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## **Critical Thinking as a key competence and the factor of self-development of the modern teacher**

## **Myślenie krytyczne jako kompetencja kluczowa oraz czynniki samorozwoju współczesnego nauczyciela**

### **Introduction**

Today's social, economic and environmental changes are forcing citizens of a global information society to have acquisition and development competencies that will allow them to act actively and develop in a constantly

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changing, uncertain reality. It is obvious that today knowledge alone will not be sufficient to improve the quality of life in a global society (Forawi, 2016). In addition, modernity, in which we live and work nowadays immersed in reality and the virtual world, forces us to constantly value the information, news and knowledge we receive to verification; to make decisions about ourselves and the people and objects around us, to deal with ambiguity and uncertainty. A cognitive skill/ability referred to as critical thinking competence (CT) is responsible for making these processes run smoothly. Critical thinking and related problem solving and communication are believed to be fundamental goals of education in a global information society (Simper et al., 2018), further conditioning the personal development of individuals. Critical thinking can be considered in terms of mental habits, attitudes, resulting in a reflective approach to solving problems, making decisions and exercising judgment (Siegel, 1988), and as the ability to evaluate evidence and arguments independently of previously held beliefs and opinions (Baron, 1991, 2000; Ennis, 1987, 1996; Perkins, 1995; Sternberg, 1997, 2001, 2003; West et al., 2008). It is worth emphasizing that critical thinking is a key (*crucial*) competence also in the context of self-management, self-development planning. In addition, critical thinking is strongly related to reflexivity, which enables insight into the self, understanding of the Self and the Other (Giddens, 2003). The importance of developing and acquiring CT for the populace, for economic, social, political and daily life uses, is apparent (Pattanapichet & Wichadee, 2015). According to UNESCO, critical thinking is a strategic skill for the 21<sup>st</sup> century, as it is associated with attitudes of personal and social change and improvement.

As Joanna M. Łukasik (2020) notes, the modern school expects teachers to be constantly engaged in their own – professional and personal – development (often, unfortunately, apparent). For only a person focused on development, which includes change, but also the pursuit of set goals, constant self-discovery, going beyond the framework of schematic thinking about oneself towards discovering one's own potential, abilities, talents, passions, is able to motivate the student to engage in his own development, lifelong learning. A competence that largely determines the active development of the individual is critical thinking, and, therefore, it is particularly important among teachers. Possession of this competence determines not only the teacher's self-development, but also largely determines his teaching success. In addition, the development of critical thinking has become a global challenge for education systems around

the world, because the possession of this competence determines one being an active, responsible participant in society, taking actions in accordance with the assumptions of the paradigm of sustainable development, which has been recognized as the optimal model of development in view of current social, economic and environmental conditions (Wiek et al., 2011; Wiek et al., 2015 Lopez-Alcaria et al., 2019; Taimur, Sattar, 2019; Rieckmann 2012, Reickmann, 2018). In order to develop critical thinking among students, teachers themselves should be holders of this competence.

The purpose of this article is to briefly characterize critical thinking in the context of teachers' personal development and to highlight the importance of this competence in active and responsible functioning in modern reality, with a particular focus on critical thinking in self-management. An attempt was made to conceptualize critical thinking, taking into account the most important among the very numerous definitions and characteristics of this competence. The importance of critical thinking in the context of personal development is then described, in order to draw attention in the last part of the text to the necessity for teachers to have CT competence for effective planning and implementation of self-development.

### **Critical thinking – an attempt at conceptualization**

Although reflection on critical thinking dates back to antiquity (Paul, Adler, 2014; Vieira, Tenreiro-Vieira, Martins 2011), this competence is not easily defined or even characterized – what is included in it and what is beyond its scope. Some researchers, such as Paul, Elder and Bartell (1997) and Karbalaei (2012) argue that due to the complexity and intellectual history spanning more than two thousand years, and the broad applicability of the term, it is not possible to give one complete definition of critical thinking that encompasses all its meanings, characteristics and skills. Today, critical thinking as a competence is the subject of consideration and scientific analysis in philosophy, sociology, psychology, pedagogy, as well as neuroscience. It is analysed in the context of changes in human behaviour under the influence of new media. For more than half a century, researchers have been trying to determine what are the sub-competencies that make up critical thinking, and how the development of critical thinking processes can be supported among children, adolescents and adults, and among them – the elderly. Of particular interest is the research on

how teachers in formal education support the formation of this competence among young people. Their definitions were proposed by Peter A. Facione, 1990, Richard Paul, Robert Ennis, Diane Halpern, Scriven and Paul and the contributions made by other theorists as Ennis (1989) and Lipman (1991), among others.

