessive social media use is linked to depression in teenagers,

particularly girls—was correctly identified by all respondents (100%, $n = 55$). This perfect recognition rate suggests that the claim was both clearly articulated in the text and readily accessible to the readers. The evidence, drawn from a large-scale study published in *The Lancet's EClinical Medicine* involving over 11,000 14-year-olds in the UK, was recognized by 81.81% ($n = 45$) of respondents. The statistical detail that girls spending more than five hours a day on social media were nearly 40% more likely to exhibit signs of depression than boys appears to have been a particularly salient feature that aided detection.

In contrast, the warrant—comprising the assumptions that the observed correlation suggests a causal relationship and that the study's findings can be generalized to the wider teenage population—was identified by 56.36% ($n = 31$). This moderate rate reflects a common challenge for students in detecting implicit reasoning that connects data to the claim. The backing, provided through Stephen Scott's authoritative statement linking excessive social media use to reduced confidence and poorer mental health, was recognized by 58.18% ($n = 32$), suggesting a comparable ability to identify the role of expert authority in strengthening an argument.

The qualifier, conveyed through hedging language such as “it is likely” and “it seems,” was identified by 69.09% ($n = 38$). This relatively higher recognition compared to other texts in the dataset may be due to the repeated and explicit use of modal expressions, which made the rhetorical moderation more visible. By contrast, the rebuttal—or, in this case, the lack of an explicit rebuttal—was identified by only 49.09% ($n = 27$). Students who recognized this absence noted that the text did not explore alternative explanations for the depression–social media link, such as other environmental or psychological factors.

Overall, the data indicate that while EFL learners are highly effective at identifying explicit claims and well-supported statistical evidence, they still face difficulties in detecting underlying assumptions, understanding the function of expert authority, and noting when

counterarguments are omitted. These findings reinforce the importance of targeted instruction in identifying both the implicit reasoning and rhetorical strategies used in media texts addressing public health and social concerns.

4.3.5. Text Five

At this stage of the training, students analyzed Text Five to continue refining their skills in identifying and evaluating argument components according to Toulmin's Model. This particular text, an op-ed piece arguing for a controversial policy shift, featured a higher degree of rhetorical complexity than previous readings, with more implicit warrants and embedded counterarguments. The analysis revealed a telling pattern: while student proficiency in locating explicit claims and direct evidence remained high, their ability to correctly identify the subtler, often unstated warrants and to distinguish nuanced counterarguments from the author's main line of reasoning proved to be significantly more challenging. This suggests that the current developmental threshold involves bridging the gap between simple identification and the deeper, critical synthesis of how these components interact to build a persuasive (and sometimes deliberately misleading) case. The table below shows the frequency with which students correctly recognized each component, illustrating their progressive development in argument analysis across the semester.

Table 4.15 *Students' examination of Text Five arguments using Toulmin's framework*

Elements of Argument Presented Within The Text	Number of Correct Answers
Claim	The primary claim is that the consumption of caffeinated energy drinks, particularly among teenagers, is on the rise, raising concerns due to their potential health impacts and addictive nature. (55) 100%
Grounds (Evidence/Support)	The text provides various grounds to support the claim, such as the rapid growth in sales of energy drinks, the high levels of sugar and caffeine in these beverages, and the potential addictiveness associated with their consumption. Specific examples, like Tom Cabrera's reliance on energy drinks to get through the day, are presented. (36) 65.45%
Warrant (Reasoning/Justification)	The reasoning behind the claim is that the high levels of caffeine and sugar in energy drinks, coupled with their popularity and marketing strategies, may contribute to addictive behaviors and have adverse health effects, especially among teenagers. The concern is that these drinks may be replacing healthier dietary choices for some individuals. (32) 58.18%
Backing (Additional Support)	The text mentions concerns raised by scientists and nutritionists about the impact of caffeine on children, the addictive potential of energy drinks, and the lack of clear marketing guidelines targeting age groups. It also cites countries like France, Denmark, Norway, and Argentina that have regulated or banned certain energy drinks due to their caffeine content. (27) 49.09%
Rebuttal (Counter-arguments)	The text mentions statements from energy drink manufacturers denying marketing to children and asserting the safety of their products. It also notes that the definition of "children" is not always clear, as companies like Coke and Pepsi claim to target those older than 20 (21) 38.18%
Qualifier	While the text presents concerns about energy drinks, it also includes statements from energy drink manufacturers asserting their safety and claiming no marketing to children. The disclaimers on the cans warning against consumption by children, pregnant women, or caffeine-sensitive individuals are acknowledged. (24) 43.63%

Note. Text Five: “A Jolt of Caffeine in the Can” by M. Warner (*The New York Times*).

Student analysis of the newspaper text “A Jolt of Caffeine in the Can” (Warner, New York Times) revealed strong recognition of explicit argument components, particularly the central claim, with decreasing accuracy for more implicit rhetorical elements.

The primary claim—that the consumption of caffeinated energy drinks, particularly among teenagers, is rising and poses potential health and addiction concerns—was identified by all respondents (100%, n = 55). This unanimous recognition indicates that the claim was both prominently stated and contextually reinforced throughout the text. The grounds supporting this claim, which included evidence of rapid sales growth, high sugar and caffeine content, potential addictiveness, and illustrative examples such as Tom Cabrera’s daily reliance on energy drinks, were recognized by 65.45% (n = 36). This suggests that while many students could detect explicit factual and anecdotal evidence, some may have overlooked supporting examples embedded within descriptive passages.

The warrant, which connected the consumption patterns and beverage composition to addictive tendencies, adverse health effects, and the displacement of healthier dietary choices, was identified by 58.18% (n = 32). This moderate recognition rate reflects the challenge of tracing implicit causal reasoning from data to claim. The backing, consisting of expert concerns, international regulatory actions, and the absence of clear marketing restrictions for youth, was identified by 49.09% (n = 27), showing that fewer students recognized the role of external authority and comparative policy examples in reinforcing the argument.

The qualifier, which tempered the argument by acknowledging energy drink manufacturers’ safety assurances, non-marketing claims toward children, and on-can disclaimers, was detected by 43.63% (n = 24). The relatively low identification rate suggests that students may not always attend to hedging or limiting language, especially when it appears alongside corporate statements. Similarly, the rebuttal, which presented counterarguments from manufacturers and addressed definitional ambiguities regarding “children” in marketing claims, was recognized by only 38.18% (n = 21). This indicates that recognizing counterarguments—especially when embedded in corporate perspectives—remains a key area for instructional focus.

Overall, the data demonstrate that EFL students readily identify explicit claims and concrete evidence in media discourse but encounter greater difficulty when interpreting implicit reasoning, expert backing, hedged statements, and counterarguments. These findings point to the need for explicit teaching strategies that train learners to detect less overt argumentative components, particularly in commercially and politically sensitive topics like food and beverage marketing.

4.3.6. Text Six

In the final stage of the training, students analyzed Text Six to consolidate their ability to identify and evaluate argument components (claims, evidence, warrants, and counterarguments) using Toulmin's Model. This text presented a particular challenge as a two-sided refutational argument, a structure that requires the author to not only present their own case but also to acknowledge, accurately represent, and then systematically dismantle an opposing viewpoint. This complexity placed a premium on students' higher-order critical thinking, demanding they distinguish between the author's core argument and the alternative perspective being presented for refutation. Success here depended on synthesizing their analytical skills to trace how evidence and warrants were strategically deployed to both build up one side and tear down the other. The results indicate that this sophisticated task pushed students to their analytical limits, revealing a clear hierarchy of competency that was strongest for surface-level components and weakest for the underlying mechanics of persuasion. The table below presents the frequency with which students correctly recognized each component, providing a summary of their argument analysis skills at the conclusion of the study.

Table 4.16 *Students' examination of Text Six arguments using Toulmin's framework*

Elements of Argument Presented Within The Text		Number of Correct Answers
Claim	The main claim of the text is that coffee is a reasonable addition to a healthy diet and that it has more potential benefits than drawbacks.	(55) 100%
Grounds	The author supports the claim by presenting various research findings and studies on the health effects of coffee. The grounds include studies on cardiovascular health, cancer risks, liver health, neurological disorders, Type 2 diabetes, and mortality.	(55) 100%
Warrant	The underlying warrant is that scientific studies and meta-analyses are reliable sources of information, and their findings can be used to draw conclusions about the health effects of coffee. The author assumes that a preponderance of evidence from multiple studies strengthens the argument for the health benefits of coffee.	(45) 81.81%
Backing	The author reinforces the argument by referencing specific studies, such as a systematic review and meta-analysis on long-term coffee consumption and the risk of cardiovascular disease, a meta-analysis on stroke, and various studies on cancer risks and liver health. These studies are presented as evidence supporting the positive effects of moderate coffee consumption.	(27) 49.09%
Qualifier	The author acknowledges certain limitations and nuances in the argument. For example, there is a distinction between black coffee and coffee-based beverages with added sugar and fat. The author also notes that the positive associations are based on observational studies, and randomized controlled trials are not as prevalent.	(36) 65.45%
Rebuttal	The author addresses potential counterarguments by mentioning concerns about cancer risks associated with coffee. However, the author contends that when considering the aggregate findings of studies, most of these negative outcomes disappear. The rebuttal emphasizes the importance of looking at the overall picture rather than cherry-picking individual studies.	(49) 89.09%
Modal qualifier	The text includes statements that add a sense of probability to the claims. For instance, phrases like "linked to," "associated with," and "might be associated" suggest a level of probability rather than absolute certainty.	(32) 58%

Note. Text Six: “*More Consensus on Coffee’s Effect on Health than You Might Think*” by Aaron E. Carroll (*The New York Times*).

The analysis of responses to the Toulmin model components for The Newspaper Text “More Consensus on Coffee’s Effect on Health than You Might Think” by Aaron E. Carroll in The New York Times reveals generally high recognition rates for explicit argumentative elements, with moderate to lower recognition for more nuanced rhetorical features. The main claim—

that coffee is a reasonable addition to a healthy diet and offers more potential benefits than drawbacks—was accurately identified by all respondents (100%, n = 55), indicating strong recognition when the central assertion is both explicit and repeated throughout the text.

Recognition of the grounds was equally high, with 100% (n = 55) of participants identifying the range of supporting evidence, which included multiple studies on cardiovascular health, cancer risks, liver health, neurological disorders, Type 2 diabetes, and overall mortality. This suggests that respondents were highly adept at detecting factual evidence when it was presented in a clear, structured manner.

The warrant—that scientific studies and meta-analyses are credible and that converging evidence strengthens the case for coffee’s health benefits—was recognized by 81.81% (n = 45). While this represents a relatively strong rate compared to other texts in the study, it still indicates that nearly one-fifth of respondents did not explicitly connect the presented studies to the underlying assumption about the authority of scientific research. Recognition of backing—specific high-credibility references such as systematic reviews and meta-analyses on cardiovascular disease, stroke, and cancer—was notably lower at 49.09% (n = 27). This suggests that while participants noticed evidence, they did not always distinguish between general grounds and additional authoritative support.

Qualifiers, including the distinction between black coffee and sugar-laden coffee beverages and the acknowledgment that much of the evidence comes from observational rather than experimental studies, were identified by 65.45% (n = 36). This reflects moderate awareness of how arguments are moderated to convey caution and scope.

Rebuttals, such as the discussion of potential cancer risks and the counterargument that aggregated evidence largely neutralizes these concerns, were well recognized by 89.09% (n = 49). This suggests that respondents were attentive to counterarguments when they were explicitly framed and directly addressed.

Finally, modal qualifiers—linguistic cues indicating probability rather than certainty, such as “linked to” or “might be associated with”—were identified by 58% of participants, revealing that a significant proportion did not consistently register these subtle hedging devices.

Overall, the pattern for this text stands out from others in the study, with unusually high recognition of both the main claim and grounds, and strong awareness of rebuttals. However, recognition declined when moving toward deeper rhetorical elements such as backing, qualifiers, and modal qualifiers, underscoring the persistent challenge of identifying nuanced argumentative features even when the subject matter is familiar and positively framed.

4.4. Synthesis of Findings on Students’ Analysis of Arguments across the Six Texts

As illustrated in Figure 4.2, students' ability to analyze arguments varied dramatically depending on the component of Toulmin's model being examined. Performance was highest for identifying the core components of an argument. The Claim (93.35 %) was identified with near-perfect accuracy, and Ground (Data) (68.18%) was also identified proficiently.

However, a significant decline in performance is observed for components requiring deeper, more inferential reasoning. The ability to identify the Warrant (45.89%), which connects evidence to the claim, proved considerably more challenging. The most difficult components were those requiring critical evaluation of the argument's structure and validity: Backing (48.18%), Qualifier (47.24%), and Rebuttal (40.65%). This clear disparity suggests a proficiency in surface-level identification but a struggle with the critical examination of underlying logic and counter-perspectives.

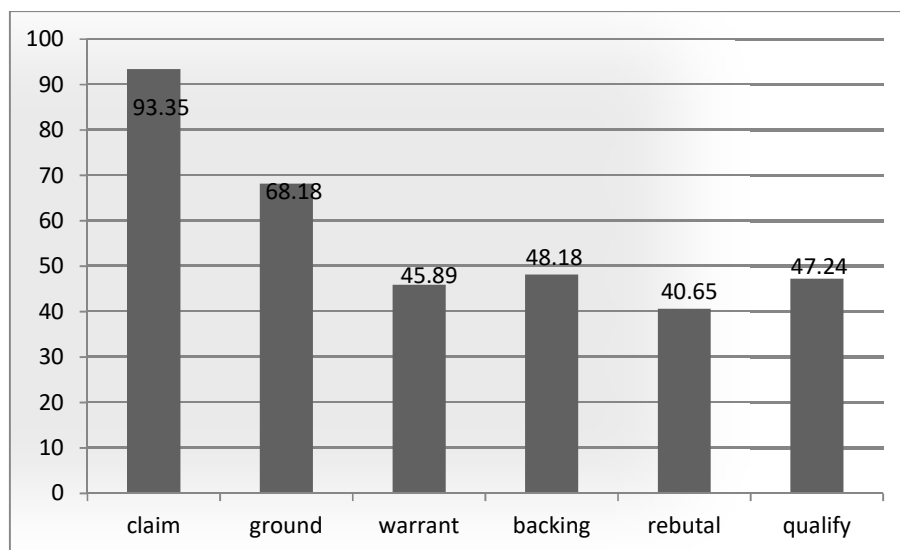


Figure 4.2 *Mean scores of students' ability to identify the components of arguments*

This finding is significant because it highlights both the strengths and the limitations of students' critical reasoning development when working with authentic argumentative texts. The ability to identify claims and data demonstrates that students are acquiring essential skills for recognizing the explicit structure of arguments, which is a foundational step in critical media literacy. However, their relative difficulty in detecting the warrant, backing, qualifier, and rebuttal signals that deeper, implicit reasoning processes remain underdeveloped. This gap underscores the pedagogical challenge of moving students beyond surface-level comprehension toward more sophisticated analytical skills, where they can interrogate the assumptions, conditions, and counterarguments underlying a text. In other words, the finding suggests that while students can grasp what is being said, they still struggle to evaluate how and why arguments are constructed in particular ways—a crucial competence for navigating persuasive media and public health discourses critically.

4.5. Readers' Perceptions of Bias and Objectivity in the Six Texts

As mentioned earlier, throughout the quasi-experimental course the author presented students with six newspaper articles, grouped into three themes on public health issues. In addition to analysing the arguments within each text (see previous section), students were instructed to evaluate the articles on an objectivity–bias scale, highlight specific statements that illustrated objectivity or bias, and explain the reasoning behind their evaluations. This procedure was designed to examine the interplay between students' prior issue attitudes and their perceptions of bias and objectivity, while also investigating the influence of critical-thinking-oriented practices on decreasing confirmation bias between the pre- and post-tests. The hypothesis assumed that as critical thinking develops, confirmation bias (defined as the tendency to perceive information that aligns with one's own beliefs as more objective) would decrease, thereby fostering a more positive reading experience. The subsections below present the results of this data , with each subsection devoted to one of the six articles.

4.5.1. Text One

Participants were asked to identify words or phrases they considered biased, and their responses revealed varying levels of sensitivity to persuasive language. While some readers highlighted instances where the author appeared to use emotionally loaded or subjective terms, others viewed the text as generally objective. Table4.11 shows a summary of the frequency of biased words detected by readers, offering a clearer picture of the patterns that emerged from their analysis.

Table 4.17 *Biased words /phrases and their functions found by readers in Text One*

Word/phrase	Function	Detection Rate
Tragic	Used to emphasize the potential negative consequences of people not quitting smoking due to fears about vaping.	(31) 56.36%
Reassure	Used to encourage smokers to switch to vaping by assuring them that it is much less harmful than smoking.	(4) 7, 27%
Devastating	Used to highlight the serious health risks of smoking.	(14) 25.45%
Tiny	Used to emphasize that the risks from vaping are much smaller than the risks from smoking.	(6) 10.90%
Passionate	Used to suggest that scientists are strongly motivated to improve public health.	(15) 27.27%
Misleading	Used to criticize studies that have cast doubt on the safety of vaping.	(28) 50.90%
Contradictory	Used to suggest that there is no clear consensus on the safety of vaping.	(5) 9.09%
Don't know who to believe	Used to express the confusion and uncertainty that many people feel about vaping.	(7) 12.75 %
Believe the thing that suits them best	Used to suggest that people are more likely to believe information that confirms their existing beliefs.	(1) 1.81%
Far less harmful	Used to emphasize that vaping is much safer than smoking.	(12) 21.81%
Big jump	Used to highlight the dramatic increase in vaping among teenagers.	(21) 38.18%
No studies	Used to suggest that there is no evidence that vaping increases tobacco use among young people in the UK.	(45) 81.81%
False belief	Used to describe the misconception that vaping is as harmful as smoking.	(55) 100%

Note. Text One: “*Public Health England Maintains Vaping Is 95% Less Harmful Than Smoking*” by S. Boseley (*The Guardian*).

An analysis of students’ responses to the selected lexical items and phrases in Text One reveals clear trends in the perception of bias. The detection rates show that students were most alert to language that appeared categorical, emotive, or strongly evaluative. The term “False belief”, used to reject the misconception that vaping is as harmful as smoking, was identified as biased by all students (100%), suggesting that direct refutation of public misconceptions in the context of the article’s central claim heightened perceptions of persuasive intent. Similarly, “No studies” (81.81%) and “Tragic” (56.36%) drew high bias recognition, indicating that students were sensitive to both emphatic expressions of evidence absence and

emotionally charged depictions of smoking-related consequences.

Moderate detection was observed for “Misleading” (50.90%) and “Big jump” (38.18%), terms that in the article frame vaping debates in ways that could be seen as undermining opposing research or alarmingly portraying trends in teenage vaping. Conversely, “Believe the thing that suits them best” (1.81%) and “Reassure” (7.27%) were seldom marked, implying that low-intensity persuasive language embedded in the article’s discussion of vaping risks often escaped notice. Similarly, descriptors such as “Tiny” (10.90%) and “Contradictory” (9.09%) attracted minimal bias detection, likely due to their relatively neutral tone.

Overall, in the context of the article’s headline claim that vaping is “95% less harmful than smoking”, students appeared more attuned to overt, absolute, and emotionally loaded expressions than to subtler framing strategies. This suggests that while they could readily identify explicit bias markers in health reporting, more implicit linguistic persuasion remained under-recognized.

The readers’ responses show that objectivity in the excerpt was primarily associated with the attribution of information to a source, as many participants highlighted the phrase “*Public Health England (PHE) maintains, anti-tobacco campaigners are alarmed that ...*”. This indicates that readers perceived the act of citing an authority and acknowledging opposing positions as a key marker of neutrality. Additionally, some readers recognized that the verbs used in the text do not carry positive or negative connotations, which supports the idea that the author is presenting information in a restrained and factual manner. Furthermore, a number of readers observed that the author avoids presenting the statement as absolute certainty, instead framing it as a position maintained by PHE rather than an undeniable truth. The strategy of presenting contrasting viewpoints and evidence was also noted, though to a lesser extent, suggesting that balance contributes to readers’ sense of objectivity. Finally, the

absence of evaluative adjectives in the description of events and actions was only slightly identified, implying that readers were less sensitive to this subtler indicator of objectivity compared to explicit source attribution and balanced reporting.

4.5.2. Text Two

In examining readers’ perceptions of bias and objectivity in Text Two, attention was given to the specific lexical choices that shaped their judgments. Students highlighted a range of objective words and phrases which contributed to the impression of neutrality and balance in the text. The table below presents a selection of these words along with their frequencies, illustrating the linguistic markers most frequently identified as indicators of objectivity.

Table 4.18 *Biased words /phrases and their functions found by readers in Text Two*

	Elements of Argument Presented Within The Text	Number of Correct Answers
scary	Used to describe the potential harm that e-cigarettes could cause. It is designed to evoke feelings of fear and anxiety in the reader.	(27) 49.09%
crisis	Used to describe the recent outbreak of lung problems associated with vaping. It is designed to make the situation seem more urgent and serious.	(28) 50.90%
mystery	Used to describe the fact that the exact cause of the lung problems is still unknown. It is designed to create a sense of uncertainty and unease	(34) 61.81%
harmful	Used to describe the effects of e-cigarettes on blood vessels and the nervous system. It is designed to warn the reader of the potential dangers of vaping.	(31) 56.36%
deceitful	Used to describe the vaping industry’s attempts to cast blame for the lung problems on black market products. It is designed to make the industry seem untrustworthy.	(5) 9.09 %
predatory	Used to describe the vaping industry’s marketing of e-cigarettes to young people. It is designed to make the industry seem irresponsible and exploitative	(11), 20%

Note. Text Two: “*Science, Not E-Cigarette Makers, Must Tell the Public Whether Vaping Is Safe*” by C. Sun Times (CST) Editorial Board.

The student response data demonstrates a strong ability to identify overt bias, particularly fallacious reasoning and framing. The high detection rates for "Big Tobacco" (94.54%), "so-called experts" (87.27%), and "tens of billions at stake" (81.81%) show students are highly adept at recognizing guilt-by-association, ad hominem attacks, and motive framing. However,

the analysis reveals a gap in detecting subtler persuasive techniques. Softer emotive language like "scary" (56.36%) and "full-court press" (50.90%) had lower identification rates. More significantly, several key biased words were entirely missed by the cohort. Critical undetected terms included "mystery," which frames the science as unsettled to dismiss industry claims; the definitive dismissal of "no solid evidence"; and the loaded phrasing "to keep from," which paints industry actions as obstructionist.

In summary, students are skilled at deconstructing the article's main argumentative but are still developing an eye for the nuanced word choices that advance the author's position more subtly. This indicates a need for further focus on analyzing how connotation and implication, not just overt claims, are used to persuade.

4.5.3. Text Three

In an examination of reader perceptions of bias and objectivity in Text Three, attention was given to the specific lexical choices that shaped their judgments. Students highlighted a range of emotive and stance words and phrases. Conversely, they also pointed to words and phrases that signaled neutrality and distance, most notably those related to attribution and factual reporting.

This dual focus suggests that readers' assessments of objectivity are highly sensitive to both the presence of emotionally charged language and the use of neutral, fact-based reporting techniques. The table below presents a selection of the words identified, illustrating the linguistic markers most frequently associated with either bias or objectivity.

Table 4.19 *Biased words /phrases and their functions found by readers in Text Three*

Word/phrase	Function	Detection Rate
appalling	The word "appalling" is used to evoke a strong emotional response in the reader. By using this word, Hancock is trying to make the point that the current situation is unacceptable and that something needs to be done to change it.	(31) 56.36%
step up and purge	The phrase "step up and purge" in the text contains strong language that implies a need for decisive action and a forceful removal of content.	(44) 80.00%
horrified	The use of "horrified" is emotionally charged and suggests a personal reaction, contributing to a biased tone.	(23) 41.81%
bravery	the use of "bravery" introduces a subjective evaluation of Molly's father's actions.	(10) 12.18%
this cannot be right	The phrase "this cannot be right" implies a value judgment and personal opinion on the appropriateness of certain online content, implying that this situation is morally wrong and requires immediate action.	(17) 30.90%
tragic	The use of "tragic" conveys a sense of great sadness and loss, suggesting that Molly Russell's death is a source of profound emotional distress and regret.	(11) 20.0%

Note. Text Three: *“Health Secretary Tells Social Media Firms to Protect Children After Girl's Death”* by M. Savage (*The Guardian*).

An analysis of reader responses reveals significant variation in the ability to identify biased language within a given text. Readers were asked to detect words and phrases indicating bias in an article concerning the Health Secretary's demands for social media regulation.

The data shows that certain forceful and imperative phrases were most easily identified by a majority of readers. The most recognized example was "step up and purge," with a high detection rate of 80.00%. This suggests that overt calls to action with aggressive connotations are readily apparent to audiences. Similarly, the strong moral judgment embedded in the word "appalling" was detected by 56.36% of respondents, indicating that explicitly negative emotional language is also fairly conspicuous. However, other emotionally charged words were less frequently identified. The term "horrified" was spotted by 41.81% of readers, while "tragic" or "tragically" was detected by only 20.00%.

This indicates that while strong emotions are somewhat noticeable, their potency as tools of bias may be underestimated by over half the readership.

More nuanced persuasive techniques went largely unnoticed. The moral framing of "inspired by the bravery of Molly's father"—a phrase designed to build the Health Secretary's credibility—was detected by a mere 12.18% of readers. Furthermore, descriptive phrases like "distressing material" and "graphic material," which pre-judge content with a negative connotation, were not detected at all by the participants in this exercise. This points to a potential blind spot where adjective-led framing is accepted without critical scrutiny. It is also worth noting that the provided text contains fallacious arguments. (false cause fallacy occurs when the "link between premises and conclusion depends on some imagined causal connection that probably does not exist) which was not detected by readers.

The detection rate for the direct moral pronouncement "this cannot be right" was 30.90%, sitting in the middle of the spectrum. This suggests that while a third of readers recognize a definitive statement as biased, a significant majority may accept it as a reasonable conclusion rather than a subjective opinion.

The analysis of the underlined passages reveals that readers primarily associate objectivity with two distinct rhetorical strategies: the attribution of claims and the presentation of statistical data. The act of underlining phrases that explicitly separate the reporter's voice from the subjects' opinions—such as "Matt Hancock warns" or "Her father, Ian, said"—indicates a preference for clearly sourced information. This suggests that readers perceive journalistic fairness and impartiality in the transparent reporting of who said what, allowing them to independently assess the validity of the statements. Concurrently, the consistent highlighting of specific statistics, such as "Suicide is now the leading cause of death for young people under 20," underscores a fundamental trust in quantitative evidence. Readers appear to equate numbers with objective truth, viewing them as unbiased facts that lend authority and

credibility to the narrative, thereby distinguishing factual reporting from personal commentary.

In an analysis of reader perceptions of bias and objectivity in Text Three, the data indicates a clear preference for explicit attribution and quantitative evidence as markers of impartiality. Readers consistently underlined phrases that directly quoted or referenced individuals, suggesting that they equate objectivity with the separation of a reporter's voice from the opinions of their subjects. Similarly, the frequent highlighting of statistical data points demonstrates a trust in numerical information as a source of unbiased, factual truth. This pattern suggests that for many readers, objectivity is not a subtle quality of tone or framing but is instead grounded in the presence of verifiable sources, whether they are people or numbers.

4.5.4. Text Four

In an examination of reader perceptions of bias and objectivity in Text Four, attention was given to the specific lexical choices that shaped their judgments. Students highlighted a range of stance markers . Conversely, they also pointed to words and phrases that signaled neutrality and distance, most notably verbs giving an overall impression of a neutral tenor and objective reporting. This dual focus suggests that readers' assessments of objectivity are highly sensitive to both the presence of emotionally charged language and the use of neutral, fact-based reporting techniques. Below is a table showing the frequency of some of the words that readers most often identified as biased.

Table 4.20 *Biased words /phrases and their functions found by readers in Text Four*

Word/phrase	Function	Detection Rate
"Making" in the Title	The use of the word "making" in "Social media is making teen girls depressed" implies a direct causation between social media and depression. It may be more accurate to say there is a correlation.	(7) 12.75 %
Less Than Desirable Aspects	The phrase "less than desirable aspects" carries a subjective tone, as it suggests a value judgment. What is considered "desirable" can vary among individuals.	(11) 20%
Impossible Beauty Standards	The term "impossible beauty standards" introduces a subjective assessment. It may be more neutral to describe societal beauty standards without labeling them as "impossible."	(27) 49.09%
Hard Links" and "Draw Hard Links	The use of "hard links" may imply a stronger causation than the study might establish. It's essential to be cautious about overstating the certainty of causal relationships.	(23) 41.81%
Consistently about Twice as Likely	While the study may show a correlation, the use of "consistently about twice as likely" could be seen as emphasizing the gender difference in a way that might be considered biased.	(10) 18.18%
Many Adolescents Tend to Hate Their Bodies	The phrase "many adolescents tend to hate their bodies" could be seen as a broad generalization and may not accurately represent the diverse range of adolescent experiences.	(28) 50.90%
Bombarded with Images of Unattainable Physiques	The phrase "bombarded with images of unattainable physiques" introduces a subjective element, as what is deemed "unattainable" can vary among individuals.	(17) 30.90%
Girls, It Seems, Are Struggling More Than Boys	The suggestion that the study "calls on industry to more tightly regulate hours of social media use" reflects a policy stance. Different perspectives exist on the role of regulation, and this statement might be considered biased.	(31) 56.36%

Note. Text Four: *"Social Media Is Making Teen Girls Depressed, Study Says"* by H. Sparks (*New York Post*).

A reader analysis of the text reveals a strong and consistent identification of biased language and methodological concerns, despite the article's presentation as a factual report on a scientific study. The data shows that readers were highly attuned to the article's framing, with a majority (50.90%) flagging the phrase "Many adolescents tend to hate their bodies" as a

biased or misleading factual statement. This suggests that readers questioned the article's attempt to present a generalized, negative assumption as an uncontested fact.

The most significant finding from the readers was the focus on causation. A high percentage (41.81%) identified the article's attempt to "draw hard links" between social media use and depression as a major red flag. This phrase implies a definitive, causal relationship that observational studies like this one cannot actually prove. Readers intuitively understood that correlation (two things happening together) is not the same as causation (one thing causing the other). This was compounded by the fact that the phrase "Researchers believe" was frequently criticized for its vagueness, as it fails to attribute claims to specific scientists, weakening the argument's credibility.

Furthermore, readers detected a clear bias in the article's framing of the problem. A striking 56.36% noted the conclusion that "Girls, it seems, are struggling more than boys," indicating they found the gendered comparison to be overly simplistic or potentially reductive. This focus was underpinned by the prominent identification of "Impossible Beauty Standards" (49.09%) as a key theme, highlighting that readers connected the article's argument to a broader, pre-existing cultural critique.

A critical blind spot was also exposed: the article's narrow focus on social media. Readers noted that the author posed a rhetorical question ("And where else are they likely to be bombarded with images...?") that assumes social media is the primary or sole source of unattainable physiques. This ignores other powerful media influences like television, magazines, and movies, presenting a biased and incomplete picture of the environmental pressures on adolescents.

In conclusion, while the article reports on concerning statistical correlations, reader analysis successfully identified a layer of interpretive bias. The language consistently overstates the study's findings, presents assumptions as facts, and isolates social media from a

wider ecosystem of influence, ultimately crafting a narrative that is more conclusive and less nuanced than the research itself appears to support.

4.5.5. Text Five

The text entitled “A Jolt of Caffeine, by the Can” Written by Melanie Warner in *the New York Times* was read by students after ninth weekly class meetings in which being introduced to the guiding questions developed by Fairclough to understand how arguments reflect certain ideologies. Use of Fairclough approach was demonstrated through the analysis of several messages as we proceed through the path in this quasi-experimental course. Overall, the text is biased in favor of energy drinks and their benefits. The author uses positive language to describe the drinks and their effects, while using negative language to describe the concerns of scientists and nutritionists. The text also omits some important information, such as the amount of sugar in energy drinks and the potential health risks of consuming too much caffeine. The majority of readers engaged in selective annotation, marking passages perceived as biased rather than those perceived as objective. A significant portion of the elements identified as indicative of bias were markers of the author's stance (position or perspective). The following words were identified by a significant number of readers as markers of authorial bias:

Table 4.21 *Readers' Perceptions of Bias and Objectivity in Text Five*

Word/phrase	Function	Detection Rate
jolt	referring to the sudden burst of energy that people experience after consuming an energy drink.	(43) 78.18 %
lifts me up	to describe a feeling of empowerment and confidence that one get from consuming caffeine.	(27) 49.09 %
skyrocketing growth	to emphasize the rapid and dramatic increase in sales and market share experienced by energy drinks over a short period.	(11) 20.00%
pleasant surprise	to describe a feeling of empowerment and confidence that they get from consuming these drinks.	(21) 38.18 %
Coke is eager to become a much bigger player	Paints a competitive image	(3) 5.45%
critics say these drinks are fostering caffeine addiction among teenagers	The use of "critics say" implies that this is not a universally accepted view, but rather a point of contention. It introduces a debate about the validity of the claim and invites readers to consider different perspectives.	(44) 80.00 %
Psychologically Addicting	appeals to the reader's fears and concerns about the impact these drinks can have on their well-being and mental health.	(36) 65.45%
Jittery, agitated and fidgety	To make the argument against energy drinks more impactful and memorable.	(31) 56.36%

Note. Text Five: “*A Jolt of Caffeine the Canby*” by M. Warner (*The New York Times*).

