

Global Journal of Foreign Language Teaching

Volume 14, Issue 2, (2024) 16-35 ISSN 2301-2595



https://un-pub.eu/ojs/index.php/gjflt/index

Critical thinking and EAP writing in the context of Iran

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Suggested Citation:

Elhambakhsh, S.E., Neysani, M. & Nikbakht, A. (2024). Critical thinking and EAP writing in the context of Iran. *Global Journal of Foreign Language Teaching* 14(2), 16-135. https://doi.org/10.18844/giflt.v14i2.9180

Received from January 1, 2024; revised from March 22, 2024; accepted from May 24, 2024; Selection and peer review under the responsibility of Prof. Dr. Jesus Garcia Laborda, Alcala University, Spain.

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Abstract

Some of the fundamental abilities that universities want their students to cultivate throughout their degree programs include critical thinking. By undertaking a meta-synthesis of prior empirical research, this study aims to comprehend how EAP students and teachers interpret critical thinking and which instructional approaches seem to be most successful in teaching both writing and critical thinking. The analysis of nine articles was done by using an operational method to teach critical thinking. The findings indicate that many students in the study continue to have misconceptions about what critical thinking is, and because of these misconceptions or cultural differences, they might be perceived as lacking the will to think critically. Evaluation and synthesis abilities are emphasized in writing teaching because they are seen to be directly related to critical thinking. The data also suggests that persistent cooperative learning could be advantageous to effectively educate critical thinking and writing.

Keywords: Argument; critical thinking; EFL Learners; English language teaching; writing.

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1. INTRODUCTION

The concept of critical thinking and the importance of assisting students in developing these abilities have long been debated in higher education generally. Critical thinking is a very important factor in understanding and solving problems (Dissen, 2023). Because more foreign students, particularly those from Asia, are enrolling in English-medium programs abroad or attending universities in English-speaking nations like Australia, the USA, and the UK (Healy, 2008), critical thinking has only recently started to gain attention in the TESOL field. This has prompted discussions about how to introduce critical thinking to academic English programs and how to teach it to second language learners.

Critical thinking abilities are frequently mentioned as desirable qualities that graduates should develop during their academic careers in Iran and other expanding circle countries' institutions (Nazari & Karimpour 2024). Many university's curricula now include the cultivation of critical thinking and evaluation processes as a result of the importance of the skill being recognized. Critical analysis is commonly mentioned in evaluation criteria as an essential part of high-level student performance (Le Ha, 2009; Wingate, 2012; Xiang et al., 2022).

The researcher's lack of understanding of this ostensibly extremely essential issue was a worry to the researcher. The researcher felt as a teacher, were not helping their students hone their critical thinking skills if they didn't understand critical thinking and what it entails (Hemming, 2000; Moore, 2013). This concern seems to be shared by many academics and teachers in other contexts. As the researcher thought back on their teaching methods, they realized that because of this misunderstanding, critical thinking was a topic they skirted over on the syllabus and never openly discussed with their students. Related to this was the challenge they faced in encouraging their students to craft an argument and find their critical voice as opposed to just focusing on grammar and structure and, as a result, simply copying others' ideas without necessarily challenging them or effectively using them to support their argument. The researcher sought the counsel of more experienced colleagues because the researcher was a relatively new teacher and had this problem. This action made it clear that many of the researcher's coworkers were equally unsure about what critical thinking meant or were unable to explain it to the researcher. They were also unsure of how to help their students develop this skill, especially when it came to assisting them in demonstrating it in their academic work.

Both English language teachers and other educators seem to struggle with this issue, especially even though critical thinking is widely acknowledged to be important, at the tertiary level. Exceptionally few actual examples of these talents have been provided to instructors, including the forms they take, how to recognize them when they are there, and potential assessment methods. (Kuhn, 1999; Peng, 2023). According to Pithers & Soden (2000), and Trent, (2024), this misconception leads to instructional strategies that don't accomplish much to develop generalizable or transferable critical thinking abilities or dispositions. It is undoubtedly necessary to "bring the major approaches together to start forming a unified field for research and practical application." to start addressing the misunderstanding and lack of clarity among educators. (Davies & Barnett, 2015).

