



***Formative Dimension of Edward de Bono's Six Thinking Hats.
 Pedagogical perspective
 Formacyjny wymiar sześciu kapeluszy myślenia Edwarda
 de Bono. Perspektywa pedagogiczna***

ABSTRACT

RESEARCH OBJECTIVE: The aim of the article is to explore the understanding of the importance of applying Edward de Bono's six thinking hats in the space of human formation.

THE RESEARCH PROBLEM AND METHODS: The following research problem is as it follows: What is the formative dimension of applying de Bono's six hats from a pedagogical perspective? The hermeneutic method will be used to answer this research question.

THE PROCESS OF ARGUMENTATION: Achieving the research goal requires analysis of the collected data in the following areas: formation related to integral development and education, critical and creative thinking, which constitute the basis for understanding lateral thinking from the pedagogical perspective. Next, the formative dimension of de Bono's six hats will be presented, taking into account a personalistic approach.

RESEARCH RESULTS: The hermeneutical analysis explored the importance of applying de Bono's six thinking hats, not only from a behaviorist perspective but also from a personalist perspective, emphasizing the spiritual element in the human formation. This reference to critical and creative thinking led to exposing the formative dimension of the method, fostering a deeper awareness and axiological consciousness.

CONCLUSIONS, RECOMMENDATIONS AND APPLICABLE VALUE OF RESEARCH: The collected research material highlights the value of applying de Bono's six hats method in the context of formative education, which encompasses the integral upbringing and development of a person, who gets to the central of own internal incoherence on the path to achieving a new quality of identity. Therefore, it is important to implement this method in various educational settings, exploring its connection to the formative development of a sense of identity. Such an approach indicates a novelty and demands further research within a broad, interdisciplinary framework.

→ **KEYWORDS:** **INTEGRAL DEVELOPMENT, INTEGRAL UPBRINGING, SIX THINKING HATS, FORMATION, LATERAL THINKING**

STRESZCZENIE

CEL NAUKOWY: Celem badawczym artykułu jest eksploracja rozumienia znaczenia zastosowania sześciu kapeluszy myślenia Edwarda de Bono w przestrzeni formacji człowieka,

PROBLEM I METODY BADAWCZE: W artykule postawiono następujący problem badawczy: Jak przedstawia się formacyjny wymiar zastosowania metody sześciu kapeluszy de Bono w perspektywie pedagogicznej? Udzielenie odpowiedzi na postawione pytanie badawcze będzie miało miejsce dzięki zastosowaniu metody hermeneutycznej.

PROCES WYWODU: Osiągnięcie celu badawczego wymaga analizy zgromadzonych danych w zakresie: formacji odnoszącej się do integralnego rozwoju i wychowania, myślenia krytycznego i twórczego, stanowiącego podstawę rozumienia myślenia lateralnego w pedagogicznej perspektywie. Następnie zostanie ukazany formacyjny wymiar sześciu kapeluszy de Bono, domagający się kompetentnego ich zastosowania z uwzględnieniem podejścia personalistycznego.

WYNIKI ANALIZY NAUKOWEJ: Wynikiem prowadzonej analizy hermeneutycznej jest eksploracja rozumienia znaczenia zastosowania metody sześciu kapeluszy myślenia de Bono, nie tylko w behawiorystycznej perspektywie, ale także personalistycznej, eksponującej duchowy pierwiastek w formacji człowieka. Odniesienie się do myślenia krytycznego i twórczego poprowadziło do wydobycia formacyjnego wymiaru omawianej metody, sprzyjającej pogłębieniu świadomości i czujności aksjologicznej.

WNIOSKI, REKOMENDACJE I APLIKACYJNE ZNACZENIE WPŁYWU BADAŃ: Zgromadzony materiał badawczy akcentuje wartość stosowania metody sześciu kapeluszy de Bono w przestrzeni formacyjnej sięgającej do integralnego wychowania i rozwoju człowieka, który dociera do centrum własnej niespójności wewnętrznej na drodze osiągania nowej jakości własnej tożsamości. Dlatego też ważne jest sięganie do wspomnianej metody w różnych przestrzeniach edukacji, eksplorując jej powiązanie z formacyjnym kształtowaniem poczucia tożsamości. Takie nowoczesne podejście domaga się dalszych badań w szerokim, interdyscyplinarnym zakresie.

