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## **CRITICAL THINKING FOR BUILDING A SOCIETY OF PEACE: AN ANALYSIS OF ADOLESCENTS' OF SELF-ASSESSED COMPETENCE LEVEL**

### **MYŚLENIE KRYTYCZNE NA RZECZ BUDOWANIA SPOŁECZEŃSTWA POKOJU: ANALIZA POZIOMU SAMOOCENY KOMPETENCJI WŚRÓD MŁODZIEŻY**

**Streszczenie:** Myślenie krytyczne jest obecnie uznawane za jedną z kluczowych kompetencji na rzecz zrównoważonego rozwoju oraz za jedną z najważniejszych umiejętności funkcjonowania we współczesnym społeczeństwie opartym na wiedzy. Zyskuje również coraz większe znaczenie w dyskursach dotyczących edukacji pokojowej i szerzej – w koncepcji budowania społeczeństwa pokoju. Artykuł prezentuje wyniki badania, którego celem było określenie deklarowanego przez młodzież poziomu kompetencji w zakresie myślenia krytycznego, rozumianego jako warunek odpowiedzialnego i skutecznego działania w złożonej i niejednoznacznej rzeczywistości społecznej. W badaniu wzięło udział blisko 900 uczniów szkół podstawowych i ponadpodstawowych z południowej Polski. Analiza wyników

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wykazała istotne statystycznie różnice w poziomach samooceny. Uczniowie płci męskiej ocenili swoje kompetencje w zakresie myślenia krytycznego wyżej niż uczennice. Zmiennymi różnicującymi odpowiedzi były również miejsce zamieszkania oraz poziom wykształcenia. Wyniki zostały omówione w kontekście rozwijania kompetencji dla pokoju i edukacji włączającej.

**Słowa kluczowe:** myślenie krytyczne, kompetencje przyszłości, zarządzanie sobą, edukacja dla pokoju, kompetencje dla pokoju

**Abstract:** Critical thinking is nowadays the competence most frequently mentioned in the context of sustainable development. It is described as a competence of the future in the information society and is analyzed in the context of education for peace and, more broadly, the building of a society of peace. This article attempts to determine the declared level of critical thinking competence, which conditions effective action in a complex and ambiguous reality, for building a peaceful society. Nearly 900 elementary and secondary school students located in the southern part of Poland participated in the study. The analysis of the survey results shows that male students rated their critical thinking competencies higher than female students. Similarly, other variables, such as place of residence and level of education, significantly differentiate students' responses.

**Keywords:** critical thinking, self-management, competencies of the future, competencies for peace.

### **Introduction**

In the context of building a society of peace and cooperation, critical thinking assumes particular importance, as it fosters an informed, reflective, and ethical understanding of the world and supports efforts toward positive social change, including a strategic yet peaceful approach to conflict resolution. It is highlighted as playing a central role in logical reasoning, decision-making, and especially in solving complex problems that require in-depth reflection and analytical approaches (Parra et al. 2002; Butler 2015).

As Henry Siegel (1998) notes, although the term "critical thinking" is relatively new, the essential ideal it conveys has been recognized as a fundamental educational value by many historically significant philosophers concerned with education. Thus, despite its long tradition, the concept remains current, and the issue of possessing and developing critical thinking competence continues to be relevant – particularly in a mediatized world where individuals are constantly bombarded with information they must filter, verify, and respond

to. Bearing in mind the importance of building a global society grounded in the peaceful coexistence of diverse nationalities, social groups, and ethnicities, this article presents the results of a study on the declared level of critical thinking among students aged 13–20.

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

As noted by one of the researchers specializing in critical thinking, Peter A. Facione (1990), critical thinking is an intentional, self-regulated judgment that results in interpretation, analysis, evaluation, and inference, as well as an explication of the evidence, concepts, methodology, criteria, or context on which the judgment is based. According to Taimura and Sattar (2019), critical thinking is an individual's ability to apply higher-order rational thinking skills such as analysis, synthesis, problem recognition and solving, inference, and evaluation. Critical thinking has its roots in the biology of the human mind. Stefan Florek (2012), in his search for the neurobiological basis of critical thinking, noted that certain regions of the neocortex are responsible for this type of cognition. Matthew Lipman (2003), on the other hand, argued that critical thinking comprises mental skills related to cognitive responsibility, objectivity, utility, and logicity. According to Lipman, critical thinking is synonymous with the ability to make informed judgments, engage in self-correction, and remain sensitive to context. Diane Halpern (2014), in turn, defines critical thinking as the use of cognitive skills or strategies that increase the likelihood of achieving a desired outcome. She further characterizes critical thinking as purposeful, thoughtful, goal-directed thinking engaged in problem solving, formulating conclusions, calculating probabilities, and making decisions. In her analysis of the concept of critical thinking, Halpern groups thirty-four specific abilities into five domains: verbal skills, analytical skills, hypothesis testing, dealing with uncertainty and probability, and decision making and problem solving (Halpern 2003a, Halpern 2003b).