Every linguistic ability reading, writing, speaking, and listening requires critical thinking, a crucial academic talent, albeit it is most frequently associated with these two. Being critical in some form is prevalent in both the written tasks that are given to students and the feedback that is offered (Moore, 2013). Writing is crucial for EAP students since it will serve as their primary form of contact with their discourse groups, both professional and academic (Bruce, 2011). For assessment purposes, writing is also essential. Due to the importance of writing in the academic environment and the fact that academic writing is one of the academic English learning topics that students find the most challenging, the study

will also focus on the connection between critical thinking and writing by examining which aspects of critical thinking are essential to the academic writing process.

1.1. Literature review

1.1.1. Various approaches to critical thinking

Paul (2011) uses three waves to divide the growth of critical thinking, each of which is distinct but overlapping and "represents, in essence, different research agendas and points to different emphases in application." The Watson-Glaser Critical Thinking Appraisal is a test that assesses one's ability to infer, recognize assumptions, deduce, understand, and evaluate arguments.," was part of the first wave, which peaked in the 1970s. This test highlighted decontextualized logic, deductive and inductive reasoning, and analysis (Florence, 2014). The second wave in the 1980s widened the term and began to link critical thinking with creativity, discipline-specific skills, and political conceptions through the works of researchers like Ennis (1989) and McPeck (1981). This wave gave rise to the critical pedagogy movement, which is characterized as "the utilization of postsecondary education to undo and unlearn the societal conditions that limit and restrict human freedom" (Davis & Barnett, 2015).

According to the writings of Benesch (1999, 2009), this movement focuses on power dynamics and political injustices both inside and outside of the classroom and is most closely associated with critical pedagogy in an EAP context. Benesch calls on practitioners to "examine how academic English(es) and the broader sociopolitical milieu interact (Benesch, 2009). According to Paul (2011), the third wave, which has only recently begun to gain momentum, comprises the integration of the first two waves as well as an endeavor to develop a rigorous critical thinking framework that also considers values and emotions.

1.1.2. Critical thinking as skills and dispositions

According to the research, a combination of cognitive skills is required for critical thinking that students should master and a set of attitudes that allow them to apply those abilities (Davies & Barnett, 2015). Bloom's taxonomy's higher levels of learning objectives are a typical place to start when characterizing the abilities necessary to think critically (Ennis, 1993). The three categories recognized to be in this category are analysis, synthesis, and evaluation; the "higher order thinking skills" level.

1.1.3. Critical thinking and writing

Writing is the most typical kind of assessment used at universities when critical analysis is requested of the students (Ma, 2023). The importance of this connection is demonstrated by how frequently assessment criteria and rubrics are mentioned. According to tutor comments in feedback that students lack criticality or critical analysis, students often perform well (Woodward-Kron, 2002; Le Ha, 2009; Wingate, 2012).

1.1.4. Dissecting analytical/critical writing

Even though there hasn't been much research on how critical thinking and writing are related (Goodwin, 2014), several fundamental ideas and abilities are frequently mentioned when discussing academic writing and critical thinking. Arguments, producing supported claims (via analyzing and synthesizing materials), having a voice or a posture, and the role of description versus analysis, are all examples of presentation. Are some of these connected and possibly overlapping concepts?

Students must demonstrate their ability to formulate an argument when writing essays (Wingate, 2012). The ability to give " facts and justifications for his claims, as well as inferences he might derive from them. " Is a requirement for an effective academic writer, according to Algozlu (2007). Another crucial stage in the evolution of academic writing is the emergence of the authorial voice (Bruce, 2011). According to Tardy (2012), voice has three different facets: The social, which is related to the discipline and how a

writer presents themselves within their discourse community, and the individual, which relates to the writer's writing style or process; and lastly, the dialogic. When describing characteristics of good student writing, writing that is mostly perhaps descriptive writing is less effective than analytical writing. (Woodward-Kron, 2002).

1.1.5. Critical thinking abilities are context- and subject- and discipline-specific

Two of the most contested topics about the teaching of critical thinking are how much subject-specific knowledge contributes to the development of these skills and how generalizable and transferable these talents are to other contexts, a topic that has been debated for many years (Ennis, 1989; Hemming, 2000; Wubalem, 2021).