The data indicate that readers were able to recognize a number of biased words and expressions in the text with varying degrees of accuracy. The highest recognition rate was for “*critics say these drinks are fostering caffeine addiction among teenagers*” (80%), followed by “*jolt*” (78.18%), “*psychologically addicting*” (65.45%), and “*jittery, agitated and fidgety*” (56.36%). Moderate levels of identification appeared for “*lifts me up*” (49.09%) and “*pleasant surprise*” (38.18%), while “*skyrocketing growth*” (20%) and “*Coke is eager to become a much bigger player*” (5.45%) received low recognition, suggesting that more subtle evaluative language was less readily noticed by readers.

Interestingly, some strongly evaluative or emotionally loaded phrases present in the text were not identified at all, such as “*a pleasant surprise for the industry,*” the repeated framing of “*addiction / psychologically addicting / hooked,*” and the dismissive description

of energy drinks as “*overpriced*.” This pattern suggests that readers were more attuned to overtly emotive or negatively framed expressions, especially those explicitly tied to health risks, while they overlooked more implicit or commercially oriented bias markers.

The significance of these findings lies in what they reveal about readers’ developing critical literacy skills. The fact that participants detected explicit emotional and health-related bias demonstrates an increased awareness of persuasive tactics following their training. However, their difficulty in recognizing more subtle commercial bias or seemingly benign positive evaluations highlights the need for deeper engagement with less obvious linguistic cues. These results support the argument that critical media literacy instruction should not only focus on identifying overtly emotive or negative language, but also on uncovering hidden persuasive strategies embedded in industry-friendly or promotional discourse. Ultimately, the findings point to a partial but uneven improvement in students’ ability to detect bias, underlining the importance of sustained practice with diverse types of media texts.

4.5.6. Text Six

By the end of the course, the students had to read and respond to the text entitled “More Consensus on Coffee’s Effect on Health than You Might Think”, written by Aaron E. Carroll in *the New York Times*. The author builds a strong argument in favor of coffee consumption based on a variety of scientific studies. The nuanced approach acknowledges potential limitations and counter arguments while emphasizing the overall positive health associations with moderate coffee intake. A substantial majority of readers have identified several biased statements in the text. A significant portion of the elements identified as indicative of bias pertained to markers of the author’s stance (position or perspective).

Table 4. 22 Readers' Perceptions of Bias and Objectivity in Text Six

Word/phrase	Function	Detection Rate
... it would “stunt my growth.” It turns out, of course, that this is a myth	anecdote about a common misconception about coffee's health effects, making the topic accessible and engaging for readers	(31) 56.36%
Surprisingly large	This phrase suggests that the benefits of coffee are unexpectedly strong, potentially overemphasizing their significance.	(19) 34.54%
Black coffee	The author focuses solely on black coffee's health benefits, potentially downplaying the impact of added sugar and fat in popular coffee drinks.	(28) 50.90%
Cherry-pick	Used negatively, implying other studies show negative effects of coffee, while the author only highlights positive ones.	(38) 69.09%
Minimal, if any, ill effects	Minimizes potential downsides of coffee consumption, even for high-end consumers.	(31) 56.36%
Should be encouraged	Strong recommendation for coffee consumption	(48) 87.27%
Long had a reputation as being unhealthy	Generalizes negative perceptions of coffee without providing context or nuance	(52) 94.54%

Note. Text Six: “*More Consensus on Coffee’s Effect on Health than You Might Think*” by Aaron E. Carroll (*The New York Times*).

The student identification of biased phrases reveals a strong consensus on certain types of bias within the text. The phrase "Long had a reputation as being unhealthy" was identified by a overwhelming majority of students (94.54%), indicating near-universal recognition of this as a framing device that the author seeks to counter. Similarly, the prescriptive phrase "Should be encouraged" was flagged by 87.27% of students, showing a clear understanding that this moves from reporting evidence to making a recommendation.

A significant majority of students also identified several other key biased elements. The dismissive term "Cherry-pick" was recognized by 69.09% of students, suggesting they understood the author's rhetorical strategy of accusing others of the very bias the article might be engaging in. The phrases “it would ‘stunt my growth.’ It turns out, of course, that this is a myth” and “Minimal, if any, ill effects” were both identified by 56.36% of students, indicating that a majority picked up on the author's condescending tone and the use of

minimizing language to downplay potential risks.

Finally, the clarifying distinction of "Black coffee" was identified by 50.90% of students, showing that about half noted the important caveat that narrowly defines the subject of the article, while the moderately emotive phrase "Surprisingly large" was identified by a smaller portion (34.54%), suggesting students may have found this to be a less obvious or more acceptable form of emphasis.

In explaining how and why they formed their evaluations, readers pointed out that the text relies on several fallacious arguments and rhetorical strategies that undermine its otherwise evidence-driven presentation. While they acknowledged that the core evidence provided is solid, they noted that the author's framing incorporates fallacies that serve to make the overall argument appear more persuasive than the data alone would justify.

This data is significant for several reasons. First, it demonstrates that students are highly effective at identifying overtly prescriptive language ("should be encouraged") and framing devices that set up a "straw man" argument ("long had a reputation"). The high frequency for these items shows they can pinpoint where an author is not just informing, but actively persuading. Second, the strong recognition of "cherry-pick" (69.09%) is particularly insightful. It shows that a majority of students are not just identifying individual biased words but are also critically engaging with the author's methodology and meta-commentary, understanding that the accusation of cherry-picking is itself a rhetorical tactic.

The lower identification rate for "Surprisingly large" (34.54%) is also telling. It suggests that students are more adept at spotting absolute, dismissive, or prescriptive bias than they are at identifying subtler, emotive language used to create a sense of wonder or exaggeration. This indicates an area for future pedagogical focus: helping students detect the persuasive power of more nuanced adjective choices.

The cumulative frequency distribution reveals that students possess a sophisticated

ability to deconstruct persuasive texts, with their critical awareness being highest for clear structural bias and explicit recommendations, and slightly less acute for subtler emotional language.

4.6. Synthesis of Findings on Students' Perceptions of Bias and Objectivity in the Texts

An analysis of bias detection across six texts by 55 students reveals clear disparities in their ability to recognize different persuasive techniques. Students demonstrated markedly higher proficiency in identifying Advocacy and Prescriptive Language, which yielded a mean detection rate of 58.18% and a median of 80.00%. This suggests that overt directives—such as calls to action or explicit recommendations—were the most transparent form of bias for the cohort. In nearly half the texts, a large majority of students consistently recognized such language, indicating that explicitly instructive or judgmental phrasing is more readily identified than subtler rhetorical strategies.

By contrast, students showed considerably more variable performance in detecting Dismissive and Condescending Language (mean: 44.30%) and Emotive and Loaded Language (mean: 41.40%). The shared mode of 56.36% across these categories indicates that while a majority of students often identified emotionally charged or condescending phrasing, a significant portion struggled to do so consistently. Performance was even less uniform in recognizing Absolute and Superlative Language and Framing and Rhetorical Devices, both of which had means near 42% and no recurring mode. This inconsistency suggests that identifying overstated claims, contextual framing, and narrative manipulation requires more advanced critical reading skills that were not uniformly developed among participants.

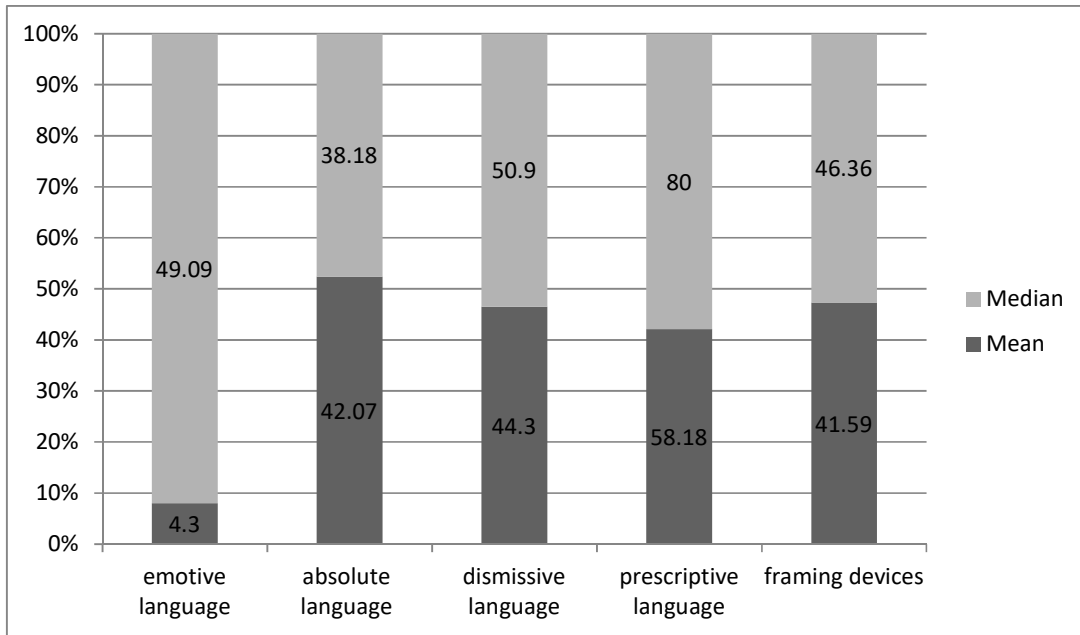


Figure 4.3 Mean and median detection rates of perceived biased words and expressions in newspaper articles

Findings on readers' bias finding in newspaper texts highlight an instructional opportunity to deepen students' critical literacy beyond surface-level bias detection. While learners capably identify explicit advocacy, they require further support to deconstruct embedded persuasive tactics such as framing, hyperbole, and dismissive language. Targeted instruction in analyzing subtler rhetorical strategies could foster more nuanced engagement with complex texts and improve consistency in recognizing a broader spectrum of bias.

4.7. Quantitative Data Interpretation

Results presented in previous sections indicate identifying persuasive intent embedded in media messages has a positive relationship with critical thinking development ($p < 0.01$), implying that the ability to apply principles of logic on readings that call for evaluation has a significant and positive impact on consumer's level of cognitive elaboration which is essential for resistance to manipulation and avoidance of deception. Hence, this result support hypothesis 1. This hypothesis stated that practice of problem solving that applies critical thinking skills would significantly increase learners' critical media literacy learning experiences. Such learning can enable consumers to identify a wide range of persuasive strategies, both in their (unintentional), and even overt (intentional) forms. This hypothesis was based on previous studies which found that the explicit teaching of argumentative skills would capture readers' attention, in a way to keep them engaged and eager to uncover a hidden intent of text and an author's strategy for being persuasive (Zohar & Nemet, 2002; Cavagnetto, 2010).

Closely linked to that connection would be the importance of identifying bias and recognizing how it affects media messages. Bias has been found to be connected to persuasiveness in political, media, and everyday discourse. Analyzing authorial persuasive intent helps readers identify bias and propaganda in a world saturated with ideologies. The analysis of the data presented in the previous section has revealed a significant positive relation between the critical thinking style as measured by the California Critical Thinking Disposition Inventory (Facione & Facione, 1992) and identifying bias, hidden agendas, or misinformation often embedded in media discourse on public health. By strategically framing an argument to favor one perspective over another, an author can significantly increase its persuasiveness, regardless if any underlying bias exists within the text.

The data that is presented in the previous section lend support to the hypothesis on the view that false or misleading information may spread and gain credibility through intermediaries (e.g reputable media agency) who amplify its reach and legitimacy. Data make it important to point out that the respondents' prior beliefs about news media led them to view newspapers as a credible source of information, which provided them with reliable, honest information. Hence, the results are consistent with previous studies that show that high credibility source exercises more influence than a less credible source. (Hovland & Weiss, 1951; Petty & Cacioppo, 1986; Pornpitakpan, 2004). We can see from the data that such belief changed over time for most respondents in the context of subject-matter instruction. Learning to think critically made respondents actively involved in applying the principles of reasoning and drawing conclusions independently of how credible they found the source. For their analysis, 'identifying cues to determine bias' and 'evaluating argument strength' were combined into readers' responding to newspaper texts regardless of perception of source credibility and the medium of news delivery.

In light of the quantitative analysis of the relationship between readers' conceptualization of argument quality via argument structure and their strategies for detection of deceptive or truthful information in newspaper texts, use of Toulmin model of argumentation (Toulmin, 2003) improved students' finding bias being present in all kinds of texts. The analysis of the texts through this lens permitted readers to critically evaluate arguments by pointing out questionable assumptions that underlie evidence, invalid reasoning, etc. Toulmin model of argumentation seemed to be particularly effective in developing students' use of systematic investigative procedures for evaluating evidence in terms of being holistic and comprehensive or cherry-picking. Media outlets often present themselves as objective and impartial, but in reality, they all have their own biases and agendas. These biases can be manifested through cherry-picking. An author commits cherry picking when he

focuses on one set of evidence to the exclusion of all other evidence. The effectiveness of Toulmin model to increase readers' ability to evaluate reasoning and evidence at a deep level is consistent with previous research (Liu & Stapleton, 2014; Rex, , Thomas, & Engel, 2010).

Toulmin model of argumentation (Toulmin, 2003) has been found to contribute to readers' engagement in examining and distinguishing factual from emotional evidence upon which the texts are based. A repeated-measures ANOVA using time (pre post) and intensity were made at the beginning, the middle, and at the end of training to indicate the effectiveness of the use of the model to increase students' critical thinking performance over the course of the semester by applying the case method. The results generally indicated that readers developed effective diagnostic skills, as they were able to detect bias in passages containing stance markers, which involve strongly emotive language and recognize objectivity in texts lacking such markers. This finding broadly supports the work of other studies in this area linking an adaptation of Toulmin's model to critical analysis of media arguments (van Dijk, 1998; Fairclough, 2014).

While the Toulmin Model has had considerable applied impact and made important pedagogical contributions, it is nonetheless characterized by limitations that must be addressed. Students, as has been previously mentioned, struggle with the task of identifying the warrant, backing, qualifier, and rebuttal in arguments. A possible explanation for this is that these elements are frequently implicit, abstract, and interwoven within the argument, unlike the more straightforward claim and evidence. Therefore, the inability to master these more implicit elements is a major factor, if not the only one, causing difficulty in uncovering the often somewhat covert ideological bias. Hence, the current case study argues that detecting media bias depends on CDA and goes beyond a close analysis of the logical structure of arguments.

4.8. Qualitative Data Analysis

This section presents the qualitative investigations of the study, drawing on data collected through verbal protocols, interviews, and peer observation. The analysis relies on thematic analysis as the main interpretive approach, allowing recurring patterns and themes to be identified across the different sources of data. The process of coding is described in detail, outlining how raw qualitative inputs were systematically organized and interpreted to provide meaningful insights into students' evaluative processes and experiences.

4.8.1. Analysis of Verbal Protocols Data

The analysis of verbal protocol data involved several steps that ensured systematic interpretation of students' responses. The Process of Verbal Protocol Analysis was carried out to trace how participants engaged with the reading tasks and articulated their reasoning. To facilitate consistency, Developing a Coding Scheme was essential in categorizing cognitive and metacognitive strategies reflected in the data. Finally, the Findings from the Verbal Protocol Responses highlighted patterns of argument recognition, evaluative judgments, and challenges faced by students in detecting bias and objectivity.

4.8.1.1 The Process of Verbal Protocol Analysis

The purpose of the retrospective verbal report was to explore readers' reasoning about the texts while they read the newspaper texts. A total of eight readers (four girls and four boys) were chosen from the population for a test in the form of "think-aloud" tasks. The subjects used for this measure were selected randomly. Six verbal protocols were conducted with each participant over the course of the semester period. Each participant was asked to use earbuds to record his/her voice on his/her phone to record his or her processes and strategies aloud. When they had finished, the researcher asked the participant to articulate their recorded verbal protocols into a piece of writing. The length of each writing depended on the participant. In order to achieve effective over - all noise reduction, the test took place into a

lecture hall designated for courses. A large space between the students was provided to ensure a better environment for focused work during the test. For conducting analysis, the researcher performed the tasks of coding scheme, segmenting protocols, and calculating encoder reliability. It is worth noting that spelling, grammar, and punctuation have been corrected in the transcripts to improve readability.

4.8.1.2. Developing a Coding Scheme

The verbal protocols were analyzed using a qualitative coding framework designed to categorize participants' reasoning processes during the think-aloud tasks. The researcher used hybrid deductive-inductive qualitative approach for thematic analysis of data. Inductive coding used open (unrestricted) coding technique and theme refinement to derive themes from data, while deductive coding used pre-selected themes and codes based on previous literature and preconceived ideas about the research subject. A sample of verbal transcripts were read and reread to search for data patterns.

A coding approach was developed to identify themes and correlations between qualitative data extracts, revealing a pattern in how readers interact with contents of printed news reports. This was done by reviewing the CDA in all of its various forms and how it may probably affect students' income level in critical media literacy. Due to the heterogeneity that characterize CDA, the analysis used a priori terms and operationalizing concepts, but new themes were also constructed inductively where data could not be accommodated by the framework, in order to avoid forcing data into predetermined categories. Fairclough's framework for analysis was used as a foundation to facilitate a priori analytical framework to analyze data, involving the classification and coding of information from participants. According to this model, critical reading is a lengthy process influenced by domain-general cognitive processes, critical awareness, and political consciousness. In his search, the author explicitly took context into account to make deductive themes refine inductive codes. The

author verified the final themes and subthemes to ensure data analytic bias, validity of interpretations, and consistency of findings.

For purposes of this study, two separate coding schemes were used to measure different mental verbals which happen while reading critically. The first coding scheme (Reader Dispositions) involved three code categories which were labeled as follows: 1) cognitive strategies, 2) metacognitive reflections, 3) affective responses. In line with cognitive theories to reading (Perfetti, 2007; Perfetti & Hart, 2002), these mental processes interact with each other to shape how readers process text, monitor understanding, and engage emotionally with content. The second coding scheme (Textual Analysis Lenses) involved eight code categories, each divided into sub-categories: 1) frame representation, 2) lexical choice & connotation in the text, 3) agency & passivization, 4) nominalizations, 5) presupposition, implicature and context, 6) intertextuality of a text, 7) mood, modality, and stance, and 8) metaphors & analogies.

Category A: Reader Dispositions

This category encompasses the internal cognitive, regulatory, and emotional processes students engaged in while reading. These dispositions represent the how and why behind their interaction with the text.

(a) *Cognitive Strategies*: This disposition refers to the suite of analytical techniques students used to deconstruct the text's meaning and purpose. This was evidenced by specific behaviors such as: Identifying loaded language designed to persuade or evoke an emotional response, noticing selective reporting or a one-sided presentation of evidence, detecting omissions of crucial information or alternative viewpoints, questioning the credibility, bias, and motives of sources cited within the text, recognizing the overarching framing of an issue, which primes the reader for a specific interpretation.

(b) *Metacognitive Reflections*: Beyond initial analysis, students engaged in self-regulatory

practices to manage their own understanding. This higher-order thinking involved: self-monitoring their comprehension in real-time, acknowledging confusion or uncertainty, adjusting their interpretation as they integrated new evidence or reconsidered a passage, making a conscious effort to evaluate credibility fairly, often by wrestling with their own biases to strive for an objective judgment.

(c) *Affective Responses*: The act of critical reading was not a coldly intellectual exercise but was often charged with emotional arousal, which students vocalized. These responses included: expressions of distrust or skepticism toward the author's claims or motives, frustration with opaque, contradictory, or perceived misleading rhetoric, moments of confirmation bias, where they acknowledged readily accepting information that aligned with their existing beliefs, identifying emotional appeals within the text and reacting to their manipulative potential, critiquing false balance that presents unequal arguments as equally valid, calling out reliance on stereotyping or reductive generalizations.

Category B: Textual Analysis Lenses

This category comprises the specific linguistic and rhetorical features students identified and critiqued within the text. These lenses represent the what (the concrete objects of their critical analysis).

(a) *Frame Representation*: Students demonstrated an ability to recognize the ideological framework shaping the text by: identifying loaded words, euphemisms, and lexical polarization that signal a specific worldview, detecting how certain identities were marginalized or centered within the narrative, spotting unstated assumptions that preemptively shape interpretation by presenting a specific chain of causally connected events as natural or inevitable.

(b) *Lexical Choice & Connotation*: Students moved beyond dictionary definitions to analyze the associative meaning of words by: detecting sentiment expressions and determining their

polarity (positive or negative valence), decoding intertextual and cultural references that rely on shared knowledge to conjure a particular meaning or emotion.

(c) *Agency, Passivization & Nominalizations*: Students showed sophistication in analyzing how grammar shapes meaning and responsibility by: making explicit judgments about the agent of an action and questioning its absence, questioning the strategic hiding of the agent through passive construction (e.g., "mistakes were made"), responding to the choice of nouns over verbs (nominalization), understanding that this deletes agency and turns dynamic processes into static, abstract concepts.

(d) *Presupposition, Implicature & Context*: Students engaged with what was implied but not stated by: Questioning claims that were presented as taken-for-granted facts (presuppositions), interpreting the implied meaning beyond the literal words (implicature), using contextual cues to retrieve relevant background knowledge needed to evaluate these indirect assertions.

(e) *Intertextuality*: Students noted how the text's meaning is derived from its relationship to other texts by: noting how one text quotes, comments on, or integrates another text; questioning the rhetorical function of chosen quotes, assessing whether they genuinely supported the argument or served as an appeal to authority.

(f) *Mood, Modality, and Stance*: Students analyzed the author's attitude and level of commitment to their claims through: introspective questioning to derive the author's purpose behind using certain modalities (e.g., may vs. will); inferring the purpose of leading questions or an overuse of imperatives; assessing the author's degree of certainty, possibility, or necessity as conveyed through linguistic cues.

(g) *Metaphors & Analogies*: Students deconstructed the persuasive power of figurative language by: Recognizing conceptual metaphors that structure ideology (e.g., explaining how social media frames COVID-19 Pandemic as a bioweapon attack); evaluating the emotional impact and rhetorical effectiveness of analogies and symbolic language, understanding their

power to make abstract concepts vivid and persuasive.

4.8.1.3. Findings from the Verbal Protocols Analysis

The analysis of students' verbal protocols provided valuable insights into how they processed and evaluated the news texts during the study. The data were organized under subsections, which reflected the development of deeper critical engagement following instructional intervention. Together, these findings illustrate the progression in students' ability to identify bias, objectivity, and persuasive intent across the six texts.

4.8.1.3.1. Text One

The data presented below comprises excerpts from verbal protocols collected from participants after their reading of Text one (*Public Health England maintains vaping is 95% less harmful than smoking*). One way to spot bias in media is to see if it presents different sides of an issue. According to Paschal Preston & Andrea Grisold (2020), this "sidedness" is key. In news coverage about vaping, a lack of multiple perspectives can signal bias, where articles favor one view and down- play or ignore others. For example, rather than independently evaluating the health risks of vaping use, the article in question largely adopts the perspective of the government and Public Health England's (PHE) efforts to convince smokers of vaping's reduced harm. This lack of diverse perspectives in media framing suggests a bias that favors vaping, a point supported by the following excerpt from a verbal protocol [M, 1, Appl. Ling., 36]:

This article says vaping might be less harmful than smoking. Public Health England claims it is 95% safer. The article shows less tar in vaping compared to smoking. It shares studies that support vaping but also mentions some warnings about long-term risks. The message seems to push vaping as a better choice for smokers. It suggests this might help people quit smoking. The article mostly supports PHE's

view. It also says UK laws are stricter than in the US and claims vaping doesn't lead more young people to smoke in the UK.

The verbal protocol reflects a critical reader's analysis of the article using Browne and Keeley's questions, identifying the main issue as potential bias in promoting vaping. The reader notes that while the article emphasizes Public Health England's stance on vaping being 95% less harmful than smoking, it may underplay long-term risks and opposing evidence. The reader questions assumptions, evaluates the selective use of evidence, and recognizes the article's persuasive tone and alignment with a harm-reduction agenda, ultimately concluding that the text leans toward advocacy rather than balanced reporting.

Despite the experiment's early stages, readers showed a clear inclination towards critical reading practices. Their responses revealed a deep engagement with the content, extending beyond a simple acceptance of the findings. Instead, these readers actively questioned the very foundation of the information presented in the content of the article, probing its trustworthiness and the underlying purpose behind its dissemination. This early skepticism suggests a discerning audience, unwilling to accept claims at face value and keen to understand the potential biases or agendas that might be shaping the narrative around vaping. Their critical engagement highlights the importance of transparency and robust evidence, even in initial research phases, when discussing sensitive topics with potential public health implications. The student's verbal protocol [M, 3, E, 23] indicated practice of a critical thinking approach though lacked significant depth.

The journalist says vaping is 95% less harmful than smoking. I've heard that before, but I always wondered where that number came from. It sounds too exact. So, this article sounds like it wants to promote vaping. It doesn't talk much about the risks. I think it's a bit biased.

In terms of readers' strategies, the data include responses illustrating the use of inference and interpretation. Many readers of this article attempted to go beyond the surface message and tried to interpret the purpose behind the visual. This shows that the experiment engaged readers to actively analyzing how the information is presented, not just what is being said, which is a key strategy towards improving critical media literacy. One reader [F, 2, E, 24] expressed that:

In simpler terms, the article is using the visual difference in tar accumulation as an argument that vaping is a less harmful way to consume nicotine because it doesn't expose the user to the same high levels of toxic tar found in cigarette smoke.

Students employed diverse analytical strategies to discern the article's bias and purpose, with some focusing on overall themes and arguments to identify structural and content patterns, and others engaging in close reading to scrutinize linguistic choices, statistical presentations, and framing techniques. Notably, many students recognized the author's word selection and selective evidence presentation as key indicators of bias, observing the article's emphasis on the relative safety of vaping compared to smoking. Further, they noted the strategic deployment of expert opinions and visual demonstrations. This selective focus, whether perceived through overarching patterns or minute textual details, ultimately shaped the students' understanding of the article's persuasive intent, revealing its aim to promote vaping as a safer alternative to smoking and a smoking cessation tool.

I observe that the author's word choice reveals a clear bias. Opposing viewpoints are mentioned but not deeply. I see addressed that persuasive statements are presented as authoritative and factual. The language, I think, is used to evoke a strong emotional response from

the audience. I think that the issue of vaping safety is consistently framed as "less harmful" than smoking, rather than being objectively assessed for independent risks.

By framing health as an individual responsibility and emphasizing personal choice and self-management through tools like e-cigarettes or nicotine patches, the text subtly promotes a neoliberal ideology. This approach has the risks of reducing the complex issue of smoking to a matter of personal choice, thereby obscuring the significant influence of broader structural factors such as socio-economic conditions, political dynamics, and environmental contexts that intervene in people's lives. The news report text's focus on empowering individuals to make "right" choices based on expert guidance may inadvertently minimize the impact of systemic issues such as inequality, stress, addiction, and corporate influence on public health. As a result, readers may not recognize the underlying ideological framework and instead perceive the message as purely a matter of scientific or health advice.

4.8.1.3.2. Text Two

The data presented below comprises excerpts from verbal protocols collected from participants after their reading of Text 2. As previously mentioned, this text, titled "*Science, not e-cigarette makers, must tell the public whether vaping is safe,*" was published by the Chicago Sun-Times on August 28, 2019.

One way to detect bias in media texts is through examining sidedness—the extent to which an author presents multiple perspectives on an issue (Douglas Walton, 1999). In the case of news framing around vaping issue, some articles reveal bias by favoring a particular viewpoint while downplaying or ignoring alternative perspectives. For example, rather than independently evaluating the health risks of vaping use, the article in question repeatedly compares it to smoking in a way that minimizes concern. This one-sided framing by the media suggests a bias in favor of vaping, as shown in the following excerpt from a verbal protocol:

The article consistently frames vaping as "less harmful" than smoking, rather than assessing its potential risks independently. The 95% less harmful number is used repeatedly.

Student 1, coded as follows [F, 4, E, 24], demonstrated using sidedness to identify the author's bias. Here the reader of the text focused his attention on the framing bias and the selective use of statistics. To detect bias in public health issues in the news, the reader needed, instead, to recognize the rhetorical strategies employed by journalists, namely focusing on framing techniques that involve the selection and emphasis of certain facts over others.

Other students identified the sidedness presented and recognized the author's purpose as to persuade. These students recognized sidedness as a characteristic of persuasive texts. They indicated that the text was written to persuade because the author presented lots of arguments, as illustrated in the following comment from a think-aloud protocol by student 2, coded as follows [F, 6, Appl. Ling., 27]:

I think that the author persuaded the reader of something by presenting lots of arguments because he showed a clear preference for vaping as a smoking cessation tool and downplayed potential risks, so he wasn't trying to inform us, or provide an explanation about it.

From this verbal protocol, we can conclude that the learner is at the stage of beginning to recognize persuasive intent in the text. However, her response remains broad and lacks the sharpness of critical thinking. She identifies that persuasion is occurring in the context of the text but does not yet analyze how it is achieved (e.g., through rhetorical strategies, selective evidence, or emotional appeals). This suggests the learner might be at an early stage of critical reading development, where she can detect persuasion but needs further support to articulate

the techniques used.

Recognizing the author's language and tone is essential for determining the author's purpose, as it reveals underlying attitudes, intentions, and potential biases that shape how information is presented to the reader. The obtained data show that only two verbal protocol students analyzed the author's language and tone to determine the author's purpose after reading. However, only one student [M, 1, Appl. Ling., 36] clearly and thoroughly used this approach thoroughly to identify the author's bias.

The choice of wording leans more toward advocating for vaping rather than maintaining a completely neutral stance. The language used suggests a subtle preference or support for vaping, rather than presenting an unbiased or purely objective perspective.

Quoting student [M, 1, Appl. Ling., 36], who analyzed the author's language and tone to determine potential bias after reading:

The author keeps repeating words like "vaping," "smoking," and "health," along with constantly mentioning "Public Health England (PHE)," which makes it clear what the text is focused on. The author also tends to link vaping with positive phrases like "95% less harmful" and "helping people quit smoking," which really puts the emphasis on its benefits. When it comes to risks, the author doesn't seem to discuss them on their own but instead compares them to smoking, making vaping seem like the much safer option. This choice of language isn't just about presenting facts—it's a clear effort to push the idea that vaping is better than smoking. The author, I think, is biased in favor of vaping.

The topic strategy was a prominent approach among students using verbal protocol for identifying author's purpose, rivaling the structure strategy in frequency. These students used textual evidence to bolster their chosen answers. A student [F, 2, E, 24], for instance, exemplified this strategy by focusing on factual information that fell under the general topic of the

use of e-cigarette,

I think the author's purpose was to persuade the reader of something by presenting a lot of facts. He did try to persuade readers but not as much as trying to inform them about the relative safety of vaping compared to smoking. He is presenting a lot of scientific evidence and expert opinions by telling us how we might be misled by misconceptions about vaping.

The use of the topic strategy in verbal protocol analysis correlated strongly with students' identification of an objective authorial tone. These students, who prioritized the extraction of key topics and related factual information, appeared to interpret the author's reliance on evidence and logic as a hallmark of showing objectivity. Consequently, they were less likely to detect or infer bias, as their analytical framework emphasized the content's informational and logical consistency over potential subjective interpretations.

Without being engaged in deep, analytical reading, some students relied more heavily on aspects of macro-processing options and the significance of text content than on the topic strategy to discern the author's tone. Specifically, those who engaged in macro-processing effectively derived the author's intent as both informative and persuasive by drawing conclusions from the presented evidence. A student's verbal protocol [M, 3, E, 23], revealed a clear application of macro-processing options. This student effectively synthesized disparate textual details, demonstrating a fair ability to construct a coherent understanding of the author's tone by identifying overarching patterns and relationships within the presented information. This process involved moving beyond isolated facts to infer the author's underlying attitude and perspective, showcasing a sophisticated level of textual analysis.

Basically, the author was trying to persuade readers into believing that vaping is significantly less harmful than smoking, like he did by

using expert opinions and scientific evidence, because he kept on presenting the same facts over and over on the health risks of smoking compared to vaping, and how misconceptions about vaping may prevent smokers from switching to a less harmful alternative.

An important observation drawn from the data is that verbal protocol students deemphasized a close reading of the text just as much as macro-processing to determine the author's bias and purpose. When being engaged in textual evaluation, some students made attempts to identify the presence of opinion as facts, while others highlighted whether the information presented was supported by evidence, factually accurate, verifiable, or objective, as shown in the following excerpt [M, 5, Appl. Ling, 25] from a verbal protocol:

I think the author's main purpose for writing this article was to inform us about the facts because a lot of people don't realize how much safer vaping is compared to smoking. They think it's just as harmful or even worse. But they don't know that studies show vaping is significantly less harmful and can help smokers quit.

