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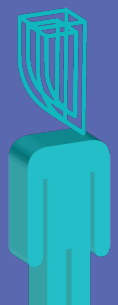

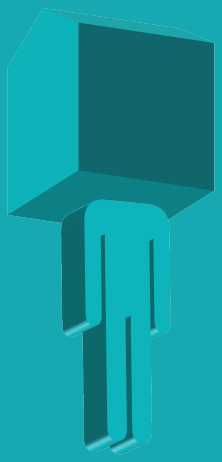

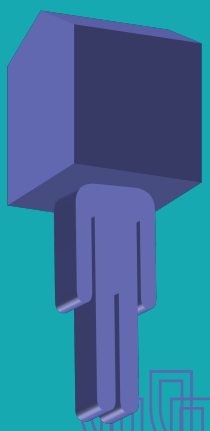

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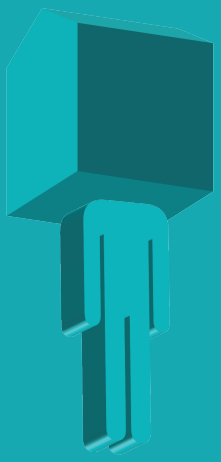

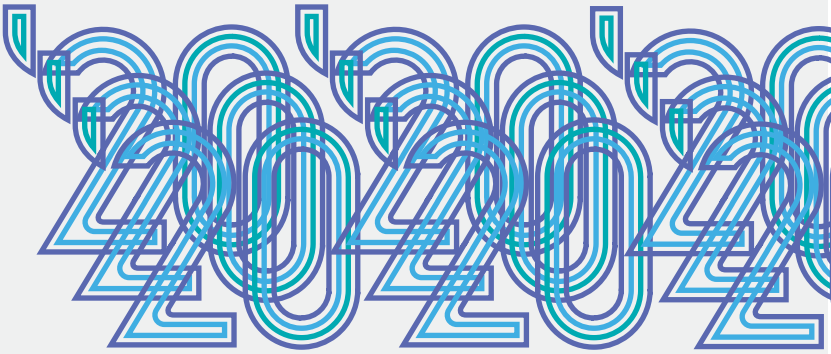

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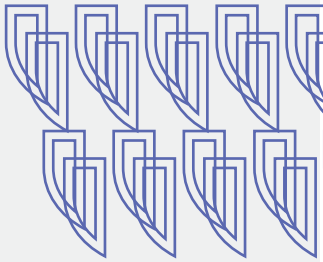

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Critical thinking and teacher's profile: central competences in the educational process

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Abstract

The concept of critical thinking was highlighted in most scientific classifications a couple of decades ago. Critical thinking is an essential skill that can simplify all aspects of human life. In its broad sense, it means the art of thinking about thinking. It is a reflective action and reasonable thinking that is focused on deciding what to believe or what to do. Today, our students are overwhelmed with information from all kinds of sources, in particular from various online platforms, and at the same time, critical thinking is the focal point missed in many students. Many scholars and educators believe in two approaches: on the one hand, is that a teacher's profile plays the focal point and the pinnacle of the pyramid of the education process (teacher, student, and content), and on the other, critical thinking is the heart and the soul of learning. Our study aims to identify to what extent teachers should integrate critical thinking approach through tackling critical thinking in terms of the education process, its dimensions, and the importance of thinking critically for students who attend any education program. Moreover, this study explores the transfer of critical thinking skills from pre-service teacher training as an agent of change in the field of education into the classroom practice and achieving a student's ability to think critically. As an intending result of this, the study is drawing general highlights of the significance of critical thinking, the role of a teacher in promoting and integrating critical thinking among students, and a set of strategies that can help teachers stimulate critical thinking during their lectures.

Keywords: critical thinking, teacher's profile, educational process.