1.1.6. Disciplinary distinctions

The performing arts and other applied fields like education and nursing place a significant focus on connecting theory and practice and see reflection as being essential to their notion of critical thinking (both their practice/performance and that of others). The instructors in the science and technology faculty saw problem-finding, analysis, and solution-proposal as essential components of critical analysis. The types of things that students are asked to form opinions on reflect these distinctions. When instructing students in critical thinking, and especially when instructing students in critical thinking and writing, there are compelling justifications for using a discipline-specific method. When it comes to writing and argumentation, there are obvious disciplinary variations, and there will be specific guidelines for appropriate and effective writing for each subject (Andrews, 2015; Ramanthan & Kaplan, 1996; Hyland, 2002).

1.1.7. Cultural influences

More recent research is challenging long-held beliefs that students who aren't Westerners, sometimes known as Asian students, are less able to think critically because of their cultural upbringing (Floyd, 2011). This is because it does not explicitly define where the East-West boundary is located, or what an "Asian" student is. More consideration is being given to how pupils' capacity for critical thinking is influenced by elements including linguistic competence and educational background.

1.1.8. The idea that "Asian" students are incapable of critical thought

Confucian-influenced or -rooted cultures, such as China or Japan, are frequently seen as emphasizing conformity to social norms and demonstrating respect for authority over individual uniqueness (Tian & Low, 2011; McKinley, 2013). In Islamic-based nations like Turkey and Egypt, concerns have also been expressed concerning the relationship between culture and students' capacity for critical thought (Alagozlu, 2007; Bali 2015). It is believed that these cultures have distinct beliefs about what it means to be an individual and that this has an impact on how students express themselves and their ideas because individual voice and posture are important parts of critical thinking (Atkinson, 1997). This translates into students in a classroom setting who lack a blatant expression of the stereotype of Asian learners as docile and unquestioning learners, the disposition and willingness to question the authority of their teacher or to argue with the ideas of their peers. This type of classroom activity may lead to pupils just relaying what they have read in written assignments rather than challenging the concepts they have come across (Alagozlu & Suzer, 2010).

Despite looking like a fairly apparent factor when talking about L2 learners, the additional difficulties created by needing to perform in a second language were rarely discussed in the criticism of "Asian" learners' lack of critical thinking skills. There hasn't been much research, and as a result, it's unclear How much more of a challenge this truly poses for the pupils is unclear (Floyd, 2011). The skill of being able to write critically in a language other than one's native one is significantly more difficult (Bali, 2015).

Language proficiency may be a factor in critical thinking, according to several research looking at critical thinking in L2 students (Manalo et al., 2015; Floyd, 2011; Tian & Low, 2011). Floyd (2011) evaluated a group of Chinese students to find a correlation link linguistic proficiency and critical thinking ability and discovered that having the students take the Chinese test significantly improved their capacity for critical thought. It should be emphasized that according to previous studies (Tian & Low, 2011), Chinese students don't seem to possess the qualities necessary for critical thinking, and little variation in criticality levels was discovered by Alagozlu and Suzer (2010), when comparing Turkish EFL students' L1 and L2 writing samples, suggesting that Language ability might not matter.

Rhetorical differences between a student's first language and English, aside from low English competence, may have a significant impact on the use of critical thinking generally and critical writing specifically. Contrastive rhetoric explores how writing varies between cultures and relates to how L1 writing is influenced by L1 culture and language (Connor, 2003). Depending on who has the larger responsibility for efficient communication, languages can either be read or written, according to Hinds (1987). Writing coherently is the writer's obligation, especially in English, according to Hinds (1987). One approach to accomplish this is to employ metadiscourse to let the reader know what the writer means (Hyland, 2003). Hyland (2003) presents several variations. These are connected to the components of writing's critical thinking between L1 and L2 to summarize the findings from research into contrastive rhetoric. These consist of various presentation techniques, the use of sources, and objectivity (expressing thoughts and generalizations). For instance, in Japanese, the language's structure and students' ability to write in L1, which uses non-linear reasoning, will be impacted to write intelligibly and persuasively in English (McKinley, 2013).

