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POTENTIAL AND ACTUAL SIGNIFICANCE OF MONTESSORI
LEARNING ENVIRONMENT*

Introduction: It is important that people who want to perform their duties in a global and uncertain reality are prepared for changes. Therefore, education can play a significant role in supporting the development of active, competent citizens. The superior task of the contemporary school is to provide an educational environment which would be a source of various experiences with the material, social and cultural world. The model solution in this regard is offered by the school environment organized according to Maria Montessori's pedagogical principles. The guiding standard for such an environment is support of the individual's potential. This is also the key rule on which the lifelong learning paradigm is based.

Research Aim: The aim of the paper is to evidence that the Montessori environment favors the development of skills necessary for lifelong learning and to verify empirically the affective significances of the educational experiences of Montessori school graduates.

Method: In order to discover the emotional significance of school experiences, the partly modified Hermans's Confrontation With Yourself method was applied.

Results: The educational experiences of Montessori school graduates are characterized by one type of emotional climate – strength and union (+HH) – in which the fulfilment of both basic motives of human behavior (of self-enhancement and contact with others) evokes positive feelings.

Conclusions: Montessori school former pupils possess intra- and interpersonal skills, necessary in lifelong learning. The Montessori model of education supports the development of the ability to harmonize one's interests with the goals of other people as well as personal and social responsibility.

Keywords: Montessori education, lifelong learning, Montessori school graduates

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INTRODUCTION

Learning as a skill that determines quality of life: learning environment

The world is an object of unceasing changes. It is important for an individual to be ready for changes, to be able to live in a global, insecure reality. Bauman warns against the threat of exclusion of those who are not sufficiently flexible, open, and ready to adopt new standards characterized by numerous possibilities and choices. Those who are unable to meet challenges that differ from earlier expectations and to cope with the unceasing pressure of the environment (Bauman, 2012) will be marginalized. Therefore, learning becomes an integral part of human life, a strategy for human existence, and a value that determines quality of life.

The efficient driving force in this intricate reality as well as in an unforeseeable future requires educational awareness and learning competences which allow one to take responsibility for one's own education. It is necessary that the school system be characterized by *great educational strength* (see Czerepaniak-Walczak, 2013), expressed in the learner's capacity to take responsibility for their self-development. Moreover, strong education releases "emancipation energy generating active lifelong learning surpassing the framework of formal education and developing abilities and competences useful in life" (Joldersma and Deakin-Crick, as cited in Czerepaniak-Walczak, 2013, p. 20).

Forming learning competences so that a young person could self-create an adult ready for success is characteristic of the people who can construct/reconstruct knowledge and acquire skills by themselves, at the same time demonstrating enthusiasm, and persistence in achieving their intended aims. The combination of self-observation and passion leads to the formation of intellectual and social capital (Nowak, 2013). Because education can play a significant role in the development of active and competent citizens, the primary task of contemporary schools is to provide an educational environment which would be a source of both various experiences with the material and relationships with the social and cultural world (Todd et al., 2019). These experiences are the foundation of the learning process. It is difficult to define the notion of a *learning environment*, not only due to the great number of possible definitions, but also because of the observed transition between learning environments. This transition takes place horizontally across different contexts (lifewide), but also vertically through time (lifelong) (Todd et al., 2019).

A learning environment refers to the diverse physical locations, contexts, and cultures in which students learn. Since students may learn in a wide variety of settings, such as outside-of-school locations and outdoor environments, the term is often used as a more accurate or preferred alternative to *classroom*, which has more limited and traditional connotations [...] The term *learning environment* also encompasses the culture of a school or class – its presiding ethos and characteristics, including how individuals

interact with and treat one another – as well as the ways in which teachers may organize an educational setting to facilitate learning. (Great Schools Partnership, 2013)

The Organisation for Economic Cooperation and Development (OECD) discusses the topic from the perspective of activities and outcomes of learning, rather than being just a location where learning takes place (OECD, 2017). Moreover, psychological studies have proven the constructive nature of cognitive processes. Human beings interpret the world in an active way and always construct a mental picture of reality. Because in each situation a person constructs a picture of the world (Klus-Stańska, 2018), a classroom is not only a place in which pupils sit. It should be organized and equipped so as to make an environment in which the curiosity and investigation/research of the pupils can be unleashed. Learning materials for manipulation, various source materials, and conditions for group cooperation are available when the pupils decide that they need them. Moreover, the pupils co-manage the classroom space and move around without restraint and according to their learning needs (Klus-Stańska, 2018).