→ **SŁOWA KLUCZOWE:** INTEGRALNY ROZWÓJ, INTEGRALNE WYCHOWANIE,
SZEŚĆ KAPELUSZY MYŚLENIA, FORMACJA,
LATERALNE MYŚLENIE

Introduction

The research aim of the article is to explore the understanding of the importance of using Edward de Bono's six thinking hats (2009a) in the space of formation of a person, who consciously uses them in undertaking a logical, coherent, internally objectified discourse in the field of solving problems of a multiple nature, including moral dilemmas. Achieving this goal requires an attempt to answer the research question: What is the formative dimension of applying de Bono's six hats method from a pedagogical perspective? It is worth noting that the topic of this article is a novelty in the field under discussion. It

will be presented in a theoretical framework that can initiate empirical research. It can be added that the use of the hermeneutic method (Adamska-Staroń & Łukasik, 2012) seems justified here, especially, considering the nature of the formulated goal and research problem. It should be noted that hermeneutics is a method that describes and interprets the human world, which must be understood like a text. The goal of hermeneutic cognition is understanding this what is specifically unitary, but perceived in the context of wholeness (Adamska-Staroń & Łukasik, 2012, p. 131; Jakubowski, 2006, s. 97). What is more, Anna Mróz states that hermeneutics is understood as a theory of interpretation and understanding of spoken or written texts and hermeneutics as a method of the humanities (2015, p. 107), in which understanding is one of the central categories of hermeneutics tightly connected with interpretation and its principles, which differ from the principles of explanation (Mróz, 2015, p. 110), what also is reflected in the hermeneutic text analysis (Boell & Cecez-Kecmanovic, 2014).

All in all, answering the research question requires an analysis of categories such as formation and de Bono's six thinking hats, with its brief reference to the following concepts: critical, creative, and lateral thinking, in the light of pedagogical perspective indicating the formative dimension of this method that can foster integral development of a person who might discover a new quality of own identity.

The Essence of Formation in the Personal Development

The term "formation" appears more and more often in social sciences (e.g. Nowak, 2001; Marek, 2017; Paszkowska, 2016; Mastalski & Siewiora, 2017; Cencini, 2005a; Cencini 2005b). Therefore, it refers not only to the formation of priestly and religious life (Kożuch, 2001; Goya, 2007; Leśniak & Popowski, 2006). It is worth noticing that Marian Nowak, analyzing this term, highlights its close connection with upbringing. According to him, formation and upbringing are often treated equally as synonym. What is more,

[...] formation is seen as the goal, the final result of a complicated upbringing process; formation subjugates upbringing in the sense that upbringing is a general term applied to all kinds of pedagogical activity, formation has a narrower application — is specific, it is an element of upbringing; upbringing is directed towards moral and social aspects, while formation would cover the intellectual, cultural, and spiritual aspects (Szymańska, 2017, p. 18).

They enable transferring the formation into auto-formation that needs increasing the quality of reflective self-awareness and self-consciousness, particularly, the dispositional self-consciousness and situational self-awareness (Majolo et al., 2023). These notions can be explained in such a way:

The dispositional self-consciousness construct (DSC) refers to a stable trait of personality resultant of an individual history of self-focusing operationalization and developmental sediment. On the other hand, situational self-awareness (SSA) refers to a transient state

of self-focused attention dependent on the control of the environment stimulation (Majolo et al., 2023, p. 1).

Both constructs foster developing the deeper look inward and outward. Ulric Neisser states that

To look inward is to focus on mental representations, on the self-concept, or inner experience. To look outward is to see the self as embedded in its environment, ecologically and socially situated in relation to other objects and persons (Neisser, 1994, p. 392).

These two ways of human perception do not exclude one another. They are complementary in gaining the more objective knowledge of the self through the inwards and outwards reflective observation enhancing the process of self-awareness and self-consciousness corresponding with the axiological awareness and consciousness (Kowalski & Falczman, 2010) based on the courageous search for the truth (Kowalczyk, 2006, p. 176; Płotka, 2016) stimulated by curiosity understood as one of an important factors determining the integral development covering the spheres: *biological, psychological, sociological, cultural and spiritual* (Kunowski, 2000, pp. 198–204). The mature growth of these spheres is conditioned by the powers of upbringing: *bios, logos, ethos, agos, loss/fate* (Kunowski, 2000, pp. 172–181), that need formation. It is associated with shaping the following developmental structures, related with these spheres: temperament, individuality, moral character, creativity, the conscious view on life. The spheres with their developmental structures are formatted with the use of adequate to them integral upbringing functions: *sanare, edocere, educere, educare* and *initiare/christianisare* (Kunowski, 2000, pp. 245–252), where the last one appears significant particularly for spiritual maturity, having a great impact on the trajectory of the process of harmonious human development. It shapes the quality of conscious attitude to self and others and can make the relationship between upbringing and self-consciousness and self-awareness visible from inward and outward perspective that acknowledges the meaning of formation and auto-formation in obtaining a new quality of identity (Cencini, 2005a). This needs undergoing the constant process of formation (Cencini, 2005b). Here, it is worth noticing that