Resumo

O conceito de pensamento crítico tem vindo a ser destacado na literatura científica já há algumas décadas. Considera-se que o pensamento crítico integra capacidades essenciais enecessárias a todos os aspetos da vida humana. No seu sentido mais lato, este conceito significa metacognição, ou o pensar sobre o pensamento, e é uma ação reflexiva centrada nas decisões sobre aquilo em que se acredita ou sobre aquilo que se deve fazer. Hoje, os estudantes estão sobrecarregados com informação provenientes de várias fontes, em particular plataformas online. Este excesso de informação leva a que o pensamento crítico seja, muito frequentemente, desconsiderado pelos estudantes. Muitos investigadores e educadores acreditam em duas abordagens principais: uma que valoriza o papel central que o professor assume no processo educativo (professor, aluno e conteúdo), e a outra que valoriza a construção do pensamento crítico como foco da aprendizagem. Este estudo tem como objetivo principal identificar, através da literatura de referência, em que medida é que os professores devem integrar a abordagem do pensamento crítico no processo

educativo, as suas dimensões e a importância de pensar criticamente para os alunos que frequentam qualquer programa de ensino. Além disso, este artigo explora os estudos que indicam a transferência de competências de pensamento crítico da formação inicial de professores como agente de mudança no campo da educação para a prática profissional e desenvolver a capacidade de um aluno pensar criticamente. Como resultado, este estudo destaca os conceitos gerais e a importância do pensamento crítico, do papel de um professor na promoção e integração do pensamento crítico entre os alunos, e de um conjunto de estratégias que podem ajudar os professores a estimular o pensamento crítico nas suas aulas.

Palavras-Chave: pensamento crítico, perfil do professor, processo educativo.

1 Introduction

Today, our society needs professionals and experts who have top-notch work and research aptitudes for the improvement of continual requests, in order to accomplish an increasingly powerful preparing procedure, and accomplish more significant employability abilities in the work environment (Davies, 2013). Notwithstanding the above mentioned, creating powerful learning abilities at the university is significant as a method for transforming the information, aptitudes, and knowledge that these students will need in their lives and their professions (Medina & Dominguez, 2006)

Critical thinking is a fundamental competence that allows facing academic, personal, and social situations, that is increasingly complex and diverse (Araya, 2011; Yang, 2012). Consequently, the development of critical thinking skills is a pivotal aspect, as well as a tool for higher education (Davies, 2013), which goes hand in hand with the rapid changes in the present world that are prompting to install themes such as flexibility, adaptability, innovative situations, questionable and vague settings, without forgetting the high speed transfer of information (Labarrere, 2006). These factors would make the development of this ability of critical thinking, considering it as one of the focal generic skills in the university training (Hawes, 2003; Yang, 2012), and especially as a centre aptitude of pedagogical training (Araya, 2011; Guzmán & Sánchez, 2006).

The above mentioned authors seem to support the idea that critical thinking is a radical element in all academic fields, yet it is a basic and indispensable trait in the field of teacher education, given that the future teachers might be able to affect the critical thinking skills of the entire society, through their contribution in creating a good generation with high cleverness, as indicated by the Standards of the Interstate New Teacher Assessment and Support Consortium (1992), that new teachers should be ingenious in instructional strategies for students' critical thinking development, problem-solving, and execution abilities. It is therefore unlikely that future teachers will foster and promote students' critical thinking except if teachers themselves become critical thinkers, which means that teachers should acquire this tool before to be able to provide students with the means to acquire it. Moreover, it is similarly improbable that new teachers will become skilled critical thinkers if critical thinking itself is not considered in their instructor training programs (Williams, 2005). In other words, in order to promote critical thinking in students, it is necessary to first nurture teachers' critical thinking (Yang, 2012).

For that reason, the adequate teacher's profile can bring benefits to the educational world. As William Arthur Ward's famous quote held "the mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires."

(Nguyen, 2016). Each teacher has his or her own personality and method of teaching, however, only those who can be qualified as great teachers are those who inspire students and catch their attention. That provides a subject of the focus of this paper: the notions of effective teaching to answer the common but yet complex question "what makes a great teacher a main pillar in the educational process?", and "how does the great teacher's profile foster critical thinking among students, through his/her acquisition of this skill during his career?". Moreover, our concern is mainly related to the ability to transfer critical thinking skills from pre-service teacher training into classroom practice to create a concordance between students and their problem-solving situations depending on critical thinking skills that teachers can pass as tool from one student generation to another. Our main objective is to identify to what extent we can get critical thinking as a theory of action, and turning it into a means, not just an objective, and at the same time, make teachers aware of the approaches used in the field of education and which seem to inhibit or enhance student's ability to think critically.

Regarding this, the identification of critical thinking skills development in teacher training programmers requires establishing its etymology and definition, as a starting point to further studies.

