

# Critical Thinking and its Importance in Education: Some Reflections

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## Abstract

**Purpose:** This article reviews some conceptions of critical thinking and highlights its importance for education. **Description:** First, it presents some philosophical and psychological approaches to critical thinking and their influence in international and national educational policies as a means of fostering active citizenship and in turn sustainable development. Second, it highlights the relation between critical thinking and Content and Language Integrated Learning (CLIL). Third, the authors of this article insist on the vital role teachers have on developing critical thinking. **Point of view:** The concept of critical thinking has been approached by different academicians through history. However they may differ, they all have in common features such as intellectual discipline, integrity, freedom, citizenship, creativity and empathy. Therefore, critical thinking development must be inherent in education as societies need citizens who facilitate their progress. An example of how critical thinking can be developed in education is illustrated through the implementation of CLIL in language classes. **Conclusion:** Having in mind that students spend a lot of time in school, teachers are called to help family to develop our students' critical thinking skills during their regular teaching practices.

**Keywords:** critical thinking, Content and Language Integrated Learning (CLIL), education, teacher education programs, values.



## Pensamiento crítico y su importancia en la educación: algunas reflexiones

### Resumen

**Propósito:** este artículo revisa algunas concepciones del pensamiento crítico y destaca su importancia para la educación. **Descripción:** primero, presenta algunos enfoques filosóficos y psicológicos del pensamiento crítico y su influencia en las políticas educativas internacionales y nacionales como un medio para fomentar la ciudadanía activa y, a su vez, el desarrollo sostenible. En segundo lugar, destaca la relación entre el pensamiento crítico y el Aprendizaje Integrado de Contenido y Lenguas Extranjeras (AICLE). En tercer lugar, los autores de este artículo insisten en el papel vital que tienen los maestros en el desarrollo del pensamiento crítico. **Punto de vista:** el concepto de pensamiento crítico ha sido abordado por diferentes académicos a través de la historia. Aunque ellos pueden diferir, todos tienen características comunes, como la disciplina intelectual, la integridad, la libertad, la ciudadanía, la creatividad y la empatía. Por lo tanto, el desarrollo del pensamiento crítico debe ser inherente a la educación, ya que las sociedades necesitan ciudadanos que faciliten su progreso. Un ejemplo de cómo se puede desarrollar el pensamiento crítico en la educación se ilustra a través de la implementación de AICLE en las clases de idiomas. **Conclusión:** teniendo en cuenta que los estudiantes pasan mucho tiempo en la escuela, los maestros están llamados a ayudar a la familia a desarrollar las habilidades de pensamiento crítico de nuestros estudiantes durante sus prácticas de enseñanza regulares.

**Palabras clave:** pensamiento crítico, Aprendizaje Integrado de Contenido y Lenguas Extranjeras (AICLE), educación, programas de formación docente, valores.

## Pensamento crítico e sua importância na educação: algumas reflexões

### Resumo

**Objetivo:** este artigo revisa algumas concepções de pensamento crítico e destaca sua importância para a educação. **Descrição:** em primeiro lugar, apresenta algumas abordagens filosóficas e psicológicas do pensamento crítico e sua influência nas políticas educacionais internacionais e nacionais como forma de promover a cidadania ativa e, por sua vez, o desenvolvimento sustentável. Em segundo lugar, destaca a relação entre pensamento crítico e Ensino-Aprendizagem de Língua e Conteúdos Integrados (CLIL). Terceiro, os autores deste artigo insistem no papel vital dos professores no desenvolvimento do pensamento crítico. **Ponto de vista:** o conceito de pensamento crítico tem sido abordado por diferentes acadêmicos ao longo da história. Embora possam diferir, todos eles têm características comuns, como disciplina intelectual, integridade, liberdade, cidadania, criatividade e empatia. Portanto, o desenvolvimento do pensamento crítico deve ser inerente à educação, uma vez que as sociedades precisam dos cidadãos para facilitar seu progresso. Um exemplo de como o pensamento crítico pode ser desenvolvido na educação é ilustrado através da implementação do CLIL em aulas de idiomas. **Conclusão:** Dado que os alunos passam muito tempo na escola, os professores são chamados para ajudar a família a desenvolver as habilidades de pensamento crítico de nossos alunos durante suas práticas de ensino regulares.