Robert Ennis argues that CT is rational and reflective thinking that focuses on deciding what to believe or do (cf. Ennis, 1996a, 1996b, 2007, 2011). This simple yet open-ended definition of critical thinking leaves open the possibility of interpreting what abilities/skills comprise this competency and who a critical thinker is, while emphasizing how this competency is important from a personal development perspective, as it supports the decision-making process supported by prior reflection, thought and analysis.

Peter A. Facione, on the other hand, on the basis of research carried out using the Delphi method, distinguished 6 dimensions (skills/sub skills) of critical thinking. They are: (1) Interpretation, and among them: Categorizing, Investigation, Decoding, Clarifying; (2) Analysing (Analysing ideas, Identifying Arguments, Analysing Arguments); (3) Evaluating (Assessing Claims, Assessing Arguments); (4) Interfering (Querying, Conjecturing, Concluding, Developing Reasons); (5) Expressing (Stating Results, Describing Procedures, Stating Arguments); (6) Monitoring (Self-examination, Self-Correction). It can be noted that all the dimensions of critical thinking listed by Facione take an active part in the processes of personal development.

According to Davies and Barnett (2015), a traditional view of CT in the context of higher education implies a focus on the skills such as “rigorous argumentation, assessing propositions, analysing inferences, identifying flaws in reasoning [and] judgement formation” (p. 12) which reflect the characteristics of the skills-based critical thinking perspective. These are processes that go a long way in guarding against persuasion and manipulation, and in assessing which decisions/actions are beneficial to the individual, enabling his or her development, and which limit it.

Changes in the way theorists define CT reflect the emergence of a more holistic view of the conceptualization of critical thinking: in addition to the ability to engage in cognitive skills, a critical thinker must also have a strong intention to recognize the importance of good thinking and have the initiative to make better judgments. In other words, the cognitive component and the dispositional component together determine a person’s actual thinking

performance (Ku, 2009; Halpern, 1998.). In addition, critical thinking is supposed to have a practical dimension, that is, to affect (desirable) changes in an individual's behaviour and support him in his personal and professional development.

In conclusion, it should be emphasized that critical thinking is directed toward achieving a specific goal, making decisions or solving problems (Aránguiz, 2020). The authors of the definition emphasize the key role of critical thinking in making decisions, establishing judgments/opinions, verifying the truthfulness, reliability and usefulness of information. In the context of the challenges of everyday life, but also in solving complex social, economic, environmental problems today and in the future, critical thinking is crucial (Merma-Molina et al., 2022), also on an individual level, as it enables critical thinkers to gain insight into themselves, to challenge their own judgments, decisions, and to orient themselves to eliminate deficiencies in their thinking, and in a broader context, personal development.

### **Critical thinking as a factor in teacher self-development**

Critical thinking is described as a process of self-regulation, which is a component of learning and development (Ku, 2009). This means that having this competence allows an individual to critically assess his own predispositions, strengths. In addition, the competence of critical thinking makes it possible to reflect on what other competencies/ skills/ abilities/ knowledge the individual needs in order to develop himself and achieve his goals. According to the definition of critical thinking proposed by Cheng and Wan (2017), a critical thinker evaluates the quality of his or her thinking, including in terms of the relevance of the information obtained to his or her own development. With critical thinking, a person with this competency can also question the goals he or she has set and the methods/means of achieving them. Critical thinking, when viewed from the perspective of educational psychology, is a complex process of reflection that helps individuals become more analytical in their thinking and personal and professional development (Phan, 2010). According to Huy P. Phan, critical thinking supports an individual's motivation for self-development, learning and acquiring more competencies, so it is an important component of self-management. In his research, Phan obtained results indicating that in the area of teaching and learning, the practice of critical

thinking provided future teachers with the skills to improve and develop content and methodological competencies (Phan, 2010).