The key principle of the contemporary learning environment is that it “recognizes the learners as it *score participants*, encourages their active engagement and develops in them an understanding of their own activity as learners” (Todd et al., 2019, p. 17). Therefore, educators become “gatekeepers of the learning process rather than of the content” (Todd et al., 2019, p. 17). Education that is considered to encourage reflection, personal understanding, requires that a relaxed atmosphere and honesty in mutual relations be fostered and that opportunities for manifesting critical thinking be provided. The teacher is “an interpreter of a complex reality, a guide promoting dialogue, caring for the democratization of social life in the classroom, and observing and providing feedback – rather than evaluating the results of learning” (Gołębnik, 2003, p. 166). Pupils’ learning combines a variety of activities and the didactic tasks that trigger them. Their work is connected with the experiences offered by the learning environment, the teacher, didactic situations, and tasks undertaken in an atmosphere of freedom. That means freedom of choice, freedom to move around the classroom, and freedom to cooperate and collaborate on the condition that others are not disturbed. The ability to make choices is a critical element in education. It increases the likelihood that pupils will discover relationships between the information they obtain and the patterns stored in their minds (Bednarczuk, 2022a). Additionally, it leads to the creation of variable and recognizable patterns, prevents stress and frustration, and allows pupils to organize and experience information in their preferred way (Bednarczuk and Kusiak, 2012).

Wood suggests that supporting educational interaction between adult and child has general, but key features. The educator helps to establish a bridge between the pupil’s knowledge and skills as well as the requirements posed by new

assignments. The teacher develops a structure to support the student's ability to solve problems and they provide instruction and help. Such participation will provide the student an active role in learning and independence in approaching tasks that were initially beyond their reach. Finally, sufficient support assumes the transfer of responsibility from the teacher to the pupil (Wood, 2006).

The model solution is a school environment organized according to the rules of Montessori's pedagogy (1975, 1991, 1992). The concept of the Montessori learning environment is complicated and has been described in many papers written by the Italian educator (for detailed analysis with literature references, see Lillard and McHugh, 2019). In this paper, its three dimensions are taken to be essential: personal (interpersonal relationships and roles of the pupil and the teacher), material (structure of rooms, equipment, and learning materials), and structural-dynamic (rules of organizing the environment and general and learning principles) (Bednarczuk, 2007; Miksza, 1998). A perfect synthesis of elements related to these aspects of the prepared environment is presented in *Logic Model for Montessori Education* (Culclasure et al., 2019). Thus, it can be used to describe the methodical context of Montessori's approach for developing skills of learning such as critical thinking, problem solving, communication, and collaboration (Binkley et al., 2010). Finally, the paper presents the results of research conducted to empirically verify the quality of experiences associated with the Montessori learning environment by former pupils of the State Montessori School in Lublin. The focus is on the emotional picture of school experiences. "Both emotions and motivation processes are equally essential for acquisition, processing, and applying information as intelligence, good memory, and the ability to learn" (Połuszna-Owczarz, 2016, p. 16).

The child-oriented learning environment in Montessori education

The most important determinant of Montessori education is the rule to "help the child act for himself, will for himself, [and] think for himself" (Montessori, 2007, p. 69), since human personality is characterized by an aspiration for independence. When translated into the language of educational practice, this rule demonstrates that the main task of the Montessori school is to organize the learning process so as to provide a child with the freedom necessary to manifest various forms of activity. Learning includes forms of thoughts and activities in a person. Therefore, in the Montessori classroom, the teacher observes the child attentively to provide suitable conditions and educational tools that liberate their activity (the foundation of learning and development). The pupils' activities and behaviors are systematically observed and reflected upon, thanks to which the pupil's and teacher's further work can be planned. The education of children is individualized and interdisciplinary in nature and its scaffolding consists of the prepared school environment (for detailed studies on the prepared environment, see Bednarczuk 2007, 2016, 2022a, 2022b). The classroom constitutes a kind of flexible space for the pupil – a

laboratory for creating cognitive, social, emotional, and practical challenges, as well as educational projects of a social and environmental character. The basic unit of learning is a free work period, to last no less than 3 hours, in which the pace of work and choice of tasks are for the pupil to determine.