**Palavras-chave:** pensamento crítico, Ensino-Aprendizagem de Língua e Conteúdos Integrados (CLIL), educação, programas de formação de professores, valores.



In recent decades, a popular topic for research, debates, forums and conferences on the role of education is the need to help students develop critical thinking skills. Important theorists, supporters and researchers on critical thinking defend its fundamental role in all different fields and knowledge domains, as well as in all life settings where human beings develop, such as work, education, family, friends, and community (Moseley et al. 10; Butler 721). Some of the scholars like Paul, Elder and Bartell (4) and Karbalaei (121) argue that because of the complexity and intellectual history, of thousands of years and the great scope for its application, it is not wise to try one single definition of *critical thinking* that encompasses all the meanings, qualities and skills it really involves. Therefore, they claim that any definition proposed would have limitations. In addition, there are different approaches to the concept of critical thinking: the philosophical one which emphasizes on the features and standards a critical thinker must have, and the psychological view which prioritizes observable skills, behaviors and attitudes of a critical thinker (Lai 7). However, for the purpose of this paper, to follow either line is not essential; conversely, an eclectic approach is adopted.

First of all, let us consider some definitions of critical thinking that could be placed within a continuum between philosophy and cognitive psychology and not at either end, even though they have been proposed by thinkers, researchers and scholars who initially favored a specific approach but later adopted less radical views.

Ennis (“Critical thinking” 5) defines critical thinking as a thoughtful and reasonable process whose main purpose is to make sensible decisions about what to believe or what to do. In a Statement at the 8<sup>th</sup> Annual International Conference on Critical Thinking and Education Reform, Scriven and Paul affirmed that critical thinking is

[...] the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from or generated by observation, experience, reflection, reasoning, or communication, as a guide to belief and action.

In addition, they say a high intellectual standard of critical thinking is essential to participate in the social, economic and political aspects of a society. Lipman (8) proposes that critical thinking is a

form of skillful serious thinking based on criteria so that it facilitates judgment, decision making, and self-assessment. He also considers the context characteristics. Tama (1) states that critical thinking refers to a way of thinking that is able to justify a person’s beliefs and may not be influenced unless the opposing argument is convincing. Siegel (20) argues that critical thinking involves a process of evaluation and reasoned judgment and the willingness, dispositions<sup>1</sup> and attitudes to living and acting by them. Facione (2), in his report to the American Philosophical Association on the role of critical thinking, states that the critical thinker has some dispositions and cognitive skills such as being able to interpret, analyze, and evaluate, among others<sup>2</sup>. Paul, Elder and Bartell (1), based on the definition of critical thinking given by Scriven and Paul and the contributions made by other theorists as Ennis (*Critical thinking*) and Lipman, propose four elements to explain the core meaning of critical thinking. They affirm that such components are intrinsically related but independent at the same time. The elements have to do with skills, practices, dispositions, attitudes and values<sup>3</sup>.

Halpern (qtd. in Liu, Frankel & Roohr 3) defines critical thinking in relation to the current challenge in education which is to prepare high-qualified people who are able to meet the demands of the labor market. Therefore, she affirms that critical thinking is:

[...] the use of those cognitive skills or strategies that increase the probability of a desirable outcome. It is used to describe thinking that is purposeful, reasoned, and goal directed—the kind of thinking involved in

1 Dispositions are considered as particular mental states that affect the feelings, volition and behaviors (Ennis “A super-streamlined”).

2 For example: the critical thinker is inquisitive, keeps well-informed, is open to reason, is open-minded, flexible, is fair, face prejudices honestly, makes judgments prudently, is willing to reconsider his views, builds clear arguments, is able to prioritize, organize and find relevant information, can select objective criteria, focuses on research, and is determined to get results.

3 They include: 1. Being able to engage in reasoned discourse and therefore making it possible to build a democratic society; 2. Participating by means of intellectual standards and qualities such as clarity, confidence, precision, relevance, depth, breadth, and logic; 3. Having analytical and inferential skills to formulate and evaluate goals and purposes and to question problems, information, concepts, theoretical constructs, beliefs, assumptions, implications, consequences, and frames of reference; and 4. Having an orientation towards values and dispositions like intellectual humility and courage, empathy, intellectual integrity and perseverance, faith in reason and justice (1).

solving problems, formulating inferences, calculating likelihoods, and making decisions, when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task.

