Investigating the Role of Multimodality in Promoting Algerian EFL Students’ Critical Thinking Skills
Case Study: Third Year EFL Students at Biskra University

Rim Bougherara
Abou kacem- Saad Allah University Algiers 2-Algeria
rim.bougherara@univ-alger2.dz

Kamel Khaldi
Abou kacem- Saad Allah University Algiers 2-Algeria
kamel.khaldi@univ-alger2.dz

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Abstract: This paper aimed at investigating the role of multimodality in promoting Algerian English as Foreign Language students’ critical thinking skills. The vital role of critical thinking skills in education makes English as foreign language teachers integrate distinctive strategies into their lessons to promote their use by students. However, the most suitable strategy is the one that enhances the interaction between teachers and students. Multimodality allows making meaning and interaction between individuals since it covers a mixture of modes. The latter assists the flexibility of interaction and then it can enhance cognitive abilities. Thus, multimodality can be considered as a workable strategy that fosters students’ critical thinking skills. This paper was important in the sense that it attempted to investigate the extent to which those students can use critical thinking skills, and to describe the role of multimodality in promoting them among English as Foreign Language students. The method adopted in this paper is descriptive one for which the researcher used two data gathering tools: a questionnaire and an interview. The questionnaire was administered to four teachers and eighty-third year students from the department of English, at Biskra University, but the interview was aimed only at the teachers. It was found that students still face difficulties in using critical thinking skills; basically, higher-order thinking ones. They mostly preferred multimodality as a strategy to promote these skills and to minimize the difficulties they faced. The findings showed that there were conflicting answers among the teachers: On the one hand they confirmed the usefulness of multimodality in promoting their students’ critical thinking skills, but on the other hand they implemented...
another strategy. Therefore, it was recommended to find out the reasons why this strategy was not used by teachers though they confirmed its usefulness regarding the promotion of critical thinking skills on the part of students.

Keywords: Critical Thinking Skills- EFL Students- Higher Order Thinking Skills- Mode- Multimodality-Teachers

1. Introduction
The Critical thinking skills (henceforth CTS) are fundamental in the educational situation. They have become one of the key pillars of contemporary education where students need to be actively engaged. Engaging the students with CTS requires creating an interactive atmosphere between them and their teachers, and this can be achieved by implementing the most appropriate instructional strategy. Several strategies are supported by English as Foreign Language (EFL) teachers to be integrated for promoting CTS among students. Yet, in contemporary classrooms, it becomes a necessity for them to select the one that goes deeply with meaning-making and communication. Multimodality covers both previous characteristics. It facilitates the use of various communicative modes like images, videos, sounds, and others in the classroom; consequently, it can be considered as the most reliable source for promoting students’ skills including the intellectual ones. So, this paper aims at investigating the role of multimodality in promoting Algerian students’ CTS.
2. Theoretical Background

2.1. Definition of Critical Thinking

Critical thinking (CT) has been defined from many angles and perspectives like the philosophical, the cognitive, or the educational one. Hager and Kaye (1992, p. 26); for instance, state: “the term critical thinking has been used and understood in several ways”. From the philosophical point of view, Ennis (1985, p. 45) defines it as: “reflective and responsible thinking that is focused on deciding what to believe or do.” (Cited in Paulsen, 2015, p. 50). Unlike this point of view which deals with beliefs, the cognitive one regards it as a mental process. Sternberg (1986, p. 31) describes CT as: “the use of those cognitive skills or strategies that increase the probability of desirable outcome” (cited in Topolovcn & Matijevic, 2017, p. 65). In its turn, the educational point of view towards CT deals with bloom’s taxonomy of thinking. For Stratton (1999, p. 44), “the taxonomy encourages us to regard CT as the best thinking; the sort of thinking that should replace every other sort of thinking”. Overall, each of these approaches offers different meanings of CT that can be used accordingly in research.

Bloom’s taxonomy of thinking is the representative approach for CT in the educational context (El Ouchdi-Mirali, 2015). It is a hierarchy of thinking that assists teachers in promoting their students' thinking solving tasks. This taxonomy consists of six levels of thinking which go from the lowest to the highest ones. Each of these levels aims at developing certain kinds of skills. Nonetheless, Anderson (2001) revised it by proposing some changes (Figure 1).