1.2. Purpose of study

This analysis contends that there is still a great deal of ambiguity surrounding the idea of critical thinking despite its prominence in higher education regarding evaluation standards, student texts, and ideal graduate characteristics. How to best teach kids to think critically, what constitutes a valid explanation of the notion, and how much the students' cultural origins influence their understanding may affect their ability to display these skills are all still up for debate. To properly comprehend how critical thinking relates to or differs from the theory, more research on what critical thinking entails for university students and faculty is required. Effective teaching strategies that consider the difficulties faced by international students due to their various backgrounds, language abilities, and prior experiences are unquestionably necessary if we are to support students in developing these skills and EAP programs should encourage critical thinking. Along with being the most common type of evaluation at universities and a talent that students find challenging to acquire, writing is also a major barrier to students' success in school, a focus on instructional writing practices was chosen because it appears that less attention has been paid to research in this area (Wette, 2014; Wingate, 2012). The study's primary goal is to identify the specific components of critical thinking that are taught about writing and the ways that are seen to be effective to further support the teaching of critical thinking in the EAP writing classroom.

This research will attempt to respond to two research questions to further explore these important areas:

- 1. What skills, dispositions, and knowledge do EAP students and teachers consider to be essential components of critical thinking in an academic context?
- 2. What approaches are being used to help students strengthen their critical thinking skills in academic writing tasks?

2. METHODS AND MATERIALS

This study on perceptions of critical thinking and instructional strategies that foster critical thinking skills in students' writing production used a qualitative meta-synthesis of earlier research, also known as a qualitative synthesis. Ortega and Norris (2006) define research synthesis as "the systematic secondary review of accumulated primary research studies".

A procedure that allows connections and potential trends to appear, as well as potential research gaps to be discovered, is unquestionably helpful in the still-developing and highly complicated field of critical thinking in EAP environments. The possibility this method offers for examining behaviors across many institutions and nations to identify any parallels may also play a role in influencing the choice of strategy. Additional factors in selecting the method included the limited time and breadth of the study, which disqualified more extensive quantitative approaches because the timetable did not allow for an entire evaluation. Furthermore, since the investigation of teaching techniques is the main goal of this study, pertinent studies are probably qualitative. For these reasons, it seemed most appropriate to take a small-scale method that concentrates on the synthesis of qualitative research. When using this strategy, it's crucial to understand and accept that the outcome will be "situated, partial, and perspectival" (Lather, 1999) rather than comprehensive.

2.1. Participants in the dataset

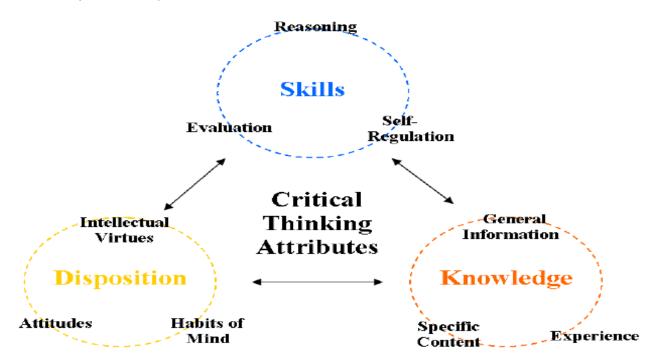
The study's primary audience was college students, only items about higher education were included in the search. The following search terms which were derived from the literature review were combined to find studies that investigate students' opinions of critical thinking and that discuss instructional strategies for fostering the development of critical thinking in students' writing. Analytical skills, EAP/ESL/EFL students, writing, argument, synthesis, voice/stance, and critical thinking are all examples of critical thinking. It was necessary to establish a set of criteria that would determine which research should be included or omitted from the synthesis to keep the number of publications under control and make sure the study has a clear focus.

In the beginning, studies needed a focus that was directly tied to their goals, therefore they needed to look at how people view critical thinking, or how writing is taught. Therefore, studies that only looked at the language or rhetorical aspects of Critical thinking were ignored. The study also needed to focus on L2 university students in expanding circle scenarios (kachru, 1982), which are nations like China, Russia Brazil, and Iran where it is uncommon to hear English. The rules produced or challenged by the Outer Circle must be adhered to by the speakers in this circle. The Inner Circle established the regulations. Nine researchers made up the final list after using these ways of searching and the inclusion/exclusion criteria.