The Montessori School is a union of life and learning. The groups are heterogeneous in age, as children of three age groups collaborate. The environment is designed by teachers so that the children can find in it what they need for development. Educators incorporate universal developmental laws and individual needs, various styles of learning, and the participation of children with special educational needs. This is the open learning environment in which freedom of choices is provided. The possibility of making independent choices is the educational operationalization of the right to human dignity (Bednarczuk, 2016). Freedom means choosing the tasks, activities, strategies, and ways of working. Moreover, it refers to freedom in asking questions, discussing, searching, collaborating, and communicating. Finally, one should mention personal freedom that does not interfere with other pupils' activity, freedom from being constantly informed and instructed, and freedom to move around the classroom. Freedom is the necessary condition for complete development of personality. This is the freedom within limits which means a lack of interference in personal choices and activities of other members of the class community (Bednarczuk, 2016).

A child works individually or in small groups, using the didactic materials specially designed by Montessori. The original set of materials, called developmental materials, is a part of the learning environment and the foundation of individualized curricula which are expanded upon with the choices made by the children. The materials are interdependent both within and across curriculum areas, as well as within and across age levels (Lillard and McHugh, 2019). They enable cognition of the world and detection of one's self according to the principle of moving from grasping to forming the ability to think abstractly. Each child accomplishes a personal program of actions manifested by the choices of environmental stimuli. Children choose sensorial, practical, mathematical, linguistic, natural, scientific, artistic, and musical materials which satisfy their interests and internal need to acquire the ability to read and write in a regular/systematic way. They enable not only *exploration of new areas of culture* (acquisition of knowledge or experiencing values), but also *cognitive cultural tools* (letters, numbers, schemes, patterns, symbols, conventions, social rules, or theories), which are defined as symbolic tools. Another important set of tools that can be acquired is *psychological tools*, including the linguistic and mental strategies of information operation (classification, arrangement, ordering, summarizing, justification, construction, asking questions, correcting faulty assumptions, hypothesizing, etc.). In the learning environment there are also materials which enable *study of the world and interrelations occurring in it*. They refer to the realization of the idea of cosmic education. Much attention

is paid to ethical and artistic education, ensuring the possibility of expression (music, art, and drama), the experience and expression of values, and education that enables students to come into contact with the world of culture.

Based on manipulation as well as studies and inquiry, pupils learn to be critical and to construct strategies of their own work. Thus, they learn to think and assess independently. By studying various areas of reality, pupils find mutual connections and relationships in the actual and symbolic reality. Materials provide structures that correspond to the pupils' progress. It is assumed that children acquire knowledge and competences through their own search, exploration, and experimentation; from other people (teachers, colleagues, or parents); indirectly from books and didactic materials, journals, or the Internet; and through reflection (Brzezińska, 2008). The environment described by Montessori enables learning using all these means (Bednarczuk, 2022b).

In the child-oriented learning environment, general rules of behavior are established, respected, and accepted by all members of the class community and an atmosphere of trust in the creative work of the child is fostered. Basic components of a properly prepared environment are freedom, order, contact with reality, beauty, simplicity, and developmental materials. Maria Montessori believed that a child in an environment adapted to their specific needs will develop according to the principle of self-motivation. Changing needs throughout their schooling are accompanied by varied educational support (Bednarczuk and Rubinstein, 2019), as illustrated by the Logic Model for Montessori Education (Culclasure et al., 2019).

Skills beneficial to successful learning and the Montessori method: systematization

As stated above, in order to form learning skills, the way in which the key role in the educational process is played by the pupil should be interpreted. Pupils "should be equipped with the basic information and skills in order to understand and process information better, and should be able to render the learning process more productive for him/her. Without these skills, either the possibility of learning decreases, or one can learn less with more effort" (Demirel, 2009, p. 1710). Lucas (2022) compiled the skills that promote effective learning, including lifelong learning (Table 1).

