

# INTEGRATING CRITICAL THINKING PEDAGOGY IN THE TEACHING OF ENGLISH IN SEGOU AREA

**Ibrahim MAIGA**

*University of Bamako-Faculty of Letters and Language Sciences*

*Mali*

*ismaigaibrahim@gmail.com*

## **Abstract**

*This study is a continuation of an earlier project of familiarizing some high school teachers of English with critical thinking frameworks. In this phase, the purpose is to improve classroom practices towards the goal of encouraging critical thinking and allowing autonomy of students in their learning. The design of the study was to observe the participants in their classrooms with regard to active learning and critical thinking instructions before and after the courses. A total of five teachers participated in the project. The information was analyzed qualitatively. By the end of the project, the participating teachers were expected to be able foster active learning and to teach for critical thinking in their classrooms. Through this effort, they were successful in improving their classroom practices reflected by increased student thinking activities.*

**Key words:** *Critical thinking pedagogy, the role of questioning, critical thinking instructional techniques.*

## **Résumé**

*Cette étude s'inscrit dans la continuité d'un projet antérieur visant à familiariser certains enseignants d'anglais du secondaire avec des théories de la pensée critique. Dans cette phase, le but est d'améliorer les pratiques enseignantes dans le but d'encourager la pensée critique et de permettre l'autonomie des élèves dans leurs apprentissages. La conception de l'étude consistait à observer les participants dans leurs salles de classe en ce qui concerne les instructions d'apprentissage actif et de pensée critique avant et après les cours. Au total, cinq enseignants ont participé au projet. Les informations ont été analysées qualitativement. À la fin du projet, les enseignants participants devaient être capables d'enseigner pour la pensée critique et de favoriser l'apprentissage actif dans leurs classes. Grâce à cet effort, ils ont réussi à améliorer leurs pratiques enseignantes, ce qui s'est traduit par une augmentation des activités de réflexion des élèves.*

**Mots clés :** *Pédagogie de la pensée critique, rôle du questionnement, techniques pédagogiques de la pensée critique.*

## 1. Introduction

In 1990, in his article “*English for Developmental Purposes*”, M. Gueye advocated the use of problem solving skills as a tool to foster better thinking processes. He urged teacher training institutes to put critical thinking at the core of their curriculum. However, reforms in English learning and teaching approaches in the direction of these skills have not yet received as much attention as they should. Malian education system seems to use only memorization to produce knowledgeable learners.

During group webinar sessions, the problem of memorization and students’ passivity in class was often subject of discussion among the attendants, but many showed little interest to the researcher’s suggestions of teaching for critical thinking. One could easily assume that most of them do not know much about critical thinking. The problem is that Malian teachers have little opportunities for a professional development.

Therefore, two months ago, the researcher conducted a four-week project (I. Maiga, 2021) through which he shared the experience he gained from his research and participation in a critical thinking program. Five high school teachers of English participated in the project. After their readings, discussions, and after watching video conferences on critical thinking, they were able to have a clearer understanding of critical thinking theories and were able to use Paul’s thinking tools by name.

The success of this project led the researcher to continue cooperating with the participants. In this phase, the objective is to familiarize them with some teaching practices and establish how this may help them encourage critical thinking and active learning in their classrooms.

## 2. Research on Present Critical Thinking Practice

In many countries educators profess to value and teach for critical thinking far more than can be documented in their classrooms. An empirical investigation of this discrepancy is the study conducted by the *California Commission on Teacher Credentialing* (R. Paul, et al., 1997). It pro-

vides evidence not only that professors, by and large, are not effectively teaching for critical thinking on a daily basis, but also why this is so.

The interview protocol in the Paul et al. study was designed beginning with a series of “close-ended” questions followed by another group of “open-ended” questions. P. E. Thomas (1999) duplicated this methodology focusing on High School teachers and their instruction of students in San Diego and produced nearly identical results.

R. Cosgrove (2011) also conducted a research on this disconnect between teacher belief and pedagogical practice in the tutorial system at Oxford University. The results of his study demonstrated the implications of implicit (rather than explicit) instruction in critical thinking, or hoping students pick up critical thinking along the way.

No such study was conducted in any of the West African countries. However, this being the case in the United States, one can assume that the situation in Mali is even worse since some teachers plainly show their lack of interest in integrating critical thinking in class.