2.2. Data analysis

A framework for data analysis was necessary to properly analyze the study data and link it to other field studies that are currently being conducted (figure 1). More general critical thinking frameworks and taxonomies were examined since there wasn't a good framework for teaching critical thinking to L2 students. This approach had a problem in that, even though most researchers provided extensive explanations of what critical thinking meant to them personally, each of them differed slightly, making it difficult to support the selection of one over the others. Given the disputed nature of the idea, many of these taxonomies are also very intricate and thorough, making them difficult for this study's aims to access.

Figure 1
Framework for data analysis



^{*}Framework taken from: Thomas and Loki (2015:98)

According to Thomas and Lok (2015), critical thinking is a "composite of specific skills, dispositions, and knowledge."

Reading the materials served as the initial stage in the analysis. After that, a chart was created using the framework. After carefully reading the papers, it was decided what points related to the framework should be noted. The noted comments were then coded to find recurring themes.

3. RESULTS

Table 1 is a Summary of the findings.

Table 1

Summary of the findings

questioning and inquiry

misunderstanding of concept

Students must comprehend why reference is so important.

1 misconception about the term "critical" 2- Early-stage student assumptions 3. The misconception that critical thinking equates to pessimism 4. The significance of students defining CT 5. The student wasn't sure what was needed.

synthesis skills

1-Students reported having trouble combining and assessing many sources 2. Ingenious idea synthesis 3- The inability to synthesize and express one's own opinions 4 Rephrasing and summarizing Five. Integrating

writing and

cycle of reading and writing to increase knowledge and establish one's place

critical thinking 6 - Assess and criticize 7 Concentrate on synthesis 8- The significance of synthesis Writing and reading are related 9-The ability to categorize information and take notes is crucial for developing an argument 10- The writer defines discourse synthesis as requiring reading, writing, and CT skills.

content/disciplinary knowledge

1. "Meeting the demands of a discourse community" is the definition of critical learning. 2- Increasing knowledge 3 Significant connections to problemsolution 4- Suggests that a task can be altered to be either disciplinespecific or allencompassing. 5. A sustained content strategy Sixth, acquiring content knowledge is

			crucial, but the subjects are still all- encompassing and not discipline- specific.	
discussion & collaboration	Collaboration gives room for peer interaction	Does having a collaborative mindset lead to more critical reflection?	combining information through collaborating and interacting with tasks	1. Discussion plays are important and should be emphasized during the prewriting process. 2-Collaborative group writing 3-The major priority is collaboration 4-Collaborative writing assignments are vital in this context, but also collaborative learning
explicit instruction	instruction of skills with a focus on modeling, explaining, and student practice	exercise that uses a question to promote this		Increased introspective episodes and more clear direction
evaluation skills	1. Assessing arguments in light of a standard Self-reflection is the capacity to assess one's reasoning. evaluating different points of view 4. Review their cultural presumptions and views 5. Review of the sources			

Writing
evaluation
and criticism
six,
discussionbased
content
evaluation
seven
8 - Evaluation
and
reflection are
important.

confidence/willingness to critique

assurance Students' disposition, or their ability to disagree, was #2. Students gained confidence through the teamwork in #3.

1 Lack of

other relevant points

CT stands for speaking up, forming opinions, and making decisions. Most crucial is your

attitude

students, cultural diversity and background are significant.

For the

Approach to solving problems discussing issues

3.1. The first research question: What skills, dispositions, and knowledge do EAP students and teachers consider to be essential components of critical thinking in an academic context?

The nine studies that were part of the meta-synthesis were determined to be pertinent to the inquiries. To ascertain how teachers in the EAP saw critical thinking, they either conducted student interviews or talked about their reflections.

3.1.1. Misconceptions of critical thinking

It is not unexpected that both students and teachers recognize that this is an issue for them taking into account the ambiguity and various definitions offered in the literature (Tian & Low, 2011; Atkinson, 1997). Students who enroll in these expanding circle contexts for learning sometimes struggle with misconceptions about the "critical" element of critical thinking, according to research that looked into student and teacher beliefs. A critical thinker does not accept everything without consideration, according to Sadeghi et al., (2020) who also observed that having an open attitude toward many subjects is linked to detecting flaws or errors in the material they are required to read. This is demonstrated by the following statement made by two of the interviewees:

According to Mehran (S), having an open mind would enable him to take more care: "When I listen to other's perspectives, I recognize that my thoughts may be flawed, and this enables me to adjust my ideas and to contemplate a matter carefully before presenting my interpretation. It implies that my level of care will grow.