2 The etymology and definition of critical thinking

Undoubtedly, there is a great relation between critical thinking and the reading process, in other words, any reader can't get his/ her absolute judgment on writers' thoughts if he/ she doesn't read the content deeply, so, reading and critical thinking skills cannot be separated. In an analogy, reading is breathing in, and critical thinking skill is breathing out. In simple words, they are two faces of the same coin. Reading is not a straightforward process of lifting words off the page. It is a complex process of problem-solving in which the reader works to make sense of a text not just from the words and sentences on the page but also from the ideas, memories, and knowledge evoked by those words and sentences (Shoenbech, Granleaf, & Murphy, 2012). Nowadays, understanding how students think and teaching them how to think is more effective and has been gaining more importance than teaching them what to think. Students who think critically promote their cognitive awareness capacities to deal with new situations with more confidence (Gumus, Gelen, & Keskin, 2013).

2.1 The etymology and overview

Our paper presents a overview of critical thinking, its deep relation with ancient philosophers and its emergence in the 21st century. Critical thinking is a skill of teaching that can be used in different aspects of life, knowledge, and beliefs. Critical thinking is a relatively new technique of thinking, teaching, and learning, although the intellectual roots of critical thinking are linked to the teaching and vision of Socrates almost 2500 years ago, who innovated and designed a method of probing questioning, that people could not rationally justify their confident assumptions to knowledge. Socrates utilized an educational method that focused on discovering answers by asking questions from his students. Socrates points out the importance of asking deep questions that probe deeply into a person's mind before accepting ideas as worthy to believe. His method of probing question is still nowadays known by "Socratic Questioning", and it considers the best strategy of teaching critical thinking among learners. The Socrates method highlighted

the need for looking for truth and clarity and not just for answering questions (Ryan et al., n. d). Furthermore, Socrates' belief was followed by a set of philosophers such as Plato, Aristotle, and the Greek Skeptics. All of them believed that things are very different from what they appear, so it is necessary to train the human mind to see through the way not just from the surface as they look to us but to the way they do beneath the surface, to achieve what is called by the deeper realities of life (Paul, Elder, & Bartell, 1997).

Another trend to critical thinking emerged in the Renaissance era (15th and 16th centuries) by a flood of scholars and famous investigators in Europe who started thinking critically about religion, art, society, human nature, law and freedom, initiating thus what became known as the scientific revolution. Francis Bacon in England was the notable scholar who recognized the mind cannot safely be left to its natural tendencies. He laid the foundation of modern science with his emphasis on the inductive method which is determining rules about general circumstances based on the observation of individual situations during the information gathering processes. Bacon's work *The Advancement of Learning* (1605) could be considered one of the earliest texts in the critical thinking process, he argued for the importance of studying the world empirically, he was concerned with the way we misuse our minds in seeking knowledge. He recognized explicitly that the mind cannot safely be left to its natural tendencies that can lead to develop bad habits of thought as Bacon himself called "Idols", which categorised into four types; "Idols of the tribe" that is related to the ways our mind naturally tends to trick itself, "Idols of the market- place" that leads to the ways we misuse words, "Idols of the theatre" in fits our tendency to be trapped in conventional systems of thought, and "Idols of schools" which identify the problems in thinking when based on blind rules and bad instruction. After Bacon, some fifty years later, Rene Descartes, the founder of modern rationalism, wrote the work *Rules for the Direction of Mind*, which is considered the second text of critical thinking after Bacon's book (Paul et al., 1997). He centers his ideas on applying the critical thinking process among the principle of systematic thoughts. He announced that each part of thinking should be questioned, hesitated, doubted, and examined.

In the same period, we can find the English author Thomas More (1438-1535) who, through his work Utopia, published in 1516, developed a new social order to achieve the ideal constitution of the republic. More claimed that in order to achieve an ideal and fictional island at the same time, it should be every domain in the present world such as categories as economics, government, and justice that can be the subject of critique to deeply understand the construction of the new social order and to achieve the pinnacle of idealism, which held to be in some way dependent on the activity of mind in all objects of knowledge (Logan, 2016).

However, the critical thinking scholars of these Renaissance and Post-Renaissance periods opened the way for the emersion of modern science and for the development of different aspects of life in society; democracy, human rights, and freedom of thought (Paul et al., 1997).