The verbal protocol analyses revealed a sophisticated comprehension among students concerning the multifaceted strategies authors employ to infuse bias and exert persuasive influence. Students demonstrated a keen awareness of the subtle power of language choices, the selective use and interpretation of statistics, and the strategic deployment of structural framing within texts. This detailed understanding signifies a significant advancement in their ability to discern persuasive techniques, moving beyond surface-level comprehension to a deeper, more critical engagement with the text's underlying intentions. Such a capacity for nuanced analysis, encompassing linguistic, statistical, and structural elements, is indispensable for the effective interpretation of complex texts, empowering

students to navigate information with discernment and intellectual independence.

4.8.1.3.3. Text Three

The data presented below comprises excerpts from verbal protocols collected from participants after their reading of Text 3. As previously mentioned, this text, titled "*Health secretary tells social media firms to protect children after girl's death*" was published by The Guardian on January 26, 2019.

Verbal protocols captured during reading sessions have revealed significant advancements in critical thinking integration among readers subsequent to training in argument analysis. These protocols illuminate how readers, following structured training in dissecting arguments, exhibit enhanced abilities to discern and evaluate the validity and coherence of presented ideas. Such progress is evidenced by their articulated reflections and analytical processes during reading, highlighting a deeper engagement with the text's underlying arguments and the ability to critically assess the information presented. This demonstrates a clear correlation between targeted training in argument analysis and the development of robust critical thinking skills among readers in applied linguistics contexts.

This development in critical thinking is particularly evident in the way trained readers articulate their evaluation of arguments during reading. For instance, one participant [F, 7, E, 25] noted:

The main claim in this text is that social media use is linked to depression in teenage girls, with girls being more affected than boys. The text provides various forms of evidence, such as statistical data showing a correlation between increased social media usage and depression in girls, comparisons of depression rates between girls and boys based on social media usage, and data linking social media use to sleep issues and body image dissatisfaction. The argument

assumes that if there is a correlation between social media use and depression, then social media use contributes to or exacerbates depression. I believe the text is not biased because it includes scientific expert's opinions.

This response reflects the reader's ability to clearly identify the main claim, evaluate the types of evidence provided, and recognize underlying assumptions. Though getting such knowledge is an indication of their improved capacity to critically analyze arguments following their training, it also highlights the need for continued practice in applying further evaluative criteria for detecting bias, assessing credibility, and interpreting rhetorical strategies in complex texts. Research argues that understanding a scientific expert's opinion does not, by itself, guarantee the objectivity of a text. Even expert views can be selectively presented or framed in ways that support a particular agenda, which means critical evaluation of how such opinions are used remains essential.

Further evidence of readers' improved critical thinking after argument analysis training is seen in their ability to go beyond identifying claims and evidence to infer implications and evaluate argumentative strategies. A second respondent, [M, 5, Appl. Ling, 25], demonstrated this by stating:

The text argues that social media contributes to depression in teenage girls, supported by UK study data, gender comparisons, and links to sleep and body image issues. It assumes excessive social media use leads to mental health problems, and cites expert opinions from Stephen Scott and Yvonne Kelly. While the text doesn't directly tell readers what to do, it strongly implies that parents should limit their children's screen time, and policymakers should regulate social media use.

This commentary shows not only recognition of the argument's structure and the types of evidence used but also an awareness of rhetorical strategies and implied recommendations. The reader demonstrates a nuanced understanding of how argumentation functions within the text (acknowledging both explicit content and implicit messaging) which underscores the impact of targeted training in enhancing analytical depth during reading.

Another key indicator of enhanced critical thinking following training is the reader's growing awareness of bias, selectivity, and rhetorical framing within a text. This is evident in responses that critically examine not just what is said, but how and why certain elements are included or excluded. One respondent, for example, observed

The article chooses to present specific figures and expert quotes that reinforce its main message, while not including dissenting views or alternative interpretations of the study.

This reflection illustrates the reader's ability to recognize selective presentation of information and question the objectivity of the argument. It also signals a shift from passive consumption of information to active interrogation of the author's choices and possible intentions. Such insights reflect the integration of higher-order critical thinking skills, as students begin to evaluate not only the strength of evidence and logic but also the broader communicative context in which arguments are constructed and delivered.

A further dimension of critical thinking development is the ability to detect the emotional tone and persuasive language used in a text to influence readers' attitudes. This sensitivity to rhetorical style emerged in several verbal protocols, where readers explicitly commented on the emotional framing of arguments. One participant [F, 7, E, 25] noted:

The wording is emotionally charged, using phrases like "bombarded with images of unattainable physiques" and "struggling with these aspects of their lives.

This observation demonstrates the reader's growing awareness of how language can shape interpretation and evoke specific emotional responses. By identifying emotionally loaded expressions, the reader not only interprets the content but also critiques the author's stylistic choices and their potential impact on persuasion. Such meta-linguistic awareness marks a sophisticated level of critical engagement, indicating that training in argument analysis supports a deeper, more reflective mode of reading. Additionally, readers began to critically assess how language may misrepresent the strength of evidence. For example, another respondent, [M, 5, Appl. Ling, 25], remarked:

The language in the article suggests a causal link between social media use and depression (e.g., “social media is making teen girls depressed”), even though the study only shows a correlation.

This insight illustrates a crucial critical thinking skill: distinguishing between correlation and causation. The reader is not only attentive to the argument's content but also to how language can subtly overstate the implications of research findings. Together, these responses show that after training in argument analysis, readers become more adept at questioning not just what is said, but how it is framed, and whether that framing accurately reflects the evidence.

An important sign of advancing critical thinking is the ability to recognize underlying assumptions and detect one-sided argumentation in a text. This involves not only analyzing what is included but also critically considering what is left out. One reader [M, 3, E, 23] articulated this capacity by stating:

The article seems to start from the assumption that social media is harmful and then selects evidence that supports this view. For instance, it highlights negative outcomes such as cyber bullying, body image issues, and depression, but it doesn't explore potential positive aspects of social media use (e.g., support communities, creative expression).

This response reveals a nuanced understanding of bias by highlighting the article's selective focus and the absence of alternative perspectives. The reader's ability to identify the author's initial assumption and the lack of balanced coverage demonstrates an advanced level of analytical reasoning, showing that the training has helped students move beyond surface-level comprehension to a deeper critique of the argument's fairness and completeness.

Another key aspect of critical thinking that emerged through the verbal protocols is readers' growing ability to identify issues of representation and framing within an argument. This includes recognizing when certain groups are emphasized or marginalized in the presentation of evidence. One participant [M, 8, E, 25] observed:

The article heavily focuses on teen girls and their struggles with social media, even though the study also includes data on boys. While the statistics show that girls are more affected, the repeated emphasis on girls may create the impression that boys are unaffected or that their experiences are less important.

This comment demonstrates the reader's capacity to critique how selective emphasis can shape audience perception, potentially reinforcing stereotypes or overlooking relevant nuances. By noticing the imbalance in the article's focus, the reader shows an ability to think critically about how data is framed in service of a narrative, and to question whether the representation of different groups is accurate and fair. This reflects a more sophisticated, equity-aware approach to argument evaluation that is fostered by targeted training in critical analysis.

A further development in students' critical thinking is their ability to identify not only bi-ased framing but also the omission of alternative explanations, which can significantly affect the integrity of an argument. This level of critique shows a more advanced engagement with the text, as readers begin to question the objectivity of the argument rather than simply accepting its con- clusions. One respondent [F, 4, E, 24] captured this insight by stating,

The author ignores possible benefits of social media or alternative explanations for the findings. This selective emotional framing signals a lack of objectivity, which is a hallmark of bias.

This reflection highlights the student's recognition of the difference between correlation and causation, as well as their awareness of how selective framing can mislead readers by ex- cluding plausible counterarguments or alternative interpretations. By calling attention to the emotional tone and the absence of nuance, the reader demonstrates a capacity for deeper critical evaluation: scrutinizing not just the claims made, but also the integrity and balance of the reason- ing behind them. This critical perspective is further reinforced by students' sensitivity to patterns of emphasis that shape the article's message.

In sum, the verbal protocols collected during reading sessions provide compelling evidence that structured training in argument analysis significantly enhances readers' critical thinking abilities. Through detailed commentary and reflection, participants demonstrate a clear progression from basic comprehension to sophisticated evaluation of argument structure, evidence, rhetorical strategy, and bias. Their capacity to recognize underlying assumptions, challenge selective framing, distinguish between correlation and causation, and assess representational fairness shows a meaningful shift toward deeper, more critical engagement with texts. This development is particularly notable in applied linguistics contexts, where the ability to analyze language and argument is essential. Ultimately, the data illustrate that such training empowers readers to become more discerning, reflective, and equitable interpreters of information.

4.8.13.4. Text Four

The data presented below comprises excerpts from verbal protocols collected from participants after their reading of Text 4. As previously mentioned, this text, titled "*Social media is making teen girls depressed, study says*" was published by New York Post on January 4, 2019. The article presents a compelling case linking social media use to depression among teenagers, particularly girls, but, as one reader observed, it lacks a balanced perspective.

Most readers began to develop a critical reading of the article by applying key elements of the Toulmin model of argument analysis. By first identifying the main claim that social media use is linked to depression in teenagers. The readers then examined the evidence provided through statistical data and expert opinions. However, moving deeper into the analysis, some readers questioned the warrant that connects high social media use directly to poor mental health, noting that the study shows correlation rather than causation. Most importantly, most reader noticed the absence of counterarguments or rebuttals. One

respondent [M, 8, E, 25] captured this insight by stating:

I don't see any substantial counterarguments. The article doesn't mention teens that use social media and *don't* experience depression. Nor does it acknowledge any potential benefits of social media. That could be a red flag for bias

This demonstrates a growing awareness of how balanced argumentation works and a readiness to critique the article's selectivity and framing. Through this process, the reader is not just absorbing information but actively evaluating its structure, logic, and fairness. A similar sentiment was expressed by a student [M, 3, E, 23] stating that:

...What about the potential positive aspects of social media for teenagers? Connection with friends, finding communities with shared interests, these aren't even mentioned. Social media is framed as a negative influence. The lack of discussion around any potential positive aspects could indeed indicate a bias in the author's approach.

Throughout the course, learners developed the ability to critically engage with texts by interrogating the underlying messages and assumptions they convey. They learned to ask whether a text passively reinforces dominant social structures—such as gender norms, power imbalances, or cultural stereotypes—or whether it encourages active resistance and critical reflection. This analytical approach enabled students to move beyond surface-level reading and to question how language, framing, and representation shape meaning and influence thought. One reader [M, 5, Appl. Ling, 25] articulated this capacity by stating:

The text passively reinforces certain assumptions about the negative impact of social media on teen girls but neglects to explore potential positive aspects or nuances in their social media experiences.

4.8.1.3.5. Text Five

The data presented below comprises excerpts from verbal protocols collected from participants after their reading of Text 5. As previously mentioned, this text, titled "*A Jolt of Caffeine, by the Can*" was published by New York Times on November 23, 2005.

One way to detect bias in media texts is through questioning the validity of the article's claims and assessing credibility by noting conflicts of interest. In the case of news framing around caffeine consumption, some articles reveal bias by favoring a particular viewpoint while downplaying or ignoring alternative perspectives. For example, rather than independently evaluating the health risks of caffeine consumption as the primary focus, the article in question argues that energy drinks are driving significant profits in the beverage industry due to their popularity, but their high caffeine and sugar content—along with potentially addictive properties—raise health concerns, particularly for young consumers.

The text illustrates the point that classification of bias is not always absolute, since perceptions of bias can vary based on individual viewpoints, context, and framing. It is shown in the following excerpt from a verbal protocol [M, 8, E, 25] that:

The writer of this article states that the caffeine in energy drinks is just like a cup of coffee. Is that reasonable? The point deserves specific attention. This article also talks about kids and teenagers drinking these, arguing that caffeine does play a role in metabolism and energy expenditure. The way of thinking about the issue indicates prioritizing business benefits over health concerns. The authors' arguments downplay the health risks associated with coffee by instead talking about the industry's growth and profits. That makes me think this article is a bit biased—it's leaning more toward supporting the energy drink companies than actually warning people about the

potential dangers, especially for young people.

The owner of this verbal protocol demonstrates strong critical thinking and analytical skills by identifying logical flaws in the article's argument—such as the false equivalence between coffee and energy drinks, particularly for young consumers. Her ability to deconstruct the argument reveals a keen awareness of biased framing, as she notes how the author prioritizes business interests over health concerns by deflecting attention toward industry profits rather than risks. Additionally, the protocol owner exhibits ethical and health awareness by specifically highlighting the vulnerabilities of children and teenagers, questioning the article's dismissive stance on caffeine's effects. Maintaining a critical perspective while reading is evident through rhetorical questions ("Is that reasonable?") and a clear critique of the article's corporate bias. Finally, she showcases source evaluation skills by recognizing how financial motivations may undermine the article's credibility. Together, these competencies reflect media literacy, scientific skepticism, and a commitment to ethical reasoning when assessing health-related claims.

The critical analysis and evaluation strategy became an integrated approach among students using verbal protocol for identifying author's persuasiveness and bias. These students used textual evidence to bolster their chosen answers. This involved highlighting tactics which authors use to incite emotions in people in order to persuade them. A student [F, 7, E, 25], for instance, exemplified this strategy by focusing on the author's balanced presentation of information, which is shown in the following excerpt.

The text makes the claim that energy drinks have three times the caffeine of soda. That's a lot! I doubt that is completely wrong. But the text reports scientific knowledge and expert opinions which lend credibility to its argument. This does not prevent doing this selectively and with bias. The writer says caffeine causes hyperactivity and

restlessness in children which implies sale of energy drinks should be prohibited. There must be serious health risks as many public authorities have taken measures to force banning. This all makes me think the companies are downplaying real risks just to keep selling more.

In conclusion, the use of critical analysis and evaluation through verbal protocols enabled students to uncover the persuasive techniques and potential biases embedded in the text. By closely examining how emotional appeal and selective use of expert opinion shape the author's message, students demonstrated their ability to question the credibility and intent behind informational texts. This approach not only deepened their understanding of textual content but also fostered critical reading skills essential for academic and real-world contexts.

4.8.1.3.6. Text Six

The data presented below comprises excerpts from verbal protocols collected from participants after their reading of Text 6. As previously mentioned, this text, titled "*More Consensus on Coffee's Effect on Health Than You Might Think*" was published by New York Times on May 11, 2015. The text argues that despite long-standing myths about its health risks, research overwhelmingly shows that moderate coffee consumption is linked to numerous health benefits and a reduced risk of various diseases, making it a reasonable part of a healthy diet.

As they delved deeper into the provided text, members of the quasi-experimental group found themselves pausing to consider whether the author had truly engaged with and acknowledged perspectives that differed from their own. This internal questioning became a point of reflection, prompting them to actively seek out any indication of counterarguments or alternative viewpoints within the material. One reader [M, 3, E, 23] articulated this capacity by stating:

I'm asking myself if this text mention opposing views. It starts by talking about the myth that caffeine consumption during childhood stunts growth. It also mentions that people used to think coffee was unhealthy and ruined the stomach. The author expects to study the matter further. He also admits most existing studies aren't experiments. So, the text seems lacking a mention of opposing views. The author tries to be fair but shows a clear pro-coffee bias in tone and emphasis.

Through careful examination of the presented arguments, members of the learning group honed their critical thinking skills by specifically evaluating the balance of perspectives. This process of actively looking for and assessing the inclusion of different viewpoints allowed them to move beyond surface-level comprehension and develop a more nuanced understanding of the subject matter. They learned to identify potential biases and appreciate the importance of considering multiple sides of an issue. One respondent [F, 4, E, 24] captured this insight by stating:

This article makes a strong case that coffee is not dangerous for health. The benefits of coffee have been proven to help lower the risk of heart disease, cancer, diabetes, and obesity. The journalist may be being too positive in his assertions. Is he giving readers the full picture or just picking studies that support their argument? Is he using selective evidence? He mostly shows studies that favor coffee. What about studies that found no benefit? Or studies on its negative impact on health? They're not here. So, I think the article might be a bit one-sided. Not dishonest, but maybe a little too eager to convince me.

The learner demonstrates an ability to question the author's objectivity, recognize potential bias, and evaluate the completeness of the evidence presented. By asking whether the journalist might be using selective evidence and noticing the absence of contradictory studies, the learner shows she is not simply accepting the text at face value. Instead, she is thinking critically about the argument, its tone, and the balance of sources. This reflects a growing awareness of how persuasive texts can be constructed and signals a meaningful step forward in developing academic and media literacy.

Skillfully evaluating language and tone acts as a crucial lens for detecting underlying bias and persuasive intents within any form of communication. By paying close attention to the specific words chosen, their connotations, and the overall emotional coloring of the message, individuals can discern subtle cues that might reveal a particular leaning or an attempt to sway opinion. Recognizing loaded language, emotionally charged appeals, and the strategic framing of information empowers one to move beyond surface-level acceptance and critically assess the presented message for potential hidden agendas or unbalanced perspectives. The following excerpt from a respondent's think aloud demonstrates this:

I notice that the author uses casual language, like use of '*When I was a kid...*' That gives it a friendly tone. Then I notice phrases like '*this is a myth,*' '*the reputation is backward,*' and '*surprisingly large benefits*' implying a definitive stance. The author even uses dramatic calorie counts to make a point — that sounds persuasive, not neutral.

This quote from a verbal protocol illustrates how students can recognize tone and rhetorical strategies in academic or semi-academic writing. The quoted student observes the use of casual, conversational language—such as personal anecdotes—to create a friendly, approachable tone. At the same time, he notes the author's use of assertive phrases and

striking statistics, which contribute to a persuasive rather than neutral stance. This reflection demonstrates an awareness of the role of language choices influence a reader's perception of credibility and intent. A similar sentiment was expressed by a student's verbal protocol [M, 8, E, 25]:

So no, the language isn't totally neutral. It's persuasive and sometimes emotional. Not extreme, but definitely not just reporting facts.

The verbal protocols relative to text five reveal that participants engaged in deep critical analysis of the text, evaluating its balance, tone, and evidentiary support. While they acknowledged the article's strong pro-coffee stance and its use of persuasive language (such as assertive claims, casual phrasing, and selective emphasis on benefits) they also identified gaps in opposing viewpoints and potential bias. This reflective process highlights their growing ability to scrutinize sources, question authorial objectivity, and recognize use of rhetorical strategies. By actively assessing the completeness and fairness of the argument, participants demonstrated advanced media literacy skills, moving beyond passive consumption to a more discerning, analytical approach to textual evaluation. This underscores the importance of teaching readers to identify bias, weigh evidence, and interrogate persuasive techniques in order to foster informed, critical engagement with media messages.

4.8.1.4. Synthesis of Verbal Protocol Analysis

In sum, the analysis of verbal protocols demonstrates that instruction in critical thinking and argumentation analysis enables first-year EFL Master learners to more effectively identify objectivity and bias in public health news articles published in English newspapers. Through the use of cognitive and metacognitive strategies, students became more aware of how linguistic cues in messages may signal deceptiveness and how stance indicators shape the

perceived credibility of information. The data also revealed that fallacious arguments are often employed as rhetorical ploys in newspapers, which requires careful understanding to evaluate arguments more objectively. Finally, the findings highlight that while critical discourse analysis is a powerful tool, its use demands caution so that learners can mitigate their own personal biases while assessing the arguments presented.

4.9. Analysis of Interview Data

This chapter presents a qualitative analysis of data gathered through semi-structured interviews. The section begins by outlining the methodological process employed to code and theme the interview transcripts. It then details the principal findings that emerged from this analysis, organized around key themes that elaborate on the quantitative data. Finally, the chapter concludes by synthesizing these insights to draw meaningful conclusions about the participants' critical thinking processes and perceptions.

4.9.1. The Process of Interview Analysis

Interviews can be time consuming. This is the main disadvantage encountered in using interviews as a method of data collection in this study. To select interview participants, purposive sampling was employed. From the total of fifty-five participants who took part in this quasi-experimental study, ten were chosen for semi-structured interviews conducted using an interview guide of open-ended questions organized into three themes.. This approach was considered appropriate because the purpose of the interviews was not to obtain a statistically representative sample but rather to gain in-depth insights into learners' perceptions and experiences of critical media literacy instruction. Participants were selected to ensure variation in relevant factors such as gender, proficiency level, and performance on the quasi-experimental tasks, thereby allowing for a richer and more nuanced understanding of the phenomena under investigation.

In conducting the data analysis of the interview data, Braun's and Clarke's thematic thematic

analysis method (2006) was used. This is a method that focuses on identifying, analyzing, and reporting patterns within qualitative framework. Braun and Clarke (2022, p.4) reiterated the guidelines for doing thematic analysis in the form of six steps

Step 1: data Familiarization

Step 2: systematic Generating Codes

Step 3: generating Themes

Step 4: Reviewing and developing Potential Themes

Step 5: Defining and Naming Themes

Step 6: Producing the Report

The transcripts contained much data irrelevant to the question of the course's impact on students' learning and critical media literacy development, and relevant materials to the research questions under investigation needed to be identified. Since not all questions were pertinent to this, a need was to determine whether a question is relevant or not to pick up relevant materials. This was done by closely and carefully reading the transcripts to highlight segments connected to the research focus, and organize them into preliminary categories associated with situating the implementation of interview across spaces and times within the research tools used.

Two levels of coding were involved within the coding process. At the first level, coding began with a description which involved the minimum of interpretation or abstraction. The codings which summed up the data chunk were applied, as appropriate, to 'chunks' of data or transcript. So it could be just a word, a phrase, or sometimes even paragraph paragraph. At the first level, coding was a complex, interconnected process in which the initial codings would be revised in light of things appearing later in the transcripts to create labels or determine the initial coding scheme that will be used to describe the data under investigation. Some codes would be subdivided, some revised if the initial codes seemed ambiguous or an

inadequate fit to the data, and codes would be combined if their meaning overlapped too much.

To choose the proper names for the main themes as well as their sub-themes, the next stage (theme development) involved more interpretation and reasoning upon the information provided by the two previous levels. Throughout the analysis, the researcher moved backwards and forwards between the data (interview extracts) and the codes, as well as between the developing themes and codes. Following predefined rules, the researcher drew out key themes together by colour coding to 'brand' the different themes within each section.

Although the initial stages of this thematic analysis were led by the data, in the final stage the researcher drew inspiration from already-existing methods as an aid to effectively sorting the codings into overarching themes. After the thematic analysis was complete, the interviews were scrutinized again and the number of interviews which mentioned a particular theme was counted. There were three themes identified, which were:

Theme 1: Perceived Impact of the Course on Learning Outcomes

Theme 2: Development of Critical Media Evaluation Skills

Theme 3: Perceptions of Media Bias and Misinformation

4.10.2. Findings from Interview Analysis

The first theme, as has already been indicated, was intended to capture the interviewees' views and opinions on the impact of the course and its contribution to their learning outcomes. The first question in this theme specifically delved into eliciting students' perceptions regarding the overall experience they gained from the course. It aimed to explore whether the instruction had influenced their ability to engage critically with texts, enhanced their awareness of objectivity and bias in media discourse, and strengthened their skills in argument analysis. In addition, the question sought to uncover how students evaluated the

relevance of the course to their academic development as EFL Master learners, and whether they perceived any transfer of these critical skills to other areas of study or everyday encounters with media texts.

Some of the responses highlighted are presented below to illustrate the range of perspectives expressed by the interviewees. The question was formulated in a simple and direct manner to encourage openness and reflection: “To begin, I’d like to hear about your overall experience taking this course.” By starting with a broad, non-restrictive inquiry, the intention was to allow students to freely articulate their impressions without being guided toward specific aspects of the course. This opening question thus provided a valuable entry point for identifying the dimensions of learning that students considered most significant, whether related to the content, instructional methods, or the perceived relevance of the skills acquired.

Most respondents found it difficult to grasp abstract concepts when these were presented with limited examples, which in turn made their application in textual analysis particularly challenging. Several students explained that without sufficient illustration or concrete cases, theoretical notions remained unclear and were harder to transfer to practical tasks. Furthermore, the responses revealed a distinction in the type of difficulties encountered: some students articulated that they experienced more difficulty in detecting bias in media texts, as this required a higher level of sensitivity to subtle linguistic and rhetorical cues, whereas they reported less difficulty in analyzing textual arguments, which they perceived as a more structured and systematic task. This contrast suggests that while argument analysis skills may be more accessible when grounded in clear models such as Toulmin’s framework, bias detection demands deeper interpretive strategies and greater reliance on critical awareness of discourse practices, which some learners were still in the process of developing.

Seeking to ascertain students’ own knowledge regarding course impact, the second

question asked students what they learned about bias in news reporting, specifically in the context of public health. A response summarized the importance of bias detection, "I think bias detection is the core of critical reading!" Another respondent echoed the value of bias detection and said, "Not only is learning about bias fruitful for evaluating information but also avoiding manipulation." What the participants found was aptly described by a respondent as follows: "lack of understanding of the journalist's perspective, readers of newspapers can have trouble with assessing the potential ideological leanings of the news report."

The second theme sought to ascertain the extent to which the course had empowered interviewees to critically evaluate news articles, detect bias, and discern underlying persuasive strategies. According to one of the respondents, the difference between a passive media consumer and an active one lies in the adopted state of mind to shed questions on media products. He said that "before undertaking this course, I had no chance to question the perspectives of journalists, no opportunity to learn criticizing arguments. A respondent summarized the importance of evaluation of argument-bias connections by saying, "I think developing the ability of evaluating argument-bias connections is crucial for us to discern how believable and trustworthy a news report is!" These insights underscore that the course not only heightened students' awareness of bias and persuasive strategies in news discourse but also fostered a more critical and reflective stance toward media consumption.

Participants perceived argument-bias interaction as a means to mitigate ignorance and foster rational engagement with media texts. Respondents reported their realization that interpreting media texts and making judgments is in fact impossible to sustain without finding objectively validated and verifiable evidence. The practice of argumentation affords an opportunity to measure bias against objective criteria. One respondent said "unless there is assessment of arguments shaping a text, then, it is impossible to establish the credibility of a news reporting being read". For many respondents, expectations for applying evaluation of

arguments to find bias in media texts were not realized. In most cases, they believed argumentation would be easy to transfer to media texts' analysis. Instead they found application complex.

To measure the embedding effect that resulted from the course, the third theme explored how the respondents perceived the impact of biased public health news and the role of media in spreading misinformation. The questions in this theme aimed to elicit students' reflections on the potential consequences of consuming distorted or one-sided health information, particularly in shaping public opinion and influencing individual decision-making. Respondents were encouraged to discuss whether they had become more sensitive to the ways in which media outlets can manipulate language, statistics, or expert voices to frame issues in a particular light. This theme also examined students' ability to connect their critical reading skills to broader social implications, such as the spread of misinformation during health crises and the responsibilities of journalists in ensuring accuracy and fairness. By doing so, it highlighted the extent to which learners could transfer their analytical insights from classroom tasks to real-world contexts of media consumption.

The first question in the third theme assessed students' perceptions of groups' susceptible to the persuasive effects of biased health news. Many participants believed that regardless of owning skills to critically evaluate what they read on new media sites, individuals who strongly identify with a particular political party may be more likely to believe information that aligns with their existing beliefs, even if it is biased or inaccurate. As one expressed, " Many aspects of the course made me believe that it is difficult for individuals to critically evaluate information and recognize bias in the news which align with their political views, even if they possess the skills to do so." One of the interviewees (F.D.21.9) argues that not media spread misinformation, propaganda, and fake news. In her words, she

states "while news reports have to involve presenting arguments and evidence to support claims, this is done to provide the public with the information they need, not necessarily to persuade them to a particular viewpoint." While knowing the existing strong relationship of bias and argumentation, they expected media coverage to have objectivity and impartiality, as argued by a respondent (M.E.23.11). Overall, the responses suggest that while students acknowledged the susceptibility of certain groups to biased health news, they also emphasized the expectation that media should uphold objectivity and impartiality despite the frequent use of persuasive strategies.

4.9.3. Drawing Conclusions from Interview Analysis

In conclusion, the thematic analysis of the interview data revealed that the course played a pivotal role in enhancing students' ability to critically engage with media texts, particularly public health news articles. Across the themes, respondents reported increased awareness of how bias, persuasive strategies, and rhetorical devices shape the framing of information and influence public perception. While students acknowledged ongoing challenges—such as grasping abstract concepts, detecting subtle bias, and resisting personal predispositions—they also highlighted tangible gains in argument analysis, recognition of stance indicators, and evaluation of the connections between argumentation and bias. Furthermore, the findings underscored that although fallacious arguments and manipulative discourse remain powerful tools in news writing, learners became more cautious, reflective, and methodical in applying critical discourse analysis to mitigate their own biases. Taken together, these insights demonstrate that systematic instruction in critical thinking and argumentation can empower EFL Master Students to transition from passive readers into more discerning and active consumers of media information.

4.10. Qualitative Data Interpretation

The analysis of verbal data through thematic analysis revealed clear patterns in students' use of cognitive and metacognitive strategies across the programme. At the initial stage, students relied more heavily on cognitive strategies than on metacognitive ones. Their engagement was primarily limited to recalling prior knowledge and responding affectively to texts. Metacognitive activity was present but restricted, often taking the form of simple reflection or the recognition of framing and repetition, without progressing into deeper analysis or evaluation. Students showed some emerging awareness of bias, yet their self-reflection and critical stance remained underdeveloped.

As the programme advanced, however, notable shifts occurred. Students began to demonstrate more sophisticated metacognitive strategies, moving beyond surface-level responses toward developed reflection. They increasingly evaluated authorial intent and persuasive techniques, showing greater critical awareness of discourse and rhetorical strategies. This progression suggests that practice in argument analysis and critical reading supported the transition from affective and knowledge-based engagement to analytic and reflective processing.

These findings align with the work of Ritchhart and Perkins (2008), who argue that metacognitive strategies foster the development of critical thinking dispositions. They are also consistent with research showing that persuasive strategies often trigger affective responses, but that rational evaluation requires explicit instruction in argument analysis and reasoning. Comparative evidence from Ha (2020) and Asalifew (2024) similarly indicates that critical thinking can moderate affective reactions to persuasive framing, enabling readers to engage in more rational and deliberate textual evaluation.

Overall, the results highlight that metacognitive strategies—particularly reflection, evaluation, and awareness of rhetorical intent—play a central role in enriching the critical thinking

process. They not only enable students to move beyond affective responses but also equip them to apply analytic reasoning in decision-making about textual persuasion.

The analysis of verbal protocols—where students verbalized their thought processes while reading—demonstrates that the educational intervention led to significant and marked progress in developing students' critical reading abilities. This progress was not instantaneous but evolved gradually, indicating a deepening integration of critical frameworks.

A primary success of the intervention was in shifting students' understanding of media bias from an abstract concept to a tangible textual feature. Students learned to recognize that a media text is not a neutral report but a constructed representation of reality, shaped by a political perspective that is determined by the author's selective choice of arguments. This was particularly evident as students applied critical discourse analysis (CDA) to deconstruct how news outlets covered controversies on public health issues, moving beyond what was reported to analyze how it was reported and why.

This analytical skill was underpinned by a refined attention to language itself. The verbal protocols charted a clear, gradual improvement in students' knowledge of a word's connotation versus its literal definition, allowing them to discern the author's intended meaning and persuasive intent. This finding aligns with the work of Kovach and Rosenstiel (2001), who posit that recognizing such linguistic patterns is fundamental to identifying bias. Students became more adept at spotting the subtle mechanisms of persuasion, showing marked progress in analyzing implicature (what is implied), presupposition (what is assumed to be true), and logical form (the structure of an argument).

These results strongly corroborate the ideas of Potter (2015), confirming that equipping readers with a "meta-linguistic toolkit"—concepts drawn from pragmatics, rhetoric, and discourse analysis—is central to deconstructing persuasive messages and fostering genuine media literacy.

The data revealed a notable area where progress was limited. The verbal protocols did not indicate a significant difference in students' ability to use intertextuality effectively between their first and final reading tasks. This suggests that the skill of identifying and interpreting a text's references to other texts, cultural narratives, or prior reporting is particularly challenging to develop in a short-term intervention. While this outcome differs from the theoretical importance placed on intertextuality by scholars like Genette (1997), it is consistent with the empirical findings of Bazerman (2004), Allen (2011), and Macri (2019), who argue that intertextual awareness requires extensive cultural and textual knowledge that is built over a longer period.

In conclusion, the intervention was highly effective in teaching students to critically analyze the internal linguistic and structural features of a single text. The challenge of intertextuality, however, highlights an important frontier for future instruction, suggesting that sustained and explicit teaching is needed to help readers navigate the complex web of references that underlie modern media and persuasive discourse.

Previous studies in line with this research argue that understanding abstract concepts and using them properly in systematic logical reasoning and problem-solving engagement is a perceived difficulty concerning EFL students, arising from inadequately developed critical thinking skills and limited training in higher-order cognitive strategies necessary for the implementation of critical media literacy (Bergstrom, 2018 ; Gkiolmas & Chalkidis , 2019). Interviews provided important data which confirms that difficult for L2 learners to learn how to interpret devices such as unusual syntax or word order, metaphors and other figurative language , parallelism , repetition , and so on .This is in line with previous studies, which have argued that rhetorical reading is generally recognised as a difficult skill and a source of ambiguity for many students (Buckingham, 2003 ; Kellner & Share, 2007). Previous studies advocate for the need to situate media text in sociopolitical contexts for effective

critical reading (Janks, 2010; Duenas, Garcia, & Lopez, 2013).