Bassham, Irwin, Nardone & Wallace (qtd. in Hashimah & Jusoff 37) consider critical thinking as a wide range of cognitive skills and intellectual dispositions to analyze arguments and overcome prejudices, respectively<sup>4</sup>. Astleitner (53) defines it as a high order thinking skill at assessing arguments which involves interpretation, analysis, evaluation, and inference. Paul and Elder (qtd. in Zarei & Haghgoo 104) argue that critical thinking is the rigorous discipline of verifying the best thinking a person can have under any conditions or context. Ennis (“A super-streamlined”; qtd. in Behar-Horestein & Niu 27) proposes a number of cognitive skills and dispositions of critical thinkers, for example, holding a view, defending it or changing it according to evidence and arguments; understanding the causes of a problem and suggesting alternatives to solve it, being open-minded, considering the context, posing relevant questions, being empathetic, among others.

The proposals developed by Ennis, Facione, and Paul, Elder and Bartell encompass all critical thinking definitions above mentioned, which have common aspects such as:

- Cognitive skills like interpreting, augmenting, inferring, analyzing, evaluating, making proposals, creating, and making decisions according to the context; seeking relevant and reliable information; being adaptable and flexible about changes.
- Values like prudence, humility, intellectual integrity, and empathy.

The presence of cognition and values means that being aware of the context and being empathetic play a crucial role in being a critical thinker. Thus, cognitive skills and intellectual capacity are not highly useful if they are not aimed to meet the needs of a given situation or at least to improve its conditions. Besides, these two qualities open the door to recognition of diversity in ways of thinking and acting, tolerance towards divergent views brought about by,

for example, cultural, social, political, economic, and academic differences.

In addition, it is essential to clarify that critical thinking qualities are not always evident in the same way since they depend on the type of experiences as well as on the knowledge about the field of study and the context (Scriven & Paul, Statement at the 8<sup>th</sup> Annual International Conference on Critical Thinking and Education Reform). For example, a person can understand and analyze the causes of a problem and evaluate how it affects a certain community, but he might not have enough knowledge or experience to propose a viable alternative to solve the problem. In this case, a critical thinker consults experts on the topic, talks to the people involved and then, suggests a solution. Therefore, a critical thinker is aware of their limitations and such recognition makes integrity and intellectual humility visible. It also encourages him to decide how to overcome them, and therefore, he looks for precise, relevant information. Consequently, critical thinking is not a fixed entity and it does not develop spontaneously. On the contrary, it is dynamic and its skills and qualities can be cultivated (Ennis “Critical thinking and subject” 4; Lipman, 12).

Paul and Elder (4) state that thinking is an innate capacity of human beings. However, thinking on its own can be influenced, distorted and biased. They also advocate that people’s life quality and everything they create, produce and build, depends on the quality of thinking. Therefore, excellent critical thinking skills and dispositions must be gradually developed. This scenery is where education has a fundamental role to play. Moseley et al. (20) and Hale (qtd. in Zarei & Haghgoo 105), among others, affirm that critical thinking and education are closely related and that it is urgent that education offers students the opportunity to develop skills, abilities and capabilities, as well as values associated to critical thinking and applicable to life outside the classroom.

Concern about the need to help students develop critical thinking skills has increased over the last decades because of the students profile when facing the job market and coping with the demands of 21<sup>st</sup> century society, which is characterized by rapid changes and advances, not only in the technological aspect, but in social and economic matters, where knowledge is critical for a nation’s growth (Crenshaw, Hale and Harper 14). For instance, the us Department of Education (qtd. in Shim & Walzack 16) states that graduates do not have the thinking skills needed for a

<sup>4</sup> Examples of such skills and dispositions are: identifying, analyzing and evaluating arguments and assumptions to be aware of prejudices and overcome them; to be able to give sound reasons, and to make smart rational decisions on what to believe in and what to do.

considerable number of job vacancies. Besides, White (“The real reason”) points out that a high percentage of employers who were surveyed by companies such as Workforce Solutions Group, Adecco and The National Association of Colleges and Employers, asserts that job candidates cannot think creatively or critically, solve problems, communicate effectively, work cooperatively, organize or prioritize tasks at work.