Another trend was created by the thinkers of the French Enlightenment, such as Bayle Montesquieu, Voltaire, and Denis Diderot, who applied critical thinking terms to all views that had to be submitted to serious analysis and critique. They believe that all the authority must submit in one way or another to the close examination and scrutiny of reasonable critical questioning. Meanwhile, in the 19th century, the concept of critical

thinking extended even further into human sciences and their lives by Comte and Spencer, also diving into language and more precisely into the linguistics field and shedding light on and probing the functions of symbols and language in human life. Therefore, in the 20th century our comprehension of the power of critical thinking has emerged in increasingly more explicit formulations of thoughts. W. G. Sumner (as citted in Paul et al., 1997) claimed that the need for critical thinking is the most important element in human life and in education. Sumner stated: "Criticism is the examination and test of propositions of any kind which are offered for acceptance, in order to find out whether they correspond to reality or not. Critical thinking is a product of education and training. It is a mental habit and power" (Paul et al., 1997).

Last, but not least, even though there was drastic change and development in the history of critical thinking, it seems always that it is entirely linked to basic questions, already raised by Socrates, that can be used in every domain of human thought, and within every use of reasoning among any domains. So, now it is possible to ask a relevant question which is: what is critical thinking after all?

2.2 Definition of critical thinking

What is critical thinking? Who is a critical thinker? Why do we need a guide to think critically? This set of questions is essential even if they seem naive. Sometimes students are afraid to ask and deliver questions because they think that they will make mistakes which will make them seem ignorant to others. But in fact, they don't know that making questions is the best way to learn and memorize new things, and to understand what others are trying to say (Hardy, Foster, & Postigo, 2015).

In fact, there are many thoughts, concepts, interpretations and explanations of critical thinking, which have been theorized with philosophical and psychological perspectives. Authors, theorists and educators query about this universal term and raised questions on critical thinking in teaching, perception and practice contexts. Thus, critical thinking is abounding with a lot of definitions. According to Ennis (1985), "critical thinking is reflective and reasonable thinking that is focused on deciding what to believe or what to do" (p. 45). Helpern (1999) simply defined critical thinking as "the use of cognitive skills or strategies that increase the probability of a desirable outcome" (p. 70). Facione (2000) stated "critical thinking is judgment, reasoning, reflective, and purposeful thinking processes, which allow people to find reasonable meaning to their problem-solving tasks". In addition, Paul and Elder (2008) claim that "critical thinking is an art of analyzing and evaluating thinking, which enables people to raise vital questions and problems, formulating them clearly and communicate effectively with others". In brief, questioning, reasoning, analyzing, and problem solving are some featuresthat should be considered and characterized to become a rational, fair, and independent critical thinkers (Sulaiman, 2012).

Therefore, Duron, Limback, and Waugh (2006) defined critical thinking as "the ability to analyze and evaluate information" (p. 160), and, as Norris (1985), Rozgay-Miller (2009) (as cited in LaPoint-O'Brien, 2013) pointed out, facilitating the development of critical thinking skills is crucial to address, on a continual basis, various lessons, projects, group problems, and/or individual assignments. Through continual emphasis on the development of critical thinking skills, students have an opportunity to build upon their knowledge and experience to learn how to solve problems.

3 Targeting critical thinking within teacher education

Historically, the teaching process is mostly linked to the behaviorism theory. It assumes learning as observable and measurable actions and behaviours. Behaviourists claim that the process of student learning as simple "stimulus ->response" reaction. Under this frame, teachers act as the focal point for reinforcing student's behaviour and assume the central element in new teacher educating and student learning, despite the fact that this approach does little to foster critical thinking among students and make them as independent critical thinkers and dynamic learners. In other words, behaviorists believe that if teachers provide positive reinforcement, or rewards, whenever students perform a desired behavior, they will learn to perform the behavior on their own. Basically, the cognitivist approach emerged to highlight the focus on learner's inner mental activities. Cognitivists approach the process of student learning as the following series "Stimulus -> meditation -> response". Under this flow, students are responsible for gathering, handling, and applying information that they acquire during their classes, and teachers play the role of facilitators of learning, providing their students with opportunities for meditation to be great thinkers and meditators. In this case, teachers are mediators between students and the information that they acquire through their daily life, more precisely, this feature provides them the power to use much of themselves to understand the reasons behind the actions. This meditation is reflective learning and is entirely representative of critical thinking (Liu et al., 2018).