After completing the course, participants reported noticeable improvements in how they engaged with arguments in news texts. Several noted that they were no longer persuaded by one-sided arguments, recognizing these as biased because they deliberately ignore counterpositions. Others explained that they had learned to view two-sided non-refutational arguments more critically, understanding that merely mentioning alternative views without addressing them still reflects partiality. The most frequently cited gain, however, was the ability to appreciate two-sided refutational arguments as more balanced and objective. Participants emphasized that this type of reasoning helped them evaluate information more systematically and resist the persuasive effects of biased reporting. These results, demonstrating the pedagogical effectiveness of teaching argument structure to improve critical media literacy, are strongly supported by previous research in the field (Chang & Wu, 2023; Kessler et al., 2022).

The interviews provided important insights into students' perceptions of media, particularly their understanding that not all forms of persuasion are intended to deceive or harm audiences. Several participants emphasized that persuasive strategies in news and public health campaigns can also serve constructive purposes, such as encouraging healthier lifestyles, promoting awareness of social issues, or guiding people toward beneficial choices. This recognition marked a shift in their perspective, as they distinguished between manipulative persuasion that seeks to mislead and purposeful persuasion that aims to inform or protect the public. Such nuanced views reflect the development of a more critical and balanced understanding of media influence.

The interviews provided important insights into readers' perceptions of objectivity and bias in news texts. These insights provide a strong base upon which to build theoretical and pedagogical implications. The interviews provided important insights into

readers' perceptions of objectivity and bias in news texts, shedding light on how students interpreted the credibility and fairness of information presented to them. Participants articulated varying levels of awareness regarding biased reporting, ranging from recognizing overt one-sidedness to identifying more subtle persuasive strategies embedded in supposedly factual accounts. These findings not only reveal how learners navigate the complexities of media discourse but also highlight areas where instruction can strengthen their evaluative skills. The insights gained thus provide a strong foundation upon which to build both theoretical implications—by advancing understanding of how EFL learners conceptualize bias and objectivity—and pedagogical implications, by informing the design of classroom practices that foster more critical and independent news readers.

Conclusion

The finding of this study revealed that students who practice deconstructing arguments in a process of their evaluation get better performance in reading critically journalistic texts. It can be concluded that applying basic critical thinking skills for teaching competency to read, interpret, and understand how meaning is made and derived from media texts is dispensable in the art and science of teaching foreign language. Though autonomy in the acquisition of critical thinking skills is very much essential for learners, yet this is not all that is needed at the initial stages. Learning involves interaction, intervention and feedback focusing on the quality of the learner's work and advice about how to improve. Students should consider the development of the ability to think critically as one of the central purposes of learning because it can shape their

world views. Furthermore, critical thinking lead students to push themselves to a deeper level of understanding to foster questioning and reasoning on how worldviews and political ideologies held by scientists, citizens, decision-makers and politicians influence science as practiced and understood today. It is the quality of teaching-learning environment which provides an arena and fertile land in which to cultivate and practice such critical consciousness, Applied to navigating the complex landscape of public health news, critical thinking are tools to uncover how powerful forces frame the news in attempts to shape or alter public opinion. Armed with critical thinking skills, readers can react reasonably to distorted pictures of the world of health embedded into media discourse. Carefully evaluating and assessing argumentation with logical thinking and analysis contribute significantly to spot misleading information in news reports.

CHAPTER V

Discussion, Limitations, Implications, and Further Research

Introduction

This chapter provides a discussion of the research findings in relation to the aims and hypotheses of the study, implications for improving educational practices in EFL, and recommendations for further research. The study limitations impacting the generalizability of the findings and the study conclusions are also presented. This cross-sectional quasi-experimental study specifically focused on exploring if raising individuals' awareness on how to distinguish between biased and unbiased information will reduce the impact of persuasive intent attribution in media contexts, as measured by the California Critical Thinking Dispositions Inventory (CCTDI), Exploring effects of explicit teaching of argumentation on the performance of EFL learners on reading newspaper texts, and finally, examining employment of critical discourse analysis as a textual analytical framework to seek to uncover elements of ideological bias as it is expressed and embedded in use of argumentation in newspaper reports on public health issues.

5.1. Addressing the Research Gap

The critical reading of media texts is a complex cognitive activity that has garnered significant interest from linguists, psychologists, and educators. While textual features are undeniably influential, comprehending a text is an interactive process where readers construct meaning by integrating textual cues with their pre-existing knowledge and beliefs. A central objective of this critical engagement is to discern both the obvious and hidden agendas of the author (Muspratt, Luke, & Freebody, 1997). Prior research has firmly established that a text's persuasiveness is heavily influenced by its argumentative structure and content (DeBono & Harnish, 1988; Sinatra & Broughton, 2011) and is often judged as less persuasive when readers perceive a slanted or biased authorial point of view. Consequently, individuals with

divergent cultural and personal experiences may interpret the same text quite differently.

The present study was designed to address a notable gap in this scholarship. While extensive research in media and journalism studies has examined how bias is produced and disseminated (e.g., Fand, 1985; PalmaSánchez, 1998), fewer studies have focused on the reader's role in identifying bias as an act of textual interpretation. Furthermore, such studies have been predominantly conducted in Western contexts, leaving it unclear whether their findings are applicable to learners in different socio-cultural settings, such as Algeria. Therefore, the primary purpose of this research was to investigate how first-year EFL Master Learners at an Algerian university identify objectivity and bias in English public health news articles, specifically by examining the relationship between their ability to detect bias and their perception of persuasive intent.

5.2. Answers to the Research Questions

This study set out to investigate the possible contributions of implementing critical media literacy practices that incorporate explicit instruction of argumentation and practical use of CDA to help EFL students engage in 21st century literacies. Overall, its findings support the idea that teaching, in instructional scaffolding form, youth to critically read media can offer valuable learning experiences to students that contribute to their personal and professional growth. The key findings, organized by the research questions, are as follows:

5.2.1. Research Question 1

The goal of the first research question was to determine if there is a statistically significant difference in students' perceptions of applying critical evaluation skills necessary to perceive credibility in newspapers after the implementation of a scaffolding program explicitly intended to teach argumentation and critical discourse analysis.

RQ1: How do first-year EFL Master Learners perceive their critical evaluation skills for determining the credibility of media news before and after completing a quasi-experimental

course?

H₀₁: There is no significant difference in first-year EFL Master Learners' perceptions of their own critical evaluation skills for determining the credibility of media news before and after completing a quasi-experimental course.

H_{A1}: There is a significant difference in first-year EFL Master Learners' perceptions of their own critical evaluation skills for determining the credibility of media news after completing a quasi-experimental course compared to their perceptions before the course.

A paired samples t-test was used to determine if there was a statistically significant difference between the same 55 students' scores from the 2020 pre-test (before fully implementing the program) and their scores from the 2021 post-test (after implementation of the program). There was a significant improvement from test to retest for response time ($t(18)$, $p < 0.05$)

Prior to the course, students' self-assessments revealed a tendency to accept information at face value, rarely questioning potential underlying agendas or institutional biases. Many admitted they did not actively analyze the framing of news stories, often overlooking instances of loaded language, selective reporting, or persuasive framing techniques. Additionally, they acknowledged being vulnerable to confirmation bias (readily believing news that aligned with their pre-existing views while dismissing or ignoring contradictory evidence without scrutiny). Their media consumption habits were largely passive, with little effort made to interrogate sources, verify claims, or consider alternative perspectives.

After completing the course, however, students reported a marked shift in their approach to media analysis. They became far more proactive in seeking out ideological influences shaping how authors present information, examining not just the content of news but also its construction. They learned to critically assess framing, word choices, and omissions within articles, recognizing how subtle linguistic shifts could influence perception.

Importantly, they also developed an awareness that even credible sources can have subtle slants (whether through emphasis, selective sourcing, or narrative framing) leading them to cross-reference reporting across multiple outlets rather than relying on a single "trusted" source. This newfound skepticism was not cynical dismissal but a more nuanced, evidence-based engagement with news, reducing their susceptibility to confirmation bias and improving their ability to discern objective reporting from persuasive storytelling.

5.2.2. Research Question 2

The goal of the second research question was to determine if there was a statistically significant difference in students' scores on identifying objectivity and bias in English public health news articles reading after the implementation the implementation of a scaffolding program explicitly intended to teach argumentation and critical discourse analysis.

RQ2: To what extent does instruction in critical thinking and argumentation analysis help first-year EFL Master Learners identify objectivity and bias in English public health news articles?

H₀₂: There is no statistically significant difference in the mean scores of first-year EFL Master Learners at Mascara University on identifying objectivity and bias in English public health news articles before and after the implementation of a scaffolding program for argumentation and critical discourse analysis.

H_{A2}: There is a statistically significant increase in the mean scores of first-year EFL Master Learners at Mascara University on identifying objectivity and bias in English public health news articles after the implementation of a scaffolding program for argumentation and critical discourse analysis.

An independent samples t-test was used to determine if there were statistical differences between student assessment scores before program implementation (beginning of the semester) and after the implementation of the program (end of the semester). There were 22

assessment scores from students with specialization in applied linguistics and didactics and 33 assessment scores from students with specialization in ESP. Students' assessment scores on identifying objectivity and bias in English public health news articles were higher after the implementation of a scaffolding program for argumentation and critical discourse analysis. Therefore, the null hypothesis H_{02} was rejected since the p-value was less than 0.05.

The findings suggested that instruction in critical thinking and argumentation analysis substantially enhanced learners' ability to identify objectivity and bias in English public health news articles. After the course, students demonstrated greater engagement in evaluative practices such as checking the reputation and expertise of the publication or journalist, cross-referencing multiple sources to verify claims, and distinguishing between primary sources, expert analyses, and opinion pieces. These strategies indicated a shift from passive consumption toward active verification and critical evaluation of information, which enabled learners to better discern potential bias and assess the objectivity of news content.

Instruction in critical thinking and argumentation analysis significantly improved learners' ability to identify objectivity and bias in English public health news articles. Following the course, students became more aware of bias by omission, recognized when one side of an argument was left out, and understood that such exclusion often signaled the reporter's preferred position. They acknowledged the importance of considering both conservative and liberal perspectives in health news and learned that journalists sometimes selected quotes to reinforce a favored argument. Learners also developed the habit of reading attentively to determine whether an argument was fallacious.

Through this instruction, students came to understand that news reports containing only one-sided arguments tended to exhibit more bias than those presenting two-sided arguments. They distinguished between two-sided non-refutational arguments, which

presented both sides in a more objective manner, and two-sided refutational arguments, which still revealed a particular stance. Importantly, they recognized that critical thinking and argumentation training not only enhanced the accuracy of their bias detection but also helped them reduce their own cognitive self-bias when evaluating news content.

Instruction in critical thinking and argumentation analysis equipped learners to better identify objectivity and bias in English public health news articles by enabling them to detect how flawed reasoning, selective evidence, and persuasive rhetorical strategies could make inaccurate claims appear credible. After such instruction, learners were able to recognize, for example, when a health report on vaccines relied on anecdotal evidence of adverse reactions, omitted large-scale statistical data confirming vaccine safety, and used emotionally charged language. Similarly, in the controversy over whether cell phones cause cancer, learners identified when articles highlighted isolated case studies, downplayed or excluded findings from large epidemiological studies, or used speculative expert statements to create unwarranted fear. In both cases, learners became adept at seeing how such argumentation patterns could subtly frame an issue in a biased way despite the weight of scientific evidence, and they applied critical evaluation of premises, evidence, and counterarguments to avoid accepting such falsehoods at face value.

5.2.3. Research Question 3

The goal of the third research question was to determine if there was a statistically significant difference in students' ability to reduce the influence of personal biases when evaluating English public health news articles after participating in a scaffolding program explicitly intended to teach argumentation and critical discourse analysis.

RQ3: To what extent does such instruction help first-year EFL Master Learners mitigate their personal biases, whether conscious or unconscious, when evaluating English public health news articles?

H₀₃: There is no statistically significant difference in the extent to which first-year EFL Master Learners mitigate their personal biases, whether conscious or unconscious, when evaluating English public health news articles before and after receiving instruction in argumentation and critical discourse analysis.

H_{A3}: The implemented instruction in argumentation and critical discourse analysis results in a statistically significant increase in the ability of first-year EFL Master Learners to mitigate their personal biases, whether conscious or unconscious, when evaluating English public health news articles.

A paired-samples t-test was conducted to evaluate the impact of the instructional intervention on students' ability to control for self-bias effects. The test compared mean scores from a pre-test (administered before the intervention) to mean scores from a post-test (administered after the intervention) on the same assessment. The analysis assessed whether the mean difference between the two sets of scores was statistically significant.

The results of the paired-samples t-test indicated a statistically significant, albeit modest, improvement in students' ability to control for self-bias following the instructional intervention. The small effect size (Cohen's $d < 0.09$) suggests that while the intervention was effective in a measurable way, its practical impact was limited. This slight improvement could be attributed to the complex and deeply ingrained nature of personal bias, which may require more extensive or differently focused training than what was provided in this short-term program. It suggests that the intervention laid a foundation for bias mitigation but that achieving substantial change would necessitate further development.

Instruction in critical thinking and argumentation provided a foundational framework that moderately assisted first-year EFL Master Learners in beginning to mitigate both conscious and unconscious biases when evaluating English public health news articles. Learners started to develop an understanding of bias as a multifaceted concept

and gained initial exposure to its implicit and explicit forms. The use of public health news as authentic materials proved beneficial in making these abstract concepts more accessible.

By contextualizing bias within meaningful content, the instruction helped foster a preliminary awareness in students that textual interpretation is influenced by their own assumptions and experiences. A key instructional focus was on critical standards of argumentation, which equipped learners with some tools to evaluate the rational and persuasive elements of news reports. To a moderate extent, students acquired skills in identifying weaknesses in reasoning and analyzing framing, which helped them start to confront biases like confirmation bias.

Instruction integrated reflective questioning, which encouraged a developing level of meta-cognitive awareness. Practical activities based on Critical Discourse Analysis enabled some learners to make initial attempts at uncovering hidden biases, though this often remained challenging. Attention to the role of emotions helped foster a growing recognition of how affective responses can influence judgment.

Overall, this approach introduced critical thinking as a lifelong process. There was evidence that learners began to move from passively reading to more actively interrogating texts, showing a nascent willingness to acknowledge personal biases and apply strategies in real-time. This represented a meaningful, though incomplete, step toward evaluating news with greater objectivity.

The outcomes indicate that first-year EFL master's - level students achieved partial success in mitigating their personal biases. The data suggest that while students developed an emerging awareness of public health as an ideologically framed civic issue, this realization was not yet fully consolidated. They showed a preliminary ability to recognize that media discourse reflects ideological positions, but their application of this understanding was inconsistent.

Similarly, while students began to recognize the link between ideological struggles, power relations, and health reporting, this recognition was not systematic across all learners and often remained at a surface level. Many still struggled to move beyond identifying bias to deeply interrogate underlying agendas.

In sum, the instruction fostered a degree of critical awareness that helped students partially mitigate bias. While not achieving complete objectivity, learners began to adopt a more critical orientation. The intervention successfully laid a groundwork for bias reduction, but the moderate results highlight that further reinforcement and practice are essential for these skills to be fully realized.

5.2.4. Research Question 4

The fourth research question had a two-fold purpose: first, to investigate the relationship between students' ability to detect bias and their perceptions of persuasive intent in English public health news articles; and second, to examine how an instructional framework integrating critical discourse analysis (CDA) and argumentation theory enhances students' capacity to critically analyze the reciprocal relationship between these two elements.

RQ4: Do differences in first-year EFL Master Learners' ability to detect bias influence their perceptions of the intended persuasive effects of English public health news articles, if so, how?

H₀₄: There is no statistically significant relationship between the ability to detect bias and the accuracy of perceiving persuasive intent in English public health news articles among first-year EFL Master Learners at Mascara University.

H_{A4a}: There is a statistically significant positive relationship between the ability to detect bias and the accuracy of perceiving persuasive intent in English public health news articles among first-year EFL Master Learners at Mascara University. Learners with a higher proficiency in identifying bias will demonstrate a greater accuracy in identifying the intended persuasive

effects of the text.

H_{A4b}: The application of critical discourse analysis (CDA) and argumentation theory frameworks mediates the relationship between bias detection skills and the accurate perception of persuasive intent. Learners with higher bias detection skills will demonstrate this by deconstructing arguments, identifying rhetorical devices, and uncovering ideological framing, leading to a more accurate interpretation of the author's persuasive goals.

To address the research hypotheses (H_{A4a} and H_{A4b}), two primary statistical analyses were employed. First, a Pearson correlation coefficient (r) was computed to measure the strength and direction of the linear relationship between students' ability to detect bias and their accuracy in perceiving persuasive intent. Subsequently, a statistical mediation analysis was conducted using the PROCESS macro for SPSS (Hayes, 2013).

The results of the statistical analyses confirmed both research hypotheses. The Pearson correlation analysis revealed a statistically significant positive relationship between students' ability to detect bias and their accuracy in perceiving persuasive intent, thereby supporting HA4a. Furthermore, the mediation analysis conducted via the PROCESS macro (Hayes, 2013) indicated that this relationship was significantly mediated by the learners' application of critical discourse analysis and argumentation frameworks, confirming HA4b. This finding demonstrates that the ability to detect bias enhances perception of persuasive intent specifically by equipping learners with the analytical tools to deconstruct arguments and identify ideological framing.

The findings indicated that differences in students' ability to detect bias influenced their perceptions of the intended persuasive effects of English public health news articles. Bias detection and persuasive strategy detection appeared to have a reciprocal, bidirectional relationship, where improvement in one skill reinforced the other. When learners became

skilled at identifying bias—such as framing, selective reporting, or partisan language—they were also more likely to recognize persuasive techniques, including emotional appeals, loaded words, and rhetorical devices. This heightened awareness often triggered resistance to the intended persuasive effects, as students felt manipulated or became distrustful of the source, consistent with the persuasion knowledge model (Friestad & Wright, 1994), which posits that understanding persuasive tactics diminishes their effectiveness.

Students with stronger bias detection skills often demonstrated greater skepticism toward news content, which in some cases reduced the message's desired effect. This skepticism could be seen as a form of psychological reactance, prompting them to question the motives of the persuader and to scrutinize claims more rigorously, thereby minimizing the risk of being deceived. The growth of critical thinking skills during the course also made them more skeptical of news coverage in general, leading them to focus more closely on authorial intent and the rhetorical strategies used to influence readers.

Conversely, when students lacked bias detection skills, they often accepted the information presented in health news reports uncritically, perceiving it as accurate and trustworthy. In such cases, persuasive strategies were less likely to be recognized, allowing the intended influence of the text to remain intact. Furthermore, if a journalist's perspective aligned with the learners' own views, the bias shaped by shared cultural norms and values often remained unseen, and the persuasive strategies likewise went undetected. Even in situations where bias was not explicitly perceived, some students assumed that the news source had an agenda, suggesting that perceptions of persuasion could also be shaped by prior attitudes toward the publication rather than by the actual content.

The analysis further revealed that students who engaged in argument evaluation and applied concepts from critical discourse analysis (CDA) were more adept at uncovering hidden ideologies and power dynamics within public health news texts. For example, when

evaluating a report claiming that “vaping nicotine is somewhat safer than smoking tobacco,” they were able to identify logical fallacies or weak evidence and to recognize discursive strategies such as downplaying long-term health risks, framing vaping as a harm-reduction tool, or selectively citing industry-funded research. This ability to critically examine arguments at both macro and micro levels not only sharpened persuasion detection but also reinforced bias awareness, demonstrating the reciprocal relationship between the two skills

5.3. Key Findings

Our findings strongly align with and extend previous work on the issue. The results confirm the assertions of earlier researchers that readers' perceptions are indeed shaped by their ability to detect textual bias. More importantly, this study provides a mechanistic explanation for this relationship, demonstrating that it is mediated by the learners' application of critical discourse analysis and argumentation frameworks. This suggests that the effectiveness of bias detection does not rely on abstract critical awareness alone, but on the explicit, structured use of analytical tools that help students navigate persuasive language and ideological positioning.

A second key finding is that the intervention fostered measurable gains in learners' analytical capacity. Students not only improved their ability to identify claims, warrants, evidence, and counterarguments, but also began to reflect more deeply on their own interpretive positions. This development indicates that the integration of CDA and argumentation into instruction helped learners shift from a surface-level recognition of bias to a more nuanced evaluation of how texts are framed and how persuasive intent operates. Such a shift was particularly evident in verbal protocols and interviews, where students explicitly acknowledged their own biases and discussed strategies for mitigating them.

Third, by demonstrating that an instructional intervention focused on argumentation and CDA significantly improved bias detection in an Algerian EFL context, this study

confirms that the core principles of critical media literacy are transferable across cultures. It validates the concerns of previous Western case studies while showing that their theoretical foundations can be adapted and successfully applied in a different sociocultural and linguistic environment. This reinforces the notion that critical media literacy is not bound to a single cultural setting but has universal relevance when properly contextualized.

Finally, this research affirms that the supreme objective of critical reading—uncovering hidden agendas—is achievable when learners are equipped with robust analytical frameworks. The findings resonate with the interactive model of reading comprehension but extend it by specifying the role of critical tools as mediators between prior knowledge, textual features, and the author’s persuasive intent. At the same time, the data suggest that progress in bias mitigation was partial rather than absolute, reminding us that personal and cultural predispositions remain influential and must be continually addressed in pedagogy.

5.4. Significance of the Findings

The results of this study represent a significant contribution to further understanding of existing relationship between media literacy and critical thinking. Moreover, they make an interesting contribution to the ongoing debate which is attempting to encourage EFL teachers to consider teaching learners to think critically to seek out and recognize bias in the news; detect ideology, slant, and spin; and recognize propaganda. This study has managed to implement a robust research design and methodology which effectively combined reading, writing and thinking activities in one class and integrated in one module designed to help participants build critical discourse analysis. Through these activities, analyzing media and culture through the lens of critical thinking tools was encouraged in class for helping language learners to use the target language in culturally appropriate ways to accomplish authentic tasks.

ESL/EFL teaching in Algeria has for decades advocated uncritical approaches to reading based principally upon getting information provided in the text. Consequently, many L2 teachers have approached and perceived L2 reading as a comprehension process based on information assimilation facilitated by vocabulary growth. Thus, during the reading process; readers are no longer simply passive recipients of information. As a result, students often struggle with applying information that has been taught to make critical decisions. Although to some extent a change in approach to language teaching could be observed, it was not at a satisfactory level for empowering students to become active learners, critical thinkers, and problem solvers. Although linguistic competence (i.e. Knowledge of language) is a primary component in the context of learning at each stage of its levels, learners should be encouraged to think more deeply and more critically about the value embedded in language use.

There is very little research on critical thinking skills in the ESL context in general and applied to critically reading authentic texts in particular. For example, the present researcher has found no empirical studies tackling the issue of critical thinking skills for reading media texts, but one cannot deny the fact that many foreign language departments in the country have recently introduced critical thinking skills as a general course by means of general lectures, included in the curriculum. This study, therefore, is one of the very first empirical studies to equip Algerian EFL students with the necessary tools to apply critical thinking to textual and contextual analysis of media text. The findings could inspire professionals in the field to conduct further studies to achieve a better understanding of students' learning needs given the increasing contemporary challenges they face in dealing with the global dominance of English, not only as a language of science and technology but also in the production of news media. In addition, bearing in mind the unique distinctive conditions of the participants in this study based on a variety of contextual factors, the

application of this remarkable new perspective will add value to the research area. This is expected to generate a contribution with a very high degree of novelty.

Although there exists L2 research illuminating the role of argumentation on writing skills, this area has received little attention from researchers in dealing with the role of evaluation of argumentation to help L2 readers develop necessary critical thinking skills for use in media text comprehension, despite acknowledging its relevance for today's networked and highly digital student population. Most of the critical thinking skills studies in EFL contexts have investigated the ability in general terms by means of literary texts to elicit reactions and interpretation of messages. Moreover, the emphasis in many EFL classes is often on teaching informational and narrative texts, and, to a less extent, persuasive texts with implicit purposes designed to manipulate and affect the thinking of others. Reinforcing critical thinking skills by using them systematically to shed light on argumentative and persuasive written discourse seems to have been neglected. Moreover, the ability to employ critical thinking techniques to detect bias with real articles, though considered essential, have not received wide coverage in the field. This study therefore is among the few pieces of research in the EFL context which explore the identification of the thinking processes necessary for "the diagnostic process" toward bias news detection. The findings should indeed be a valuable contribution for further exploration of the area to provide insight towards better comprehension of the interplay of critical thinking and critical media literacy.

5.5. Discussion of Findings

The ensuing discussion delves into the principal findings of the study, contextualizing them within the existing literature. Each subsection will not only present the implications of the current study's data but will also actively interpret these findings by making reference to and engaging with previous studies. This dialogue established in the research process will serve to highlight where the results confirm theoretical expectations, where they offer new insights, and where they might challenge or refine prevailing understandings of how readers process persuasive media texts and identify bias and objectivity.

5.5.1. Evaluating Argument in Persuasive Texts

EFL students are generally perceived by educators as having “intellectual” limited ability in weighing evidence and assessing its limits and uncertainties against alternative viewpoints or theoretical perspectives (Kuhn, Amsel, & O'Loughlin, 1988; Kuhn & Dean, 2004). A prevailing view in the literature is that students with no explicit instruction in argument analysis do not demonstrate critical thinking or analytical ability, in terms of weighing evidence but decide on the basis of their own knowledge, or the general beliefs they hold. They hardly see the differences between the scientific point of view and their own (Eemeren & Grootendorst, 1987; Osborne, Erduran, & Simon, 2004). The findings of the present study, however, indicated that before the explicit teaching intervention, most participating EFL students operated at a rudimentary level of critical thinking.

Prior to explicit instruction, the analysis indicated a primary reliance on general reading strategies, with only occasional efforts to use textual evidence to identify bias. A key finding from the verbal protocols was a clear inconsistency between the markers of bias students implicitly applied in their writing and those they explicitly acknowledged or described when speaking. Verbal protocols conducted at the beginning and midpoint of the course revealed that students' textual evaluations were heavily influenced by prior knowledge,

personal attitudes, and beliefs, with minimal application of critical reasoning. Following explicit instruction in argument analysis, subsequent verbal protocols demonstrated a marked shift: students' evaluations became increasingly guided by their ability to reason clearly, evaluate evidence, and judge arguments systematically.

Research widely acknowledges that despite our best efforts to maintain objectivity, the act of reading is inevitably influenced by the prior knowledge and personal beliefs that readers bring to a text. This inherent subjectivity, however, does not negate the essential need to differentiate between reasoning grounded in textual evidence and reasoning influenced by external beliefs. In fact, the ability to consciously distinguish between these two cognitive processes is a fundamental component of critical thinking and a key marker of intellectual maturity (Elder & Paul, 2010). Effective critical reading, therefore, does not require the impossible eradication of prior perspectives but rather the disciplined application of skills that allow individuals to identify, evaluate, and, when necessary, suspend their own biases to engage rigorously with the evidence presented within a text.

One unanticipated result was that the initial training results from the quasi-experiment indicated that most students could not identify the argument's conclusion and its evidence. This result led to the conclusion that the students would have a primary deficit in their ability to assess the extent to which the reasoning and evidence in a text support the author's claim for making evaluative judgments about the strength of the arguments presented—a prerequisite skill for objective text quality appraisal. This finding suggests students might struggle to differentiate between an argument's conclusion and its evidence for various reasons. Most important among these reasons would be 1) Lack of explicit instruction or limited exposure to critical analysis, 2) difficulty identifying key points, 3) overreliance on surface-level understanding, and 4) language barriers. Several authors, most notably (Abrami, et al., 2008; Bensley & Spero, 2014), have argued that the role of explicit instruction on the

concept of arguments and how to identify their components is vital for evaluating arguments that texts present and in thinking critically about the language molding them. Accordingly, the present study exposed the students to explicit teaching of argumentation which was coupled with support through strategies, task design and friendly classroom climate to reduce frustration levels.

The results of textual evaluation following direct and explicit instruction in argumentation revealed that significant, though not yet complete, progress was made. Students demonstrated a growing understanding of the nature of evidence and its functional role in supporting claims within persuasive texts. This foundational development yielded considerable advancement in their critical thinking capacities. These findings resonate strongly with the body of research established by Kuhn (1989, 2005, 2011), which posits that the ability to differentiate between a claim and its supporting evidence is a fundamental prerequisite for critical thought. Without this crucial distinction, individuals lack the cognitive framework necessary to assess the quality of evidence effectively, to engage in genuine argumentation, and to successfully challenge and manage the inherent biases within their own beliefs. Thus, the observed progress in this study represents a vital step toward the epistemological maturity that defines a skilled critical thinker.

Due to the lack of enough practice, students displayed poor performance in several initial tasks at the start of the project within which evaluated most premise statements in biased ways compared with follow-up tasks. While the initial tasks aimed at equipping students with the essential heuristic procedures to make learning progress when carrying out the main tasks, the follow up tasks sought to engage the students to transfer their learned concepts and content to solve new challenging tasks, and in parallel foster their metacognitive reflection.

Arguments are evaluable only if situated within an adequately determined theoretical

framework. Evaluating arguments based on Toulmin's scheme, the students diverged in the ability to grasp or understand in depth stated premise statements and viewpoints embedded in media texts. Using verbal protocols, data revealed that when the texts made readers in disagreement with points raised, they evaluated the quality of a text's chain of argumentation and reacted to premises or conclusions merely on the basis of their beliefs or and/or their prior knowledge. Students' evaluative reasoning, as data showed, mirrored occurrence of biased reasoning among the students. These results are very consistent with those of others. They reflect those of Walton (1991, 2013) who also found that "bias is a failure of critical doubt to function correctly in argumentation in a given context of dialogue" (Walton, 1991).

Much of the published work about teaching argument evaluation and evidence is aimed at philosophy (see Chapter 2). However, the principles appear to translate directly to all sciences, and can certainly apply to the teaching of languages. In the past, it has been noted that some confusion and ambiguity on the use of formal analysis tools for analysis and evaluation of argumentation has been an obstacle to teaching and assessing it (Andrews, 1995). For the purposes of this work, argument evaluation is taken to involve assessing whether reasons are true, and whether, if true, they give support to the conclusion. Argument evaluation—when combined with content analysis—offers the best basis for decision making in evaluating any text for if it is partial/biased or neutral/objective. The supreme end of engaging students in both types of evaluation is acquiring skills required to identify biases and discover their persuasive intentions.

The fundamental critical thinking skills needed by language students to identify media bias in written press are evaluating evidence and drawing appropriate conclusions; distinguishing arguments from non-arguments, and identifying assumptions. Training not only provides learners with the necessary knowledge but also with competences, skills and the

motivation to use these skills. In accordance with the present results, previous studies have demonstrated that novice ESL students when evaluating media texts 's authorial claims made very little use of the evidence in explaining or justifying their opinions (Cotterall & Cohen, 2003). Before fully engage in the learning process, a majority of students in the present study seemed to lack skills of critically appraising arguments to make applied in a practical manner. It was because they had not previously been explicitly exposed to critical thinking skills. T test results and verbal protocol analyses revealed that the participants who did not show success in identifying bias seemed to lack analytic verbal ability of critically appraising arguments.

Pre-test and post-test in this study indicated that implementation of explicit knowledge and skill-based course with the aim at teaching general principles of critical thinking caused a substantial difference in the ability of mature readers to identify bias, persuasive devices, faulty thinking, and intended manipulation in media texts. Data gave evidence that the students performed differently in the post-assessment of their own critical reading ability of media texts. As mentioned in the literature review, skills to critically evaluate arguments are divided into two skill sets: low level (i.e. basic) and high level (i.e. complex), Kuhn (1992). The current study argues that high negotiation skills are the basic requirement to run a critical analysis of media discourse.

According to recorded verbal protocol data, it appears that the students employed the skills to critically evaluate arguments at the lower level and a little beyond more frequently and correctly than those skills taking part at the advanced level. Recognizing author's tone and purpose, examining author's word choice, identifying unstated and ambiguous assumptions, and uncovering arguments and evidence were the most frequently applied to help determine bias. It also included determining source trustworthiness. On the basis of the general frameworks offered by (Ferrari & Sternberg, 1998a; Kuhn, 1998), the course provided

students with a demonstration of what is meant by levels of critical thinking. On the basis of the prescribed levels, some attributed the inadequacy level of their performance to lack of extreme effort and others to lack of enough ability and poor strategy use. It is somewhat surprising that affective dispositions were not noted in their responses.

There exist plenty of studies which provide evidence of the role of affective dispositions to feed students' willingness to engage and persist on problem solving tasks (Lambert & Shipp, 2006; Jonassen, 2010). The current study does not undervalue the role of affective dispositions when students solve critical thinking problems. The researcher argues that self concept and self esteem are closely tied to performance of learners as critical thinkers whose task(s) is interpretation and evaluation of information and argumentation. The researcher of the present study does not deny the possibility that the two skill areas could covary in their relationship without one necessarily "causing" the other. Some people can have both in abundance, some have skills but not the disposition to use them, some are disposed but lack strong skills, and some have neither (Ennis, 2011; Facione, et al., 2000).