### **3. The Teachability of Critical Thinking**

A broad, general finding from researches showed that thinking skills instruction accelerated the learning gains of participants. For example, D. Halpern (1998) offers evidence of two instructional programs aimed at improving the critical thinking skills and abilities of college students. In their review of the literature, M. Kennedy et al. (1991) as summarized in E Lai, (2011) concluded that instructional interventions aimed at improving students’ critical thinking skills have generally shown positive results.

For a more detailed example, S. Scalan (2006), a student teacher in a San Diego area twelfth grade Rhetoric and Composition class conducted procedures that were designed to improve the critical thinking skills of his students. Emphasis was placed on improving the critical thinking skills of the students by incorporating researcher Richard Paul’s “Elements and Standards of Reasoning” into all standards-based curriculum, which included persuasive essays on the topics of child abuse, language, gender and culture, and the value of life. Students were identified as high-range, mid-range or low-range achievers. The progress of each group was measured through a progressive series of rubric assessments of their writing, examining five key areas important in

rhetorical composition: Clarity of Writing, Analysis of author's argument, Use of supporting information, Organization, and Grammar and Syntax. Through the introduction of this focused critical thinking training, student composition improved dramatically in all of the five key areas, among all the groups.

Unfortunately, action based research in the area of critical thinking in Mali is wide open to studies. It is said unfortunately, because, although the area is ripe for research, not a single research has been done. This action research study will, then, help some high school teachers improve their teaching practices through the use of some critical thinking instructional strategies as it will be seen.

#### **4. The Critical Thinking Pedagogy**

In critical thinking pedagogy information is not presented to students as facts and students are no longer considered as "empty vessels" to be filled with readymade information (M. Kabilan, 2000). Based on the critical thinking pedagogy, "The learners learn from the teacher and the teacher learns from the learners" (M. Kabilan, 2000 p.2). The question that rises, then, is how to achieve this goal. The answer lies in P. Freire's (1970) pedagogy of questions. This pedagogy requires both teachers and learners to pose questions and provide the possible answers. One of the major tasks of a teacher is to motivate learners to get involved in the lesson, to evoke learners' curiosity. The way to do that is improved questioning. The skillful use of questions will teach learners to use questioning to solve problems and to approach a problem differently.

#### **5. Critical Thinking Activities**

A number of researchers have recommended using particular instructional strategies to encourage the development of critical thinking skills and abilities, such as collaborative or cooperative learning (P. Abrami et al., 2008). Another highly recommended critical thinking strategy is problem posing and problem solving. What is important in problem solving is gathering, evaluating, and using information effectively rather than providing one-right answer. Once the problem is posed, the answer is not the one that gains the main attention. The assumption behind the problem posing notion is that the process of

coming to a conclusion is more important than the conclusion itself (C. Meyer, 1986). Open-ended questions encourage students to think creatively in order to find out their own answers, without fear of giving the wrong answer. Different activities, such as Dialogue Journals and Reading Logs are introduced as critical thinking activities because of possessing problem solving features.

## **6. Methodology**

This project was conducted in two cycles. The focus was to encourage active learning and critical thinking in language learning and teaching. These goals could only be achieved through action and reflection

### **Cycle one: Teachers as learners**

The first cycle was a workshop on integrating critical thinking in language learning and teaching. Five high school teachers of English were the participants. They had less than two years of experience in teaching. Except Teacher3, they all graduated from teacher training centers. Their ages varied from 36 to 27 years old.

#### ***6.1. Cycle Two: Teacher-Learners as Teachers***

In cycle two, five classes of grade eleven were selected; one class for each teacher. The choice of grade eleven is only justified by the fact that all the teacher participants had at least a class at this level. The learners' ages in these classes varies from sixteen to eighteen years old. In both cycle one and cycle two, the researcher observed and provided reports. He wrote field notes of the classes both when acting as teacher-trainer and Observer.

The teachers in cycle one wrote reflective reports about classes and their improvement. They completed assignments and got engaged in discussions to evaluate improvement and how they feel the course is important. The second cycle was to gain useful data on the learning and teaching improvement of the process of the teacher participants' incorporation of critical thinking instructional strategies in their classrooms.