As mentioned above, the drastic point in this section leads us to say that targeting critical thinking within teacher education is going to be something madatory in the education process. In our education system, students are bombarded with and overwhelmed by different sources of information, but it is mostly worthless for efficient learning as the whole quality of information that is given cannot be fully absorbed. Moreover, there are education systems which believe that the acquisition process of knowledge is composed of a set of information, attitudes, principles, and notions, which means students rely on repeating and recalling what teachers or textbooks deliver, and this leads to saying that this kind of knowledge is nothing more than a set of senseless words in students' minds. In order to shift this superficial memorisation into deep learning and comprehension it is important to bear in mind the way that can reshape these systems, in other words, to facilitate the way students understand new ideas, thoughts, and beliefs. They should make their goals explicit, facing the problems and struggling to reinforce them to create new ideas and store them with more confidence in their mind, and instruct a new mental structure or system by reshaping and remolding the old systems into new and better structure that can foster critical thinking (Yücel & Ok, 2012).

To this end, Paul (1989), as cited in Yücel and Ok (2012), mentioned those teachers should

> help students to break big questions or tasks into smaller, more manageable parts; create meaningful contexts in which learning is valued by students; help students to clarify their thoughts by rephrasing or asking questions; pose thought-provoking questions; help to keep the discussion focused; encourage students to explain things to each other; help students to find what they need to know by suggesting and showing students how to use resources, and ensure that students do justice to each view, that no views are ignored, or unfairly dismissed (p. 23).

All these, regarding the importance and value of critical thinking in the field of education and the great role of the teacher in this mission, lead to recognize that critical thinking is the essential element in teacher education because pre-service teachers are assumed to teach and promote this skill in their lectures, and to be easy to access into this, it is impossible to do this without learning in general what to teach and more precisely how to teach it. In other words, as Paul, Elder and Bartell (1997) claimed, shaping new thinking strategies and teaching methods of future teachers and encouraging them to find out the inner potential capacities of their minds is important if they are themselves used to developing good critical thinking and problem-solving skills because only if they possess these skills during their career will they be able to enrich and educate a generation to be critical thinkers and problem-solvers. In the wide vision, critical thinking should be taken seriously besides promoting it in all aspects of pre-service teachers' programs (Toy & Ok, 2012).

In fact, the role of well-trained teachers in teaching thinking skills is essentially important. It is mandatory for teachers to have vast background about critical thinking skills, know how to facilitate those skills through classroom activities including thinking skills, become aware of the constraints that students may encounter, and innovative methods that can push student to use their minds in order to be familiar with unexpected situations that can face, to enable learners to be effective thinkers rather than shifting knowledge into their learners, and, at the same time, educators who received good training will be able to ensure new teachers to acquire essential skills through the education process in order to help them attain proficiency in promoting and fostering thinking skills among their learners (Liu et al. 2018).

To be clear, as Conner-Greene and Green (2002) assert, "critical thinking is not an academic fad; it is an essential skill for living in the information age" (p. 321). For this reason, learning to think rationally and critically is the the key to reshaping educational systems in a number of educational settings worldwide. Furthermore, the focal branch in teaching critical thinking skills lies upon the "Teacher" with whose knowledge and experience schools can be improved, for instance; language teacher can have a great role in developing critical thinking skills among students (Kavanoz & Akbaş, 2017).

4 Conclusions

One of the greatest teacher educator's responsibilities is to prepare the pre-service teacher students to be great teachers, and the only way for teacher educators to be satisfied and to fulfil this responsibility is to teach student-teachers how to become good teachers. The idea that we have tried to convey throughout our reflection is that being a good teacher is also being a critical thinker, being able to foster this skill in the teaching-learning process, providing students with the appropriate means to enhance critical thinking. The characteristics of a good teacher should mirror himself/herself, in order to be socialized, and should be adopted by the teachers as the significant characters they need to enter the world of education.

In addition to the idea of being a good teacher, we must also reflect on what makes a good teacher profile and how its effectiveness will affect the students' achievement. Bearing in mind that many variables depend entirely on the students' achievement, such as family life, social life, just to mention a few, it is important to highlight that teachers have direct responsibility for instructing a student's academic achievement and represent the essential

factor in the education process (Rockstroh, 2013). This is why it is important to examine which teacher's profile may be affected positively or negatively as regards the learner's achievement. Nowadays, many people can be a teacher, but the big issue is to what extent do people can effectively be a good teacher. Honestly, to be an effective teacher is more complicated than some people think. To be a great teacher does not only mean you should have deep knowledge and culture, but should also be more organized in his/her professional life, handling or treating students in a positive way, and having excellent communication skills. Moreover, the great teacher is the focal element in creating a warm classroom atmosphere, motivation, and is responsible for shaping an interactive teacher-student relationship (Rubio, 2009).

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