[...] formation starts when the person is conscious of their own central incoherence that affects the integrity of a personality and is reflected in behaviors, attitudes, feelings (emotions) and incentives that shapes the cognition of our own identity, Gods image, the image of another man, and ideals (Szymańska, 2017, p. 19).

Looking through the transformative lenses on the self in the light of the formation process, understood in the context of the spiritual traditions, involves a concern for the personal wholeness, in which identity and integrity are coherently harmonious. The appropriate trajectory of formation process requires the wisdom, courage, humility, openness and readiness for taking up challenges that can creatively transform the approach to self, others, God and environment, regardless of the cost the person might pay for. From this

context, the importance of one of the cognitive factors determining this process emerges. It seems to be the thinking (O'Connor & McDermott, 2012), deepening self-awareness and self-consciousness grounded in the values that foster developing the maturity of inward space, where the problems and dilemmas of different nature are solved. The results of formative activities in this area, should be reflected in the more mature and autonomous approach to inner and outer world. In this light, it is worth eliciting some methods that can foster constructing the beneficial formative space for the holistic integral development of the person. Among them, there are creative and narrative ones such as reflective and digressive diaries, journals, essays, stories etc. Also, the use of De Bono's six thinking hats as a formative method can turn out to be effective, as it fosters developing the lateral thinking (De Bono, 2008) which can shape unconventionally, creatively and critically, at the same time, the autonomous maturity of the person. Such maturity permeates a new quality of identity. It helps moulding the incentives, feelings/emotions, attitudes and behaviours, as a result of deep axiological self-awareness and self-consciousness taking place in the auto-formation.

The Edward de Bono's Six Thinking Hats as a Method Fostering the Formation of Human Being

Having considered all the issues signaled above, drawing attention to De Bono's six thinking hats as the method fostering the formation of the person, seems justified. It enables solving the research problem and achieving the research aim that oriented towards eliciting the formative dimension of this method which not only can stimulate the development of critical and creative thinking, but also the lateral one shaping the inner space of the person. That is way, first of all, sketching these sorts of thinking in the context of the six thinking hats seems important. Here, it is necessity to notice, that as the article has own limitations, the chosen terms will be presented in brief, as representative ones. Then, showing the formative dimension of this method will lead to some implications.

According to Eunice Widyanti Setyaningtyas and Elvira Hoesein Radia "critical thinking is a process that occurs in the cognitive realm which then stimulates the ability to interpret, analyze, and evaluate information, arguments or experiences" (2019, p. 83). In this context building a formative approach to self and others requires taking into considerations elements in the critical thinking activities including:

- a) identifying elements based on reasoning; b) identifying and assessing an assumption;
- c) clarifying and interpreting existing ideas; d) assessing credibility, a claim; e) assessing various arguments in various forms; f) analyzing, evaluating and explaining and making decisions; g) producing inference; h) producing arguments (Setyaningtyas & Radia, 2019, p. 83).

These critical thinking activities can be reflected in the process of implementing the six thinking hats, particularly, while putting on the white hat, that should be objective and oriented towards the true reasoning, regardless of own point of view. Here, such a thesis