![Figure1. Compare the Revised Version of Bloom’s Taxonomy to the Old Version (Li, 2015, p. 67)](image)

Notably, the changes cover both of the terminology and the structure. On the one hand, the names of the two lower levels of thinking are changed from knowledge and comprehension to remembering and understanding. The term synthesis also becomes creating. Besides, the categories of the new version have been changed from nouns to action verbs. Sousa (2006, p. 53) describes these changes as: "revising the taxonomy provided the opportunity to rename three categories and interchange two of them". On the other hand, the structure of the two highest levels is changed by moving the evaluation down so that the highest level becomes creating.
2.2. Multimodality

2.2.1. Meaning of Multimodality

Multimodality refers to a variety of modes such as videos, images, gestures, and others. Its main aim is to show how people interact with each other using various modes of communication. Jewit (2009, p. 14) states that it refers to: "the approaches that understand communication and representation to be more than about language, and which attend to the full range of communicational forms people use image, gesture, gaze, posture, and so on and the relationship between them." (cited in Pan, 2016, p. 69). Moreover, this communication needs to be contextual; therefore, there is a clear relationship between multimodality and social semiotics where a deep focus is given to meaning-making depending on the social context. According to Machin, (2016, p. 3) "multimodality is a social semiotic approach”. In brief, multimodality is a vital component of social semiotic that assists people to create smooth communication between them.

2.2.2. Multimodality and Critical Thinking Skills

The literature has shown that there is a relationship between multimodality and CTS. In the educational context, students are supposed to analyze and evaluate the knowledge they receive until they reach the level of creating something new. They can be smoothly engaged in this process by multiple modes of communication. Ragupathi (2012, p. 1) supports this idea by saying:

Research indicates that students who incorporate multimodal forms and approaches to their learning are better engaged with the content than those who employ. Traditional approaches, thereby enhancing their thinking and learning process.

Consequently, presenting multiple modes of communication in the classroom can engage students in their learning process in general, and in promoting their CTS in particular. Visual images, including pictures and images, are one example of these modes, and they are considered as key resources for constructing students’ intellectual abilities (Grazib, 2014). In his turn, McConnell (2015, p. 2) mentions, "pictures can be used very effectively to engage students at any level in many kinds of learning activities, including higher-order thinking”. Moreover, with the current development in education, digital resources become another mode, and they play an important role in promoting CTS because today's students are very familiar with them. Sherrie (2015, p. 115) props this point as: “teaching critical thinking to a generation that places a premium on using technology and the process of finding themselves can have significant impact”. Briefly, multimodality can play a crucial role in promoting students' CTS.

3. Methodology

3.1. Context and Rationale of the Study

3.1.1. Context

This study investigated the role of multimodality in promoting Algerian Third year EFL students’ CTS. It took place at the Department of English at Biskra University, and during the academic year (2019- 2020). It was conducted in order to reach two basic aims. The
first aim was to highlight the extent to which EFL students at Biskra University still faced difficulties in using CTS. It was a major step that needed to be covered to reach the second aim where the researcher proposed multimodality as one strategy for overcoming the students’ difficulties in using CTS for boosting them. This study addressed the following two research questions:

1) To what extent do EFL students face difficulties in using their CTS?
2) Does multimodality promote EFL students’ CTS?

3.1.2. Rationale of the Study

CTS are focal elements in higher education. Some Algerian researchers in the field of education (Touati, 2016; Benmouhoub & Boukedimi, 2019; Abdaoui & Grine, 2020) carried out various studies in this area of study through which they aimed at promoting these skills among their students. However, their findings showed that, among the majority of their students, there was still a lack in the use of CTS. Hence, it becomes a necessity to rethink about a strategy that goes in parallel with current students’ needs for promoting these skills. Regarding the existence of the digital age, students get familiar with multiple modes of communications including images, videos, and digital elements. The latter, play a great role in getting students engaged with several activities; particularly, the intellectual ones (Ragupathi, 2012). For this reason, this paper attempted to investigate the role of multimodality, as a new orientation in today’s classes, in promoting Algerian EFL students’ CTS.

3.2. Participants

The participants of this study were eighty third-year students from the department of English at Mohamed Khieder University, Biskra, and Four EFL teachers who teach third-year level from the same department. This sample was randomly chosen. The selection of the third-year level came from the basis that students at this level are supposed to have enough knowledge and practice about CTS.

3.3. Instruments

3.3.1 Instruments for Data Collection

In this research we used two data collection tools: a structured-questionnaire and a semi-structured interview. According to Harris and Brown (2010, p. 1), “structured questionnaire and semi-structured interview are often used in mixed method studies to generate confirmatory results”. On the one hand, the questionnaire was planned to be addressed to Four EFL teachers who teach third-year classes at Biskra University and Eighty third-year level EFL students from the same university. On the other hand, the interview was planned only for teachers from the same sample.