Research suggests that learners may reach a progressive development of ability in critical thinking dispositions that make them more effective and confident decision makers and problem solvers directing them toward owners of higher levels of skills to solve specific complex problems. The current case study research was built around the assumption that identification of prejudice, bias, propaganda, self-deception, distortion, misinformation, etc. involves not only understanding the author's arguments, but also criticizing them. The more developed one's analytical reasoning skills and applying them to tasks, the better able one is to present "a more complex and effective form of justification, providing more inclusive and better integrated assumptions for evaluating a view" (Kitchener, 1994).

5.5.2. Effects of Readers' Prior-beliefs and Knowledge in the Processing of Persuasive

Texts

As has already explained in chapter two of this thesis, a strong relationship between the processing of persuasive texts and argumentation structure has been reported in the published literature (Persky, Daane, & Jin, 2003; Salahu-Din, Persky, & Miller, 2008). Being convinced to follow a particular idea, goal, or course of action is largely determined by one's previous content knowledge and one's perception of the quality of the structure and content of the supporting as well as opposing logic behind an argument. Besides prior knowledge and quality of argument, stylistic strategies are considered to play prominent roles in texts elaborated for persuasive purposes.

Hypothesizing that if students' pre-reading beliefs held that "vaping is less harmful than smoking traditional cigarettes, e-cigarettes are sold to help people quit using traditional cigarettes", then bringing up the contrary arguments may be seen as erroneous and false reflecting incorrect identifications, misleading opinion or biased information. Compared to post-course surveys results and student reflections, at the initial stages of the course process, the student appeared to be less able to weigh evidence and assess arguments objectively in messages in which the evidence conflicted with their own theoretic views. This finding is consistent with that of (Kuhn, 1988; Stein & Miller, 1993; De La Paz, 2005; De La Paz & Felton, 2010; Monte-Sano, 2011)

When students' prior beliefs conflicted or did not correspond with textual evidence, students tended to ignore the evidence and base a response instead in line with their own value base and prejudices, it is called "response bias". The findings appeared to confirm Henry' beliefs (2020) in arguing that uncritical adult readers of media texts accept only the evidence that confirms their initial beliefs and expectation and they disregard evidence to the contrary. These findings demonstrate that systematic instruction in critical thinking and

argument analysis provides students with the tools to move beyond instinctive, knowledge-based judgments. By learning to evaluate evidence and deconstruct reasoning, students become less dependent on prior assumptions and more adept at objective analysis. Ultimately, this development of analytical skills reduces the influence of confirmation bias, fostering more objective and evidence-based interpretation.

Recall that Elaboration Likelihood Model of Persuasion (ELM) as noted earlier suggests that authorial persuasive intent is a controlling factor in argument representation and belief change. Persuasive intent should not simply be represented by a set of possible arguments, but rather by the quality of the information embedded in the arguments. The change of belief can be due to receiving new information or the change of belief due to the fact that a certain effect has taken place. Thus, the students' belief change after reading a media text about the negative impact of social media on mental health (see appendixes) may be due to students' lack of knowledge on the issue. After reading a second text on the same issue but arguing for no negative health impacts of social media use, most students resisted the changes which the first text had made. Understanding of the second text was based on the experience of reading, evaluating, and answering questions about the first text. The present finding also indicated that a majority of students were unaware of the persuasive purpose of the first text, thinking that it was simply giving information until being exposed to the second text. This implies that intertextuality increases reflective and critical analysis of media texts. The scope of the current research did not cover the area of intertextuality, so needless to elaborate the point.

Research shows that media texts are more persuasive when they increase readers' emotional involvement with the content, which in turn increase response to the claim that a text expresses as neutral and objective, even if the text is "biased," (Aristotle, 1994; Toulmin, 2003; Robert Cialdini, 2004). In contrast, other studies found texts are more

persuasive if state fact-based argumentation, (O'Keefe, 2002; Perloff, 1993, 2010; Petty & Cacioppo, 1981, 2001). At the initial stage of the current study, most students were more highly influenced by the emotionally appealing support presented by the authors than by the factual support in assessing whether a text is biased or not. This implies that if individuals lack a skeptical approach to critically evaluate information, emotional appeals tend to have a more significant impact on their beliefs and actions. This is because emotional appeals can bypass rational thinking and directly influence one's feelings and attitudes. Reflecting upon the diversity represented in the texts and reflecting on language of framing were considered after models covered in class. Their critical reflections were not at the highest level. One reason for this could be that the course did not capture the full essence of being critical thinkers being prescribed at the core of the course to facilitate learning.

In addition to the impact of individual differences, text variables may also have impacted students thinking used to capture authorial bias. The following sections discuss the potential impact of text sidedness on comprehension and evaluation of arguments, and on persuasiveness and attitude change in the context of EFL readers of reading public health news.

5.5.3. Effects of Sidedness of Argumentation in the Processing of Persuasive Texts

The present study investigated the impact of text sidedness in the involvement of EFL news readers in the comprehension of argument for textual evaluation. Based on empirical evidence, it found that sidedness and content had a significant influence in inferential, interpretive, and critical comprehension abilities, except author's ideology identification, for which depth analysis is necessary to make informed judgments and evaluations.

Building on Petty and Cacioppo's Elaboration Likelihood Model, argumentative texts are often categorized by their persuasive structure: one-sided, two-sided non-refutational, and two-sided refutational arguments (see Chapter 2). A body of empirical research with adult

readers has demonstrated that audience response is significantly influenced by this message sidedness, an effect that persists irrespective of a source's perceived trustworthiness (Fives, 2001; Hynd, 1999; Murphy, 2001; Seed, 2007). Notably, within this paradigm, two-sided non-refutational messages—which acknowledge opposing views without directly refuting them—have often been found to be the most persuasive, potentially by enhancing perceived source credibility and reducing psychological reactance.

To investigate how these structures affect emotional and cognitive engagement among EFL readers, the present study tasked a participant group with reading three pairs of persuasive newspaper articles. Each pair addressed a relevant public health topic but was strategically designed to differ in its argumentative sidedness (specifically including the impactful two-sided non-refutational format) and its balance of emotional versus factual content.

The results of this investigation are consistent with the aforementioned body of research. This study found that two-sided non-refutational arguments consistently elicited higher levels of perceived credibility and persuasive effectiveness among EFL readers compared to one-sided arguments. This alignment with prior work (e.g., Fives, 2001; Murphy, 2001) strengthens the claim that the persuasive advantage of acknowledging counterarguments—even without refutation—is a robust phenomenon, extending its validity to the EFL context. The following sections discuss the role of these structural variations, with a particular focus on sidedness, in how readers identify bias and are persuaded.

5.5.4. Effects of Sidedness of Argumentation in Identifying Bias

As has already been indicated, the concept of "text sidedness" in identifying bias refers to the perspective or position from which a piece of text is written and how that influences the potential bias within it. Bias may manifest in various ways, such as political, cultural, ideological, or per-sonal biases, among others. The way a text is framed can significantly

impact how biased it appears (Eadie, 2009). While presenting multiple perspectives can enhance the comprehensiveness of an article on a problem under study, the manner in which these opposing view points are communicated can impact bias, resulting from flaws in the design. Only few approaches in humanities and social sciences address the influence of sidedness in identifying media bias.

If an article presents two sides but heavily favors or prioritizes one perspective over the other without fairly representing both, it can result in bias (Walton, 1999). This bias might manifest through tone and language, omission of context, or cherry - pick information that supports authorial preexisting beliefs. Using information selectively in support of one side while ignoring or downplaying evidence from the opposing perspective can inevitably skew the reader's understanding. Several reports have shown that articles presenting two-sided non-refutational arguments can potentially be objective if they offer a balanced, comprehensive view of both perspectives without favoring one over the other. However, this does not prevent bias from being present based on how the information is presented, the language used, and the selection of arguments and evidence (Kuypers, 2002; Doyle, 2018).

We should not overlook that bias can be embedded in all text types, but its perception fall along a continuum of degrees of certainty. An arguer who sticks too rigidly to his position will be perceived as being biased (Walton, 1999). In accordance with the present results, previous studies have demonstrated that though one-sided argument is biased for advocating one viewpoint and ignoring the evidence for the other side, its persuasive intent is more effective when the audience is relatively unfamiliar with the issues.

In comparison of reading one sided arguments, data revealed that two sided arguments text sidedness had an impact on readers' perception of bias, even if unfamiliar with the reading issues. If a text includes diverse perspectives or sources, readers might perceive it as less biased compared to a text that relies heavily on a single viewpoint or set of sources.

With respect to two-sided arguments, O'Keefe (1999) made a distinction between refutational and non-refutational cases. A refutational two-sided argument involves presenting contrasting viewpoints on a particular issue while actively refuting or countering the arguments made by the opposing side. Non-refutational texts were perceived by readers as more credible and objectively transmitting messages than refutational texts. However, O'Keefe (1999) warns that even if a non-refutational two-sided argument may appear more balanced on the surface by presenting contrasting viewpoints without actively dismantling them, bias can still exist.

It appeared from the findings that sidedness in textual messages may have influenced students' decision to decide if opinions made by journalists in the media can be told to be biased, though were not yet clear for them whether or in what sense an argument is fallacious—ambiguity attributed to difficulties they encountered in the critical thinking process.

Although sidedness appeared to influence readers' evaluation of objectivity and bias in news texts, readers' evaluative stance were also influenced and varied by the emotional content in each text being read. Accordingly, identifying the emotional content of media texts and bringing it to the surface level of discourse was a necessary skill undertaken in the course. Emotionally evocative evidence can indeed enhance the persuasive power of a text, but its effectiveness depends on readers' level of analytical reasoning skills. When reading news through a critical lens, the emotional content within texts can be seen as manipulative or lacking credibility; hence, reducing the persuasive impact.

This thesis in its entire scope and content rests on extensive research in the field of understanding media effect, suggesting that authorial sidedness that occurs throughout arguments, in their combination with the emotional content plays a vital role to uncover claims produced by heavily biased sources designed to mislead and persuade the reader to change attitudes or beliefs, about controversial issues open to discussion.

Another important issue deserving discussion was to find out whether the readers of media texts rated emotional content as more persuasive than factual content in all text types. Compared to non-refutational texts, most readers rated refutational two-sided argument texts as logical and less emotional and as being more persuasively effective. Some responded differently though sharing same learning experiences, indicating the opposite. Taking this difference into consideration, one can say that the level of persuasiveness can also depend on the audience and the specific topic, or the audience's level of involvement in the topic (Brown, 2016). Some readers might be more receptive to emotional appeals of what is being read, while others may find logical, evidence-based refutations more compelling. Individual differences in reading have become a focus of much scholarship throughout the humanities Afflerbach (2015).

In her seminal book *“Reading with Feeling”*, Susan L. Feagin (2018) explores the intertwining relationship between reading and empathy, arguing that readers have a vast repertoire of strategies to use while reading for different purposes in different situations. In various reading situations, a non-use relies on logic of appropriateness or a use of a non-reputational argument with two sides could be more appreciated if the reader appreciates empathy and appreciation of multiple viewpoints. This does not prevent saying that persuasive effect of emotional content work better with less reflective, critical thinkers.

5.5.5. Lexical and Grammatical Effects Involved in Identifying Bias

Lexical and grammatical marking play significant roles in identifying bias in language. Not only do words play a role of delivering knowledge, but they also serve to impart world views and values. Bias can be explicit or implicit, and it can manifest through both lexical and grammatical decisions (Zhukova, 2019). Results of this study showed that mature readers detected bias in passages with stance markers. Practice of critical thinking skills made students aware of the role of stance words to influence the quality of arguments. They learned

that journalists use distinct keywords in order to convey their specific stances in writing on a controversial issue. Regarding stance words in the analysis of public health news, the students utilized keywords in order to conduct their textual analysis, aiming to demonstrate an author's persuasive intent and bias.

Due to the many advantages that stance words offer to the critical reader, the procedures used for tasks of identifying stance words should be conducted based on the appropriate method performed against a sharply defined line of procedures that locate the text into its discourse context in a way that minimizes readers' bias. Not only bias, stance words also reveal persuasive intent into a text or texts – but an interpretation of a text is derived through an examination of how stance words appear in context and of their patterns of co-occurrence with other strategies.

In order to obtain a more contextualized picture of some of the dominant strategies in which journalists communicate controversy in issues of health concerns, the students were trained to follow up a keyword analysis within a series of tasks, focusing on the rhetorical function of words. In so doing, teachers explicitly draw students' attention to the strength of collocations in an attempt to persuade the reader and bring about a change in his / her attitude. Using sample passages from newspapers, the teacher-researcher demonstrated the students how skillfully employing collocations for emphasizing the collective effort of vaccination for the benefit of the entire community. Highlighted on the input was the observation that words with collocations found in different texts may accomplish different functions, with particular regard to their persuasive intent.

Although examining word stance is vital for analyzing persuasive language, alone provides only restricted information concerning how persuasive intent function in context. Accordingly, in order to analyzing media texts, a concordance analysis combining multiple linguistic units for a thorough analysis is necessary to indicate preferences for

particular perspectives and beliefs. Such combinations have been advocated by a number of researchers for use as means for fostering students to progress in their critical reading process skills through learning how to use stance words to examine how rhetorical arguments are characteristically constructed. In several tasks, students of the present study were asked to analyze and compare stance words and the arguments presented health policy news.

The results largely confirm the necessity of linking between stance markers identification and evaluations of arguments to develop mature readers' fuller critical understanding of media texts. Despite the fact that achievement gains were not fully significant among EFL Master grade students in Algeria (The greatest challenge facing the student was that of time constraints), our students did quite well in putting of certain models into practice to identify some of the forms that bias takes in media texts with persuasive intent underlying public health news. The students were launched for the first time into an interactive space with media texts to understand how political perspectives or "ideological principles operate in news writing about calls for legalizations or banning enforced in the name of public health.

5.6. Implications

The findings of the present study have implications for language teachers, academicians, researchers, curriculum designers, and policymakers. Specifically, they provide a robust, evidence-based foundation for developing more effective pedagogical strategies, refining assessment tools, and creating curricula that better address the nuanced challenges learners face.

5.6.1. Theoretical Implications

From a theoretical perspective, this research extends the understanding of media literacy and critical thinking by emphasizing the necessity of multimodal critical analysis. Previous theories on media effects and persuasion have focused broadly on content and overt messaging; however, this study underscores the importance of deconstructing linguistic and discursive structures to evaluate underlying ideology and intent. By integrating methodologies from Critical Discourse Analysis (e.g., Fairclough) and formal argumentation theory (e.g., Toulmin) into theoretical frameworks, researchers can develop more robust models that accurately assess the impact of covert persuasive strategies and manipulative language. This refined understanding helps in designing more effective educational interventions to foster critical autonomy, thereby advancing the field of critical media literacy research.

5.6.2. Policy Implications

The policy implications of this study are equally significant. Policymakers play a crucial role in shaping the educational and informational landscape in which media and citizens operate. This research suggests that policymakers should promote the development and adoption of standardized critical media literacy curricula and evaluation tools. Standardization would ensure that essential analytical skills are taught consistently, making it easier to evaluate program effectiveness and scale successful initiatives. This consistency would enhance public resilience against disinformation, helping to create a more discerning citizenry and ensuring a healthier democratic discourse. Moreover, clear guidelines and standards would provide educators and institutions with a concrete framework for implementing effective critical thinking instruction, ultimately advancing the broader goal of national digital and civic literacy development.

5.6.3. Practical implications

For educators, curriculum developers, and media organizations, the practical implications of this research are profound. They can use insights gained from this study to refine their instructional methods and content creation guidelines by adopting measurable critical analysis competencies. Institutions can track progress more accurately and make data-driven decisions to improve their practices. This evidence-based approach can build public trust and credibility, enhancing their educational and communicative impact.

In addition, media outlets and educational bodies can use these analytical frameworks to identify areas where they can make the most significant ethical and pedagogical impact. For example, a news organization might find that systematically applying Fairclough's interrogatives to its own reporting leads to more transparent and less biased journalism, which can then be highlighted in its public accountability reports. By focusing on argumentative integrity and discursive transparency, organizations can strengthen their reputation and build audience trust.

Another practical implication is the potential for cross-sector collaboration by integrating these analytical models into professional training across fields. Industry groups can foster a culture of critical consumption and production that goes beyond academic theory. This multidisciplinary approach can lead to the development of innovative solutions and shared best practices, further enhancing the effectiveness of public communication. For instance, joint initiatives between tech companies, journalists, and educators can lead to more sophisticated digital literacy tools and platform policies.

The implications of this research are wide ranging and impactful. Theoretically, it enriches the understanding of media persuasion and manipulation by highlighting the importance of integrating discursive and argumentation analysis. For policy makers, it underscores the need for supportive regulatory and educational frameworks to ensure a

critically literate public. Practically, it provides stakeholders across education, media, and technology with actionable insights to enhance the integrity and effectiveness of public discourse. By adopting these recommendations, policymakers, educators, and media professionals can contribute to a more resilient and informed society, where public communication and media content are authentic, effective, and widely recognized.

5.6.4. Pedagogical Implications

The pedagogical implications necessitate integrating critical thinking, critical cultural literacy, and intercultural argumentative discourse into EFL teachers' professional development. This equips educators to move beyond language mechanics and foster critical analysis in students. Furthermore, it calls for the development of dedicated teaching materials that build students' critical media literacy, enabling them to deconstruct bias and persuasive intent in various texts. These pedagogical implications will be explained in the below subsections.

5.6.4.1. Integrating Critical Thinking into EFL Teachers' Professional Development

The findings underscore that effectively integrating critical thinking, particularly critical media literacy, into EFL classrooms necessitates a fundamental shift in teacher professional development. Simply understanding critical thinking theory is insufficient; teachers require explicit, systematic, and sustained practical training in its pedagogy. Therefore, the core implication of this study is a mandatory call for all language teacher education programs—both pre-service and in-service—to embed dedicated modules that move beyond theoretical concepts. These modules must provide educators with hands on experience in designing instruction that fosters critical analysis of social, political, and economic messages in media texts, while also offering strategies for the crucial practice of self-reflective evaluation of their own and their students' thought processes. Ultimately, for teachers to successfully bridge the gap between theory and authentic classroom practice, their professional development must itself be modeled on the principles of critical pedagogy, emphasizing authentic tasks, ongoing

reflection, and adaptive application to real world contexts. This approach transforms institutions of higher education into vital centers for professional learning, ensuring teachers are not merely informed about critical thinking but are proficient in teaching it.

5.6.4.2. Integrating Critical Cultural Literacy into EFL Teachers' Professional Development

A second major implication arising from this study is the necessity of integrating critical cultural literacy into the professional development of EFL teachers. The findings reveal that critical thinking is not a universal, culture neutral skill but is deeply bound to sociocultural, historical, and political contexts. Students' cultural backgrounds significantly shape their assumptions, reasoning styles, and responses to critical tasks. Therefore, teachers must be equipped to move beyond a one size fits all approach to critical thinking and instead learn to adapt their pedagogy to the diverse cultural frameworks of their learners. This involves understanding how their own cultural perspectives influence their teaching and developing strategies to make critical thinking accessible and meaningful across different cultural contexts.

Ultimately, for critical thinking instruction to be effective, it must be reframed through an intercultural lens. This requires systemic support—from national policy (macro level) down to individual course design (micro level)—to ensure teachers are not just imparting skills but are fostering a critical consciousness that is both culturally responsive and empowering. Professional development must therefore prepare educators to employ tools like critical discourse analysis flexibly, helping students deconstruct bias and ideological manipulation in texts while respecting and leveraging their cultural identities. The goal is to transform classrooms into spaces where diverse critical thinking styles are recognized as valuable assets in the collective development of critical media literacy.

5.6.4.3. Integrating Intercultural Argumentative Discourse into EFL Teacher

Professional Development

A culminating implication of this study is the necessity to integrate intercultural argumentative discourse as a core component of EFL teacher professional development. The findings reveal that students' difficulties in deconstructing media arguments are not merely linguistic or cognitive, but are deeply rooted in unexamined cultural frameworks for what constitutes a "valid" argument. Therefore, teachers must be equipped with the knowledge and skills to explicitly teach how argumentation is culturally mediated. This involves moving beyond a Universalist model of critical thinking to one that examines cultural variations in rhetorical styles, forms of evidence (e.g., empirical data vs. authoritative testimony), and norms of persuasion. Professional development must therefore provide teachers with frameworks for analyzing diverse argumentative structures and train them to design activities where students compare arguments across cultural contexts. By doing so, educators can better empower students to critically navigate the globalized media landscape, transforming the classroom into a laboratory for understanding how culture shapes persuasion and ideology. This approach directly addresses the identified frustrations and skill gaps by providing both teachers and students with the meta-cultural awareness necessary for genuine critical discourse analysis.

5.6.4.4. Development of Critical Media Literacy Teaching Materials

The absence of an official, mandated textbook for university-level English instruction in Algeria presents a unique opportunity for a flexible and democratic approach to curriculum development. While this allows educators autonomy to select materials within the national framework, it also reveals a significant deficit: a critical scarcity of teaching resources designed to explicitly develop critical thinking and media literacy skills for EFL learners.

To address this gap, a two-pronged approach is essential. First, there is an urgent need to develop and disseminate purpose-built teaching materials that move beyond passive content consumption. These resources should serve as practical guides for both teachers and students, scaffolding the process of critically analyzing and evaluating media content within relevant socio-cultural contexts. Second, this material development must be underpinned by systematic training for educators on how to adapt existing resources and implement these new frameworks effectively. This endeavor requires institutional support, including the establishment of research centers dedicated to conducting thorough needs analyses. As underscored by scholars like Jordan (1997) and Nunan (1988), such analysis—which must account for learner variables like cognitive styles, prior knowledge, and motivation—is the essential foundation for designing effective syllabi, courses, and ultimately, for achieving the rapid qualitative growth of the Algerian educational system.

5.7. The Strengths and Limitations of the Study

There are a number of problems, both theoretical and practical, which threaten the validity of a study such as this. A major problem that emerged in the design and execution of the pedagogical interventions used has been the lack of clear definition in the literature of concepts such as objectivity and ideology. A lack of shared definitions of these concepts made it hard to objectively evaluate students' progress. Such difficulty urged the adoption of standard tests and their definition to provide less ambiguous descriptions of the skills and knowledge acquired. Although it was difficult to contextualize these testing instruments to the learning situation, it was clear that there was progress in use of decoding strategies to better understand cultural manipulation through media. Students feel more competent and persevere and expend high amounts of effort as they recognize they control strategies that result in better products in the end. Here, the results of the analysis are very much dependent on the definitions of the variables as well as the test instruments used under setting socio cultural

considerations.

The strength of the study lies in the quality of data. A detailed data analysis and results were presented and discussed in chapter four with the aim of understanding the role of the practice of critical thinking in the process of deconstructing media content to reveal its bias and hence uncovering hidden ideologies intended to shape attitudes and beliefs by having persuasive effects strategically planned through discourse devices. Strength of the present study is that it was possible to combine tools from different fields for use in ELT. The results of the tests have revealed that CDA and argumentation theory (combined) are resources of potential tools to be used by students as a means to assist their critical reading of media texts written in English and demonstrate advanced understandings about persuasive intent and bias. However, simultaneously as only a few parameters could be combined, making this type of combination also became a limitation.

The current study does not ignore the already existing studies in which addressed the role of the practice of argumentation analysis in a consistent manner with training in critically analysis of discourse for media literacy development objectives (N. Fairclough, 2013; G.Trudy, 2018). But, the study pays attention to existing knowledge gaps on which still more can be said on this relationship. It is assumed that not just the amount of practice and level of training, but also the quality of practice and training conditions that can have a significant effect on the rate of learning and final levels of achievements. Aside from practice itself, one of the most critical variables affecting an individual's engagement in the development process of critical textual analysis of media passages is the provision of students with the necessary feedback on performance, both at the cognitive and metacognitive levels. Although the researcher perceived himself to provide enough feedback on both types at each time it could be used for improved performance, an investigation measuring students' perception of the effectiveness of feedback was not being fully executed, and hence, leaving it is a topic for

future research.

Despite overcoming a number of challenges, there remained limitations which could not be overcome and are necessary to be pointed out. The most important of these limitations were linked with the number of research subjects and the length of the course carried out by the author of this research. While the used research tools provided rich data for theorizing, systematic generalization was not possible from such a small sample. The general hold view is that the larger the sample is, the less is the chance of its being non-representative. The study was carried out only among fifty five ELT students enrolled into two courses within the Applied Linguistics specialization, whose field of study was either ESP or TEFL, enrolled in its pursuit after having completed the degree of Licence together from the same university department. Though the number of students was so small in size for global generalization, it allowed drawing important conclusions to be used as the basis for policy formulation and further empirical studies.

Furthermore, the intervening course was carried out in a short period of time. Although the study extended over a period of 14 weeks, the feeling on the part of the author was that the number of lessons for the intervention period might not have been enough to guarantee conclusive results. Alternatively, the feeling on the part of many of the students emerged from analysis of the interview data was that they were exposed to deal with too much material in too short a time. It can be suggested that the results obtained from post-test data would be much better if the training period had been prolonged and the students had enough time to adequately learn and apply knowledge and get feedback to evaluate their knowledge gaps and progress to move forward. Possibly then, the research focus was narrower and learning strategies adjusted more effectively than would be the case if the study were implemented for a very long period of time.

Another limitation involves the researcher's inability to take into account some

moderating variables which might have affected the results of the study, producing less consistent results. It was not possible to have the same number of male and female students involved in the study. It has been widely hypothesized that male and female learners may have different cognitive mechanisms underlying critical thinking (Beau Fly Jones, 2013).

Having such hypothesis into consideration enables a researcher to place his or her research design into the context of various cognitive theories applied for understanding gender differences in how critical thinking construct understanding of media issues as vehicles involving the presentation of intentionally persuasive content to audiences.

Although data has not shown gender differences in critical thinking concerning its effects to guard oneself against being influenced by authorial stance and thus "biased" perspectives, the study does not rule out the possibility of this hypothesis, leaving it is an exploratory topic for future research. With the exception of gender, the independent variables under consideration were locus of control, age, academic achievement, interest, prior knowledge, learning style, and motivation.

Due to difficulty in obtaining a truly representative control group, the present study was framed within quasi-experimental design standards prescribed by Kercher (1992) in which no control group was included for comparison. Therefore, results had to be interpreted with caution. To take possible (internal) validity threat into account, a comparison of post-test and pre-test scores was used to provide a measure of the knowledge and skills gained through the intervening treatment. Time between pre and posttest could uncover changes. Even if alternatives to missing control groups exist for internal validity compensation, future research should examine such topic based on having a control group to compare the effects of treatment vs. no treatment to highly raise validity of results which can be generalized to other environmental contexts and other populations.

5.8. Recommendations for Future Research

Building upon the studies' findings, the following three recommendations for future research are proposed, each situated within the contemporary educational paradigm that prioritizes critical, situated, and student-centered learning. These directions aim to address the identified gaps and further explore the practical applications of this study's contributions.

(1) Use of Digital Tools to Foster Skills of Critical Media Literacy

The findings of this study, particularly the varied success students had in evaluating newspaper texts during their projects, illuminate a critical area for future investigation. While media was central to the learning process, the curriculum did not explicitly teach students how to analyse and critique texts from digital platforms and social media. Therefore, a vital next step is for researchers to explore the deliberate integration of critical media literacy (CML) frameworks into digital pedagogy models. Specifically, future research should ask: How can models like the flipped classroom be systematically designed to not only deliver content via digital videos but also to teach students to deconstruct the authorship, purpose, and biases embedded within those videos? This would involve creating interventions where the pre-class materials are themselves the objects of critical analysis. For example, students might be tasked with analyzing the persuasive techniques used in an educational youtube video or tracing the funding and perspective of a source in a curated online article.

(2) Use of Flipped Classroom Design for Teaching Critical Thinking

Flipped classroom model is a teaching strategy that has gained popularity in recent years. While the flipped classroom is often lauded for promoting higher-order thinking by freeing up class time (Bergmann & Sams, 2012), its implementation frequently focuses on procedural application (e.g., more math problems) rather than the structured development of critical thinking dispositions like analysis, inference, and evaluation. My research observed that

students struggled with identifying underlying ideologies in argumentation even in an active learning environment. This suggests a need for more intentional instructional design. The flipped model's structure provides a unique opportunity to scaffold critical thinking. Flipping the classroom provide the opportunity to structure more collaborative and interactive time to work alongside students: students can be introduced to cognitive frameworks and heuristics (e.g., Paul and Elder's 2008 eight elements of thought and reasoning), then use valuable synchronous class time to practice, debate, and receive immediate feedback on complex, authentic tasks that require use of these skills.

(3) Use of Place-Based Pedagogies to Teach Critical Media Literacy

A primary recommendation is to investigate the use of place-based pedagogies as a vehicle for teaching critical media literacy, with a specific focus on its capacity to mitigate deeply ingrained cognitive biases like confirmation bias. Critical pedagogies and place-based pedagogies are mutually reinforcing. This approach is powerful because it moves theory into tangible practice. By grounding media analysis in the students' immediate, familiar environment—their own community—abstract concepts like bias and representation become concrete. Students can physically investigate how their neighborhood is portrayed in local media versus reality, creating direct cognitive dissonance when their lived experience contradicts media narratives. This experiential clash is a potent catalyst for breaking automatic thought patterns. Future research should ask: Does this place-based, experiential model of critical media literacy lead to a greater measurable reduction in confirmation bias compared to traditional, abstract media literacy lessons? And how does the practice of creating counter-narratives about their community foster the metacognitive habit of seeking disconfirming evidence? This line of inquiry positions the local community not just as a context for learning, but as an essential tool for deconstructing bias and building more resilient, critical thinkers.

Conclusion

This chapter has brought together the findings of the study, showing that a text's persuasiveness is heavily influenced by its argumentative structure and content. The reader's role in identifying bias has been confirmed as an interpretive act that requires more than surface-level comprehension; it involves the ability to deconstruct argumentation and recognize the interplay between claims, evidence, and ideological positioning. The study demonstrated that bias is most effectively detected through the analysis of argumentation. In particular, examining argumentative strategies allowed EFL learners to uncover persuasive intents and hidden ideological perspectives embedded within public health news articles. The extent to which readers successfully identified bias was determined by their ability to reveal these persuasive and ideological layers. This confirms the central contribution of critical media literacy practices: when explicit instruction in argumentation and the practical application of Critical Discourse Analysis (CDA) are integrated, EFL students can more effectively engage in the textual evaluation of controversial media content.

The findings were interpreted within the framework of argumentation theory, which highlights the role of fallacious reasoning in shaping textual persuasiveness. The thesis argues that teaching EFL students about the mechanisms of flawed or manipulative argumentation provides them with essential tools to resist persuasion based on weak reasoning. By acquiring these skills, students are able to conduct textual analysis guided by what the text presents rather than relying on their pre-existing beliefs, values, or background knowledge. In this way, critical argumentation enables a more rational and dialogic engagement with media texts, positioning readers in an active inner dialogue with writers.

The chapter closes by outlining the theoretical, practical, and pedagogical implications of these findings. It underscores the importance of embedding critical media literacy in EFL curricula to empower students as critical consumers of media discourse. Finally, it

acknowledges certain limitations of the study, while pointing to potential avenues for further research, particularly in exploring how sustained instruction in critical argumentation may foster deeper, long-term transformations in learners' interpretive and evaluative practices.

General Conclusion

The link between perceived bias in news reports and persuasiveness is far from straightforward and must, ultimately, be understood within the broader context of textual and contextual factors. While a message seen as biased often provokes doubt and lessens its power to persuade, its actual impact varies greatly. Key factors at play include the existing beliefs of recipients intended for a particular text, their dispositions to think critically, the strength of the evidence provided for persuasion, and the surrounding context associated both with news recipients and the source of the news itself. Sometimes, a biased message can even strengthen conviction in those who already agree, while other times it might just cause people to resist or tune out. This unpredictability means that creating persuasive media content requires a deep understanding of recipients' psychological well-being, rhetorical strategies, and the socio-cultural dynamics that shape news interpretation. It highlights the crucial need for strong critical media literacy skills to navigate today's complex information landscape.

This study aimed to investigate the effectiveness of explicitly teaching argumentation, coupled with aspects of critical discourse analysis, within the EFL context for the objective to enhance students' critical media literacy in a world saturated with information. The rationale for this study stemmed from the observed limitations in EFL students' critical thinking and argument analysis skills. Students often struggle to objectively weigh evidence against alternative viewpoints and tend to rely heavily on prior knowledge and personal beliefs when evaluating information. This deficit is particularly concerning in the contemporary media landscape, where individuals are constantly bombarded with complex and often manipulative information. Therefore, this research sought to address this gap by providing a structured pedagogical intervention designed to equip EFL learners with the necessary tools and frameworks to deconstruct arguments, identify subtle persuasive intents, and ultimately

develop more discerning and independent judgments regarding the information they encounter in the modern media landscape. By focusing on critical reading of challenging materials and fostering the ability to detect bias and understand underlying ideologies, the study aimed to empower students to become more critical and responsible consumers of media texts.