#### ***6.2. Research instrument***

The instrument used derived from the observation protocol proposed by R. Paul (1998). Paul's questions, an extension of his earlier work (R. Paul et al., 1997), modify his interview coding data analysis

questions to use as observation questions. R. Paul's (1997) interview protocol contains a total of thirteen questions. Given the fact that, for the purpose of this observation, the researcher is simply looking for indicators of teachers encouraging critical thinking, as many questions were not needed. Improvement was analyzed by comparing the teachers' classroom observational data obtained before the workshop against those obtained after.

During the observations, the note-taking strategy primarily entailed confirming or noting the absence of those critical thinking strategies which were in the course program. This approach was advantageous as it counters many of the common shortcomings of observational studies. For example, R. Pring (2000, p.35) warns that observations are often crippled in three significant areas: 1) objectives are often unclear (just "taking a look to see what happens"); 2) what is "observed" is inherently biased as it is "filtered...through the understandings, preferences and beliefs of the observer and; 3) it is difficult to connect product (what is said or done) with process (the thinking behind the action)."

These pitfalls were limited by clarifying the objectives and by focusing on observing the extent to which the teachers incorporate critical thinking strategies in their classrooms as it was seen throughout the workshop. Data collected through responses to questions concerning the classroom observations are simply reported with a narrative analysis. The following four questions were, then, used as both pre and post-training classroom observation instruments:

- a. Intellectually challenging work that requires learners to persevere?
- b. Does the teacher encourage learners to think independently in the context of the content being taught?
- c. References to intellectual standards of critical thinking?
- d. Are learners encouraged to ask their own questions?

## **7. Action Research Cycle One: Teachers as Learners**

### ***7.1. The Pre-Training Classroom Observations***

Even though the five teachers volunteered for the study, the idea of being observed in class was not well received by them. The researcher had to give further explanations on the nature of the obser-

vation and insist on its necessity for the study. Perhaps the reason behind the teachers' hesitation is that they think that it may have negative consequences for them due to the fact that evidence collected during the observation may be used against them. They might have thought that information obtained might be used to affect their professional life. In anyways, several measures were taken to increase anonymity. This has been essential to protecting those who volunteered for the study.

### ***7.2. Week one: Questioning in Education***

Education is inquiry. We do not learn anything without answering either a direct or an indirect question. This is why as educators; we see so much emphasis on questioning as an instrumental strategy. In week one, the focus was on finding new and interesting ways to pose questions that probe thinking more deeply.

Before delving into fostering critical thinking in class, we have had a general revision on Paul's thinking tools. Those are useful tools for developing questioning. The elements of thought are an analytical tool that helps us probe thinking from the perspective of modes of thought. The intellectual standards are also tools to encourage depth, breadth, and clarity of thought to name a few.

As a purpose in this week, I hoped to help the participants activate their learners' thinking so that there is a realization that education is not just memorizing and repeating information, but that it leads to new insights and new ways of looking at the world. In addition to the tools mentioned above. I also printed and handed articles to the teachers.

In the discussion, the teachers were asked to describe how they have used or currently use questioning in teaching and learning. After this, they were asked to give ideas based on their readings on how the questioning they use could be made even more students-centered, more open-ended, and deeper.

The discussion included some very good examples of how they already encourage learners to go beyond the superficial even though the pre-training observational data proved the contrary. It was also terrific to see their willingness and curiosity to experiment with some specific ideas to improve their approaches to questioning.

As mentioned by Teacher4, preparing questions ahead of time can be of benefit. Using warm-up questions, as Teacher4, Teacher5,

and Teacher3 explained, is a great start. Preparation forces the teacher to reasonably predict and think more deeply about suitable questions and the goal to which they may lead the learners. It encourages the teacher to become aware of his or her own strengths and weaknesses in questioning.

Using questions to respond to typical learner questions, as Teacher3 explained can show learners how to question themselves deeper, growing their autonomous learning skill. During the discussion, Teacher3 talked about not only preparing himself better but also helping learners to become better at enquiry. Indeed! How about trying out an idea from *The Role of Socratic Questioning in Thinking, Teaching, and Learning*, i.e. having learners write and then compare a list of questions that your lesson answers or raises?