It is worth noting the relationship between critical thinking and self-efficacy (cf. Bandura et al., 1975). Self-efficacy belief as a motivational construct plays a central role in the development of critical thinking, and vice versa – thanks to critical thinking, an individual is able to realistically assess the quality and effectiveness of his actions and to undertake reflection on these actions. Thus, these are abilities that intertwine and condition each other. In addition, on the one hand, a positive attitude and belief in one's own abilities result in motivation for development; on the other hand, a lack of motivation is an obstacle to critical thinking. Since self-efficacy beliefs are described as the main elements of motivation, especially in the context of behaviour change and self-development, they can effectively support critical thinking processes (Sang et al., 2010). In a study by Marzieh Dehghani and colleagues (2011), they obtained results that indicate that there is a significant strong correlation between self-efficacy and critical thinking among Iranian students. Higher levels of critical thinking competence were associated with higher reported levels of self-efficacy beliefs among young adults. Thus, the authors of the study emphasize that critical thinking is the key in developing self-efficacy. In addition, it should be emphasized that from a developmental perspective, such characteristics of the individual as consistency and determination in pursuing goals and plans, intrinsic motivation and commitment are important here (Pikuła, 2016). Critical thinking is an individual's resource that supports the formation of these qualities and thus supports the processes of self-development.

It should be added that critical thinking is the core shared by such concepts related to personal development as Howard Gardner's (1983) theory of multiple intelligences; Salovey and Mayer's (1990) theory of emotional intelligence, and Carpenter's (1993) and Garmez and Mansten's (1991) competency-based maturity model.

In the work of a modern teacher, critical thinking is a key competence – in many contexts – and is a factor of self-development. First of all, critical thinking activates critical reflection, while critical reflection enables insight into oneself and answers the question: *What do I need? What am I striving for? What is my resource and what is a limitation?*

A critically thinking teacher is, therefore, capable of recognizing the persuasion and manipulation to which he, the students and the school as an institution are subjected. According to the model for describing the role of the modern teacher as an emancipated person, a feature of his personality is a rebellion against imposed solutions and a willingness to seek his own alternative proposals that could replace the existing ones. Critical thinking and related reflective abilities in perceiving the world are advanced in him (Nowak-Łojewska, 2011). An emancipated teacher, being critical and reflective, acquires the tools to change his own practice; he learns how to teach while preparing himself for continuous improvement in accordance with the postulate of lifelong education and continuous development in a society of permanent change. A critically thinking, emancipated teacher masters the knowledge of the process of discovery and creation of knowledge combined with the knowledge of the methodology of the discipline being taught in the sciences of education; he or she develops the criticism, openness and courage so essential in the reorientation of education and the concept of school (Szempruch, 2012). It seems that undertaking critical reflection by a teacher will allow him to teach with passion and commitment; it can be a defence against professional burnout syndrome, and at the same time, against exploitation and manipulation. It can deepen the understanding of the mechanisms affecting educational reality and the specific behaviours, attitudes expressed by its subjects – students, parents, other teachers. It also allows to adapt the teacher's practice to the conditions of a dynamically evolving world, to keep up and even predict the directions of change (Czaja-Chudyba, 2013).

The teaching profession nowadays includes the need for constant learning, updating knowledge, acquiring new skills and developing the existing ones. According to Miranda N. Florea and Elena Hurjui and colleagues, critical thinking is an essential skill – their own and their students' – that teachers and professors develop in order to learn. Through critical thinking, it is possible to determine what is worth learning, as well as to evaluate the reliability, usefulness of information and skills. In addition, critical thinking is necessary to improve cognitive abilities, such as comprehension, knowledge construction, and decision-making, and in freeing oneself from biases (Bassham, 2011). Ali Khavanin and colleagues (2021), on the other hand, emphasize, based on the results of their own research, that critical thinking abilities are strongly

correlated with self-esteem. Self-esteem, in turn, is the component that determines self-development processes.

Critical thinking is an essential component in the successful teaching of any subject. It should be the central focus of any professional development programme. Thus, in order to effectively implement the tenets of Education for the Future in a global information society, teachers must themselves possess CT competence and be able to shape it among their students.

The need to develop critical thinking among students, and even to teach them how to be critical thinkers, has been recognized and has become a major concern among educators, teachers and researchers in recent decades (Aliakbari, Sadeghdaghighi, 2013). However, less attention has been paid so far to the extent to which teachers possess critical thinking competence and to what extent, being CT holders, they are able to develop it in young people – their students. More often, researchers have analysed the level of critical thinking among students of various fields of study and study levels.