Employing a quasi-experimental design, this research systematically exposed EFL students involved in two Master's level classes, studying at the department of English at the University of Mascara in Algeria to various carefully selected health issues in the news embedded in newspaper texts. The pedagogical intervention provided learners with direct strategies and frameworks for deconstructing complex arguments and identifying subtle persuasive intents. By actively engaging students in tasks specifically designed to foster critical reading of these challenging materials, the study sought to determine how explicit instruction could enable individuals to better detect bias, understand underlying ideologies, and ultimately develop more discerning and independent judgments regarding the information they encounter in the modern media landscape.

To achieve its aims, this study assessed the impact of practicing argument analysis using Toulmin's model of argumentation on students' quality of argument evaluation. Beyond this, the research also sought to evaluate the effectiveness of employing Fairclough's critical discourse analysis as a model to challenge students' conventional thinking, encouraging them to look "outside the box" in their textual evaluations. This two-pronged approach aimed to significantly enhance their ability to critically examine media texts, empowering them to identify subtle biases and overt persuasive intents that might otherwise go unnoticed in the increasingly complex and often manipulative contemporary media landscape.

This study was guided by four key research questions exploring the development of critical media literacy among EFL undergraduate university students. First, it examined how

students perceive their skills in critically evaluating the credibility of media news both prior to and after completing a quasi-experimental course. Second, it investigated how instruction in critical thinking and argumentation analysis can assist students in identifying objectivity and bias when evaluating the credibility of English news articles related to public health. Third, the study explored how such instruction may help students control the influence of their own subjectivity when using an evaluation scale to assess objectivity and bias in public health news reporting. Finally, it considered whether differences in students' ability to detect bias influence their perceptions of the persuasive intent behind English-language public health news articles, and if so, how those differences manifest.

This research hypothesized that explicit instruction in argumentation would significantly enhance students' ability to detect bias and persuasive intent in media texts. It was assumed that by learning to analyze claims, evidence, and rhetorical strategies more systematically, students would develop stronger critical thinking and media literacy skills. The guiding hypothesis was based on the compensatory reasoning that critical reading through explicit instruction of critical discourse analysis would offset students' initial difficulties in textual evaluation, providing them with structured tools to identify bias and persuasive intent. Specifically, the study hypothesized that students would perform better on post-intervention assessments of bias detection and persuasive intent recognition if the evaluation of their argumentation incorporated elements of critical language awareness, allowing for a deeper examination of how persuasive language reflects ideology in media texts.

Findings associated with the first research question highlight that prior to the completion of the quasi-experimental course; students who completed the course perceived their critical evaluation skills as limited and often relied on surface-level indicators such as the popularity of the source, headlines, or visual appeal to assess the credibility of media

news. They reported a lack of confidence in distinguishing between biased and unbiased reporting and expressed uncertainty about how to identify persuasive intent or manipulation in texts. However, after completing the course—which emphasized explicit instruction in argumentation and incorporated tools from Critical Discourse Analysis—students reported a noticeable improvement in their critical reading abilities. They became more aware of rhetorical strategies, ideological framing, and the role of language in shaping perception. Students expressed increased confidence in evaluating the credibility of media content, and many demonstrated a more systematic approach to analyzing news, including questioning the author’s intent, the use of evidence, and potential bias.

In addressing the second research question, the findings reveal that instruction in critical thinking and the analysis of argumentation significantly enhanced students’ ability to critically engage with media texts, particularly in evaluating objectivity, bias, and credibility in English news articles related to public health. Through explicit instruction, students learn to deconstruct arguments, recognize rhetorical devices, and critically assess the use of evidence and language choice in newspaper coverage of health-related issues. By applying structured frameworks—such as Toulmin’s model of argumentation and principles of Critical Discourse Analysis—students develop the ability to identify underlying assumptions, detect emotionally charged or manipulative language, and differentiate between fact-based reporting and opinion-driven narratives. During the course, students engaged in guided practice that included comparing multiple articles on the same public health issue, analyzing how different sources framed the topic, and evaluating the presence or absence of supporting evidence, counterarguments, and transparency. Over time, students demonstrated increased awareness of how bias can subtly influence reporting through word choice, source selection, and omission of context. They became more critical of articles that presented one-sided views or lacked verifiable data, and more appreciative of those that demonstrated balance,

transparency, and adherence to journalistic standards. Overall, the instruction empowered students not only to evaluate the credibility of English language news more effectively but also to approach media content with greater skepticism and analytical depth, which is an essential skill for informed engagement in a global information environment.

In response to the third research question, the findings found that instruction in critical thinking and the analysis of argumentation played a crucial role in helping EFL students manage the influence of their subjectivity when evaluating the objectivity and bias of English news articles, particularly in sensitive and complex areas like public health. Prior to receiving such instruction, many students tended to rely on personal beliefs, emotional reactions, or prior knowledge to judge news content, often conflating their agreement with an article's message as a sign of its credibility or objectivity. Through structured instruction in critical thinking and argumentation, students learned to separate their personal opinions from evidence-based reasoning. They were introduced to evaluation criteria rooted in logical analysis. With practicing these tools to the analysis of newspaper texts, students developed the ability to systematically assess texts using consistent standards, rather than instinct or preference. As a result, students reported becoming more conscious of their own biases and more disciplined in applying neutral criteria when using an evaluation scale. For example, they began to recognize that even articles they agreed with could still show signs of bias, such as selective sourcing, emotionally loaded language, or lack of counterarguments. Likewise, they learned to appreciate objectivity in articles that presented opposing viewpoints fairly, even if they personally disagreed with the stance. Ultimately, the instruction fostered greater metacognitive awareness. Students learned not only thinking critically about the texts but also critically reflecting on their own thinking. This shift enabled them to evaluate media content with a more balanced, fairminded approach, leading to more reliable and valid assessments of objectivity and bias.

In response to the fourth research question, the results indicate that students' varying levels of achievement in detecting bias do influence how they perceive the persuasive intent of English news articles reporting on public health issues. Students who demonstrated higher proficiency in identifying bias were more likely to approach news texts with a critical mindset. They were better able to recognize subtle persuasive techniques, such as emotional appeals, selective use of evidence, or ideological framing, and therefore perceived the persuasive intent of the articles as deliberate and often manipulative. In contrast, students with lower achievement in bias detection tended to focus more on surface-level features of the articles, such as layout, tone, or topic familiarity. They were also less likely to question the underlying motivations or rhetorical strategies of the text. As a result, they either accepted the message at face value or misinterpreted persuasive elements as simply informative. This group also showed greater difficulty in distinguishing between objective reporting and opinion-based content, which affected their ability to critically evaluate the credibility and intent of the article.

The results demonstrate that at the initial stage of being engaged in the course process, students exposed to the intervention commonly exhibited limitations in recognizing and identifying fallacies in arguments, which implied deficiencies in analytical reasoning. Most students struggled to objectively weigh evidence against alternative viewpoints, relying instead on prior knowledge and personal beliefs to evaluate text for trustworthiness. This was largely governed by the learner's cognitive biases, epistemological assumptions, and limited exposure to critical evaluation frameworks. After receiving explicit instruction in argumentation and guidance in applying Critical Discourse Analysis (CDA) as a methodological approach to examine authorial intent and bias, students showed significant progress. They developed stronger evaluative skills, assessing textual claims against supporting evidence to ensure those claims were not misleading. After having received

explicit instruction in argumentation and guidance in applying Critical Discourse Analysis (CDA) principles as a methodological approach to examine authorial intent and bias, students demonstrated considerable learning progress, developing deeper skills of evaluating the claims made in texts in light of offered evidence to assure that the claims made are not misleading. Adopting an interdisciplinary approach revealed that applying CDA frameworks was valuable for students' analytical competence in identifying and examining how newspaper articles on the subject of public health circulate neoliberal ideology, which inherently prioritizes corporate profits over public health and safety, ignoring the many structural harms.

Despite this growth, the pervasive influence of prior knowledge and beliefs remained a complex factor in their evaluations, underscoring the ongoing need for extensive practice and the cultivation of higher-level analytical skills. This result draws attention to the indispensable value of creating learning space designed for critical inquiry within which creating a context for the juxtaposition of opposing views, arguing for and against ideologies and world views. It also highlights the crucial importance of fostering learner-centered spaces where learners develop critical self-awareness and self-direction which are central to the process of critical thinking. They minimize cognitive biases that may lead news readers to make negative interpretations of reports, resulting from a loss of critical control over the process of reading.

In terms of critical media literacy, this study confirmed that EFL students initially had difficulty in identifying logical fallacies and struggled with evaluating the quality of arguments embedded in health news texts, particularly when textual evidence contradicted their pre-existing beliefs, often demonstrating a response bias where they prioritized personal values over factual evidence. While the content of a text significantly impacted bias perception, students were frequently unaware of the author's persuasive intent until exposed to counterarguments, suggesting that the integration of intertextual reading into educational

environments fosters critical analysis and higher-order thinking skills. The most obvious finding to emerge from this study is that students were initially more swayed by emotional appeals than by factual support, highlighting a general lack of a skeptical approach to information. These findings collectively underscore the complex interplay of prior beliefs, textual content, and rhetorical strategies in how EFL learners evaluate persuasive arguments, emphasizing the critical need for explicit instruction to cultivate their ability to discern bias and make objective judgments.

When EFL students were investigated regarding their critical evaluation of health information, the findings revealed that their initial struggle to identify logical fallacies and evaluate argument quality in health news texts occurred when authorial evidence contradicted their pre-existing beliefs. A clear response bias emerged, with students favoring personal values over factual evidence. While textual content strongly influenced bias perception, many remained unaware of authorial persuasive intent until exposed to counterarguments, underscoring the value of intertextual reading in fostering critical analysis. Notably, students were more swayed by emotional appeals than empirical support, reflecting a lack of skepticism. Following the intervention, students' argument evaluation demonstrated statistically marked improvement in a students' tendency of self control for reducing reliance on emotional appeals, with responses increasingly referencing textual evidence to support the given analyses. These gains suggest that structured training in critical literacy can effectively mitigate cognitive biases, even in situations that are uncertain

In examining the link between critical thinking and media literacy, the present study also focused on examining the impact of text sidedness (the perspective or position embedded within a text) on students' engagement with news reports that required them to identify bias. The findings revealed that not only the content, but also the sidedness the texts significantly influenced students' skills, though their ability to identify the author's ideology required

deeper analysis to go beyond the surface lines to the reasons behind the arguments to the inferential level—that's where the students need the most help.

Drawing on the work of scholars in the area of reading skill, the current study utilized three types of argumentative texts—one-sided, two-sided non-refutational, and two-sided refutational—to assess how these variations affected readers' responses. One-sided texts present only arguments that support a particular position or viewpoint, Two-sided non-refutational texts present both sides of an issue, but they do not actively refute the opposing arguments, Two-sided refutational texts present both sides of an issue and then actively refute the opposing arguments.

Consistent with previous research, the results of the present study indicated that before critical thinking training, readers took part in the learning experiment, perceived bias most readily in one-sided texts, which was due to the explicit absence of opposing viewpoints, making the author's singular agenda apparent. However, they had mistakenly interpreted two-sided non-refutational texts as genuinely balanced, overlooking subtle biases embedded in the framing. Two-sided refutational texts, which provide a refutation of a counter-argument, had been seen as highly credible, with readers potentially accepting the author's refutations without an extensive analysis of the arguments and the scrutiny in the light of deeper evidence. Following critical thinking training, some students developed a more sophisticated understanding of bias; they could not only quickly identify the overt bias in one-sided texts but also delve deeper into two-sided non-refutational texts to discern how these biases manifest themselves through language choice and how to infer them from argumentation. Furthermore, with progress and enhanced critical skills, they could more effectively evaluate the validity and fairness of refutations in two-sided refutational texts, assessing whether opposing views are truly engaged with or merely dismissed, thereby making more informed judgments about the author's underlying ideology.

While the paramount importance of critical thinking and media literacy in navigating complex information landscapes is widely acknowledged in educational discourse, this study offers crucial implications by refining our understanding of effective pedagogical approaches. It demonstrates that merely recognizing the need for these skills is insufficient; rather, explicit, targeted instruction in argumentation and critical discourse analysis is essential, particularly within EFL contexts, to genuinely enhance students' ability to detect bias and persuasive intent. Furthermore, the findings highlight that even with dedicated training, the persistent influence of prior knowledge, personal beliefs, and emotional appeals remains a significant challenge, implying that effective critical literacy education must extend beyond skill transfer to actively address and mitigate these deeply ingrained cognitive biases.

Equally important is that the findings of this study offer valuable insights into the development of critical media literacy among EFL learners, particularly in the context of evaluating English news texts that are not far from students' lives. By demonstrating that text sidedness and content significantly influence students' inferential, interpretive, and critical comprehension skills, the research highlights the importance of exposing learners to diverse argumentative structures to foster deeper evaluative abilities.

Moreover, the study highlights the complexity of identifying authorial ideology, suggesting that additional instructional support is necessary to enhance students' capacity for detecting subtle bias and perspective. It argues that pinpointing an author's underlying beliefs or worldview (their ideology) is difficult for reasons that aren't solely inherent to the text itself (e.g., how the author wrote it) or solely to the reader (e.g., the reader's skills or bias). Instead, the study posits that the challenge emerges from the dynamic and complex interaction that takes place when a reader actively engages with and interprets a text in view of its socio-cultural context. It's in this interplay between the reader's mind and the textual content and context that an author's ideology is revealed, obscured, or perhaps even constructed by the

reader.

This contribution is particularly significant as it bridges a gap in the existing literature by empirically examining the interplay between argumentation analysis, bias detection, and critical thinking in an EFL context: an area that has been largely underexplored. The study thus provides a foundation for designing pedagogical interventions that aim to equip EFL students with the critical skills needed to navigate and assess the credibility of media information passed through media.

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One of the main strengths of the present study lies in its design, which allowed for a systematic investigation of how instruction in critical thinking and argument analysis affects EFL students' ability to critically evaluate arguments that may be congruent with one's own goals and beliefs. By incorporating authentic public health news articles that varied in argument structure, tone, and purpose, the study provided learners with realistic and contextually relevant materials that reflected real-world media discourse. Another notable strength is the combination of both qualitative and quantitative data collection methods, which enabled a comprehensive understanding of changes in students' perceptions, evaluative skills, and awareness of bias. Furthermore, the study addressed an important gap in the literature by focusing on EFL university learners—an underrepresented group in critical media literacy research—thereby extending the applicability of findings beyond native-speaking contexts. The integration of established theoretical models, such as Toulmin's Model of Argumentation and Stella Cottrell's framework for critical thinking, also enhanced

the conceptual rigor and interpretative depth of the research, contributing to its overall validity and reliability.

Despite its valuable contributions, the present study is not without limitations. One notable limitation concerns the relatively small and context-specific sample, consisting of EFL undergraduate students from a single university, which may restrict the generalizability of the findings to other educational settings or cultural contexts. Additionally, while the quasi-experimental design provided useful insights into the effects of text sidedness and argumentation instruction, the duration of the intervention may have been insufficient for students to fully internalize and apply complex critical thinking and bias detection skills. Another limitation lies in the reliance on self-reported perceptions alongside performance-based measures, which may have introduced elements of subjectivity or social desirability bias in the responses. The researcher acknowledges the risk that these self-reports were probably not entirely accurate. This inaccuracy could be due to individual personal interpretations (subjectivity) or because participants tried to present themselves in a more positive or socially acceptable light (social desirability bias), which might not reflect their true perceptions.

Moreover, given the inherent complexity of ideological bias, which often emerges from the dynamic interaction between reader and text rather than residing overtly in either, the challenge of effectively assessing students' ability to detect such subtlety in media texts clearly suggests the need for more sophisticated and context-sensitive assessment tools, alongside longer-term longitudinal studies, to accurately capture the incremental and nuanced development of this crucial critical thinking skill over time. These limitations highlight areas for improvement and suggest directions for future research.

In light of the limitations identified, several recommendations for future research can be proposed. First, it would be beneficial to replicate this study with a larger and more diverse

sample of EFL learners from different universities or cultural contexts to achieve the generalizability of the findings. Future studies could also extend the length of instructional time interventions to allow for deeper development and consolidation of critical thinking and bias detection skills. Additionally, the design of more sophisticated assessment tools capable of capturing subtle shifts in learners' ability to identify ideological bias in media texts is recommended. Longitudinal research could provide valuable insights into the sustainability of these skills over time and their transferability to real-life media consumption. Furthermore, comparative studies examining the effectiveness of different pedagogical approaches, such as project-based learning or digital media production, in fostering critical media literacy among EFL students would enrich the understanding of best practices in this field.

The findings of this study carry important implications for both educational practice and language teaching policy. They suggest that integrating explicit instruction in critical thinking, argument analysis, and media literacy into EFL curricula can significantly enhance students' ability to critically evaluate the credibility, objectivity, and bias of media texts, and thereby reduce the persuasive impact of manipulative intent. Therefore, it is recommended that language education policymakers prioritize the inclusion of critical media literacy components that can truly empower students, particularly in contexts where students are increasingly exposed to global media content. Teachers should be provided with appropriate training and resources to design tasks that engage learners in the critical examination of authentic media texts, especially those addressing socially and culturally sensitive issues.

Moreover, curriculum developers are encouraged to embed activities that promote reflective thinking, bias detection, and evaluative judgment into reading and writing courses. Such pedagogical adjustments would better prepare students to navigate complex information environments and become more discerning, responsible consumers and producers of media messages.

Moreover, in light of the demonstrated complexities in discerning subtle ideological bias and the pivotal role of reader-text interaction in this process, curriculum developers are strongly encouraged to go beyond traditional comprehension tasks and embed explicit, systematic activities that stem from critical discourse studies to rigorously promote reflective thinking, sophisticated bias detection, and nuanced evaluative judgment aimed at demystifying ideology and power relations in language use. Such pedagogical adjustments would involve introducing students to diverse, real-world media texts, guiding them through the deconstruction of arguments, and training them to identify rhetorical strategies, underlying assumptions, and the selective use of evidence. This proactive approach would not only better prepare students to critically navigate the pervasive and often manipulative information environments of today but also empower them to become more discerning, ethically responsible consumers and conscientious producers of media messages, ultimately fostering active and informed civic participation in a globally interconnected world.

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Appendices

Appendix A

Basic Information

Male Female Age.....

1. What is the highest level of formal education you have completed?

- Bachelor's degree (Licence)
- Master's degree
- Doctorate
- PhD or equivalent
- None of the above

2. What is your most recent high school class rank? Use an identical pattern as illustrated below for you. If you do not know your rank, check with your department counselor.

In ----- I graduated and got my-----degree from -----, -----in a rank of a class of -----.
In 2000 I graduated and got my license from the English language teaching department of Oran University, 10th in a rank out of a class of 200 .

3. What is the primary language used in your home?

- Arabic
- Berber
- French

4. List any language you are fluent in other than Arabic

_____ Spoken _____ written
_____ Spoken _____ written
_____ Spoken _____ written

5. How would you identify yourself in ideological orientation?

- Conservative
- Liberal
- Middle-of-the-road (midway between the two extremes)
- Salafist
- I am not sure

Appendix B

Students' Access to Sources of News

Directions

In this section you have to answer a reading profile questionnaire about your reading habits and access to open and paid TV channels, use of online social networks, access to newspapers and social background, among other related issues.

1. What is your main source of news of the day?

- TV
- Magazines
- Newspapers
- Radio
- Sites on the net
- Online social networks (facebook, twitter, snapchat, instagram, linkedin, pinterest)
- Don't get it at all

2. How frequently would you say you watch news on your television, computer, or mobile device?

- Never
- Once or twice a day
- Once or twice a week
- Two or three times a month

3. How frequently would you say you read a daily newspaper (either print or online versions)?

- Never
- Once or twice a week
- Most days
- Daily

4. In which language would you feel most comfortable reading news (e-papers / printed papers /printing forms as PDF)?

- Arabic
- Berber
- French
- English

5. Please list any newspaper that you typically read along with your favorite news section

1. Science & technology news section
2. Trade & food news section
3. Education & job news section
4. Health & environmental news section
5. Sport news section
6. None of these

Favorite news section

1 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
2 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
3 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>

6. How frequently would you say you read a magazine (either print or online versions) ?

- Never
- Weekly
- Monthly
- Quarterly
-

7. Please list up to three titles of magazine that you typically read along with your favorite news section

1. Science & technology news section
2. Trade & food news section
3. Education & job news section
4. Health & environmental news section
5. Sport news section
6. other

Favorite news section

1 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
2 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
3 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>

8. What part of a magazine or newspaper (online or print) do you habitually turn to first? Indicate your preference by using (1) for the part you read first, (2) for the part you read second, (3) for the part you read third

- Comics
- Cross-puzzles
- Editorials
- Feature sections
- Editorial cartoons
- Financial
- Front page
- Letters of the editor
- Local news
- Obituaries
- Sports
- TV and Radio

9. Please list up to three radio station that you typically listen to and any specific programs that you try not to miss

1. Science & technology news program
2. Trade & food news program
3. Education & job news program
4. Health & environmental news program
5. Sport news program
6. Political commentary program
7. other

Favorite news program

1 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>
2 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>
3 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>

10. Please list up to three website that you typically visit most frequently

1. Shopping websites
2. Education & job news websites
3. Health & environmental news websites
4. Sport news websites
5. Political comentary from weblogs
6. Entertainment
7. other

Favorite websites and blogs

1 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>
2 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>
3 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>

11. What is your most frequent source of TV news?

- Maghreb channels
- Middle Eastern channels
- Transnational channels
-

12. In which language(s) do you watch the TV-news programs?

Please indicate how frequently by using a scale from 1 to 5

- Never 1
- Occasionally..... 2
- Sometimes..... 3
- Frequently 4
- Almost always... 5

• Programs in Arabic	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
• Programs in French	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
• Programs in English	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
• Programs in Arabic subtitled in English	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
• Programs in Arabic subtitled in French	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
• Programs in English subtitled in Arabic	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
• Programs in English subtitled in French	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
• None of these (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4/5

13. Please list any English TV channel that you watch most frequently and any specific programs that you try not to miss in each Chanel

1. Aljazeera /English
2. BBC
3. CNN
4. Euronews
5. CNBC-Europe
6. National Geographic Channel
7. Sky News
8. Other (specify) _____

My favorite TV program	In TV channel
1 _____	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/>
2 _____	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/>
3 _____	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/>

14. Which Online Social Networks and Media Web Sites do you visit most frequently?

- Facebook
- Hulu
- LinkedIn
- Pinterest
- Twitter
- YouTube
- Other (specify)-----
- Never use media web sites

Appendix C

Students' Questionnaire on the Use of Media Texts in the English Classroom

1. In your current and past experiences learning English, how often do/ did your teachers incorporate media texts (whether sound, visual or written) within their teaching practices?

never rarely sometimes frequently always

2. In your current and past experiences learning English, how often do/ did your teachers ask you to?

- Connect the use of media texts in class (read or watched) to your lives, experiences, and/or current events?

never rarely sometimes frequently always

- Focus on examining an author's bias (how author's background, values, affiliations, etc.) affects how and why they write/create text/media)?

never rarely sometimes frequently always

- Focus on the way text or media frames an argument?

never rarely sometimes frequently always

- Focus on deconstructing why you and your classmates understand text or media the way you do (e.g., how your background/experiences influence your understanding)?

never rarely sometimes frequently always

- Examine multiple source or perspectives on a single topic ?

never rarely sometimes frequently always

- Discuss questions that have no correct or singular answer?

never rarely sometimes frequently always

- Explicitly examine who is marginalized and is not marginalized from text or media?

never rarely sometimes frequently always

- Focus on how systems of oppression (e.g. racial, sexual, economic, etc.) are manifested in text or media?

never rarely sometimes frequently always

- Describe a specific episode where a professor or an instructor effectively demonstrated or modeled analyzing media texts in a classroom lesson. Please include in your description what content was being taught, what technology was used, and what teaching approach(es) was implemented.

- Did your teachers integrate analyzing media texts into their own practices? If so, how did they?

- If applicable, describe a time during your study periods. when you learned about analyzing media texts

Appendix D

Trust in Media News Coverage of Global Issues

Directions

This section rates on the extent to which you think the news media reports the news accurately and fairly, being indicated in a choice of Likert scales.

1. To what extent do you agree or disagree with these statements?

Answer the questions by crossing ① = (Agree), ② = (Neutral), or ③ = (Disagree)

(I mean here the media in general: print and broadcast)

- | | |
|---|-------|
| A. Not all media are biased in news coverage | ① ② ③ |
| B. Not all the content of media are commercial productions | ① ② ③ |
| C. Not all the media's stereotyping of one particular race is wrong
(that is one race is superior or inferior to another) | ① ② ③ |
| D. Not all the media's stereotyping of one particular gender is wrong
(that is subordination of women within the male-female relationship) | ① ② ③ |
| E. Not all media images are constructions that do not present reality | ① ② ③ |
| F. Not all exposure to media content changes people's attitudes or beliefs | ① ② ③ |
| G. Not all media messages have intentional political agendas | ① ② ③ |
| H. Not all media empowers people to take control of their own lives | ① ② ③ |
| I. Not all media produces false or misleading information. | ① ② ③ |
| J. Not all media results in negative effects on the readers'/viewer's attitudes, affect, and behavior. | ① ② ③ |
| K. Not all media are unhealthy or irresponsible for young people. | ① ② ③ |

2. How far do you trust the Western international media's coverage of global issues? Write a number in the circle beside each statement, based on the following scale of 1 to 6.

① = (Not at all), ② = (Not very much), ③ = (Somewhat), ④ = (A fair amount), ⑤ = (Strongly trust), ⑥ = (Don't know)

A. The Western international media's coverage of global issues is generally fair	<input type="radio"/>
B. Usually, the Western news media coverage presents accurate coverage reports.	<input type="radio"/>
C. News reports from international Western news media are generally balanced.	<input type="radio"/>
D. News reports from international Western news media are generally biased toward one side or another.	<input type="radio"/>
E. I trust Western news media coverage of international affairs.	<input type="radio"/>
F. I trust a blogger's opinion more than a newspaper or magazine	<input type="radio"/>
G. Asking the different media in turn, I trust the press most, followed by radio, followed by television	<input type="radio"/>
H. Western news media are doing well at reporting controversial global issues	<input type="radio"/>
I. Western media is bias in its coverage of the Muslim world.	<input type="radio"/>
J. Western media is responsive and relevant to people's concerns and interests	<input type="radio"/>
K. Media bias, prejudice and ideological baggage are not peculiar to Western media.	<input type="radio"/>
L. I accept what western media tell us as truth	<input type="radio"/>
M. The Western international media's claims are almost always false or misleading	<input type="radio"/>

3. How much trust and confidence do you have on the following TV channels?

Answer the questions by crossing ① = (Not at all), ② = (Not very much), or ③ = (Somewhat), ④ = (A fair amount), ⑤ = (A great deal)

A. Aljazeera/English	①	②	③	④	⑤
A. BBC/ English	①	②	③	④	⑤
B. CNN	①	②	③	④	⑤
C. Euronews	①	②	③	④	⑤
D. CNBC-Europe	①	②	③	④	⑤
E. National Geographic Channel	①	②	③	④	⑤
F. Sky News	①	②	③	④	⑤
G. Othe (specify) _____	①	②	③	④	⑤

4. To indicate your trust on Western media, please answer these questions openly and honestly.

- I trust the Western international media's coverage of global issues, with the exception of _____

- I don't trust the Western international media's coverage of global issues, with the exception of _____

5. What is your opinion: Should the media include interpretation in their news reports? Why or why not?

6. The Internet, newspaper, TV, and radio news tell us....

- Only the truth
- Only lies
- Only some of the information
- Everything we need to know

3/4

7. You will find a series of general statements listed below related to issues that are close to people's everyday lives. The statements have been taken from TV news programs and documentaries. Regardless of how knowledgeable you are about the topics; would you consider these statements to be factual or opinion statements? Not all statements will be relevant to all respondents - please feel free to choose those where you think you are best placed to respond.

① = (I trust that it's correct), ② = (I doubt very much that it is indeed true), or ③ = (Don't know)

The media inform us that

- | | |
|--|-----------------------|
| A. Cellphones cause cancer. | <input type="radio"/> |
| B. Sportswomen have little value in relation to sportsmen. | <input type="radio"/> |
| C. Nicotine is highly addictive and is the most common type of drug addiction. | <input type="radio"/> |
| D. There are no natural home remedies for depression. | <input type="radio"/> |
| E. The use of Arab and Islamic Herbal remedies is fairly safe to use. | <input type="radio"/> |
| F. Genetically modified food is safe to eat. | <input type="radio"/> |
| G. There is an association between exposure to diesel exhaust and lung cancer. | <input type="radio"/> |
| H. Eating red meat may increase a person's risk of developing heart disease or cancer. | <input type="radio"/> |
| I. A hole in the ozone layer causes climate change. | <input type="radio"/> |
| J. The greatest democracy in the world is the United States of America. | <input type="radio"/> |
| K. Today, there should be no lingering doubt that Iran represents serious threats against | <input type="radio"/> |
| L. world peace and human security. | |
| M. China is now the largest national source of the greenhouse gas pollution causing global | <input type="radio"/> |
| N. warming and resulting changes to the Earth's climate. | |
| O. Social media is a significant factor in a rising tide of anxiety among teenagers and adolescents. | <input type="radio"/> |

Appendix E

Identifying the Language of Framing in News Articles

Directions

Read the text below and answer the questions by circling ① = (Yes), ② = (No), or ③ = (Don't know).

	Title and Date of Article		
The author uses words with strong connotative meanings.	①	②	③
Facts in the text are not supported by evidence or multiple credible sources.	①	②	③
There are in the text generalizations without support.	①	②	③
The author omits facts and information that do not support his or her view.	①	②	③
Little or no attention is paid to opposing views, or they are only mentioned towards the end of the piece.	①	②	③
The piece presents one-sided opinion of the issue.	①	②	③
The author uses words and /or a tone that stirs emotions or convey strong images.	①	②	③
The headlines or content evokes a lot of emotions.	①	②	③
The author is named and is expert on the topic.	①	②	③
The source is of reliable and quality information that most people trust.	①	②	③
The information in the source matches other credible sources.	①	②	③
The author states his own subjective comments at the same time that he/she depicts objective events and images	①	②	③

Appendix F

Identifying Persuasiveness in News Articles

Directions

Read the text below and answer the questions by circling ① = (Yes), ② = (No), or ③ = (Don't know).

	Title and Date of Article		
Are the author's purpose, tone, and intended audience clear for you?	①	②	③
Does the text reflect the author's perspective or viewpoint in text?	①	②	③
Does the text reflect persuasive writing strategies?	①	②	③
Are there any indicators of persuasive writing strategies use in the text?	①	②	③
Does the text include figurative language devices?	①	②	③
Does the text include sensory imagery?	①	②	③
Does the text include rhetorical figures of speech?	①	②	③
Does the text include an informal language register (slang, swearing, derogatory language)?	①	②	③
Does the text include high-modality language (expressed by using words like "should not", "forced into")?	①	②	③
Does the author quote or cite the opinions or published work of experts or other authors ?	①	②	③
Does the author appeal to emotions without providing convincing evidence?	①	②	③
Does the author consider opposing viewpoints?	①	②	③
Are there any indicators of how the author's wants the reader to react to what he/she says in his text?	①	②	③
Has the author attempted to convince the reader that something must be avoided by highlighting the undesirable consequences?	①	②	③
Does the author use selective preference for certain kinds of evidence while excluding important others)?	①	②	③
Has the author convinced you to change your mind, or at least to be open to a different point of view?	①	②	③
If you already agreed with the author's claim the argument, has the author strengthened your belief through his support and evidence	①	②	③
Does the author appear to have an unfair bias?	①	②	③

Appendix G

Evaluating the Trustworthiness of News Articles

Directions

Using the scale provided, indicate your level of agreement with the following statements about the text you have just read by circling ① = (Very much), ② = (Quite a lot), ③ = (Somewhat), ④ = (A little), ⑤ = (Not at all)

	Title and Date of Article
The text deals with an issue that I have already read about.	① ② ③ ④ ⑤
The text aroused my interest to understand what the author specifically states in his/her report.	① ② ③ ④ ⑤
The author made me to gain a better understanding of certain dimensions of this issue.	① ② ③ ④ ⑤
The information and ideas contained in the text seem real to me.	① ② ③ ④ ⑤
The text seems a reflection of a reality being built out of authentic incidents and real-world examples.	① ② ③ ④ ⑤
I agree with all that the author says, for being built on strong arguments and logical reasoning.	① ② ③ ④ ⑤
This text has made me think differently about things which I already knew.	① ② ③ ④ ⑤
My reading of the text has changed my opinion on this topic.	① ② ③ ④ ⑤
The text states facts I did not know before reading this text.	① ② ③ ④ ⑤
The text states facts I knew only imperfectly.	① ② ③ ④ ⑤
Content on this text reflects the author's expertise on the topic at hand.	① ② ③ ④ ⑤
Information on this text seems trustworthy.	① ② ③ ④ ⑤
Information on this text inspires me to want to change my life style as a result of the truth embedded in the author's arguments.	① ② ③ ④ ⑤
The author of this text appears to be an authority in his/her area of specialty.	① ② ③ ④ ⑤
<p>Write one or two sentences that describe your opinion, reaction, or evaluation of the article.</p> <p style="text-align: center;">My Opinion/Evaluation</p>	

Appendix H

Identifying Objectivity and Bias in News Articles

Directions

Read the text below and identify sentences with words which convey either objectivity or bias. Write those sentences in the corresponding columns, and provide an explanation of your choice. Then complete the bottom portion of the chart, deciding the overall text is biased or objective. Provide evidence for your choice.