Each data gathering tool was used for a specific purpose. The researcher used the questionnaire as a first data-gathering tool because of its reliability in receiving data from a large group of participants. It was administered to EFL university students so as to highlight the extent to which they face difficulties in using CTS. The same questionnaire was addressed to their teachers to answer the first research question. As for the interview, it was used in order to answer the second research question in which EFL teachers’ answers gave us data about the role of multimodality in enhancing EFL students’ CTS.
The researcher utilized a set of open-ended questions which were prepared in advance, and the teachers’ answers were written in a form of notes. As far as this interview was implemented with a small group of participants, it was one-on-one basis interview.

3.3.2 Procedures
The researcher followed certain procedures while conducting this study. First of all, a short descriptive session was planned for teachers who were selected from the sample. This session described the concept of multimodality and its implementation in today’s EFL classes. It was an online session via the Zoom application. Its PowerPoint presentation took twenty minutes, and fifteen minutes were left for the discussion. Since multimodality is considered as a new field of study, this session was planned to make sure that the teachers had a clear insight about it. In light of this session, the researcher could then proceed to the next two other procedures. That is to say, it assisted teachers to provide valid and reliable data while answering the questionnaire and doing the interview.

4. Results and Discussion
4.1. Results
This part is the practical one that describes the results gathered from the proposed sample. Since there were two research questions, the results of the teachers’ and students’ questionnaire answered the first research question; whereas, the results of the teachers’ interview answered the second one. Concerning the first research question, the findings were presented in a form of a pie chart. In addition to the pie charts, there was a description of the findings.

4.1.1. Results of the Questionnaire
Research Question (1): To what extent do EFL university students face difficulties in using their CTS?

4.1.1. Results of the Students’ Questionnaire
Question (N°1): do you face difficulties in using CTS? If yes, which level(s) of CTS?

Figure. 1. Facing Difficulties in Using CTS
The first question of the students’ questionnaire aimed at highlighting the extent to which EFL students face difficulties in using CTS. The results, (See Graph 3.4), demonstrated that a high proportion of students (85%) answered that they face difficulties in using CTS. Concerning the most difficult level of CTS for them, (See Graph 3.5), the majority (50%) selected analyzing; however, others (45%) considered separately evaluating and creating as the most difficult levels.

**Question (N°2):** do your teachers integrate different strategies to promote CTS? if yes, which one do you prefer?

The second question aimed at clarifying EFL students’ attitudes about their teachers’ integration of the strategies that promote their CTS. The majority of them (66%) answered “yes”, (See figure 3). In addition, a great number of them (50%) chose “multiple modes of communication” as the strategy that was mostly preferred by them for promoting their CTS.
3.1.1.1. The Results of the Teachers’ Questionnaire

**Question (N°1):** do your students face difficulties in using CTS? If yes, which level (s) of CTS?

![Figure 5. Facing Difficulties in Using CTS](image)

The results, (See figure 5), showed that all (100%) the respondents answered with “yes”. That is to say, all teachers argued that their students face difficulties in using CTS. Remarkably, a similar percentage (75%) selected analyzing, evaluation, and creating as the most difficult levels of CTS for their students (See figure 6).

**Question (N° 2):** do you integrate strategies for promoting your students’ CTS. If yes, which ones?

![Figure 7. The Teacher’s Integration of Strategies for Fostering Students’ CTS](image)

Teachers were also asked in the second question about the strategies they integrated in the classroom for enhancing their students' CTS. The whole number of the respondents’ (100%) answered that they integrated strategies which fostered their students' CTS (See...
The findings in the next Figure (8) showed that the majority of them (70%) used cooperative, work as a strategy for promoting these skills among students. Besides, only (30%) of them referred to using multiple modes of communication.

4.1.2. Results of the Teachers’ Interview

Research Question (2): Does multimodality promote EFL students’ CTS?

Question (N°1): are you familiar with the concept “Multimodality”?

The results showed that all teachers were familiar with "Multimodality". Although the session that was programmed with them helped a lot in clarifying the meaning of this word to the sample, it was found the whole participants had already had adequate knowledge about the meaning of this concept.

Question (N°2): which mode(s) is/ are mostly used by teachers while presenting the lesson?

The second question aimed at finding out which modes were usually integrated in the classroom by EFL teachers. The results showed distinctive answers on the part of teachers, and despite that, the majority (T 1, T 2, T 3) them chose speech. One of the teachers (T 2) justified as: “speech is direct in conveying meaning and ideas”. (T 4) selected ICT. (See table 3.1)

Question (N°3): which mode(s) does/ do your students prefer to learn through?