In line with teaching aimed at developing critical thinking, the teacher should encourage the student to engage in reflection, to come to personal reflections, and the teacher should accept the student's making mistakes. Critical thinking competence can allow one to reorganize the ways of one's own functioning in school, teaching, going beyond the comfortable ways of implementing curriculum content, as well as forming intellectual humility and refraining from quick judgments in the daily work of a teacher

In order for students to acquire and later develop critical thinking competence, the attitude of a "critical thinker" must be formed among them. As Kelly Yee Lai Ku (2009, p. 71) notes, "a critical thinker must also have a strong intention to recognize the importance of good thinking and have the initiative to seek better judgment." This willingness to self-regulate can be described in terms of executive function, key dispositions toward thinking, the motivation to think and learn, and the perceived need to use specific cognitive processes when solving problems. Executive function refers to metacognitive processes, used to self-regulate thought.

It is extremely important to integrate critical thinking with other competencies, like guided inquiry, experimenting, seeking evidence with support, teamwork and communication (Forawi, 2016).

The ability to think critically is not innate, but develops over time and experience. This fact is particularly emphasized by some authors, noting that

in order for students to be able to use critical thinking skills in extracurricular (professional, personal) situations, they must first be taught how to develop particular skills so that, in accordance with the principle of life-long learning, they can continuously improve this competence.

### Summary

Critical thinking includes the component skills of analysing arguments, making inferences using inductive or deductive reasoning, judging or evaluating, and making decisions or solving problems. Having critical thinking competency enables people to perform basic, but important activities, for example, distinguishing whether information received from the environment is correct or false. However, CT is not only relevant for the individual, but also for the progress of society, having become one of the fundamental pillars of the new knowledge-based economy (Norman et al., 2017).

Undoubtedly, critical thinking is a very important factor in self-development, guiding this development and setting the pace. Without CT competence, an individual is unable to determine what he needs, what he is aiming for, what his strengths and weaknesses are, and how to effectively develop his next skills and competencies, becoming a person who is not subject to persuasion and manipulation. In the context of teacher development, critical thinking is particularly important, as teachers must work in the present to prepare students for the future, while focusing on self-development. Therefore, critical thinking should be encouraged in the process of teacher education. To this end, it is worth planning and implementing quantitative research to determine at what level critical thinking competence is formed among the candidates for the teaching profession, and then plan adequate interactions that – in response to the needs of future teachers – will allow them to develop CT competence and take care of their own development.

**Abstract:** Critical thinking is described as a competence for the future, a key competence in a global information society, enabling efficient and proactive action in a changing reality in which individuals must cope with information chaos. In addition, the competence of critical thinking is exceptionally important in the context of self-development, and especially – the development of teachers, because this professional group has to cope in its work with unpredictability, ambiguity, the need to constantly verify information, update existing competencies and acquire new ones. Critical thinking also makes it possible to discover weaknesses/deficiencies in one's own thinking, shortcomings in one's skills, and make judgments based on evidence/arguments. The article addresses the issue of critical thinking in the context of teacher development. Attention was paid to the understanding of the concept of "critical thinking" as a key competence in the modern world, and it was pointed out how critical thinking supports the process of self-development, especially among teachers.

**Key words:** critical thinking, teacher, self-development, key competence

**Streszczenie:** myślenie krytyczne jest określane jako kompetencja dla przyszłości, kluczowa w społeczeństwie globalnej informacji, umożliwiająca sprawne i aktywne działanie w zmieniającej się rzeczywistości, w której jednostki muszą sobie radzić z chaosem informacyjnym. Ponadto, kompetencja myślenia krytycznego wyjątkowo ważna jest w kontekście samorozwoju, a szczególnie – rozwoju nauczycieli, bowiem ta grupa zawodowa musi w swojej pracy radzić sobie z nieprzewidywalnością, niejednoznacznością koniecznością nieustannego weryfikowania informacji, aktualizowania posiadanych kompetencji i nabywania nowych. Myślenie krytyczne pozwala także odkryć słabości/niedostatki własnego myślenia, braki w zakresie posiadanych umiejętności oraz wydawać oparte na dowodach/ argumentach sądy. W artykule podjęto problematykę myślenia krytycznego w kontekście rozwoju nauczyciela. Zwrócono uwagę na rozumienie pojęcia „myślenie krytyczne” jako kompetencji kluczowej we współczesnym świecie oraz wskazano, jak myślenie krytyczne wspiera proces samorozwoju, szczególnie wśród nauczycieli.

**Słowa kluczowe:** myślenie krytyczne, nauczyciel, rozwój osobisty, kompetencja kluczowa

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