Lucas states that these are general skills which under favorable conditions can develop into skills or competences; in turn, these will become habits of the learner, to be acquired and practiced in many different situations (Lucas, 2022). However, there are many similar comparisons. Here should be mentioned the most commonly cited and used skill framework – the Assessment & Teaching of 21st Century Skills (ATC21S), which arranges the skills dispensable for learning throughout life into four categories: ways of thinking (creativity, innovation, critical thinking, problem-solving, decision-making, and learning to learn [metacognition]); ways

of working: communication and collaboration [teamwork]); tools for working: information literacy [includes research on sources, evidence, biases, etc.] and ICT literacy; and living in the world citizenship (local and global, life and career, and personal and social responsibility [including cultural awareness and competence]) (Binkley et al., 2010). Within the context of key knowledge instruction, students must also learn the essential skills for success in today’s world, such as critical thinking, problem-solving, communication, and collaboration. The authors of these frameworks maintain that the skills mentioned are only examples to be adapted to different contexts. The operational effectiveness of the skills as well as the way of organizing classroom practices “is the challenge for national education systems globally” (Care et al., 2018, p. 8).

Table 1.
The skills promoting lifelong learning

European Parliament	Pellegrino, Hilton	Gutman, Schoon	Heckman, Kautz	Lamb et al.
<ul style="list-style-type: none"> • communication in the native language • communication in foreign languages • mathematical competence and basic scientific and technical competences • computer competence • social and civic competences • initiating and entrepreneurship • cultural awareness and expression 	<ul style="list-style-type: none"> • critical thinking skills • proficiency in using information • reasoning skills • innovativeness • intellectual openness • work ethic • conscientiousness • positive attitude • communication • cooperation • responsibility • conflict resolution 	<ul style="list-style-type: none"> • motivation • persistence • self-control • metacognitive strategies • social competences resilience and resourcefulness • creativity 	<ul style="list-style-type: none"> • persistence • self-control • trust • attentiveness • self-efficacy belief and high self-esteem • resistance to adversity • openness to new experiences • empathy • modesty • acceptance of different opinions • effective involvement in social life 	<ul style="list-style-type: none"> • critical thinking skills • creativity • metacognitive skills • problem-solving • cooperation • motivation • self-efficacy • conscientiousness • persistence

Source: (Lucas, 2022).

To accomplish the aim of the paper – to demonstrate that the Montessori methodology favors the development of learning skills – the skills of lifelong learning (ATC21S) were compared with the methodical solutions typical of Montessori pedagogy, as systematized in the Logic Model for Montessori Education (Culclasure et al., 2019).

The Logic Model for Montessori Education is a specific synthesis of the main assumptions of Montessori pedagogy. It was written by specialists, as with other logical models, in order to act as “a collective reference point to reconcile conversations across different disciplines and audiences, providing a common language and starting point for understanding best practices” (Culclasure et al., 2019, p. 37). The construct can be used for understanding the Montessori education model and can be perceptively treated for bringing up to date the approach to Montessori pedagogy. It will be employed in this function in this paper. Based on the Logic Model for Montessori Education and the competences treated as the key ones regarding the formation of skills and a culture of learning from the ATC21S model, it will be pointed out how the Montessori methodology promotes the formation of learning skills. The information given in Table 2 is only a suggestion which can be interpreted and developed in a particular way (see Boté, 2022; Mavrič, 2020). This is a system of assumptions and notions which describes an aspect of reality, but it is not a rule or an obligation.

Table 2.
Montessori methodology in supporting learning skills

Standards that promote learning	Child work strategies	Support of the environment
Ways of Thinking		
creativity innovation	move freely in the classroom examine interdependencies work toward abstraction explore the environment beyond the classroom in-depth investigation	ordered environment set of Montessori materials respect for the child broad, interrelated curriculum individualized instructions non-intervention challenging activities
critical thinking problem-solving decision-making	choose real-life and manipulative materials choose activities of interest field studies examine interdependencies project method-thematic learning storytelling and key presentations prolonged activity uninterrupted work periods	positive emotional climate precise presentations challenging activities responsibility given to the child observer
meta-cognition	personal expression work of heads, hands, and hearts plan and track activities	activities incrementally build procedural understanding precise presentations, language, and communication movement and cognition are intertwined