Based on remarks from his interviews, Atai et al. (2018) address the notion that critical thought is bad and associated with flaw-seeking. There is still a focus on identifying something wrong even though this student realizes that critical thinking entails action in the form of initiating change, which Davies & Barnett (2015) describe as vital in criticality. He found that students frequently associated the terms "critical thinking" and "problem" with words like "negative" and "problem." Despite this student's explanation that " identifying drawbacks so we may improve and change " constitutes the definition of "critical thinking," the emphasis on identifying flaws persists". Such topics are merely propaganda, and the books' authors are just expressing their own opinions through the works, a student claimed.

According to Iranmehr et al., (2018), certain levels of English proficiency would be required for enrollment in EAP programs. A needs analysis can be used to demonstrate a student's language deficiency when they lack a foundational knowledge of the English language, don't have a functional vocabulary of English words, don't understand the fundamentals of English structures, and think EAP texts are beyond their level of English proficiency.

Critical thinking is a more important subset frequently utilized in academic settings to evaluate rather than to point out flaws (Alexander et al., 2008). This suggests that introducing children to the various definitions of the word "critical" would appear to be an important first action. In educating them to think critically.

3.1.2. Dispositions: willingness to critique and question

The disposition necessary to develop into a critical thinker has been highlighted as a significant component of students' views toward embracing critical thinking, and as a result, their perceived openness to criticism (Hamby, 2015). Any misunderstandings they may have of the idea and the degree to which they think it is culturally suitable will have an impact.

According to the study by Vafaeikia et al., (2022), a response by an interviewee was "We found it more intriguing because you asked us questions before you read them because it got us thinking about the subject (Ershadi-Manesh, interview, May 29, 2020)." This demonstrates that she became motivated to pose and address important issues, which is consistent with the study's findings that doing so helps students improve their problem-solving abilities.

One of the goals of the EAP instructor who is a subject of the Sadeghi et al., (2020) study is to encourage her students' inquiry, as she explains in the interview:

Nasrin (T) stated, "Even if they ask the same question multiple times, I calmly respond to them. They feel more suitable to ask questions and receive my feedback in this way. Both instructors and students thought that group work would encourage students to engage in more active questioning: When I visit groups, I see that most of the questions they pose are to their peers rather than to me. They feel more at ease and can ask questions of one another in groups.

Students must learn the habit of asking questions, how to recognize good questions, and how to distinguish between different sorts of inquiries (Leicester & Taylor, 2010). According to this teacher, being critical entails establishing a strategy that questions and evaluates the issues at hand. As such, she works to promote this strategy by exemplifying this questioning in her comments to pupils. An important aspect of critical thinking, as it is defined in the literature, is determining the validity of sources, which may involve identifying an author's bias (Stapleton, 2001) or possible flaws in an argument (Davis & Barnett, 2015).

3.1.3. Skills: Evaluation and synthesis

The most frequently identified ability related to critical thinking was evaluation, specifically about evaluating arguments and sources. Therefore, this feature serves as an illustration of the intimate relationship between critical reading and writing.

According to the students' remarks on evaluation, the abilities necessary for synthesis are ones that they find challenging. In Vafaeikia et al.'s (2022) study, a teacher responded "According to what I saw, students frequently adapted logical argumentation patterns from prior debates to new argumentative contexts (Teacher's field notes, May 22, 2020)". To strengthen their attempts at being creative, students started extending, repeating, analyzing, and evaluating their ideas, which confirms the current study's conclusion that fostering creativity is beneficial. This comment demonstrates the problem students encounter when they first start to write utilizing sources since they lack the abilities necessary for creative synthesis to develop their argument.

Given that there hasn't been any research done to look at the potential of having CT training in the environment of Iran, a country with cultural norms and perspectives that are different from those of the West, according to Enayat et al., (2015), CT instruction has been taken for granted. This may imply that encouraging critical thinking through the use of subjects that students are familiar with will aid in their starting to acquire the necessary abilities.