### ***7.3. Week two: Some critical thinking instructional techniques***

In addition to Socratic questioning, we have seen some instructional techniques that can be used for classroom discussion. They are: Think-Pair-Share, Think Aloud Pair Problem Solving (TAPPS), Argumentation (Hearing, Fishbowl, Network, Onion). The participants showed great interest in those new ideas.

### ***7.4. Week three: video projection on how to teach for critical thinking***

This week the teachers watched a video of the international conference on critical thinking in which Richard Paul tells how to teach students to read and write well.

### ***7.5. Week four: The participants' reflection on the two project***

Through the two phases of this project, the participants have learned about the elements, standards, traits, critical thinking strategies, and Socratic questioning. They were now asked to reflect and identify one or two significant ideas that they have learned from reading or discussing. They were also asked to explain the ideas and elaborate how each of these ideas has impacted their understanding and application of critical thinking. Below are the reflective reports.

The idea, I believe, has helped me and my teaching is the Socratic questioning in thinking. With this document, I learned that I need to prepare and provide good questions

that will stimulate students' thinking and prepare them to be better thinkers (Teacher1).

I got inspired by the content of the 35 dimensions of Critical Thoughts. I will read this continuously most often because I see in it a resource that helps build my personal character. Its understanding and application will foster me and make me a better person. My reflection will be more mature ... (Teacher2)

... All the articles contributed greatly to build my skills as EFL teacher. I will still continue to explore the immense resource of the 35 Dimensions of Critical Thought (Teacher3).

One of the articles that certainly caused a great impact in my life was "The Art of redesigning instruction" (modified from a chapter in Paul. (1995). Critical Thinking: How to Prepare Students for a Rapidly Changing World... (Teacher4)

...Both, the elements of thought and the critical thinking strategies attracted my attention a lot, and its introduction was highly significant for both my personal and professional development of critical thinking (Teacher5).

## **8. Action Research Cycle Two (Teacher Learners as Teachers)**

The purpose of this cycle is for the teachers, who were the participants in Cycle One, to use instructional techniques and methods that target critical thinking in their classes. The aim is to see how the teachers can make their experience accessible to their learners and engage them in critical thinking. The goal is to compare the teachers' practices of critical thinking before the course against those observed after the course. The focus is on improvement—the movement between where they were before the course and where they are now. The same questions were used as both pre and post-classroom observation instruments.

### ***8.1. Knowledge Gained During the Observations***

The objective of this project was to help the participants improve their classroom practices by using activities that encourage active

learning and critical thinking. Therefore, the data obtained through learner's daily classroom activities after the training matched the objectives. During the classroom observations it became clear that the teachers' classroom practices were largely enhanced: learners were deeply engaged throughout the class periods in small group or whole class discussions. There was learner collaboration in every class observed. This encourages the learners to develop affectively. Learners were far more active than they used to be. This was affirmed by the teachers themselves.

### ***8.2. Evidence of Improvement in the Learners' Classroom Behavior***

This study does not seek improvement in the learners' ability to think critically. In fact, this is beyond the objective of the study. Given the fact that the teachers' classes are observed just once; the improvement is only sought in whether the learners are engaged in activities that enable them to train their thinking skills which in turn improves their language skills. To reach this aim, it is necessary for learners to work in pairs and in small groups (T. Hutchinson and A. Waters, 1987).

During the pre-training classroom observations, the learners would not say anything on their own. Many were inhibited to participate. The learners seemed unwilling to take responsibility of their own learning and would count too much on the teacher to do the thinking for them. In the five classes observed the learners' level of interest in the courses was particularly low and many appeared to be bored.

During the post-training classroom observations, I noticed that the amount of talking for individual learners had dramatically increased. The learners were cooperating and negotiating with one another. They were giving their opinions and contributions were varied. In Teacher3's classroom, for examples, the learners who were struggling during the discussions were even prodded by their classmates to take responsibility and contribute to the group effort. Above all this the learners seemed to be enjoying the activities. The participating teachers who are in a better position to talk about their learners' behavior confirmed that they were far more active than they used to be. The teachers' simple use of pair works and group works made that significant difference. Besides, the teachers' classroom practices were encouraging learners' autonomy.