Ways of Working		
communication	choose real-life and manipulative materials personal expression express oneself artistically resolve disagreements storytelling and key presentations	mixed age groups across a 3-year span respect for the child positive emotional climate clear expectations precise language and communication
collaboration/ teamwork	assist and collaboration with peers, help maintain the environment, interactive, small group lessons	
Tools for Working		
information literacy (includes research on sources, evidence, biases, etc.)	choose real-life and manipulative materials plan and track activities conduct in-depth investigations repeat activity sequence classify or arrange in a series work plans self-correction	one-on-one instruction small group instruction precise language precise communication
ICT literacy	ICT devices, computers, the internet, audio-visual devices, radio, television, calculators, and online communities cooperative technologies and storytelling games and educational applications running on touch-screen devices virtual manipulative mathematics iPad apps	ordered environment broad, interrelated curriculum
Living in the World		
citizenship (local and global)	integrated curriculum assistance and collaboration with peers help maintain the environment, freedom and responsibility civic engagement (voluntary work)	respect for the child lessons on social etiquette interactive small-group lessons classroom community
life and career	complete work cycles freedom and responsibility planning tasks and activities self-correction	

Source: Author's own study based on (Binkley et al., 2010; Culclasure et al., 2019; Drigas and Gkeka, 2016).

In the presented way (Table 2) there were verified the assumptions of Montessori pedagogy regarding the learning environment and its potential to develop learning skills. The learning environment makes possible and available education

through manipulation, experiences, observation, equal age tutoring, study, and inquiry. Children are active participants in this development and learning process and actively interact with their environment. They use various educational strategies because they can learn in different ways. In this way, lifelong learning is based on interaction and appropriate support, usually in the form of communication with others and with materials. “Encouragement, support, structuring, and making suggestions are ways of assisting learners to achieve a higher level than they would if they were unassisted. Learning practices allow students to study in accordance with the real-world contexts” (Fleming, 2021, p. 39), for example, through different resources, materials, evidence, project-based learning, or contact with nature. The learning process is exposed and procedures to obtain results are given, but not the effects themselves – according to the Utilization Hypothesis. It assumes that the more various ways of perception and reasoning are provided to a persons, the more they learn and the richer resources they will have at their disposal in different situations (Neisser, as cited in Klus-Stańska, 2010).

RESEARCH AIM AND QUESTION

Empirically verified quality of the learning Montessori environment

What is the value of described above learning environment? The author explored this question in another study project (Bednarczuk, 2022a), which will be presented in this part of the paper. To investigate the value of the Montessori learning environment, the principal problem was identified: What is the affective significance of the school experiences of Montessori graduates (Bednarczuk, 2022a)?

RESEARCH METHOD AND SAMPLE CHARACTERISTICS

Sixty-nine former students (56.5% female and 43.5% male) of the state Montessori primary school in Lublin revealed it in the form of valuations (Bednarczuk, 2022a). The basic conditions for the selection of the research group were the time they spend in the Montessori school and age. The majority of the respondents (62.25%) completed a whole, nine year cycle of education at Montessori kindergarten and school. The alumni were 16–21 year old (43.5% were 18 and above and 56.5% were underage), in the late adolescence. This period is crucial for identity and personality consolidation. Both phenomenon are necessary to reflect upon life experiences.

A valuation, according to Hermans (1991; see also Hermans and Hermans-Jansen, 2000), represents a conscious, reflective description of an experience. As such, each valuation has its own content and emotional meaning. In order to discover the emotional significance of school valuations, the partly modified Hermans’s Confronta-