3.1.4. Knowledge: Disciplinary differences

An instructor stated that students should "master reading comprehension skill... in my opinion, there isn't even the slightest purpose of introducing a particular type of ideology into EAP texts and the way we teach them" (Table 9, theme 2.2). This was reported by Atai et al., (2018). The EAP materials, according to yet another instructor, are "prepared after collaboration to acquaint students with the vocabulary or translation techniques, I collaborate with other members of the mathematics department on this project. We only impart that. It is never intended to promote ideology of any kind (theme 2.2).

A method of instructing critical thought that is more discipline-specific may be advantageous given that the problem-solution dimension of critical thinking and the capacity to defend in the hard sciences or humanities, it is considerably less likely to be essential to find a specific solution to a given problem than it is in the mathematics discipline (Andrews, 2015).

3.2. The second research question: What approaches are being used to help students strengthen their critical thinking skills in academic writing tasks?

The analysis revealed three overarching themes, one for each of the three categories in Thomas and Lok's (2015) framework: the importance of subject matter expertise, the importance of teaching evaluation and synthesis skills, and the importance of cooperation in developing the dispositions to engage in critical thinking.

3.2.1. The role of content and background knowledge

The fact that several research in this meta-synthesis use a prolonged topic-based approach in lessons designed to foster critical thinking demonstrates the crucial role that content knowledge plays in critical thinking. Sadly, the situation in Iran is not dissimilar, writes Fahim, and Ahmadian (2012). Due to teachers' contempt for students' thoughts and opinions and their refusal to allow them the opportunity to express themselves, Iranian students are not allowed to develop critical thinking skills in their native language school system. As a result, students do not develop their ability to think critically (Fahim & Sa'eepour, 2011).

According to Atai and Khazaee (2014), EAP teachers should be well-versed in both language proficiency and subject-matter expertise. He thought that the requirements of the pupils might be better met, the EAP instructor should be prepared with knowledge of the field's teaching principles and techniques, use a "reflective approach" when instructing, and make use of supplemental materials and technology resources. According to this viewpoint, using a CBI strategy for teaching EAP would seem to most closely mimic how students learn in their academic areas. Corroborating this, one of the teachers said, "I don't mean to imply that it is simple for me to adhere to the mandated curriculum, much less an ideal [i.e., critical] approach, "in Soodmand Afshar & Donyaie's (2022) study.

According to research by Davoudi Sharifabad et al., (2023), when students join in universities, their curricula place a greater emphasis on the material of their chosen expertise than on more general topics. The majority of students struggle with the challenges provided by the challenging complicated English texts that teachers assign to be studied because, except for English majors, they are not required to take English classes after the first year of their studies.

There appears to be an underlying assumption in most of the research examined in the meta-synthesis that critical thinking abilities are, at least to some extent, generalizable and transferable and that using general academic content over time to introduce critical thinking to EAP students is an effective strategy.

3.2.2. Instruction focusing on evaluation and synthesis skills

To learn in an academic setting, kids must do more than simply read. They must analyze what they have read and then apply what they have learned to their work. The research a part of the meta-synthesis emphasizes the value of teaching the related abilities of evaluation and synthesis. By asking students to interpret various subject matters in class, Sadeghi et al., (2020) found that all teachers and students who took part in this research emphasized interpretation as a crucial quality of a successful critical thinker. Some of the findings are as follows:

According to Shiva (S), "where there are various interpretations, the accumulation of them will result in a thorough comprehension of the issue. I make an effort to carefully consider the topic before offering my interpretation.

According to Sadeghi et al., (2020), teachers should give students the chance to assess various issues being discussed in the classroom. Several students felt that their background knowledge and group work would enable them to make a more accurate assessment of the subject:

We try to talk to our students in groups to examine a topic. We will be able to evaluate the topic more accurately thanks to this consultation. On the other hand, we can utilize our prior information to make a more accurate assessment (Hamid, S).

According to Sadeghi et al., (2020), teachers and students suggested several creative writing prompts to support critical thinking. The teacher should provide an incomplete story and ask the students to complete it, according to Azar (S). Mehran (S) also recommended that "the teacher can give different words or idioms to students and request that they write a conversation."