It is worth noting that language is fundamental to critical thinking—this type of cognition operates on verbal material and involves evaluating it (Facione 1990). According to Harvey Siegel (1998), a critically thinking person is guided appropriately by the justifications embedded in language. Therefore, critical thinking is fostered by tasks and methods that treat language as a living, dynamic phenomenon, enabling the clear expression of opinions, argumentation, concept definition, definition evaluation, assumption identification, argument analysis, deductive and inductive reasoning, assessment of observational results, evaluation of information source reliability, and interaction with others – all of which emphasized, are essential to critical thinking.

### **Critical thinking in the context of building a society of peace**

Critical thinking helps identify hate speech and the mechanisms that can lead to the dehumanization of social groups and the escalation of violence. Critical thinking is of paramount importance in the context of identifying the causes of conflict, violence, and injustice. It enables a deep understanding of these phenomena, including their structural and historical conditions, as well as the consideration of alternative perspectives and diverse solutions. Critical thinkers are capable of identifying bias, misinformation, and manipulation that can lead to the escalation of conflicts (Kaur 2018).

Moreover, critical thinking allows for deeper reflection on values and attitudes. In peace education, the key values include empathy, justice, equality, and respect for human dignity. Critical thinking promotes reflection on these values and enables an assessment of whether individuals' beliefs and actions align with ethical norms and the principles of peace. In this context, young people should be able to learn how to challenge dogma and stereotypes and evaluate how their own actions affect others (Bar-Tal, Rosen 2009). The acquisition and development of this competence should take place at school and, in the context of creating a peaceful society, through peace education – understood as a holistic process of developing human potential to coexist in less violent ways, and seeking to understand others rather than judging them (Shapiro 2015). Possessing this competence is also essential in developing social and moral responsibility. Critical thinking involves reflecting on the consequences of one's actions and making responsible decisions that do not harm others. A peaceful society consists of individuals who understand how their actions impact others and who are willing to act ethically for the common good. Additionally, critical thinking prepares individuals for active participation in social and political life, enabling them to evaluate policies, decisions, and actions of authorities. In this way, they can support initiatives that promote peace, democracy, and human rights – and oppose injustice and violence.

### **Methodological assumptions of the study**

The purpose of the study was to diagnose and describe the level of critical thinking declared by students aged 13–20, while the subject of the study concerned students' self-reports regarding which components of critical thinking competencies they believed described them (i.e., which they claimed to possess). The research problem was formulated as the following question: What is the declared level of critical thinking among students aged 13–

20? For the purposes of the present study, only the students' declarations regarding critical thinking were analysed, although the questionnaire also included items related to other competencies defined as "key competencies for sustainable development".

The survey was conducted among 877 students in grades VII and VIII of elementary and secondary schools located in the Małopolska region. Students participated in the study either after giving their own consent or upon providing parental consent. The survey was completed during class time. In the analysis of the collected data, the following independent variables were taken into account: the gender of the respondent, their place of residence and level of education. The sample consisted of 53.02% girls and 46.98% boys. Of the total number of respondents, 59.18% were in elementary school, while the remaining students were in secondary school. Regarding place of residence, 36.15% of students lived in rural areas, 33.98% in small towns, and 29.87% in large cities.

### Survey results

Possessing critical thinking competence is extremely important in a society where young people are constantly bombarded with information and exposed to persuasion and manipulation. As the analysis of the survey results indicates, nearly half of the surveyed students demonstrated a high level of competence related to critical thinking (49.14%). Nearly 42% achieved a competence index indicating a medium level, while a low level in this area characterized almost one in ten participants (9.01%). Nearly one-quarter (23.03%) of respondents indicated that all ten statements described them. Conversely, only 0.34% (30 students) did not identify with any of the critical thinking competence statements.

Among the set of statements indicating critical thinking competence, students most frequently selected drawing conclusions from their own past experiences – 91% of respondents identified this statement as applicable to themselves. The second most commonly chosen statement was “curiosity about the surrounding reality”, marked by 78.8% of students. The distribution of responses for each statement is presented in Table 1.

**Tab.1. Students' indications of the various statements that make up the critical thinking competency**

Statement	Percentage of Students Who Agreed (%)
<i>1. I always evaluate the opinions and arguments of others</i>	68,53
<i>2. When making a decision, I consider and compare opportunities</i>	76,28

<i>and risks</i>	
<i>3. I take a critical look at my surroundings</i>	57,58
<i>4. I learn from my own experiences</i>	90,99
<i>5. I analyze conditionality regarding various issues and situations</i>	54,28
<i>6. I reflectively consider the problems that affect me</i>	74,23
<i>7. I justify my ideas</i>	72,63
<i>8. I ask a lot of questions to people I interact with</i>	62,60
<i>9. I am curious about the surrounding reality</i>	78,79
<i>10. I like solving puzzles, participating in games, quizzes</i>	74,34

A trend of male students more frequently indicating individual statements related to critical thinking competence continues. An exception is the most frequently selected item – “I draw conclusions from my own experiences” – where the results for male and female students are similar. However, in most cases, gender significantly differentiates the frequency of indications. The relationship between the variables is statistically significant, as is the difference between means: the average index value for female students is 6.30, and for male students, 8.01. Among all respondents, 11.40% of girls and 36.17% of boys marked all the statements describing critical thinking competence as applicable to themselves. Furthermore, a high level of critical thinking was indicated by 35.27% of female students and 64.81% of male students. The largest gender-based differences appeared in responses to the statement “I analyse the conditions regarding various issues and situations”, which was marked as appropriate by only about 42% of female respondents and nearly 68% of male respondents. Other items that showed substantial differences included “I always evaluate other people’s opinions and arguments”, “I justify my ideas”, and “I ask a lot of questions to people with whom I interact”.