Sentences from the text	Words or phrases which show the author's bias	Words or phrases which show the author's objectivity	Explanation of choice
Decide whether the overall text is biased or objective and provide an explanation. The text is biased for /against..... because			

Please rate how biased this news article is. Circle the number of your choice (0 being unbiased and 5 being extremely biased)

① ② ③ ④ ⑤

Please indicate how you arrived at the conclusion of the article as being (un) biased on the level you indicated above by indicating a numerical level as follow

1 = to no extent, 2 = to a little extent, 3 = to a moderate extent, 4 = to a great extent)

(If your conclusion is based on a criteria which is not on the list please add it at the end)

Statements	1	2	3	4
1. I relied on my prior knowledge on this topic and based my decision on my own point of view				
2. I tried to identify the main idea (s) and the author's purpose (intended effect on the reader)				
3. I tried to identify the text-type (persuasive, narrative, or informational				
4. I tried to identify the author's point of view and compare his perspective with other points of view which are left out of the current text.				
5. I examined the sources of the information presented in the text				
6. I examined how the author introduces and develops his/her claims through argument (s)				
7. I assessed the reasoning and evidence the author gives to support his argument (s)				
8. I paid attention to whether the title is representative of the article's content or not				
9. I paid attention on whether the claims that are expressed are objective facts or the author's subjective impressions				
10. I paid attention to whether rhetorical techniques are applied by the author as a means of persuasion				
11. I contrasted the point of view of the author with other author (s) on the same topic by analyzing their claims, reasoning, and evidence				
12. I paid attention to whether there is a preference of information that strengthens the author's views and avoidance of alternative information conflicting with his/her views				
13. I tried to identify whether the author presents arguments on the pros and cons				
14. I tried to identify whether the author presents facts without judgment				
15. I paid attention to the ways in which the author conveys mood and tone through word choice, figurative language, and syntax				
16. Other				

Appendix I

Peer Observation Sheet

Date: _____	Observer: _____
Setting: _____	
Start/stop time: _____ / _____	

	Observer's Notes	Observer's Evaluation			
I		①	②	③	④
A		①	②	③	④
M		①	②	③	④
D		①	②	③	④
C		①	②	③	④
E		①	②	③	④
R		①	②	③	④

Annotations:

<p>I – Instructional strategy; A – Assessment strategies; M – Misconception/student difficulty; D – Deviation in instruction from lesson plan; C – Content of the lesson; E – Teacher's efforts to elicit student misconceptions; R – Teacher's response to student questions/difficulties</p>	<p>0=Not observed 1= Observed to occur for short periods of time 2= Observed to occur for long periods of time 3=Observed to occur during all the lesson of the day</p>
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Appendix J

NewspaperTexts Used in this Research

The Guardian

Sarah Boseley Health Editor— Fri 28 Dec 2018

Public Health England maintains vaping is 95% less harmful than smoking

As scepticism rises, PHE says e-cigarettes could help more people quit smoking



‘Vaping is likely to pose only a fraction of the risk,’ says PHE’s Prof John Newton.
Photograph: Christian Horz/Getty Images/EyeEm

The government is launching a new campaign to try to convince the UK’s smokers that vaping is not as harmful as smoking and a good way to quit, in a bid to counter the scepticism generated by some scientific studies and media headlines.

Public Health England (PHE), which maintains that vaping is 95% less harmful than tobacco, is releasing a short video of an experiment which reveals the amount of sticky black tar that accumulates in the lungs of a heavy smoker, collected in a bell jar. By contrast, the same nicotine intake through vaping releases only a trace of residue.

“It would be tragic if thousands of smokers who could quit with the help of an e-cigarette are being put off due to false fears about safety,” said Prof John Newton, director of health improvement at PHE.

“We need to reassure smokers that switching to an e-cigarette would be much less harmful than smoking. This demonstration highlights the devastating harms caused by every cigarette and helps people see that vaping is likely to pose only a fraction of the risk.”

PHE says the risks from vaping are tiny compared to smoking. Some studies that have been published focus on the risks without looking at those of cigarettes. A lab study from Birmingham University in August, for instance, claimed that vaping could harm cells in the lungs. While the authors said they did not believe e-cigarettes were more harmful than ordinary cigarettes, they suggested that over 20 or 30 years there might be an effect and urged “cautious scepticism” about the safety of vaping.

Martin Dockrell, head of the tobacco control programme at PHE, said all the scientists in the field had ambitions to improve health. “We like to think of our scientists as being detached about these things, but in fact the scientists involved in this area on both sides are deeply passionate about it,” he said.

Studies about the risks of chemicals in e-cigarettes run prominently in the media. Some were misleading and others were contradictory, said Dockrell. “People don’t know who to believe and they believe the thing that suits them best,” he said. A smoker who finds it hard to quit may not want to believe that e-cigarettes are far less harmful.

One of the stories that does the rounds is that vaping causes “popcorn lung” – a condition that makes people cough and struggle for breath which can be caused by a chemical used to flavour popcorn that is also found in e-cigarettes. But the chemical, diacetyl, is also found in ordinary cigarettes at levels 100 times higher.

Concern about e-cigarettes is high in the United States, where vaping has taken off among school students. Many use a small device called Juul, the size of a USB stick. Anti-tobacco campaigners are alarmed that e-cigarettes will be a “gateway” to smoking, and some studies suggest this could happen.

A survey in December by the National Institute on Drug Abuse found a big jump in the numbers of teenagers who were vaping. More than one in three high school seniors said they vaped last year, which was 10 times the number who smoked cigarettes and a 10% increase in a year. A few months earlier, the Food and Drug Administration launched an information campaign to warn young people that there were risks to vaping.

PHE says that although e-cigarette use did rise among young people in England up to 2015, the numbers have flattened off since. Unlike the US, the UK has tight regulations, it says, and a limit on the nicotine level in e-cigarettes – which is higher in Juul in the US than it is in the UK. “There are no studies that show vaping increases tobacco use among young people in the UK,” said Dockrell.

PHE says that e-cigarettes could help many more people quit smoking – which kills half of those who take it up. Data from its smoking cessation programme showed that 65%–68% of people who used e-cigarettes as well as nicotine replacement therapies succeeded in quitting.

“We want to encourage more smokers to try and quit completely with the help of an e-cigarette, or by using other nicotine replacement such as patches or gum, as this will significantly improve their chances of success. If you’re trying to stop smoking, our free online personal quit plan will help you find the support that’s right for you,” said Newton.

Dr Lion Shahab, from University College London, who appears in the video, said: “The false belief that vaping is as harmful as smoking could be preventing thousands of smokers from switching to e-cigarettes to help them quit.

“I hope this illustrative experiment helps people see the huge damage caused by smoking that could be avoided by switching to an e-cigarette. Research we and others have conducted shows that vaping is much less harmful than smoking and that using e-cigarettes on a long-term basis is relatively safe, similar to using licensed nicotine products, like nicotine patches or gum. Using e-cigarettes or nicotine replacement such as patches or gum will boost your chances of quitting successfully.”

EDITORIAL: Science, not e-cigarette makers, must tell the public whether vaping is safe

Manufacturers insist e-cigarettes are safe. But recent cases of serious lung illnesses and neurological symptoms associated with vaping demand answers.

By CST Editorial Board August 28, 2019



Are e-cigarettes and vaping truly safe?

Ever since electronic cigarettes hit the U.S. market about a decade ago, the industry has engaged in a full-court press to assure the public that yes, these devices are a safe alternative to tobacco cigarettes.

That smokers who want to quit can rest easy if they opt for e-cigarettes over nicotine patches, lozenges or gum.

Fast-forward to 2019. Almost 11 million Americans, many of them teens and young adults, use e-cigarettes. And the potential harm they could cause is scary: The Centers for Disease Control is investigating nearly 200 cases nationwide of severe lung problems associated with vaping, including 22 cases in Illinois.

One of those 22 cases led to a man's death earlier this month right here in Illinois — the first vaping-related fatality in the country, the state Department of Public Health has reported.

The exact cause of the illnesses is still a mystery. Investigators “have not identified any specific product or compound that is linked to all cases,” the CDC said.

The vaping industry is eager to cast blame for the 200 problem cases on “black market” products.

“Each day of this crisis brings more evidence that street vapes containing THC or other illegal drugs are responsible for these illnesses, not nicotine vaping products,” the American Vaping Association's president, Gregory Conley, said in a statement. There's no solid evidence to support that, though.

What's more, the claims of e-cigarette safety have come from the manufacturers, who have tens of billions in revenue at stake.

The public needs independent scientists, not industry-paid so-called experts, to find out the truth.

Scientists from an independent, scientific institution, like the CDC. They're the ones the public can trust to give us a definitive answer.

In the meantime, other serious health questions persist. A recently published study by researchers at the University of Pennsylvania's Perelman School of Medicine found that smoking even one nicotine-free e-cigarette can be harmful to a person's blood vessels.

"While e-cigarette liquid may be relatively harmless, the vaporization process can transform the molecules . . . into toxic substances," the study's main investigator, professor Felix Wehrli, says. "Beyond the harmful effects of nicotine, we've shown that vaping has a sudden, immediate effect on the body's vascular function, and could potentially lead to long-term harmful consequences."

And the Food and Drug Administration earlier this year began investigating dozens of reports of seizures or other neurological symptoms, such as fainting or tremors, that may well be related to vaping.

Here are some other reasons not to trust the vaping industry's word:

- Even though manufacturers repeatedly denied targeting young people as consumers of their products, they kept on making products with bubble gum, candy and other flavors popular with teens.
- The Vapor Technology Association, another trade group, sued the FDA earlier this month to keep the agency from reviewing the e-cigarettes currently on the market for safety.

It all sounds too much like Big Tobacco, before scientists stepped in and found that cigarettes cause cancer.

If adults want to vape, that's their business. They can read the news and decide for themselves about any risk. We don't see enough evidence to justify sweeping new vaping regulations, other than regulations to keep e-cigs out of the hands of minors.

Like we said, we and others have plenty of questions. The public needs independent scientists to answer them.

Health secretary tells social media firms to protect children after girl's death

Matt Hancock warns companies after death of Molly Russell, whose social media contained distressing material



Social media companies are facing renewed demands from the government to protect children from harmful online content, amid growing concerns over suicide and self-harm among teenagers

Matt Hancock, the health secretary, has warned companies including Facebook, Google and Twitter that he will use the law to force them to act should they fail to remove inappropriate content. He warns that the benefits of new technology could be “lost because of reasonable concerns about its risks”.

He writes: “It is appalling how easy it still is to access this content online and I am in no doubt about the harm this material can cause, especially for young people.

It is time for internet and social media providers to step up and purge this content once and for all.”

Hancock said he had issued the demand after the case of Molly Russell, 14, who took her own life in 2017. Her Instagram account was found to contain distressing material about depression and suicide.

Her father, Ian, said he believed social media was partly to blame for his daughter’s death. Facebook, which owns Instagram, said it was “deeply sorry” over the case. Instagram has said it “does not allow content that promotes or glorifies self-harm or suicide and will remove content of this kind”.

Hancock said that protecting teenagers from graphic material online had to be part of efforts to tackle mental health issues among the young. “As you know, I have for some time been very concerned that we act now to stop children and young people being exposed to harmful content online,” he writes. “As health secretary, I am particularly concerned about content that leads to self-harm and promotes suicide.

“Suicide is now the leading cause of death for young people under 20. Levels of self-harm are rising among teenage girls in particular. Like any parent, I was horrified this week to learn of 14-year-old Molly Russell, who tragically took her own life. Molly was just two years older than my own daughter is now, and I feel desperately concerned to ensure young people are protected.

“I was inspired by the bravery of Molly’s father, who spoke out about the role of social media in this tragedy – and moved by the sense that there is much more we all need to do to stop a tragedy like this from happening again.”

Hancock’s letter comes ahead of a government white paper on the risks of online content, which will include issues around suicide and self-harm. “I want to work with internet and social media providers to ensure the action is as effective as possible,” he continues. “However, let me be clear that we will introduce new legislation where needed.

“Research shows that people who are feeling suicidal use the internet to search for suicide methods. Websites provide graphic details and information on how to take your own life. This cannot be right. Where this content breaches the policies of internet and social media providers it must be removed.”

Social media is making teen girls depressed, study says

By Hannah Spark—Jan. 4, 2019



Social media is a fact of life for today's teenagers, though little is known about the impact of long-term exposure to its less than desirable aspects: cyberbullying, impossible beauty standards and violent content.

But a new study published today in the *Lancet's EClinicalMedicine* journal appears to draw hard links between depression in teenagers and social media use. Using data from more than 11,000 14-year-olds in the UK, they found that girls who are depressed also tend to use social media more than boys.

For example, nearly 40 percent of girls who spent more than five hours a day on apps such as Facebook, Snapchat and WhatsApp also showed signs of depression, compared with 14.5 percent of boys. Regardless of length of time, girls were consistently about twice as likely to be depressed in relation to their social media use. Furthermore, girls are using social media at higher rates, with two in five of them spending three or more hours a day on social media as opposed to one in five boys.

Girls were also twice as likely to suffer from sleep issues, which researchers believe among other things could be caused by staying up late on social media and being awoken by push alerts. Poor sleep has long been associated with depressive symptoms.

Though researchers recognize that many adolescents tend to hate their bodies and lack confidence, many UK officials are warning parents against too much social media in their children's lives.

"It is likely that excessive use of social media does lead to poorer confidence and mental health," says Stephen Scott, director of the National Academy for Parenting Research at King's College London.

For example, 60 percent of girls who are depressed are unhappy with their appearance and two and a half times more likely than boys to be dissatisfied with their weight. And where else are they likely to be bombarded with images of unattainable physiques than social media? Cyberbullying, too, can contribute to poor self esteem. Again, girls who showed signs of depression were also twice as likely to have been victims of online harassment.

"These findings are highly relevant to current policy development on guidelines for the safe use of social media, and calls on industry to more tightly regulate hours of social media use for young people," says lead researcher Yvonne Kelly, professor at University College London's Institute of Epidemiology & Health Care, who co-led the research.

"Girls, it seems, are struggling with these aspects of their lives more than boys, in some cases considerably so."

The New York Times

NEW YORK, NOV. 23, 2005

A Jolt of Caffeine, by the Can

By Melanie Warner

Every day Tom Cabrera, a 27-year-old auto mechanic who lives in Middletown, R.I., drinks a can of SoBe No Fear energy drink on his way to work. Later in the day, if he goes to the gym, he downs another before his workout.

He says he probably could not get through the day without one. "It lifts me up. One minute I'm dragging and then it's like 'Pow!' " he said, widening his eyes.

Loyal and enthusiastic customers like Mr. Cabrera have helped propel caffeinated energy drinks into the fastest-growing sector of the \$93 billion domestic beverage industry. Sales of energy drinks, which sell for \$2 to \$3 a can, have grown a torrid 61 percent this year in the United States, according to Beverage Digest.

Energy drinks, which have become a \$3 billion business since their introduction in the United States eight years ago, are expected to accelerate profit growth for the beverage industry more than any other drink category in the next few years.

Sales of regular soda, meanwhile, are unchanged or declining in the United States and major markets around the world. "The energy drink category came out of nowhere," said John Sicher, publisher of Beverage Digest. "It's been a pleasant surprise for the industry."

But that has scientists and nutritionists worried. Energy drinks have as much sugar and roughly three times the caffeine of soda, and some experts peg their popularity to their addictiveness. And with racy names like Full Throttle, Rockstar and Adrenaline Rush, critics say these drinks are fostering caffeine addiction among teenagers.

Caffeine can cause hyperactivity and restlessness among children and is known to increase the excretion of calcium, a mineral much needed while bones are still growing.

Energy drink manufacturers say they do not market to children and their products have no more caffeine than a typical cup of coffee. But the debate persists. Four countries have barred the sale of energy drinks with current levels of caffeine: France, Denmark, Norway and, two months ago, Argentina.

In the U.S., however, sales continue to surge. According to estimates that Coca-Cola executives presented to analysts this summer, the additional industrywide profits that will come from energy products in the four years from 2005 through 2008 will total \$540 million, compared with \$210 million for regular soft drinks, \$130 million for bottled water and \$290 million for sports drinks.

A relative latecomer to the energy drink business, Coke is eager to become a much bigger player. In January, the company introduced Full Throttle, and last week it announced plans to revamp the 1970's brand Tab, which has not been sold in any significant quantities in the last 20 years, as an energy drink aimed at women. It will also start selling a caffeinated version of its Powerade sports drink.

This month, PepsiCo, which owns the SoBe No Fear and Adrenaline Rush brands through its 2001 acquisition of the South Beach Beverage Company, will start selling Mountain Dew MDX, an extra-caffeinated version of Mountain Dew.

Critics contend that much of the skyrocketing growth of energy drinks comes because consumers are getting physically addicted, either by consuming the concoctions daily or guzzling several at a time to elevate their mood.

Roland Griffiths, a professor of behavioral biology at Johns Hopkins University School of Medicine, says the amount of caffeine necessary to produce dependency and withdrawal symptoms is about 100 milligrams a day. A can of energy drink has 80 to 160 milligrams, depending on the size, though such information is not listed on any cans. An eight-ounce cup of coffee typically has 100 to 150 milligrams.

Some energy brands go so far as to promote their addictiveness as a selling point. "Meet your new addiction! 16 oz's of super charged energy with advanced components and a great berry-passion fruit flavor," reads the front page of Pepsi's SoBe No Fear Web site. Cans of Kronik Energy, made by an Arizona company, warn customers, "Caution: May Be Psychologically Addicting," meant as a daring come-on, not a serious warning.

Nutritionists say that while it may be fine for adults to have their dose of caffeine, they worry about children becoming hooked. "I suspect that busy, driven teenagers are grabbing one of these energy drinks instead of eating real food, which I would be concerned about," said Lola O'Rourke, a registered dietitian in Seattle and a spokeswoman for the American Dietetic Association.

Cans of SoBe, Monster, Rockstar and others carry a voluntary disclaimer, warning that the fizzy liquid inside is "not recommended for children, pregnant women or people sensitive to caffeine."

But the definition of "children" is not always clear. Coke and Pepsi say they aim their products at those older than 20. Rodney C. Sacks, chief executive of the Hansen Natural Corporation, which sells the popular Monster brand, says that his product is appropriate for anyone over 13.

Tom Pirko, president of Bevmark, an industry consulting firm, says that while the primary consumers of energy drinks are men ages 20 to 30, the category definitely attracts younger users. "We know they skew down to 12 and 13," he said. "You look at the claw of the monster on the can. When do kids start watching monster movies?"

In addition to caffeine, other purportedly energy-enhancing ingredients in energy drinks have attracted the attention of European health officials. When France banned Red Bull in 2000, health officials cited uncertainties about the interaction of caffeine, the amino acid taurine, and glucuronolactone, a type of sugar that is produced by human cells and used in metabolism.

Beverage companies say energy drinks have been safely consumed around the world for more than a decade and that such concerns are unfounded. But they acknowledge that there have been few studies looking at the particular combinations of these compounds. In addition to taurine and glucuronolactone, energy drinks have other unusual ingredients: guarana, a Brazilian herb that contains caffeine; inositol, a sugar alcohol; D-Ribose, another sugar used in metabolism; carnitine, arginine and creatine, three amino acids; and ginseng, an Asian herb said to have antioxidant benefits.

Red Bull, the Austrian company that makes the original energy drink, makes ambitious assertions about its particular blend of these ingredients. The company's Web site boasts that Red Bull "improves performance, especially during times of increased stress or strain," "increases concentration" and "stimulates the metabolism."

Other manufacturers, however, are more circumspect in their claims. Mary Merrill, group director for sports and energy drinks at Coca-Cola, says the reason taurine, guarana, carnitine and ginseng are in Full Throttle is because customers want them there.

"Energy drinks contain ingredients that consumers have come to expect and want to see," Ms. Merrill said. "We make no claims about any of them. We believe in marketing our brand by focusing on the brand's personality, rather than the ingredients."

Mr. Cabrera, the auto mechanic, says he likes it that his can of No Fear has strange-sounding ingredients, listed on the top of the can, but he admits he has no idea what taurine, creatine and arginine are.

Kristi Hinck, a spokeswoman for SoBe beverages, says that if consumers are curious about ingredients, they should do research. "We encourage people to do their homework and look it up," she said. "It's part of the whole mystique about energy drinks."

Some scientists say this mystique amounts to little more than shrewd marketing of overpriced, caffeinated sugar water. "These are just caffeine delivery systems," said Professor Griffiths at Johns Hopkins. "They're being marketed cleverly to imply they have other ingredients that may be useful to some end."

Henk Smit, a researcher in the department of experimental psychology at the University of Bristol in Britain, decided to test the effectiveness of energy drinks. In a study published in the medical journal *Nutritional Neuroscience* last year, Mr. Smit found that energy drinks were effective at improving mood and performance, but he concluded that caffeine was the crucial component.

"Any additional benefits of taurine, glucuronolactone or other ingredients are minimal compared to those of caffeine, and from what I know, are speculative at best for most of these ingredients," he wrote in an e-mail message.

Mr. Sacks, the Hansen chief executive, takes issue with these findings. He says Monster is carefully made to deliver a smoother burst of energy than other forms of caffeine. "When you drink coffee you get jittery, agitated and fidgety," he said. "Our experience is that you don't get the same effect with an energy drink."

Mr. Sacks says that if his aim were to simply get customers revved up on caffeine, he would have added more of it. "If I wanted to promote sales, I could have doubled the caffeine," he said. "It's a cheap ingredient relative to the others. Why would I spend dollars and dollars per case for these other ingredients when I could just put in 2 more cents and double the caffeine?"

It is these other, more expensive ingredients that allow manufacturers to charge \$2 to \$3 a can when a 20-ounce bottle of soda can be had for \$1 to \$1.50. And that, says Mr. Pirko of Bevmark, has everything to do with marketing. "You're selling images to people who want to be powerful," he said. "It's a head trip."

The New York Times

NEW YORK, MAY. 11, 2015

More Consensus on Coffee's Effect on Health Than You Might Think

By Aaron E. Carroll

When I was a kid, my parents refused to let me drink coffee because they believed it would “stunt my growth.” It turns out, of course, that this is a myth. Studies have failed, again and again, to show that coffee or caffeine consumption are related to reduced bone mass or how tall people are.

Coffee has long had a reputation as being unhealthy. But in almost every single respect that reputation is backward. The potential health benefits are surprisingly large.

When I set out to look at the research on coffee and health, I thought I'd see it being associated with some good outcomes and some bad ones, mirroring the contradictory reports you can often find in the news media. This didn't turn out to be the case.

Just last year, a systematic review and meta-analysis of studies looking at long-term consumption of coffee and the risk of cardiovascular disease was published. The researchers found 36 studies involving more than 1,270,000 participants. The combined data showed that those who consumed a moderate amount of coffee, about three to five cups a day, were at the lowest risk for problems. Those who consumed five or more cups a day had no higher risk than those who consumed none.

Of course, everything I'm saying here concerns coffee — black coffee. I am not talking about the mostly milk and sugar coffee-based beverages that lots of people consume. These could include, but aren't limited to, things like a McDonald's large mocha (500 calories, 17 grams of fat, 72 grams of carbohydrates), a Starbucks Venti White Chocolate Mocha (580 calories, 22 grams of fat, 79 grams of carbs), and a Large Dunkin' Donuts frozen caramel coffee Coolatta (670 calories, 8 grams of fat, 144 grams of carbs).

I won't even mention the Cold Stone Creamery Gotta-Have-It-Sized Lotta Caramel Latte (1,790 calories, 90 grams of fat, 223 grams of carbs). Regular brewed coffee has 5 or fewer calories and no fat or carbohydrates.

Back to the studies. Years earlier, a meta-analysis — a study of studies, in which data are pooled and analyzed together — was published looking at how coffee consumption might be associated with stroke. Eleven studies were found, including almost 480,000 participants. As with the prior studies, consumption of two to six cups of coffee a day was associated with a lower risk of disease, compared with those who drank none. Another meta-analysis published a year later confirmed these findings.

Rounding out concerns about the effect of coffee on your heart, another meta-analysis examined how drinking coffee might be associated with heart failure. Again, moderate consumption was associated with a lower risk, with the lowest risk among those who consumed four servings a day. Consumption had to get up to about 10 cups a day before any bad associations were seen.

No one is suggesting you drink more coffee for your health. But drinking moderate amounts of coffee is linked to lower rates of pretty much all cardiovascular disease, contrary to what many might have heard about the dangers of coffee or caffeine. Even consumers on the very high end of the spectrum appear to have minimal, if any, ill effects.

But let's not cherry-pick. There are outcomes outside of heart health that matter. Many believe that coffee might be associated with an increased risk of cancer. Certainly, individual studies have found that to be the case, and these are sometimes highlighted by the news media. But in the aggregate, most of these negative outcomes disappear.

A meta-analysis published in 2007 found that increasing coffee consumption by two cups a day was associated with a lower relative risk of liver cancer by more than 40 percent. Two more recent studies confirmed these findings. Results from meta-analyses looking at prostate cancer found that in the higher-quality studies, coffee consumption was not associated with negative outcomes.

The same holds true for breast cancer, where associations were statistically not significant. It's true that the data on lung cancer shows an increased risk for more coffee consumed, but that's only among people who smoke. Drinking coffee may be protective in those who don't. Regardless, the authors of that study hedge their results and warn that they should be interpreted with caution because of the confounding (and most likely overwhelming) effects of smoking.

A study looking at all cancers suggested that it might be associated with reduced overall cancer incidence and that the more you drank, the more protection was seen.

Drinking coffee is associated with better laboratory values in those at risk for liver disease. In patients who already have liver disease, it's associated with a decreased progression to cirrhosis. In patients who already have cirrhosis, it's associated with a lower risk of death and a lower risk of developing liver cancer. It's associated with improved responses to antiviral therapy in patients with hepatitis C and better outcomes in patients with nonalcoholic fatty liver disease. The authors of the systematic review argue that daily coffee consumption should be encouraged in patients with chronic liver disease.

The most recent meta-analyses on neurological disorders found that coffee intake was associated with lower risks of Parkinson's disease, lower cognitive decline and a potential protective effect against Alzheimer's disease (but certainly no harm).

A systematic review published in 2005 found that regular coffee consumption was associated with a significantly reduced risk of developing Type 2 diabetes, with the lowest relative risks (about a third reduction) seen in those who drank at least six or seven cups a day. The latest study, published in 2014, used updated data and included 28 studies and more than 1.1 million participants. Again, the more coffee you drank, the less likely you were to have diabetes. This included both caffeinated and decaffeinated coffee.

Is coffee associated with the risk of death from all causes? There have been two meta-analyses published within the last year or so. The first reviewed 20 studies, including almost a million people, and the second included 17 studies containing more than a million people. Both found that drinking coffee was associated with a significantly reduced chance of death. I can't think of any other product that has this much positive epidemiologic evidence going for it.

I grant you that pretty much none of the research I'm citing above contains randomized controlled trials. It's important to remember that we usually conduct those trials to see if what we are observing in epidemiologic studies holds up. Most of us aren't drinking coffee because we think it will protect us, though. Most of us are worrying that it might be hurting us. There's almost no evidence for that at all.

If any other modifiable risk factor had these kind of positive associations across the board, the media would be all over it. We'd be pushing it on everyone. Whole interventions would be built up around it. For far too long, though, coffee has been considered a vice, not something that might be healthy.

That may change soon. The newest scientific report for the U.S.D.A. nutritional guidelines, which I've discussed before, says that coffee is not only O.K. — it agrees that it might be good for you. This was the first time the dietary guideline advisory committee reviewed the effects of coffee on health.

There's always a danger in going too far in the other direction. I'm not suggesting that we start serving coffee to little kids. Caffeine still has a number of effects parents might want to avoid for their children. Some people don't like the way caffeine can make them jittery. Guidelines also suggest that pregnant women not drink more than two cups a day.

I'm also not suggesting that people start drinking coffee by the gallon. Too much of anything can be bad. Finally, while the coffee may be healthy, that's not necessarily true of the added sugar and fat that many people put into coffee-based beverages.

But it's way past time that we stopped viewing coffee as something we all need to cut back on. It's a completely reasonable addition to a healthy diet, with more potential benefits seen in research than almost any other beverage we're consuming. It's time we started treating it as such.

An Arabic - Language Summary of the Dissertation

ملخص باللغة العرب

مقدمة

تهدف هذا البحث إلى دراسة تأثير تعليم التفكير النقدي الصريح على قدرة متعلمي اللغة الإنجليزية في المرحلة الجامعية على تمييز المحاولات الإقناعية الخفية، والتي تسعى إلى التأثير على الرئي العام وتوجيه السلوك، وتحديد التحيز في تغطية الأخبار المتعلقة بالشؤون الصحية العامة التي تحمل في ثناياها محاولات خدمة لأسيولوجيات محددة. كما تسلط الضوء على العلاقة بين مهارات تحليل الحجج وقدرة الطلاب على تقييم التحيز في العروض الإخبارية. كان المشاركون في هذه الدراسة طلاب الدراسات العليا في جامعة معسكر في الجزائر، والذين شاركوا في دراسة شبه تجريبية خلال العام الدراسي 2020-2021. تم استخدام تصميم اختبار ما قبل وما بعد لتقييم فعالية التدريب. تظهر النتائج تحسينات كبيرة في قدرة الطلاب على تحليل نصوص الوسائط الإعلامية والكشف عن تحيز المؤلف بناءً على تحديد الحجج وتقييمها، وبالتالي، فإن إدراك النية الإقناعية المناصلة في هذه النصوص. ومع ذلك، كانت التحسينات في تحديد التحيز الأيديولوجي، أي الميل إلى وجهة نظر سياسية أو فلسفية معينة، المرتبطة ارتباطًا وثيقًا باستخدام الأداة المحددة، أكثر محدودية. تشير هذه النتائج إلى أن تطوير مهارات التفكير النقدي لدى الطلاب بعد خطوة مهمة في تمكينهم من تحليل المعلومات بشكل نقدي، ولكن ذلك يتطلب أيضًا تزويدهم بالأدوات اللازمة لفهم السياق الاجتماعي والثقافي والسياسي الذي ينتج فيه النص الإعلامي .

الغرض الأول

تشير الأبحاث إلى وجود صلة وثيقة بين التفكير النقدي والتربية الإعلامية، إذ يشارك كلاهما في هدف تعزيز القدرة على تحليل وتقييم المعلومات. فالتفكير النقدي يزود الأفراد بالأدوات اللازمة لتخصص الرسائل الإعلامية بدقة وتأمل، بينما تساهم التربية الإعلامية في تطبيق هذه المهارات على الواقع الإعلامي المتشابك. وبالتالي، فإن التربية الإعلامية، التي تطورت من مجرد القدرة على الوصول إلى المعلومات إلى القدرة على تقييمها بشكل نقدي، تمكن الأفراد من المشاركة الفاعلة في الحوار الإعلامي، وتعزز لديهم مهارات التفكير النقدي اللازمة لاتخاذ قرارات مستنيرة .

يشهد مجال تعليم التفكير النقدي جدلاً مستمراً حول أسس هذا النوع من التفكير وكيفية تعليمه. هل هو قدرة فطرية أم مكتسبة؟ وهل يمكن تعميمه أم يقتصر على سياقات معينة؟ تسعى الأبحاث إلى الإجابة على هذه التساؤلات من خلال دراسة مختلف النظريات حول طبيعة التفكير النقدي وتجربة مناهج تعليمية متنوعة. تتراوح هذه المناهج بين التركيز على تعليم مهارات تفكير عامة قابلة للتطبيق في مختلف المجالات، وبين دمج هذه المهارات ضمن تخصصات محددة. ومع ذلك، تظل مسألة قابلية نقل هذه المهارات بين مختلف السياقات محل جدل. خاصةً في ظل التنوع الثقافي والاجتماعي. تسعى المناهج التعليمية الحديثة إلى تطوير إطارات نظرية وعملية متكاملة لتعليم التفكير النقدي، مع مراعاة السياقات الثقافية والاجتماعية المتنوعة.