This fact directly affects educational institutions since their graduates are their future workforce, businesspeople and governors, and education must help students prepare for facing ongoing challenges and responsibilities (Halpern qtd. in Liu, Frankel & Roohr 4). Paul (*Critical thinking* 24) argues that problems faced in human life have different dimensions and therefore, critical thinking is the only way to effectively solve them. Consequently, a system of education that facilitates their development must be promoted. Dewey (qtd. in Fahim & Nazari 86) declares that the primary purpose of education is to learn how to think. Brookfield (12) explains that critical thinking is one of the major objectives of education since learning to think critically can help students resolve ambiguity and embrace or adapt to continuous social, cultural and technological change. Karbalaei (122) also argues that education is responsible for promoting students’ critical thinking development.

Similarly, Butler (qtd. in Liu, Frankel & Roohr 1) states that critical thinking has received special attention from educators and Higher Education policy makers. Thus, we can find implicit or explicit reference to standards and parameters related to critical thinking in the goals of various agencies in charge of education in different countries, and in the educational objectives of different programs offered by corporations, educational foundations and universities. For example, the European Commission (3) argues that young people need to be prepared to enter the job market and engage in lifelong education, not only for fostering personal growth but also for being able to adapt to rapid changes in the labor market. Besides, the Australian Higher Education Council (qtd. in Chapman & O’nel 105) in its educational policy states that all graduates, regardless of their field of study, must develop and demonstrate capacities for thinking critically, solving problems, selecting and handling information; having qualities such as intellectual curiosity and rigor, creativity and imagination, as well as ethical values like integrity and tolerance. In the same line, the Spellings Commission recommends divulging the results in the critical

thinking test administered to Higher Education graduates so that institutions can be ranked and compared accordingly, and therefore, families can make an informed decision about where their children will study (Ennis “Nationwide testing” 2). In the same way, the Tunning Latin America project, based on the European original version, proposed 27 generic competences for Higher Education, some of which are directly related to critical thinking.<sup>5</sup>

In our country, Gómez (“Desarrollar destrezas”) declares that for Colombia to increase its competitiveness, apart from basic skills in literacy, mathematical reasoning, science and citizenship, young people must be able to easily adapt to changes, think critically, work collaboratively, speak a foreign language, and use ICTs. The Colombian National Ministry of Education (MEN “Propuesta de lineamientos”) includes critical thinking, creative thinking, analytical and synthetic reasoning, among others, as generic skills for Higher Education. Besides, the Universidad Nacional de Colombia in its proposal for the Higher Education reform cites a statement of Unesco (qtd. in Universidad Nacional 9) in which they affirm that one of the diverse tasks that Higher Education has is that of promoting critical thinking and active citizenship in order to contribute to sustainable development, peace and well-being. Isaza (1) also argues that, although the Law (Ley 30/1992) provides clues to the development of critical thinking, it does not establish quality parameters for its evaluation. However, he claims that the reform proposal presented in the current government is clearer about it.<sup>6</sup>

5 For example: 1. Capability for analysis and synthesizing; 2. Capability for identifying, planning and solving problems; 3. Capability for criticizing and self-assessing; 4. Capacity for doing research; 5. Skills at finding, processing and analyzing information from different sources, and 6. Capability of putting theory into practice.

6 An extract from the system purposes section, art. 8 states:  
[...] b. Despertar en los estudiantes un espíritu reflexivo, orientado al logro de su autonomía personal en un marco de libertad de pensamiento y de pluralismo ideológico, que tenga en cuenta la universalidad de los saberes y la particularidad de las formas culturales y que aporte al desarrollo individual de las personas, el avance de la sociedad y al progreso del país.” (Proyecto de Ley N° 112 /2011, qtd. in Isaza 4).

Besides, in an extract of objectives of Higher Education Institutions, art. 18, it can be read: “a. Profundizar en la formación integral de personas provistas de un sentido crítico; capaces de analizar los problemas de la sociedad y plantear y llevar a cabo soluciones a los mismos [...]”