The results for elementary and high school students were similar. A high level of competence was demonstrated by 47.01% of elementary school students and 52.23% of high school students, while a low level was indicated by 10.40% of the younger group and 6.98% of the older group. The average index value for elementary school students was 6.95, compared to 7.32 for high school students. A statistically significant difference was observed for only two statements: “I analyse the determinants of various issues and situations” and “I reflectively consider the problems that affect me” Both were more frequently selected by high school students, i.e., those in late adolescence. Older students were also slightly more likely to

agree with the statements mentioned above. Interestingly, only about three-fourths of all respondents indicated that they enjoy playing games and quizzes or solving puzzles.

Regarding the size of the locality in which respondents lived, a statistically significant relationship was found for three statements: “I always evaluate the opinions and arguments of others”, “I critically look at my surroundings”, and “I analyse the conditions regarding various issues and situations”. All three statements were most frequently selected by students living in rural areas. In the case of the last statement, the frequency of positive responses decreased as the size of the locality increased.

The analysis of responses by students from rural areas, small towns, and large cities revealed certain differences. For instance, the maximum number of items selected as appropriate was marked by 32.81% of students from rural areas, 14.09% from small towns, and 21.37% from large cities. A high level of critical thinking competence was indicated by 56.78% of students from rural areas, 44.63% from small towns, and 45.04% from large cities. The highest number of indications for the statement “I analyse the determinants of various issues and situations” was observed among students living in rural areas.

Similarly, female students from rural areas were more likely to choose the statement “I always analyse the conditions regarding various issues and situations” as appropriate for themselves compared to their peers living in small towns and large cities. The same pattern applied to the statement “I always evaluate other people’s opinions and arguments”. Among the ten statements describing critical thinking competence, none was selected less frequently by rural students than by students living in medium-sized or large cities.

### **Discussion and conclusions**

Critical thinking plays a key role in shaping future decision-makers and socially conscious citizens. Gender differences in the self-assessment of critical thinking competence, as well as those related to place of residence, indicate the need to strengthen education in this area – particularly among groups reporting lower levels of this competence.

When analysing students’ self-assessments of the components of critical thinking competence, special attention should be paid to the characteristics of those who rate themselves the lowest. The tendency for girls to report lower self-esteem in various domains, including academic achievement, is well documented in the literature (see: Chubb et al. 1997; Agam et al. 2015; Birndorf et al. 2005; Seiffge-Krenke et al. 2009). Low self-esteem among female students presents a significant challenge for educators. It is essential to take steps to

strengthen girls' confidence in their critical thinking abilities and, in doing so, to foster a high sense of self-efficacy. Moreover, students should learn how critical thinking informs their decisions, influences their actions, and, from a broader perspective, shapes social life.

Regarding the slightly lower results obtained by elementary school students compared to high school students, these differences may be explained by the differing curricular requirements and methods of implementation at both levels of education. It is possible that the structure of the core curriculum in secondary education allows for greater opportunities to develop critical thinking skills. In high schools, teachers may place greater emphasis on fostering these competencies, recognizing their importance for the future lives of their students. One could also argue that younger students may lack full awareness of the competencies they are acquiring and developing through education. As a result, they may be more cautious in evaluating their abilities or may simply be unable to recognize situations that demonstrate the use of such competencies.

One of the most surprising findings of the study is that students living in rural areas assessed their critical thinking competence the highest. This trend is supported by findings from other studies that show rural children often report higher self-esteem than their urban peers (Yang, Fetsch 2007; Roscigno, Crowley 2001; Fan, Chen 1999). Rural students appear more optimistic in evaluating their own competencies. It is possible that these competencies are indeed stronger among rural students, which could be attributed to smaller class sizes and greater opportunities for individualized work with teachers who serve as mentors or guides. These conditions may better support students in thinking reflectively about their own lives, their capacity for social change and continuity, and the consequences of their actions.

In contrast, students from large cities often benefit from greater access to education and face heightened competition. Their self-assessments may reflect the higher expectations placed on them by their environments and the socio-cultural pressures they experience.

The method used in this study has its limitations. Most importantly, the questionnaire was based on students' self-assessment. Future research should aim to measure the actual level of critical thinking among adolescents. It is also worth examining which methods teachers use to foster students' critical thinking skills and to what extent they consider this competence to be among the most essential today.

Within peace education, critical thinking supports the development of attitudes grounded in empathy, justice, and respect for human dignity. These, in turn, promote the peaceful resolution of conflict and the building of harmonious interpersonal relationships.



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