This question can clarify today’s EFL students’ needs regarding the modes of communication. So, the results addressed that all teachers select ICT as the most preferred mode by students. Also, they justified their choice; for instance, (T 4) argued that this generation of students is very familiar with ICT and its use. (See table 1)

Question (N°4): which mode(s) can assist EFL students to promote their CTS?

The teachers were asked about the mode/s which could help EFL students to boost their CTs. The analysis of the results demonstrated that each participant chose more than one mode. For instance, (T 1 and T 4) selected writing, speech, and ICT. In her turn, (T 1) referred to speech and ICT. Yet (T 3) chose all the modes. It is noticeable that the teachers had two in common answers, which were speech and ICTs (See table 3.1). Additionally, they had convergent justification behind their choice, and below they are:

- “Promoting students’ CTs differ from one to another, thus there should be a variety of modes”. (T 1)
- “It depends on students’ learning styles and preferences, but ICTs are always appreciated by learners”. (T 2)
- “I guess that all the modes can promote students CTS. They can be used interchangeably”. (T 3)
- “CTS can be developed through various modes. ICTs are the preference of students. (T 4)

Question (N°5): is multimodality a workable strategy for promoting CTS among EFL students?

Teachers were also asked a more specific question about the role of multimodality in promoting their students' CTS. The result suggest that all the participants showed their positive attitude towards multimodality as one workable strategy for promoting CTS, and they answered by "yes". However, only two teachers commented on their responses:

- (T2) argued: “They have to select what modes are suitable to convey their messages”.
- (T3) justified: “it widens their CTS because it gives the chance to learn with a variety of modes”.

**Table 1.**

The Summary of Questions (2, 3, 4) about the Modes of Communication

<table>
<thead>
<tr>
<th></th>
<th>The Most Used Mode (s)</th>
<th>Students’ Preferred Mode(s)</th>
<th>The Mode that Promotes CTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>Images</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>ICTs</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Speech</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>T2</td>
<td>Images</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>ICTs</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Speech</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>T3</td>
<td>Images</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>ICTs</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Speech</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>T4</td>
<td>Images</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>ICTs</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Speech</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

**4.2. Discussion**

This study was designed around two research questions; the findings of the first research question revealed that EFL students still face difficulties in using CTS; basically, the higher order thinking ones. Besides, it was found that teachers attempted to minimize these difficulties and to boost their students’ CTS through integrating cooperative work rather than the other strategies that were proposed by the researcher in the questionnaire. Their choice of such strategy may be because of its strong sense of interdependence.
On the other hand, the results of the second research question revealed EFL teachers’ familiarity with multimodality. The teachers also agreed that it was a workable strategy for promoting EFL students’ CTS. Furthermore, the results demonstrated that CTS could be promoted through the integration of a variety of modes in the lesson. Yet, it was found that the students’ preferred mode was information and communication technology (ICT), and it was the most suitable mode for promoting these skills. It is used to suit the students’ needs and requirements (Seddiki, 2016; Bouguebs, 2019).

As predicted, EFL teachers integrate a specific strategy for promoting students’ CTS (i.e. cooperative work). However, the paradox here is that their students prefer to learn through multiple modes of communication rather than cooperative work. Reasonably, using the strategy that does not satisfy students’ needs cannot play a great role in enhancing their abilities. According to Hodge and Preston-Sabin (1997, p. 126), “teachers have found that by adapting teaching methods and strategies to meet the special needs of some students, all students can benefit”. For this reason, it is quite possible that EFL students are still facing difficulties in using CTS due to the inadequacy of the teachers' chosen strategy with the students’ desirable strategy.

Another striking point, these teachers acknowledged during the interview that multimodality is a workable strategy for boosting CTS on the part of their students. They also provided several strong arguments for their attitudes. This finding went in harmony with the literature as Gerber and Abrams state (2014, p. 74): “it is paramount that teachers incorporate multimodality in school-based learning as it helps to enhance students’ critical thinking”. Nevertheless, surprisingly, the results of the questionnaire showed that it is not highly implemented by teachers, and they rather used cooperative work. This apparent lack of correlation between the teachers’ attitudes about the role of multimodality in promoting their students’ CTS and its real implementation during the lesson may rise due to some reasons. Teachers probably lack training on how to use such an updated strategy.

Furthermore, teachers are not highly in line with their students’ preferred mode of communication. Although the teachers confirmed that their students preferred to learn via ICTs, as one mode of communication, they use another mode (i.e. speech) while presenting lessons. According to Kelsey and St Amant (2008, p. 129), “studies have shown that the use of ICTs by instructors and students is increasing”. Our findings did not lend support to the literature because they demonstrated that teachers still prefer to use another mode rather than ICTs. The possible explanation for their choice may not refer to the fact that teachers ignore the use of ICTs; instead, they may lack them in their workplace. Hoadjili and Mehiri (2015, p. 77) state, “in Algeria, employing the new digital technologies efficiently and effectively is still backward”. It is very likely as well that those teachers may lack training sessions or professional development (Semmoud & Azzouz, 2012) on how to use ICTs regarding the promotion of CTS among students. In fact, training is beneficial step for teachers (Taddarth, 2019).