Over the past years, actions have been taken in order to promote critical thinking. Let us take the case of English language teaching where the implementation of CLIL approach (Content and Language Integrated Learning) has led to the development of critical thinking skills through language teaching and learning. CLIL implements Bloom's taxonomy<sup>7</sup> and is supported by studies affirming that the use of specific content to teach a language promotes effective learning (Buchholz qtd. in MacDougald 44). The growing boom in implementing CLIL in our country is associated with the achievement of the goals of the national program Colombia Bilingüe (Rodríguez 80) now called Programa Nacional de Inglés (National Program of English). McDougald (45) states that bilingualism has a new role in Colombia since education institutions are not just committed to teaching English; they are also interested in what students can achieve by using the language. However, at present times, the adoption of CLIL is limited to teaching practices at some bilingual schools or some universities where a certain number of subjects are taught in English. Moreover, it is a gradual and slow process subject to certain conditions for effective implementation, such as training a significant number of teachers, not only in the approach but also in improving their language level, development of materials, adopting an intercultural approach, curriculum changes, and so forth (Rodríguez 85). The ideal is that in the quest to develop communicative competence in English, the development of critical thinking skills associated with CLIL would not be left aside.

Taking into account the benefits of CLIL related to language competence, cultural awareness, internationalization, language competence and preparation for study and working life, it is crucial that not only English Language Teaching (ELT) education programs but also undergraduate education programs in general, progressively implement CLIL. In the case of ELT programs, CLIL should be implemented in the core subjects, and in the foreign language component in the case of other education programs. It implies that teachers during their training process must learn the language through content, cultural awareness and critical thinking. CLIL, a context-sensitive

approach, is related to Content, Communication, Cognition and Culture (Coyle 98). Such 4Cs framework should be used to create and deliver meaningful effective lessons. The first element, Content, is related to the subject or theme of the lesson or course. The second element, Communication, refers to the use of the target language to communicate thoughts, opinions, attitudes and discoveries related to the lesson content with the aim of producing authentic language by students. The third element refers to the development of critical thinking skills that enable students to understand the content, analyze it, use it to solve problems, make decisions on its application, evaluate it, reflect how it relates to their lives, as well as to monitor their learning. The fourth C has to do with Culture, it refers to the learning community of a class and more broadly, to local and global cultures. It involves intercultural awareness and understanding of how differently content could be experienced by people in other cultures.

As it can be observed, the inclusion of CLIL in teachers education programs contributes to the learning of a target language not only as a vehicle of communication, but also as a tool for gaining knowledge and exploring new ways of experiencing the world. It also provides opportunities for developing language systems and skills. CLIL and bilingualism are crucial issues in Colombia's development in different ways which are directly related to the role of ELT education programs. Pre-service teachers will become teachers and/or bilingual education policy makers probably in contexts where CLIL has already been adopted or where its implementation is at early stages.

In the global context, it is possible to find various studies on critical thinking and strategies for its' development in Higher Education (King, Wood & Mines; Chacón & Lago; Crenshaw, Hale & Harper; Behar-Horenstein & Niu; Loes, Pascarella & Umbach); also, there are studies on critical thinking in education programs of different fields (Paul, Elder and Bartell; Young, et al.; Barrionuevo; Temel). Besides, there is research on the role of critical thinking in language skills development in ELT classes (Shapiro & Kilbey; Pineda; Byrnes, Maxim & Norris; Fahim, Bagherkazemi & Alemi; Pally; Xu). However, there are few published studies on the role of critical thinking in ELT education programs.

Research by Brumfit et al. (145), aimed to establish the relationship between the modern languages curriculum, classroom practices and the development of critical thinking and social skills in the UK.

<sup>7</sup> This taxonomy proposes a scale of cognitive skills classified as lots (Lower Order Thinking Skills) and hots (High Order Thinking Skills): remembering, understanding, applying, analyzing, evaluating and creating. It has served to formulate instructional objectives and related assessment activities (Krathwohl 214).

Through interviews, classroom observations, review of student production, course syllabi and assessment criteria, they found that as the higher the level, the less emphasis on language form and more emphasis on content quality. The results also showed that self-assessment, discussion skills, autonomy, and intercultural competence were promoted. However, they reported that it was necessary to do more research on some specific topics such as how the linguistic component is taught and how self-assessment and autonomy were developed.

The study conducted by Bataineh and Zghoul (33) diagnosed critical thinking skills of 50 graduate students of English as a Foreign Language (EFL) master program by means of the Cornell, level Z test. This instrument assesses skills such as deduction, induction, and identification of assumptions, among others. Variables such as age, gender and grade reports were taken into account in the analysis of data. Results showed general low performance. Also, older men and younger women got higher scores than their respective counterparts; and students with higher grade reports outperformed the others. One of the conclusions of the study was the need to implement teaching practices that promote critical thinking development in the classroom. The researchers affirmed that diagnosing in-service teachers would help better understand classroom real teaching and learning processes so that actions to improve them could be taken.