tion With Yourself method was applied (Hermans and Hermans-Jansen, 2000). The school valuations were defined in a purposeful way. A valuation of the past was set – “Recall yourself as a student in the Montessori class” – as was one for the present – “Someone in your family is beginning to attend a Montessori class” – and one about the future – “You will be responsible for the education of your children; the Montessori school is your choice” (Bednarczuk, 2022a, p. 130). The emotional value was assessed by the graduates with 24 affect-denoting terms on a scale from 0 to 5 to indicate the intensity of their affect. Individual feelings were grouped into sets treated as standardized indicators. The first one, denoted by *S*, is the sum of points for four feelings expressing the self-enhancement motive (self-confidence, self-esteem, a sense of power, and pride). The second one, *O*, is the total score of four feelings that characterize contact and union with another person (care, love, tenderness, and intimacy). In turn, *P* refers to the sum of points for eight positive feelings: joy, contentment, enjoyment, trust, a sense of safety, energy, internal peace, and a sense of freedom. The last indicator, *N*, is calculated as the sum of points for eight negative feelings: helplessness, fear, shame, internal conflict, loneliness, guilt, a sense of inferiority, and anger (Hermans and Hermans-Jansen, 2000). These indicators inform us which feelings prevail in the valuations, or what the quality of a given valuation is. They provide information about positive (*P* higher than *N*), negative (*N* higher than *P*) or ambivalent life experiences (*P* is equal to *N*). The range of variation for the indicators *S* and *O* was from 0 to 20, and for *P* and *N* from 0 to 40 (Chmielnicka-Kuter et al., 2009). All four indicators calculated for a specific valuation form its affective pattern; by analogy to the types of valuations distinguished by Hermans (1991), we can identify the most characteristic type of experience or way of experiencing: an experience of autonomy and success (*S+*), an experience of aggression and anger (*-S*), union and love (*+O*), insatiable yearning (*-O*), helplessness and isolation (*-LL*), or enhancement and union (*+HH*) (Chmielnicka-Kuter et al., 2009).

This paper presents the interpretation of the indicators, with which an essential type of experiencing school situations can be established (Bednarczuk, 2022a). Knowing the kind of feelings that determine a specific valuation, it is possible to learn about the valuation itself. The emotional evaluation is an integral element of the image of the world that a person creates.

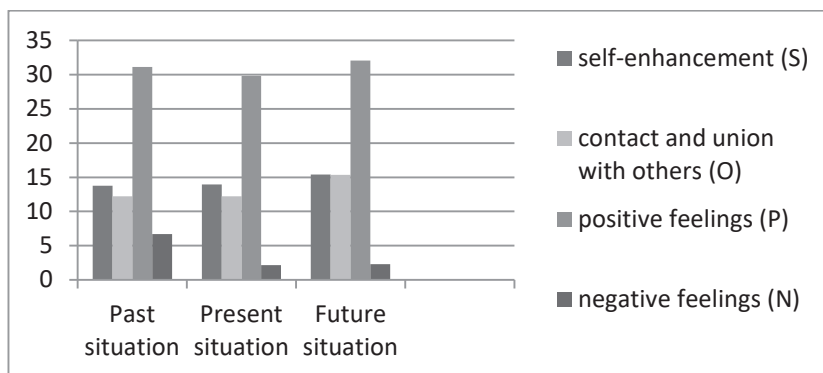
RESULTS AND DISCUSSION

Montessori environment of strength and union for learning

The resulting affective patterns were created by calculating the mean of the component patterns of individual people (Puchalska-Wasył, 2006). The global averages give a general view of the valuation. The average values of the indicators are presented in Figure 1.

Figure 1.

Comparison of the intensity of motives and emotional attitudes in the experiences reported by graduates



Source: (Bednarczuk, 2022a).

Comparisons for individual situations were made. The data inform us that the intensity of the self-enhancement motive (S) was significantly higher than that of contact and union with others (O) in both the past ($Z = -2.736$; $p < 0.01$) and present ($Z = -3.245$; $p = 0.001$) valuations. No statistically significant differences were observed in the future situation. Both motives were fulfilled ($P > N$) in three school valuations. Positive feelings prevailed significantly over negative ones (past: $Z = -7.187$; $p < 0.001$; present: $Z = -7.155$; $p < 0.001$, future: $Z = -7.187$; $p < 0.001$). As a consequence, the school experiences present one type of emotional climate – strength and union (+HH) – in which the fulfillment of both motives evoked positive feelings (Bednarczuk, 2022a).