emerges: the more we know, from various perspectives, about the object of discussion or discourse, the more objective argumentative assessment and decision making take place. These perspectives can be also seen wider, thanks to the creative thinking abilities and skills, which can help dealing with the enormous field of the knowledge obtained in everyday life and education, what requires “the educational system to process knowledge in new forms and go beyond the lowest level of mental skills, such as memorization, to develop students’ means, methods and strategies for thinking and ability” (Mohammed, 2024, p. 46). The method or strategy of the six thinking hats “can help students analyze problems from multiple perspectives, develop innovative solutions, and make wise decisions” (Mohammed, 2024, p. 46). Such a point of view requires referring not only to the critical thinking term, but also to the creative thinking and creative thinking skills, understood by De Bono in his perception of creativity (Mohammed, 2024, p. 46). De Bono’s understands creativity as a skill that can be learned, then developed and applied (De Bono, 2009b, p. 11). He appreciates the phenomena of our brain that is programmed in such a way that is able to create the stable patterns of acts of doing in a stable universe. Everybody can gain these abilities, but not everyone will be good at them equally. He states that for the first time in a history we can look at creativity as “logical” behaviour of some sorts of informative system, so the mystics and mystery can be eliminated from creativity (De Bono, 2009b, p. 12–13). This point of view is shown from behaviorism perspective, what, at the first sight, can be seen as a clash with the personalistic, especially, Christian light, where the formation is grounded in spirituality. But, it is a matter of perspective giving a new dimension to this method. Hence, the idea of the six thinking hats can be adapted into the practice of formation which needs creativity seen also by De Bono, as something new and valuable, what indicates the novelty in this area. The author, distinguishes the creativity of ideas from the artistic creativity. He claims that creativity of the world of art is tied up with element of “esthetic assessment”. The artist assesses what is valuable. Such assessment is completely different than skill of creating ideas. The artists can be perfect in their field, but they seem not to be good at transforming and creating new ideas (De Bono, 2009b, pp. 14–15). Understanding creativity in such a way, can trigger the wider dispute. Khairi Mahmoud H Al-Sababha states:

[...] there is confusion about the specific definition of creativity; some researchers focus on the characteristics of creative people, while others have focused on the creative product itself. Nonetheless, creative thinking skills are essential for successful learning and success in life, and creative thinking involves a set of skills that can be enhanced across the curriculum (2023, p. 2).

It also can mean generating ideas which are original, unusual, which can satisfy someone’s standard of valuable life activities exceeding many boundaries, among which there are the behavioural ones, as well. Overcoming these boundaries needs also critical thinking and critical thinking activities aiming at searching the true picture of self in its relational dimension, what in consequence, needs developing lateral thinking skills enabling the formation of a person and community. For better understanding this matter,

it is a necessity to refer to De Bono's book, entitled *The Use of Lateral Thinking*, where he discusses the differences between vertical and lateral thinking. The first one is based on logics seen in schematic, structured, and predictable way, the logic shapes the mind. The second one uses logics, but assumes that the solution to the problems can emerge from chaos of ideas etc. There is no need to be right all the time; the final conclusion has to be true. The lateral thinking means entering into the specific chaos and searching until the natural way is going to be found. The need for correctness on each stage and all the time, appears probably the biggest obstacle for new ideas (De Bono, 2008, p. 110). This kind of thinking corresponds to the qualitative research strategies, where the solutions and conclusions can be unpredictable, but in fact, they are logical and coherent. They just demand an appropriate interpretations and taking into considerations many factors such as the selective perception, emotions, logical mistakes, different experiences, far-reaching generalization, possibilities and certainties (De Bono, 2009a). Discussing the lateral thinking results in indicating four categories of principles: recognition of dominant polarized thoughts; searching the various ways of looking on the things; weakening the firm control of vertical thinking; implementing the accidental case (De Bono, 2008, p. 89–108). The lateral thinking combining the critical and creative thinking can be developed with the use of the method or strategy of the six thinking hats. That is why,

The main aim of the six thinking hats strategy is to guide students to think in a certain way, then force them to think differently, such as changing their thinking to the "green hat" mode, which engages the students' minds and enables them to see things from different perspectives (Al-Sababha, 2023, p. 3),

what is crucial in the formation of self in relationship with others, God, and the world. De Bono assumes that hats: assure the alternative for argumentation; enable deepening the issue; demand deep inquiry into the issue contents instead of showing own point of view and defending it; provide a quiet way of the change in thinking; provide the way, in which, we can ask for the concrete way of thinking; replace the aggression of argumentation with the challenge of deep examining the problem; bring out what is best in the person (De Bono, 2009a, p. 108). In the context of matters discussed above, the use of six thinking hats in the aspect of formation appears justified, what is going to be shown.