Saeed, Reza and Momene (16) firmly believe that English classes offer potential advantages to the development of life skills such as critical thinking skills, and that teachers play a significant role in learners' success. Based on those beliefs, they conducted a study to investigate the conceptions of critical thinking of 106 Iranian EFL teachers. The results obtained through interviews and questionnaires showed that even though most teachers thought they had a clear conception of critical thinking, their ideas were general and vague. They also recognized the importance of teaching critical thinking skills as a central goal of English classes, and the need to train teachers to develop critical thinking. They also stated that another reason for the study was the recent notion of Applied ELT which gave English teaching an interdisciplinary scientific character and permitted recognizing some distinctive features of English classes: they offered learners the opportunity to compare cultures, discuss a variety of topics, learn a language in form and use, work in different interaction patterns, and so on.

Back to the Colombian context, the results of the national examination Saber Pro<sup>8</sup> show that the education reference group has got the lowest scores in the generic competences component since 2012. To this group belongs the different education programs, among which ELT education programs are at the top list regarding generic competences; they also have the best scores as far as specific competences are concerned. However, the fact that the education group is at the bottom of the general score scale strongly indicates that it is necessary to improve education programs pedagogical practices, in our case ELT education programs, since they are in charge of preparing future English teachers.

Shapiro & Kilbey (62), Patry (qtd. in Rafi 64), and Crenshaw, Hale and Harper (17) state that, according to some studies, the main difficulty in the development of critical thinking in Higher Education is teachers, which could be due to different factors: lack of knowledge on what critical thinking is and how to develop it, false beliefs about critical thinking, curriculum restrictions, and/or the desire to perpetuate the traditional teaching model. Brown ("Some practical thoughts"), and Saeed, Reza and Momene (18) also affirm that nowadays, language educational programs must not only teach the linguistic component and related subject matter, but also have to include critical thinking development. Additionally, Bar-Yam et al. ("Changes in the teaching"), and Bean (qtd. in Lake 580) argue that changes in education are triggered by teachers. Theorists such as Moseley et al. (20), Brookfield (12), Dewey (qtd. in Fahim and Nazari 86), and Karbalaei (121) advocate that one of the major roles of education is to educate critical thinkers. Besides, Bataineh and Zghoul (35) and Gerard (7) state that training pre-service teachers and in-service teachers is key to the development of critical thinking in the classrooms.

Traditionally, education has been concerned with the preservation of culture through the transmission of knowledge accumulated in the development of its history. However, this spoon-feeding education has to change since students need to acquire knowledge and develop skills and competences for

8 It is a national examination designed to evaluate the quality of Higher Education in Colombia through generic and specific competences that students of technical professional, technology and university professional programs should have developed during the program. Students need to have passed at least 75 % of the academic credits (Icfes, Saber Pro).

life. This cannot be done if they are not active participants of their learning process; they cannot be introduced in someone else's experience and knowledge. They have to build their own in order to be able to accomplish their life goals and dreams. Besides, students must understand they belong to a local and a global community, and therefore they have to become aware of the needs of both their particular and larger contexts: an effective solution to a certain context cannot negatively affect surroundings. In addition, students have to be able to see and grasp opportunities for long-term growth without detriment to others. However, this understanding comes when students develop critical thinking skills which go beyond intellectual brilliance and capacity as they also embrace leadership, companionship, courage, creativity, perseverance, discipline, freedom, honesty, maturity, integrity, autonomy, transformation, discernment, and empathy.

As children and young people spend a lot of time in schools, teachers are called to help them become critical thinkers. Of course, it is also a family duty, but we as teachers can do it as part of our regular classroom practices. Particularly, in language classes, teachers can adopt a CLIL approach and its' 4Cs framework facilitates the development of critical thinking skills through Content, Communication, Culture and Cognition. Furthermore, professors in teacher education programs have a tremendous opportunity to help teachers-to-be become critical thinkers, and they in turn will help their future students to develop their critical thinking skills.

It is time for us teachers to play a decisive role in changing the spoon-feeding education paradigm and help our learners develop critical thinking skills and foster human values. Critical thinking skills and subject matter are not mutually exclusive but complementary. Our world needs people who really care about how to restore integrity, promote welfare, equity and social justice; our world needs critical thinkers.

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