تقيم التفكير النقدي مسألة شائكة تتطلب جهدًا مضاعفًا. فتعريف التفكير النقدي الغامض يجعل قياسه الموضوعي تحديًا كبيرًا. ورغم ذلك، تشير الأبحاث إلى إمكانية تقييم مكوناته. وقد تم تطوير العديد من أدوات التقييم، مثل اختبارات WGCTA و CCTT و CCTST، التي تستند غالبًا إلى أسئلة اختيار من متعدد. ومع أن هذه الأدوات تقدم قيمة، إلا أنها تختلف في موثوقيتها. ويضم اختبار Ennis-Weir، الذي يعتمد على المقالات، منظورًا مختلفًا ولكنه ليس غاليًا من القيود. وفي سياق تعلم اللغة الإنجليزية كغير لغة أولى، كما في نموذج

ستابلطن، يجب أن تتلاءم أساليب التقييم مع احتياجات المتعلمين ومستوياتهم اللغوية. ومع ذلك، تحتاج هذه الأساليب إلى مزيد من الدراسة والتطوير، خاصة للتطبيق في سياقات سياسية واجتماعية التي تؤثر في اتخاذ القرارات في عمليات انجاز النظام التعليمي مثل الجزائر، لضمان دقتها وفعاليتها

العلاقة المترابطة بعمق بين التربية الإعلامية والتفكير النقدي تؤدي إلى إثراء متبادل في النظرية والممارسة. تتضمن التربية الإعلامية فهم وتحليل وتفسير الاحداث التي تذكر في الاخبار عبر منصات متنوعة، بينما يوفر التفكير النقدي الأدوات المعرفية لتقييم مصداقية هذه الاخبار وهدفها وتأثيرها. يؤكد الكثير من العلماء أن الاخبار الاعلامية غالباً ما تكون مفبركة و عكس الواقع، وتشكل الرأي العام من خلال التحرير الانتقائي والإطار الأيديولوجي. وهذا يؤكد ضرورة تعلم التربية الإعلامية كأداة ديمقراطية تمكن الأفراد من تمييز الدعاية ومواجهة التحيزات واتخاذ قرارات مستنيرة. لقد وضع مفكرون مؤثرون مثل بولو فريري ونوام تشومسكي وميشيل فوكو نظريات أساسية تربط معرفة وسائل الإعلام بالتعميق النقدي، والدعوة إلى دورها في تعزيز الاستقلالية والمقاومة للتلاعب الأيديولوجي.

تبرز الدراسات التجريبية العلاقة المتبادلة بين هذه المحويات، فوضحة كيف نثني مناهج التعلم و التربية الإعلامية التفكير النقدي من خلال تعليم الطلاب التساؤل وتحليل ومقارنة محتوى الاخبار الإعلامية. وتشمل استراتيجيات دمج التربية الإعلامية في التعليم تعزيز الاستقصاء ومقارنة التمثيلات الإعلامية و تغطية الاحداث وتشجيع مشاريع بحثية في المجال من إعداد الطلاب. وتهدف هذه الممارسات إلى تطوير مواطنين واعين قادرين على فك شفرات التحيزات الإعلامية وفهم تأثيرها الاجتماعي. ويجادل العلماء بأن التربية الإعلامية النقدية ضرورية للتصدي لتحديات العصر الرقمي، حيث تزود الأفراد بمهارات البقاء اللازمة لانتقاد الأيديولوجيات السائدة والتعرف على المعلومات المضللة. وفي النهاية، فإن الجمع بين التربية الإعلامية والتفكير النقدي في النظم التعليمية لا يعزز المهارات الأكاديمية حسب، بل أيضاً الثورات مدى الحياة للتفكير المستقل والمواطنة الفعالة، مما يضمن للطلاب الازدهار في عالم مشبع بالإعلام بشكل متزايد.

أثبتت الأبحاث العلمية وجود علاقة قوية بين التربية الإعلامية والتفكير النقدي. ومع ذلك، تعاني هذه الدراسات من تحيز رئيسي يتمثل في صعوبة قياس معرفة وسائل الإعلام بشكل دقيق. بينما توجد أدوات موثوقة لقياس الاداء في مجال التفكير النقدي، مثل اختبار كالفورنيا، فإن الأدوات المماثلة لقياس معرفة الإعلام محدودة. ورغم ذلك، تشير الدراسات، مثل دراسة فيورشتاين (1999) وأركي (2005)، إلى أن برامج التربية الإعلامية تساهم بشكل كبير في تعزيز التفكير النقدي لدى الطلاب.

بناءً على هذا الأساس، توجهت الأبحاث اللاحقة نحو تدخلات محددة في مجال معرفة وسائل الإعلام. فركزت دراسات شارير (2009) وراذولوف وبرغان (2009) على دمج التربية الإعلامية في مناهج دراسية مختلفة، سواء كانت تهدف لمنع العنف أو تعزيز فهم قضايا المرأة، وكلاهما أشارا إلى نتائج إيجابية في تنمية التفكير النقدي والوعي الإعلامي. وفي خطوة أبعد، اقترح سبيري (2012) دمج التربية الإعلامية مع البحث العلمي، بينما ألتي ويب ومارتن (2012) الضوء على دور التربية الإعلامية النقدية في مواجهة الأخبار الزائفة وفهم تأثيرات الإعلام العنيف. وقد وسعت دراسات لاحقة، مثل نالجاكي وآخرون (2016) وتشن وراتراي (2017)، من هذا النطاق، مؤكدة على دور معرفة وسائل الإعلام كركيزة أساسية في بناء التفكير النقدي. بشكل عام، تشير هذه الدراسات إلى وجود علاقة وثيقة بين التربية الإعلامية والتفكير النقدي، مع التأكيد على الحاجة إلى مزيد من الأبحاث التجريبية المتعمقة في هذا المجال.

الفصل الثاني

التحيز ظاهرة معقدة تتناقض مع المثل الأعلى للموضوعية والحياد. فبينما تسعى العلوم والمعرفة إلى الكشف عن الحقيقة الموضوعية، فإن التحيزات الشخصية والثقافية والأيديولوجية تتسلل إلى كل جوانب الحياة، بما في ذلك البحث العلمي والإعلام. وعلى الرغم من ذلك، فإن الاعتراف بوجود التحيز هو الخطوة الأولى لتجاوزه. فمن خلال الوعي بالآليات النفسية التي تؤدي إلى التحيز، يمكننا تطوير استراتيجيات للحد من تأثيره واتخاذ قرارات أكثر موضوعية.

تتناول هذه الدراسة تقاطع التحيز، والموضوعية، والإقناع في وسائل الإعلام، مع التركيز على كيف تؤثر هذه العوامل على تصورات الجمهور واستجاباته. في حين تهدف الموضوعية إلى تقليل التحيزات الشخصية، يستفيد الإقناع من الاستراتيجيات الخطائية للتأثير على المواقف والسلوكيات. إن تصورات التحيز والموضوعية ذاتية، وتتشكل وفقًا لوجهات النظر العالمية الفردية والسياقات الاجتماعية الثقافية. يعتمد فعالية الإقناع على جودة الحجج، ومصداقية المصدر، ومشاركة الجمهور، كما هو موضح في نموذج الاحتمالية التفضيلي (ELM)، والذي يميز بين مسارات المعالجة المركزية (الناقدة) والهامشية (السطحية). من خلال استكشاف هذه الديناميكيات، تسلط الدراسة الضوء على البور الحاسم للتربية الإعلامية في الكشف عن استراتيجيات الإقناع و التبرير لفهم تأثيرها على تشكيل التصورات والسلوكيات الاجتماعية للأفراد.

رغم كونه مجالاً رئيسياً للدراسة، فإن التحيز الإعلامي يفتقر إلى تعريف مرضٍ تمامًا. ولأغراض عملية، يمكن فهمه على أنه الإنتاج المنهجي لتمثيلات مشوهة للواقع الاجتماعي، غالبًا ما يدفعها أجندات حزبية أو أيديولوجية. يتعين على المؤسسات الإخبارية اتخاذ قرارات تحريرية يومية، واختيار الأحداث التي ستغطيها وكيفية تقديمها بطرق تساعد الجماهير على فهم الأخبار. يتأثر هذا المسار للاختيار والتقديم بقواعد الصحفيين وروايتهم وأحكامهم الجمالية، والتي تشكل تصوير الواقع. وكما جادل Katrin Voltmer، فإن الأخبار منتج ثقافي يتم تفسيره من خلال "قواعد اللغة" الصحفية. إن تصور التحيز منتشر على نطاق واسع، وحتى منافذ الأخبار التي تدعي الحياد يمكن اعتبارها متحيزة، خاصة في تغطيتها للمواضيع المشحونة سياسياً. يمكن أن يعكس التحيز مصالغ الجماعات الداخلية (مجموعات العضوية) مقابل الجماعات الخارجية (مجموعات غير العضوية)، ويتأثر بعوامل مثل العرق والوضع الاجتماعي والمعتقدات السياسية. يمكن أن يكون التحيز متعمداً، بهدف التأثير على الجمهور، أو غير مقصود، ناتجاً عن ميول منهجية في الممارسة الصحفية. سؤال ما إذا كان التحيز متعمداً ومن المستفيد منه أمر بالغ الأهمية في فهم دوره في وسائل الإعلام، وهو موضوع يتم استكشافه بشكل أكبر في الأدبيات مع مختلف التصنيفات المصممة لتحليل اللغة المنحيزة.

يتخذ تحيز وسائل الإعلام أشكالاً متعددة ومتنوعة، من حذف الحقائق وتشويهها إلى تفضيل وجهات نظر معينة. وقد سعى الباحثون إلى تصنيف هذه الأشكال من التحيز لفهمها بشكل أعمق. فمن جهة، صنف ماكوليل التحيز إلى حزبي ودعائي ولاواعي وأيديولوجي، ومن جهة أخرى، ميز إيمان بين تحيز التشويه وصنع القرار والمحتوى، فيما صنّفه داليسيو وألين إلى تحيز البوابة والتغطية والبيان. تهدف هذه التصنيفات إلى تحديد أنواع التحيز وفهم آلياته، وهي تختلف باختلاف السياق البحثي. إن دراسة هذا التحيز أمر حيوي لتنمية الوعي النقدي لدى الجمهور وفهم تأثيره على استهلاك الأخبار.

يمكن أن يتجلى التحيز في مراحل مختلفة من عملية إنتاج الأخبار، بدءاً من جمع الأخبار والكتابة وحتى التحرير والنشر، مما يؤثر على كيفية الإبلاغ عن الأحداث ويؤثر على الرأي العام. خلال مرحلة جمع الأخبار، يختار الصحفيون الأحداث والمصادر التي سيتم تغطيتها، غالبًا بناءً على اعتبارات أيديولوجية تعزز وجهات نظر محددة أو تبرر الوضع الراهن. في مرحلة الكتابة، قد يتبنى المراسلون أساليب كتابة معينة أو خيارات الكلمات أو الأهمزة البلاغية لإقناع القراء أو التأثير على مشاعرهم. يلعب التحرير أيضاً دوراً حاسماً، حيث توجه قرارات وضع القصة والحجم والعناصر المرئية مثل الصور أو الرسوم الكاريكاتورية انتباه القارئ وتفسيره. يمكن أن تظهر عدة أنواع من التحيز طوال هذه العملية، بما في ذلك التحيز حسب اختيار الحدث (اختيار الأحداث التي سيتم تغطيتها)، والتحيز حسب اختيار المصدر (تفضيل وجهات نظر معينة)، والتحيز بالإدراج أو الحذف (إضافة أو حذف حقائق)، والتحيز في التصنيف واختيار الكلمات (استخدام لغة محملة). تشمل الأشكال الأخرى التحيز في وضع القصة وتخصيص المساحة واختيار الصورة والتعليقات التوضيحية، حيث يشكل كل منها كيفية إدراك القصة. أخيراً، يتضمن التحيز بالبوران الجمع بين كل هذه العناصر لإنشاء سرد منحرف، إيجابياً أو سلبياً، حول حدث إخباري. يساعد التعرف على هذه الأنواع من التحيز القراء على تقييم محتوى الوسائط الإعلامية بشكل نقدي.

دراسة التحيز الإعلامي في إطار العلوم الاجتماعية تهدف إلى استكشاف كيفية تأثير النغطية الإعلامية المتحيزة على مواقف الجمهور وسلوكياته، بهدف فهم كيفية تشكيل وسائل الإعلام لمعارف الأفراد وآرائهم وأفعالهم. لقد ثبت أن التحيز الإعلامي يؤثر بشكل كبير على القرارات السياسية، حيث يغير الطريقة التي يعالج بها الناس المعلومات ويدركون الأحداث. بينما تظل وسائل الإعلام التقليدية مثل الصحف ضرورية في تقديم المعلومات الموثوقة، أصبحت وسائل التواصل الاجتماعي مصدرًا مؤثرًا، رغم أنها غالبًا ما تكون ملوثة بالتحيز والمعلومات المضللة التي قد تعزز وجهات النظر الحالية. تجري المناقشات البحثية حول ما إذا كان التحيز الإعلامي أو مستهلكو هذه الوسائل الإعلامية يتحملون المسؤولية الأكبر في تشكيل الآراء المتحيزة. يتفق هذا التأثير من خلال وسائل التواصل الاجتماعي، حيث يبحث المستخدمون غالبًا عن محتوى يتماشى مع معتقداتهم، مما يخلق "غرف صدى" تعزز التحيزات. وقد حدد العلماء ثلاث أطر نظرية رئيسية لفهم هذه التأثيرات: التنشيط (Priming)، وتحديد الأجندة (Agenda-setting)، والإطار (Framing). يشير التنشيط إلى أن التعرض للإعلام ينشط المعرفة المسبقة، مما يؤثر على كيفية تفسير المعلومات اللاحقة. يشير تحديد الأجندة إلى قدرة وسائل الإعلام على إبراز قضايا معينة، وبالتالي تشكيل انتباه الرأي العام وجهات نظره. وأخيرًا، يشمل الإطار عرض الأخبار بطريقة تبرز جوانب معينة، مما يؤثر على كيفية فهم الجمهور وتفسيره للقضايا. هذه الأطر تبرز كيفية لعب وسائل الإعلام، سواء من خلال اختيار المواضيع أو من خلال عرض الأحداث، دورًا محوريًا في تشكيل المعتقدات المجتمعية والخطاب السياسي.

طورت الأبحاث في مجال العلوم الاجتماعية مناهجًا متنوعة لتحديد وقياس التحيز الإعلامي في تغطية الأخبار. ويعد تحليل المحتوى تقنية مستخدمة على نطاق واسع تتضمن فحصًا منهجيًا للعناصر النصية مثل الكلمات والعبارات وبنية الجمل لتحديد الأنماط والتحيزات. ويمكن للباحثين الاختيار بين نهج كمي وكيفي ضمن تحليل المحتوى. يركز التحليل الكمي على الترددات والوصف الإحصائي، بينما يهدف التحليل النوعي إلى فهم أكثر شمولًا من خلال فحص السياق والمؤشرات الدقيقة للتحيز. يستكشف تحليل الإطار كيف تقوم وسائل الإعلام بإطار المعلومات من خلال تسليط الضوء على جوانب معينة من القضية مع إهمال جوانب أخرى. إنه يفحص الخيارات التي يتخذها الصحفيون في تقديم المعلومات، بما في ذلك استخدام أدوات اللغة والعناصر المرئية. يدخل تحليل الخطاب النقدي (CDA) في العمق، حيث يتحقق من العلاقة بين اللغة والسلطة والأيدولوجيا في نصوص الإعلام. إنه يتجاوز المعنى السطحي للكلمات لكشف كيف تستخدم الجماعات القوية اللغة لتشكيل الرأي العام وتفتين مصالحتها. تتوفر هذه الأساليب، المستخدمة وحدها أو مجتمعة، أدوات قيمة لفحص تغطية الإعلام بشكل نقدي وتحديد التحيزات المحتملة.

الجمع بين تحليل المحتوى وتحليل الإطار وتحليل الخطاب النقدي يتيح فهماً أعمق لنصوص الإعلام والأيدولوجيات الكامنة وراءها. تساعد هذه الأساليب على تحديد الأنماط اللغوية واستكشاف أنظمة القيم المضمنة في النصوص. من خلال تحليل هذه الأنماط، يمكن للباحثين الكشف عن كيفية تشكيل وسائل الإعلام لوجهات النظر العالمية ونقل ديناميكيات القوة في المجتمع. لا يكشف هذا النهج التحيز لحسب، بل يكشف أيضًا عن القوة الإقناعية للغة في تشكيل وتعزيز وجهات النظر الأيدولوجية.

يهدف هذا البحث إلى دراسة قدرة متعلمي اللغة الإنجليزية على تقييم مدى موضوعية وتحيز الخطاب الإعلامي، مع التركيز بشكل خاص على دور تقييم الحجج في كشف التحيزات الموجودة في النصوص الإعلامية الإقناعية. نظرًا لتأثير وسائل الإعلام القوي وطبيعتها المتحيزة، يسعى البحث إلى سد الفجوة القائمة في دمج تعليم مهارات التربية الإعلامية في برامج تدريس اللغة الإنجليزية كلغة أجنبية من خلال دراسة احتياجات الطلاب الجامعيين الجزائريين، يستكشف البحث مدى فعالية استخدام استراتيجيات مثل رسم خرائط الحجج وفقًا لنموذج تولمين، وتحليل الخطاب النقدي وفقًا لإطار فيركلاف، في تمكين الطلاب من تحليل النصوص الإعلامية تحليلًا نقديًا، وكشف التحيزات الموجودة فيها من خلال تقييم الحجج بشكل دقيق. تم دعم هذه الاستراتيجيات بمحاضرات نظرية لتزويد الطلاب بفهم شامل لبناء الحجج ومهارات التفكير النقدي اللازمة لمواكبة الخطاب الإعلامي المعاصر، وتشكيل الأدوات التي تستخدمها وسائل الإعلام لنشر أيدولوجيات مختلفة. في ضوء ما تقدم يسعى البحث للإجابة على الاسئلة التالية.

■ كيف يعتقد طلاب اللغة الإنجليزية كلغة أجنبية في مهاراتهم في التقييم النقدي قبل وبعد دورة تهدف إلى تحسين قدرتهم على تقييم مصداقية وسائل الإعلام الإخبارية؟

■ كيف يساعد تعلم التفكير النقدي وتحليل الحجج الطلاب في تحديد الموضوعية والتحيز عند تقييم مصداقية مقالات الأخبار المتعلقة بالصحة العامة؟

■ كيف يساعد هذا التعلم الطلاب في التحكم في تأثير ذاتيتهم عند تقييم الموضوعية والتحيز في مقالات الأخبار؟

■ هل يدرك الطلاب الذين يظهرون قدرة أكبر على اكتشاف التحيز نية الإقناع في مقالات الأخبار بشكل مختلف؟ وإذا كان الأمر كذلك، كيف؟

دُفعت هذه الدراسة برغبة في فهم مدى تأثير التفكير النقدي على نظرة متعلمي اللغة الإنجليزية للتحيز الإعلامي. ركز السؤال البحثي الأول على تقييم التغيرات في تصورات الطلاب حول مصداقية وسائل الإعلام قبل وبعد تدخل تعليمي، وذلك من خلال استبيان تضمن أسئلة مختلفة. أما السؤالان الثاني والثالث، فتناولوا دور الباحث في تنفيذ ممارسات تعليمية تعزز التفكير النقدي لقياس مدى تأثير ذلك على تحليل و تقييم نصوص صحفية من حيث المصدقية.

دعت الدراسة إلى أهمية التفكير النقدي في مواجهة التحديات التي يطرحها الإعلام المعاصر. فقد افترضت أن قدرة الفرد على تحليل الحجج المنطقي في النصوص الإقناعية تساهم بشكل كبير في تقليل تأثير الأفراد بالتحيزات الإعلامية. فمن المتوقع أن يؤدي تنمية مهارات التفكير النقدي، من خلال تدريب الأفراد على تقييم مدى قوة الأدلة وموثوقية المصادر، إلى زيادة وعيهم بالأساليب التي تستخدمها وسائل الإعلام للتأثير على الرأي العام، مثل استراتيجيات التأيير.

"أجريت هذه الدراسة خلال الفصل الدراسي الثاني من العام الجامعي 2020-2021 بقسم اللغة الإنجليزية وآدابها بجامعة معسكر، الجزائر. شارك فيها خمسة وخمسون طالبًا المسجلين في برنامجي الماجستير في تخصص "اللغة الإنجليزية لأغراض خاصة" (ESP) وتخصص لسانيات تطبيقية. نظرًا لتركيز هذين البرنامجين على مهارات التفكير النقدي وتحليل الخطاب، فقد شكل هؤلاء الطلاب، الذين تتراوح أعمارهم بين 23 و 36 عامًا، عينة مناسبة لدراسة تجربتهم مع القراءة النقدية وتحليل الخطاب الإعلامي. ولضمان موثوقية البيانات، تم اعتماد أسلوب الملاحظة بين الأقران، بما يتوافق مع الممارسات البحثية التي تؤكد على أهمية التدقيق والتقييم المتبادلين

استخدم الباحث خلال هذه الدراسة منهجية البحث الإجمالي لما تتميز به من مرونة و قدرة على التكيف مع المتغيرات المختلفة. حيث يتيح هذا المنهج للباحث جمع البيانات من مصادر متنوعة، مثل الملاحظة والمقابلات والاستبيانات، وتحليلها بشكل عميق. كما أنه يوفر للباحث تم فرصة للتعلم المستمر وتطوير فهمه للمشكلة محل الدراسة. ستخدم تحليل البيانات منهجًا مختلطًا، يجمع بين التقنيات الكمية والنوعية لتحليل البيانات الكمية، بما في ذلك درجات الاختبارات، واستجابات الاستبيان، وتحليل النصوص، باستخدام الإحصاءات الوصفية أما البيانات النوعية، مثل محاضر المقابلات والملاحظات الميدانية، فقد خضعت لتحليل المواضيع، SPSS واختبارات تي بمساعدة برنامج ويهدف هذا النهج إلى توفير فهم شامل لمشكلة. مع التركيز على تحديد الأنماط والمواضيع المتعلقة بتصورات الطلاب لموضوعية الإعلام وتحيزه البحث من خلال استكشاف الجوانب الكمية والنوعية للبيانات.

اعتمدت هذه الدراسة على تصميم تجريبي قبل وبعد التدخل للدراسة تأثير تدريب على مهارات التفكير النقدي (بناءً على تصنيفات *Facione* ونموذج الحجة لـ *Toulmin*) على قدرة متعلمي اللغة الإنجليزية كلغة أجنبية على تقييم مدى تحيز نصوص إعلامية. وقد تم قياس هذه المهارات باستخدام أسئلة صح/خطأ ومقياس ليكرت. يتطلب نقاش كل نص من أعضاء التجربة تقييم الحجج وتحديد أهميتها. تشير النتائج في ما يخص ذلك إلى أن درجات الاختبارات الأولية كانت منخفضة بشكل عام، ولكن درجات الاختبارات النهائية أظهرت تحسناً ملحوظاً. وعلى الرغم من عدم تحسن بعض المجموعات وعدم تميز المكاسب الإيجابية، إلا أن النتائج كانت أفضل مما كان متوقفاً

ركزت الدراسة على تقييم مهارات الطلاب في التوضيح وفقاً لتعريف فاسبوني، مع التركيز على خمس قدرات أساسية. أظهرت نتائج الاختبار الأول أن مستوى مهارات التوضيح لدى غالبية الطلاب كان ضعيفاً جداً. ومع ذلك، كشفت نتائج الاختبار الثاني عن تحسن ملحوظ في متوسط درجات الطلاب، مما يشير إلى أن التدخل التدريبي أثر بشكل إيجابي على قدرتهم على توضيح أفكارهم بوضوح وفاعلية. زادت نسبة المشاركين الذين أظهروا مستوى عالٍ في مهارات التوضيح بشكل كبير، بينما انخفضت بشكل ملحوظ نسبة الذين أظهروا مستوى ضعيفاً جداً أو ضعيفاً. هذه النتائج تؤكد أن التدخل التدريبي كان فعالاً في تحسين قدرة المشاركين على تحليل المعلومات، بناءً على الحجج، وتحديد أهداف النصوص.

كشفت الدراسة أن إشراك الطلاب في تحليل النصوص النقدي بشكل منهجي أدى إلى تطوير كبير في مهاراتهم في التفكير النقدي، خاصة في مجال تقييم الحجج والبراهين. من خلال التدريب على فحص النصوص وتقييم صحة حججها، يكتسب الطلاب القدرة على تفكيك الأفكار المعقدة وتحديد المغزى المنطقي. هذه المهارات الأساسية في التفكير النقدي تعد حجر الزاوية في بناء وعي نقدي حيال المعلومات المتداولة، بما في ذلك المحتوى الإعلامي. ومع ذلك، يبقى السؤال حول مدى تأثير هذا التدريب على القدرة على رصد التحيزات الإعلامية وتأثيرها على الرأي العام بحاجة إلى مزيد من الدراسة.

أظهر جزء من البحث أن تدريب الطلاب على استراتيجيات القراءة النقدية قد حقق تحسناً ملحوظاً في قدرتهم على تقييم النصوص الإعلامية للتحيز. فقد أتقن الطلاب، بعد البورة التدريبية، مهارات تحليل حجج المؤلفين والبحث عن الأدلة النصية التي تدعم أو تدحض هذه الحجج. ومع ذلك، كشفت النتائج عن حاجة الطلاب إلى تطوير قدراتهم على التحليل النقدي المتعمق، حيث لا يزالون يميلون إلى الاعتماد على معرفتهم السابقة بدلاً من الاستناد إلى الأدلة المقدمة في النصوص محل الدراسة.

. تؤكد البيانات أن الطلاب بحاجة ماسة إلى تدريب متخصص لتمكينهم من كشف الافتراضات الخفية التي قد تختبئ وراء الحجج. إن مقال مايا وي هاس حول البلاستيك الحالي من مادة BPA يمثل مثلاً حياً على هذه الحاجة، حيث يوضح كيف أن الحجج المنقذة قد تخفي افتراضات قد تؤثر على تقييمها لها. لذا، فإن التدريب على التفكير النقدي لا يقتصر على فهم الأفكار الظاهرة، بل يشمل أيضاً القدرة على تحديد الأسس التي تقوم عليها هذه الأفكار وتقييم مدى صحتها.

أظهرت الدراسة أن طلاب اللغة الإنجليزية كلغة أجنبية في الجزائر واجهوا صعوبات في بداية الأمر في تمييز الموضوعية عن التحيز في الأخبار الصحية. ومع ذلك، أدى التدريب المكثف على التفكير النقدي إلى تحسن ملحوظ في قدرتهم على تحليل الحجج وتحديد أهداف النصوص الإخبارية. رغم ذلك، استمرت الحاجة إلى مزيد من الجهد لتشجيع الطلاب على الاعتماد على الأدلة بدلاً من المعتقدات الشخصية. تؤكد النتائج أهمية التدريس النظري والتطبيقي معاً، بالإضافة إلى تهيئة بيئة تعليمية محفزة.

كشفت هذا البحث عن تأثير عميق للمعتقدات المسبقة على عملية معالجة النصوص الإقناعية لدى الطلاب. فقد أظهرت النتائج أن التحيز التأكيدي، وهو الميل إلى تفضيل المعلومات المتسقة مع المعتقدات القائمة، يلعب دورًا محوريًا في تقييم الطلاب للأدلة. وتشير هذه النتائج إلى أن الطلاب يميلون إلى تفسير المعلومات الجديدة بطريقة تعزز معتقداتهم القائمة، حتى عندما تكون هذه المعلومات متناقضة مع الأدلة الموضوعية. علاوة على ذلك، أظهرت الدراسة أن الطلاب يتأثرون بشكل أكبر بالحجج العاطفية مقارنة بالحجج المنطقية، مما يدل على وجود فجوة في مهارات التفكير النقدي لديهم.

تهدف هذه الدراسة إلى استكشاف الآثار المتبادلة بين انحياز النصوص الإخبارية ومستويات فهم القراء من متعلمي اللغة الإنجليزية كلغة أجنبية (EFL). وقد ركزت الدراسة على تحليل قدرة هؤلاء القراء على استخلاص المعنى الضمني، وتقييم الحجج، وتحديد أيديولوجية المؤلف. كما تم فحص تأثير التنوع في درجة الانحياز (من جانب واحد، من جانبين دحض، من جانبين غير دحض) والمحتوى العاطفي والواقعي في النصوص الإخبارية على مستوى الخراط القراء العاطفي وقدرتهم على كشف التحيز الكامن فيها. وقد أظهرت النتائج أن انحياز النص يؤثر بشكل ملحوظ على أداء القراء في معظم جوانب الفهم، باستثناء تحديد أيديولوجية المؤلف التي تتطلب مهارات تحليلية أعمق.

لا يقتصر تقييم مدى تحيز النص على تحليل النص نفسه، بل يتجاوز ذلك إلى النظر في خصائص القارئ وتأثيرها على عملية الفهم والتقييم. فحافيات القراء المعرفية والثقافية، ومشاعرهم تجاه القضية المطروحة، وقدرتهم على التفكير النقدي، كلها عوامل تؤثر على كيفية تفسيرهم للمعلومات المقدمة. فالقارئ المتحيز مسبقًا قد يميل إلى تفسير النص بطريقة تؤكد اعتقاداته، حتى لو كان النص محايدًا، بينما قد يتمكن القارئ النقدي من اكتشاف التحيزات الكامنة في النص وتقييمها بوعي.

رغم الاهتمام المتزايد بدمج التربية الإعلامية والتفكير النقدي في التعليم، فإن الدراسات التي تستهدف متعلمي اللغة الإنجليزية كلغة أجنبية، خاصة في سياق التعليم الجزائري، لا تزال محدودة. تسعى هذه الدراسة إلى سد هذه الفجوة بتقديم استراتيجيات عملية لدمج النصوص الإعلامية في تدريس اللغة الإنجليزية، بهدف تعزيز مهارات التفكير النقدي لدى الطلاب.

رغم الاهتمام المتزايد في السنوات الأخيرة بدمج التربية الإعلامية والتفكير النقدي في المناهج التعليمية على مستوى العالم، إلا أن الدراسات التي تركز على تطبيق هذه المفاهيم لدى متعلمي اللغة الإنجليزية كلغة أجنبية، خصوصًا في السياق التعليمي الجزائري، ما زالت قليلة ومحدودة. يتزايد الوعي بأهمية تطوير مهارات التفكير النقدي لدى الطلاب، خاصة في ظل الثورة الرقمية وانتشار وسائل الإعلام بشكل واسع، مما يجعل من الضروري تعليم الطلاب كيفية تحليل المحتوى الإعلامي وتقييمه بشكل نقدي. من هنا، تأتي هذه الدراسة لتسد الفجوة المعرفية في هذا المجال، من خلال تقديم استراتيجيات عملية ومبتكرة لدمج النصوص الإعلامية في تدريس اللغة الإنجليزية. الهدف من هذه الاستراتيجيات هو تعزيز قدرة الطلاب على التفكير النقدي وتحليل الرسائل الإعلامية بشكل واع، مما يساهم في تحسين مهاراتهم اللغوية ويساعدهم على أن يصبحوا متعلمين قادرين على التفاعل بشكل نقدي وواعي مع مختلف أنواع المحتوى الإعلامي في العصر الحديث.

لتعزيز التفكير النقدي بفعالية، لا بد من توفير تدريب شامل للمعلمين في جميع المراحل التعليمية. يجب أن يشمل هذا التدريب تعليمًا صريحًا وتطبيقات عملية في سياقات تعليمية تعكس واقع حياة الطلاب. كما يتطلب تطويرًا مهنيًا مستمرًا وتدريبًا متخصصًا يركز على التفكير الناقد والتغلب على مقاومة التغيير. يجب أن يربط التدريب بين النظرية والتطبيق من خلال محام تعلم واقعية، وأن يأخذ في الاعتبار السياق الثقافي للتفكير النقدي، ويعزز الوعي الثقافي ويستكشف أساليب التفكير المتنوعة.

الخاتمة

استنصت هذه الدراسة الأثر الإيجابي لتعزيز مهارات التفكير النقدي لدى طلبة اللغة الإنجليزية بجامعة معسكر بالجزائر على قدرتهم على رصد التحيزات في نصوص الإعلام. ركزت الدراسة على جوانب التحليل والتقييم، معتمدة على تصميم تجريبي قليل وبعد التدخل الذي

استهدف صقل مهارات الحجّة والتحليل النصّي. وبناءً على تصنيف فاسيونّي ونموذج تولين، تمّ قياس هذه المهارات باستخدام مقياس ليكرت من خمس نقاط عبر أسئلة تتعلق بنهم مقاطع القراءة. أظهرت النتائج تحسّناً ملحوظاً في قدرات الطلاب على التحليل والاستدلال، مع قدرة متزايدة على فحص الأفكار وتقييم الحجج وتدقيق الأدلة بشكل نقدي. ورغم اختلاف المستويات بين الطلاب، فقد ساهم التدخل في تعزيز استراتيجيات القراءة النقدية لدى جميع المشاركين، مما مكّهم من تقييم تحيزات الإعلام بشكل أفضل. ومع ذلك، لا يزال الطلاب يواجهون بعض الصعوبة في تحليل الحجج المعقدة ويعتمدون بشكل كبير على معرفتهم السابقة. تؤكد هذه الدراسة أهمية إشراك الطلاب في تحليل نصوص إعلامية نقدي لتعزيز مهاراتهم في التفكير النقدي، خاصة في مجال تحليل الحجج. ومع ذلك، تبقى الحاجة قائمة لمزيد من البحث لتحديد مدى انعكاس هذا التحسن في المهارات على زيادة الوعي النقدي الشامل تجاه تحيزات الإعلام.