Synthesizing information from several sources is frequently necessary for demonstrating criticality in writing, and the necessary abilities are expressly taught in several disciplines.

According to Iranmehr et al., (2018) research, if we think about the demands of students, we can observe that they are varied. One can want to interact with different professionals in the community, give a presentation, create a paper, or speak with professors from foreign nations. Exposing students to resources published from other points of view will help them compare those things to their own experiences and opinions to develop critical thinking.

According to Davoudi Sharifabad, et al., (2023) research, kids lack the necessary reading comprehension abilities and methods. As a result, many learners are dissatisfied with EAP courses. This difficult Iranian EAP context, where pupils have difficulty reading in English, results in a poor perception of EAP. Role of Collaboration in fostering critical thinking:

- Critical thinking abilities must be taught in language classrooms, as demonstrated by Fahim & Ahmadian (2012), to enhance the teaching and learning of languages. They came to the conclusion that every effort student made, such as reading class materials, looking up information online, discussing their viewpoints with others, working cooperatively in the classroom, and participating in argumentation for debate, significantly contributed to the improvement of their analytical skills.
- Mitra (T) argued that "through discussion and dialog in class, we can make students aware of their ideas and beliefs," according to Sadeghi et al., (2020). All of the participants in this study were open to reflecting on their ideas and saw self-awareness as a crucial element in their academic and personal development.
- According to Sadeghi et al., (2020), one of the teachers, Farhad, said: "I put the students in peer groups." The group leader will be someone with a higher level of proficiency. A group's members ought to communicate with the teacher and one another. As a result, they are all engaged in learning and their attention is less diverted.

4. CONCLUSIONS

Through a meta-synthesis of prior studies, the study's objectives were to examine how EAP students and instructors conceptualize critical thinking and to discover the instructional strategies for teaching critical thinking in writing in the classroom. The present study revealed that there are still misunderstandings of the term and that it is crucial to investigate the abilities and knowledge EAP students and teachers think are crucial for critical thinking. This may lead teachers to believe that some pupils lack the disposition to be open to questioning and inquiring. According to the meta-synthesis, these dispositions are valued as critical thinking skills by EAP teachers and students. It may be challenging for kids whose educational or cultural background does not support a questioning mindset.

The synthesis and assessment abilities that the establishment of a close relationship between critical reading and writing can be attributed to students' understanding of and exposure to concepts that are basic to critical thinking. The research on instructional strategies that encourage students to write critically also indicated that teachers appear to value collaborative assignments and long-form content as means of fostering students' ability to write critically and analytically.

The conclusions above cannot be broadly generalized because a small-scale qualitative investigation was conducted; therefore it is crucial to acknowledge its limits. The results have also been influenced by the methods used and the challenges of approaching the challenging subject of critical thinking in this manner. Despite making every effort it is conceivable that some key researchers were overlooked to undertake a thorough and meticulous search of one significant database. Due to time restrictions, it was necessary to restrict the search to a single database, however, this likely prevented the inclusion of other pertinent studies.

Despite the drawbacks of the little study's design and methodology, several intriguing insights into a complex subject have been revealed, and some potential implications for teaching strategies have also surfaced. Teachers may prioritize the elements of critical thinking they feel are most important for pupils, but they should equally acknowledge the value of other elements, such as critical reflection, that may receive less attention in a higher education setting.

Because critical thought is collaborative, building a community for cooperative learning in the classroom that encourages debate and allows students to work in groups during writing classes also appears crucial. Given the intense nature of many EAP courses, this could be challenging, but before being expected to replicate this with previously published research, which likely be a more challenging assignment, it would help students acquire confidence and allow them to critically review each other's writing. This study highlighted the importance of information in critical thinking, which suggests that teaching writing and critical thinking with a sustained content approach would be advantageous to help students develop their content knowledge before critically analyzing a topic. It's less clear, though, how much EAP students will profit from a generalized, as they begin their degree programs, a non-disciplined method of critical thinking education.

Author Contributions

The authors have analyzed the collected data and contributed to the development of the paper.

Declaration of interest statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Data Statement

Derived data of this study are made available by the authors, without undue reservation.

Funding

No funds, grants, or other support were received.

Acknowledgments

We would like to thank all the participants who participated in this study

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