It should be noted that the motive of self-enhancement (S) is reflected in specific experiences described by psychologists as self-expression, self-realization, striving for success and autonomy, and self-defense (Chmielnicka-Kuter et al., 2009). They were stronger than the experiences that reveal the motive of contact and union with others (O), namely feeling and sharing love, building relationships, community, and cooperation. However, this does not mean that the respondents did not experience these feelings. They were significant and present, as evidenced by the high value of the indicator O. Moreover, the difference between the positive and negative feelings ($P > N$) indicates that the respondents accomplished both basic motives in such situations. The significant differences in the values of motives S and O suggest that the self-enhancement (S) motive was more active. When reflecting on the previous and current experiences, self-defense and self-development were more strongly felt than striving for union with someone. However, neither of the motives was more strongly expressed (Bednarczuk, 2022a).

The Montessori school enabled pupils to manage individual actions in order to manifest themselves “by protecting themselves and [through] self-affirmation and expansion of their own self” (Hermans and Hermans-Jansen, 2000, p. 39).

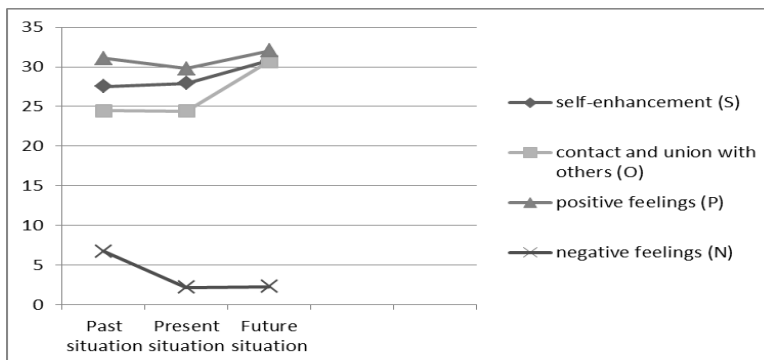
The school experiences are characterized by one type of emotional climate – strength and union (+HH). The relationship between the two basic motives is that of interdependence and, as Hermans found out, this is the most positive approach to the valuation assessment. The respondents’ autonomy and individuality were combined with a tendency to go beyond themselves and to open up to the external world (Bednarczuk, 2022a).

Positive feelings as activators of the 21st century skills

Psychologists argue that emotions are “caused by the subject’s conscious or unconscious valuation of an event as significant for a cause (goal) that is important for him [...]; an emotion is felt positive if the event is favorable for this cause” (Oatley and Jenkins, 2003, p. 95). The emotional patterns of Montessori school experiences are filled with positive feelings (Figure 2).

Figure 2.

Indicators of motives and emotional attitudes in the study group for valuing school situations (the results of scales S and O were multiplied by 2 to make them comparable with P and N (see, for example, Puchalska-Wasył, 2006)



P – positive feelings, N – negative feelings, S – self-enhancement motive, O – contact with others motive

Source: (Bednarczuk, 2016, p. 303).

The domination of positive feelings not only proves the high assessment of the characteristics of the Montessori school environment, but also attests to its positive importance in fulfilling the students’ goals, plans, and aspirations, and finally in building themselves (Bednarczuk, 2022a). “Numerous studies indicate that [...] typical positive feelings often not only affect the process of thinking but

are largely engaged in cognitive organization and information processing” (Isen, 2005, p. 528). This concerns strong affects as well as mild feelings in the state of cheerfulness affecting thinking processes.

CONCLUSION

The Montessori school conditions provided a relative balance of stimuli motivating former students to compete and cooperate as well as encouraging self-improvement and contact with others (Hermans and Hermans-Jansen, 2000). This results in successful self-enhancement and satisfactory social relationships. Thus Montessori school graduates possess intra- and interpersonal skills, necessary in lifelong learning. The Montessori model of education supports the development of the ability to harmonize one’s interests with the goals of other people as well as personal and social responsibility.