The use of white hat requires deepening the true knowledge of self in relation to others, the world, and God, particularly in the light of finding the new dimensions of central point of own incoherence that becomes the barrier on the path leading towards perfection understood through Christian lenses, which are shaped by the cardinal virtues transforming incentives, emotions, attitudes, and behaviours. The inwards conducted dialogue with self should be reflective and constructive, what needs peace, openness, courage, and humility in analyzing *pros and cons* of arguments in discussed matters. The red hat enables expressing own positive and negative feelings and emotions upon these matters, without aggression; it provides the space for good and truth, even if it is difficult, and even painful. Self-awareness and self-consciousness help direct those

feelings and emotions to the solutions, in peace, what is connected with the growth in maturity, that is revealed clearly in the black hat and the yellow one. The black hat is called “the advocate of devil” and brings the black scenery for resolving the problem. Keeping self-awareness is a necessity here, so the person takes into consideration all the possibilities and obstacles, and finally discovers the positive aspects of difficulties emerging from inner dialogue and reflection, what takes place while “putting the yellow hat on”. Here, the incidental decisions bring a new light on the problems and their solutions. The hope infuses the person and shapes motivation (incentives) that is a strong power stimulating the person to act creatively and behave wisely while discovering own mission connected with the strong passion eliciting the specific profile of own identity (Cencini, 2013; Szymańska, 2023). As a result of such use of the hats, the green hat becomes beneficial for the person, and the social environment, which is enriched by the person’s creative activities transforming not only Self, but others, as well. Thanks to the use of six thinking hats, the lateral thinking can develop having an impact on the trajectory of the process of human formation seen from the pedagogical perspective. It can be assumed that it forms the areas of integral upbringing (Rynio, 2016) leading to the human mature and coherent integral development covering the biological, psychological, social, cultural, and spiritual (religious) spheres. Furthermore, one might imply that formation taking place with the use of the method/strategy of six thinking hats, results in creating a new function for their use – the formative one, on the condition that their application is not going to be seen only through the behaviouristic lenses, but opens a new gate to the spirituality seen from the personalistic, pedagogical perspective. This perspective draws attention to the axiological self-awareness and self – consciousness deepening understanding self, God and the world. Developmental and immanent hierarchy of values (Kunowski, 2003) can correspond with the categories of principles of the lateral thinking, if they are rooted in a personalistic paradigm, which opens a new door to the competent application of the six hats method or strategy in the process of human formation comprising the incentives, emotions, attitudes and behaviours. Such an attitude becomes fruitful when the reflection on these elements of formation matches with developing the reflective skills. Thanks to them, the six thinking hats enable creative, constructive travelling inward and outward of the human entity.

Conclusion

Summing up the scientific, hermeneutic reflection on the formative dimension of the use of De Bono’s six thinking hats indicates a new personalistic and pedagogical perspective for their application in the human integral development and upbringing. Implementation of this method or strategy can foster deepening self-awareness and self-consciousness in the area of discovering own central point of inward incoherence, what should result in undertaking the activities that serve the formatting incentives, feelings (emotions), attitudes, and behaviours. Thus, their formation can have an impact on building a new

quality of identity rooted in the spiritual background, which can be revealed thanks to deploying six thinking hats in practical areas of education. Therefore, developing the lateral thinking comprising the creative and critical one in the processes of inner creative formation seems necessary, especially, when the future generations are considered to bring the civilization of the peace. Such point of view on the formative dimension of the method of six thinking hats is a novelty and requires further research.