Therefore, for further research, it is suggested to detect the reasons behind non-implementing multimodality as a strategy by EFL teachers for fostering their students’ CTS even though they are aware of its importance and usefulness. It can be suggested as...
well to explore the causes behind the misconnection between the teachers’ used instructional strategy and their students’ preferable one regarding the promotion of the CTS.

5. Conclusion

This article investigated the role of multimodality in promoting Algerian EFL students’ CTS. It was designed around two basic aims in which the researcher highlighted whether EFL students at Biskra University find CTS difficult to be used by them and whether multimodality is workable for promoting these skills. To achieve the previously specified aims, the mixed approach was adopted for data collection including the questionnaire that was addressed to both teachers and students, and the interview that was planned only for teachers. So, the results of both teachers' and students' answers showed that EFL third-year students faced difficulties in using CTS; in particular, the higher order thinking skills. However, concerning the most preferable instructional strategy for promoting these skills, the teachers and the students did not go in the same line. Moreover, EFL teachers at Biskra University corroborated the role of multimodality in enhancing their EFL students’ CTS. Nevertheless, when it comes to practice, it was found that they rather used cooperative work. Therefore, for further research, it is suggested to find out the reasons behind non-implementing multimodality regarding the promotion of EFL students’ CTS though it was argued that is a very workable strategy.
References


Critical thinking skills

1 - Do your students use critical thinking skills during the lesson?

 a- Yes [ ]   b- No [ ]

If “Yes”, which ones are mostly used by them?

 a- Remembering [ ]  b- understanding [ ] c- applying [ ]  d- Analyzing [ ]  e- evaluating [ ] f- creating [ ]

2- Do your students face difficulties in using critical thinking skills?

 a- Yes [ ]  b- No [ ]

If yes, which ones?

 a- Remembering [ ]  b- understanding [ ] c- applying [ ]  d- Analyzing [ ]  e- evaluating [ ] f- creating [ ]

3- Do you integrate different strategies that promote critical thinking skills in your classroom?

 a- Yes [ ]  b- No [ ]

If “Yes”, which ones?

 a- Cooperative work [ ]  b- Games [ ]  c- Multiple modes of communication [ ]  d- Others [ ]
Appendix (II):

**Students’ Questionnaire**

Dear students,

This questionnaire is a part of my work that is under the title “investigating the role of multimodality in enhancing EFL students’ critical thinking skills”. Your answers will be treated anonymously and confidentially. So, would you, please, tick or give the answer that best corresponds to your position. Thank you in advance for your cooperation.

**Critical thinking skills**

1 - Do you use critical thinking skills during the lesson?

   b- Yes [ ]   b- No [ ]

If “Yes”, which ones are mostly used by them?

   b- Remembering [ ]   b- understanding [ ]   applying [ ]
   d- Analyzing [ ]   e- evaluating [ ]   f- creating [ ]

2 - Do you face difficulties in using critical thinking skills?

   b- Yes [ ]   b- No [ ]

If yes, which ones?

   b- Remembering [ ]   b- understanding [ ]   applying [ ]
   d- Analyzing [ ]   e- evaluating [ ]   f- creating [ ]

3 - Do your teachers integrate different strategies that promote critical thinking skills in your classroom?

   b- Yes [ ]   b- No [ ]

If “Yes”, which ones?

   e- Cooperative work [ ]
   f- Games [ ]
   g- Multiple modes of communication [ ]
   h- Others [ ]

Appendix (III):

**Teachers’ Interview**

**Question (N°1): are you familiar with the concept “Multimodality”?**

   a- Yes [ ]   b- No [ ]

**Question (N°2): which mode (s) is/ are mostly used by teachers while presenting the lesson?**
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a- Images  b- writing  c- ICTs  d- speech
The Justification:
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.................................................................................................................................

Question (N°3): which mode(s) does/do your students prefer to learn through?

a- Images  b- writing  c- ICTs  d- speech
The Justification:
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.................................................................................................................................

Question (N°4): which mode(s) can assist EFL students to promote their CTS?

a- Images  b- writing  c- ICTs  d- speech
The Justification:
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Question (N°5): is multimodality a workable strategy for promoting CTS among EFL students?