Isen (2005) draws a few meaningful conclusions concerning the power of positive feelings, reported in the study. They stimulate exploration of new ideas and possibilities, inspire the search for unconventional ways of formulating phenomena, and lead to satisfaction through individual discoveries and original interpretations. Thus, people who feel well (and are characterized by an optimistic attitude) are watchful for new possibilities, inquire and search, and solve problems competently and effectively. Positive feelings enhance flexibility in thinking, facilitate creative problem-solving, enable mutual satisfaction (because it is negotiated), and aid in interpersonal conflict resolution, which are the most desirable 21st-century skills. In the social area, positive feelings activate the disposition to give help or responsibility (Isen, 2005).

Abstract thinking that is activated due to positive emotions enables the formation of life plans and enhances the efficiency of accomplishing tasks for their assumed purposes. It seems justifiable to remember Bower’s thesis that positive emotional experiences activate thinking characterized by kind, constructive implication. The author believes that our relationships with the environment are evaluated from the point of view of our own well-being. Therefore, we act according to our assessments. During positive experiences, people feel safe, self-confident, and expansive – this is a manifestation of treating events as challenges, but not as threats (Bower, 1998). It is possible to formulate the conclusion that the Montessori school graduates can specify ways of achieving their goals creatively, are not afraid of changes or challenges, are flexible and creative in thinking and acting (Bednarczuk, 2016). So, these are skills which could be transferable to different context of learning.

Reviewing various models of lifelong learning development, Fleming (2021) stated that

while public policy interpretations may be, on occasion, reductionist or one-dimensional there is a potential implied in the concept that has implications not only for individuals and their work but equally for the increasingly complex and challenging task of creating a society that is democratic, fair and caring. (p. 52)

The results of the study indicate that Montessori education can hold such potential. The former pupils are capable of self-creation and self-education and are ready to cooperate with others.

STUDY LIMITATIONS

The research findings should be considered with great caution as they cannot provide a sufficient background for greater generalization. They represent rather an expression of the personality standard of Montessori school graduates covered by the diagnosis. This problem should be the subject of further research. The study project has provided a clear signal, that further exploration in this area can and should be carried out.

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POTANCJALNE I RZECZYWISTE ZNACZENIE MONTESSORIAŃSKIEGO ŚRODOWISKA UCZENIA SIĘ

Wprowadzenie: Ważne jest, aby ludzie, którzy chcą wykonywać swoje obowiązki w globalnej i niepewnej rzeczywistości, byli przygotowani na zmiany. Dlatego edukacja może odegrać znaczącą rolę we wspieraniu rozwoju aktywnych i kompetentnych obywateli. Nadrzędnym zadaniem współczesnej szkoły jest zapewnienie środowiska edukacyjnego, które byłoby źródłem różnorodnych doświadczeń, nabywanych w kontaktach ze światem materialnym, społecznym i kulturowym. Modelowym rozwiązaniem w tym zakresie jest środowisko szkolne zgodne z zasadami pedagogiki Marii Montessori. Ideą przewodnią jego organizacji jest wspieranie potencjału jednostki. Jest to również kluczowa zasada, na której opiera się paradygmat uczenia się przez całe życie.

Cel badań: Celem artykułu jest wykazanie, że środowisko szkoły Montessori sprzyja rozwojowi umiejętności niezbędnych w procesie uczenia się przez całe życie oraz empiryczna weryfikacja afektywnych znaczeń doświadczeń edukacyjnych absolwentów szkoły Montessori.

Metoda badań: W celu określenia afektywnych znaczeń doświadczeń szkolnych zastosowano częściowo zmodyfikowaną Metodę Konfrontacji z Sobą Huberta J.M. Hermansa.

Wyniki: Doświadczenia edukacyjne absolwentów szkoły Montessori charakteryzuje jeden typ klimatu emocjonalnego – siły i jedności (+HH), w którym zaspokojenie obydwu motywów podstawowych ludzkiego działania (umacniania siebie oraz kontaktu i jedności z innymi) wywołuje uczucia pozytywne.

Wnioski: Absolwenci szkoły Montessori posiadają umiejętności intra- i interpersonalne, niezbędne w procesie uczenia się przez całe życie. Model edukacji Montessori wspiera rozwój zarówno umiejętności harmonizowania własnych interesów z celami innych ludzi, jak i odpowiedzialności osobistej i społecznej.

Słowa kluczowe: edukacja w systemie Montessori, uczenie się przez całe życie, absolwenci szkoły Montessori