REFERENCES

- Adamska-Staroń, M., & Łukasik, B. (2012). *Hermeneutyka pedagogiczna jako orientacja metodologiczna*. In A. Gofron & A. Kozerska (Eds.), *Propozycje metodologiczne* (pp. 119–138). Oficyna Wydawnicza „Impuls”.
- Al-Sababha, K.M.H. (2023). The effect of using the six thinking hats strategy for developing creative thinking and the learning of some gymnastic skills among primary school students. *Annals of Applied Sport Science*, 11(3), e1195.
- Boell, S.K., & Cecez-Kecmanovic, D. (2014). A hermeneutic approach for conducting literature reviews and literature searches. *Communications of the Association for Information Systems*, 34, 257–286. <https://doi.org/10.17705/1CAIS.03412>
- Cencini, A. (2005a). *Od wychowania do formacji* (D. Piekarz, Trans.). Wydawnictwo Salwator.
- Cencini, A. (2005b). *Proces formacji ciągłej. Wskazania dla każdego* (D. Piekarz, Trans.). Wydawnictwo Salwator.
- Cencini, A. (2013). *Misja albo dymisja. wymiar misyjny w towarzystwie powołaniowym młodzieży* (K. Stopa, Trans.). Wydawnictwo Salwator.
- De Bono, E. (2008). *Myślenie lateralne. Idee na przekór schematom* [The use of lateral thinking] (C. Welsyng, Trans.). Sensus.
- De Bono, E. (2009a). *Mieć piękny umysł* (How to have a beautiful mind) (O. Wojtaszczyk, Trans.). Wydawnictwo Studia EMKA.
- De Bono, E. (2009b). *Umysł kreatywny. 62 ćwiczenia rozwijające intelekt* [How to have creative ideas] (M. Bugajska, Trans.). Wydawnictwo Studio Emka.
- Goya, B. (2007). *Formacja integralna do życia zakonnego* (K. Kozak, Trans.). Salwator.
- Jakubowski, W. (2006). *Edukacja w świecie kultury popularnej*. Oficyna Wydawnicza „Impuls”.
- Kowalczyk, S. (2006). *Człowiek w poszukiwaniu wartości. Elementy aksjologii pedagogicznej*. Wydawnictwo KUL.
- Kowalski, M., & Falczan, D. (2010). *Świadomość aksjologiczna i podmiotowość etyczna. Analizy i impresje*. Oficyna Wydawnicza „Impuls”.
- Kożuch, M. (2001). *Chrześcijańska formacja indywidualna*. Wydawnictwo WAM.
- Kunowski, S. (2000). *Podstawy współczesnej pedagogiki*. Wydawnictwo Salezjańskie.
- Kunowski, S. (2003). *Wartości w procesie wychowania*. Oficyna Wydawnicza „Impuls”.
- Leśniak, F., & Popowski, R. (2006). *Formacja ludzka powołanych do kapłaństwa*. Wydawnictwo KUL.
- Majolo, M., Gomes, W.B., & DeCastro, T.G. (2023). Self-Consciousness and self-awareness: Associations between stable and transitory levels of evidence. *Behavioral Sciences*, 13(2), 117. <https://doi.org/10.3390/bs13020117>
- Marek, Z. (2017). *Pedagogika towarzyszenia. Perspektywa tradycji ignacjańskiej*. Akademia Ignatianum w Krakowie.
- Mastalski, J., & Siewiora, J. (2017). *Formacja wychowawców w kontekście przemian cywilizacyjnych*. Wydawnictwo Homo Dei.

- Mohammed, A.J. (2024). The effectiveness of the six thinking hats strategy for teaching the curriculum and teaching methods course in developing creative thinking skills and achievement among students of the Faculty of Education at the University of Tikrit. *Middle East Journal of Educational and Psychological Sciences*, 4(3), 45–53. <https://doi.org/10.56961/mejeps.v4i3.693>
- Mróz, A. (2015). Analiza hermeneutyczna narracji autobiograficznych w badaniach noetycznego poziomu rozwoju człowieka. *Rocznik Lubuski*, 41(1), 107–116.
- Neisser, U. (1994). Self-perception and self-knowledge. *Psyche & Logos*, 15(2), 392–407.
- Nowak, M. (2001). *Podstawy pedagogiki otwartej. Ujęcie dynamiczne w inspiracji chrześcijańskiej*. Redakcja Wydawnictw KUL.
- O'Connor, J., & McDermott, I. (2012). *The art of system thinking*. Thorsons.
- Paszowska, T. (2016). Formacja osoby. In K. Chałas (Ed.), *Encyklopedia aksjologii pedagogicznej* (pp. 368–372). Wydawnictwo POLWEN.
- Płotka, W. (2016). Prawda jako wartość epistemiczna: fenomenologia oczywistości i usytuowania poznania. *Filo-Sofija*, 33, 87–98.
- Rynio, A. (2016). Integralne wychowanie. In K. Chałas & A. Maj (Eds.), *Encyklopedia aksjologii pedagogicznej* (pp. 440–448). Wydawnictwo POLWEN.
- Setyaningtyas, E.W., & Radia, E.H. (2019). Six thinking hats method for developing critical thinking skills. *EST Journal of Educational Science and Technology*, 5(1), 82–91.
- Szymańska, M. (2017). *Transformative creativity in teacher formation: A pedagogical approach*. Akademia Ignatianum, Wydawnictwo WAM.
- Szymańska, M. (2023). The relationship between the harmonious passion development and the human integral development: Educational perspective in brief. *Horyzonty Wychowania*, 22(63), 33–42. <https://doi.org/10.35765/hw.2023.2263.05>

Copyright and License



This article is published under the terms of the Creative Commons Attribution – NoDerivs (CC BY- ND 4.0) License <http://creativecommons.org/licenses/by-nd/4.0/>

Source of funding

Lack of funding sources.

Disclosure statement

No potential conflict of interest was reported by the author(s).