### ***8.3. Evidence of Improvement in the Teachers' Classroom Practices***

The comparison of the teachers' observational data before the course against those obtained after the course shows that the training played an important role in helping them shape their attitude toward critical thinking. Before the course, all the activities in Teacher1's classroom were completed by the learners at their seat. In teacher2's class the learners were not engaged at all, and many appeared to be bored. Teacher2's reading comprehension questions were answered without learners talking with each other. He was simply accepting the correct answers and rejecting the wrong ones without giving reasons or asking the learners to explain their point. Teacher5's class was very similar to that of Teacher2. Teacher3's lesson was about pronouns. He started the lesson by giving definitions, explanations, and examples, and the learners were just passively copying what the teacher writes. In Teacher4's lesson about the Simple Present, he gave a whole class lecture, questions-answers where he answered his own questions. Teacher4 was, indeed, encouraging memorization, and every activity was completed dominated by him.

On the other hand, the data obtained through learner's daily classroom activities after the course indicated a large enhancement in the teachers' classroom practices: learners were deeply engaged throughout the class periods in discussions. There was learner collaboration in every class observed. The learners were explaining their reasoning, and the teachers used their time efficiently by cajoling information and listening rather than doing all of the talking. In short, it was a lively intellectual atmosphere, though the tools of critical thinking were used at the implicit rather than explicit level by the teachers.

## **9. Conclusion**

After gaining insights into critical thinking and its role in learners' education, the participating teachers showed a clear willingness to embrace the change that were brought. This led them to change what they do in class. These changes aimed at enhancing language teaching to make it more thoughtful by pursuing new teaching practices. The improvement in their classroom activities indicated that the project was

a success. Besides, the positive attitude of the learners toward the new activities was a satisfying factor. This project targeted only teachers of English as a foreign language yet; all teachers need opportunities to learn the taxonomy of critical thinking. For more initiatives of this nature, some forces are needed to either individually or together produce improvement in critical thinking in our curriculum. They are funding and open-mindedness.

## 10. References

- ABRAMI Philip, BERNARD Robert, BOROKHOVSKI Erguene, WADE Anne, SURKES Michael, TAMIM Rama and ZHANG Dai**, 2008, *Instructional interventions affecting critical thinking skills and dispositions: A stage 1 meta-analysis*. *Review of Educational Research*, 78(4), 1102–1134.
- COSGROVE Rush**, 2011, *Critical Thinking in the Oxford Tutorial: A Call for an Explicit and Systematic Approach*. *Higher Education Research and Development*, 30(3), 343–356.
- FREIRE Paolo**, 1970, *Pedagogy of the oppressed*. Ney York: Continuum
- GUEYE Mamadou**, 1990, *One Step Beyond ESP. English for developmental purposes (EDP)*. *English Teaching Forum*, 28, 3, 31–34 38.
- HALPERN Diane**, 1998, *Teaching critical thinking for transfer across domains: Dispositions, skills, structure training, and metacognitive monitoring*. *American Psychologist*, 53(4), 449–455.
- HUTCHINSON Tom and WATERS Alan**, 1987, *English for specific purposes: A learner-centred approach*: Cambridge CUP
- KABILAN Muhammad Kamarul**, 2000, *The creative and critical thinking in language classrooms*. The internet TSL journal, VI (6)
- LAI Emily**, 2011, *Critical thinking: A Literature Review*. Pearson’s Research Reports
- MAIGA Ibrahim**, 2021, *Introducing the concepts of critical thinking to some high school teachers in Segou area*. *Revue della/afrique*
- MEYER Chet**, (1986). *Teaching Students to Think Critically*. San Francisco: Jossey-Bass Publishers
- PAUL Richard**, 1997, *Critical thinking: Basic theory and instructional structures*. *Wye Mills, MD*: Foundation for Critical Thinking.

**PRING Richard**, 2000, *Editorial Conclusion: A philosophical perspective*. Oxford Review Of Education, 26(3-4), 495-501. doi: 10.1080/713688536

**SCANLAN Stephen**, 2006, *The Effect of Richard Paul's Universal Elements and Standards of Reasoning on Twelfth Grade Composition*. School of Education, Alliant International University, US.

**THOMAS Paul Everest**, 1999, *Critical Thinking Instruction in Greater Los Angeles Area*. Azusa Pacific University.