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DIGITALNI AKADEMSKI ARHIVI I REPOZITORIJI

“HEAD, HEART AND HANDS LEARNING” - A CHALLENGE FOR CONTEMPORARY EDUCATION

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ABSTRACT

Applying a holistic, integrated and experiential approach, this paper analyses the culture of head, heart and hands learning as both a challenge and an imperative of contemporary education using the descriptive method based on a review of relevant literature. Self-determination, self-work, self-organization and self-management are emphasized along with different models of learning culture oriented towards student's holistic development. In accordance with that the paper discusses issues related to the new organization of learning and teaching and the role of the teachers, students and school community. Specifically, many scientists believe (Henting, 1997; Bruner, 2000; Stoll & Fink, 2000; Faulstich, 1999) that high-quality and successful changes in education can be achieved by introducing a culture of learning which espouses the holism and integrity of human beings. Such changes are especially relevant in the context of lifelong learning which integrates all three domains of learning: cognitive (head), affective (heart) and practical (hands). In this way, cognitive, affective, experiential and active learning interests are fully expressed, which bears witness to the fact that people learn, think, feel and act differently.

Key words: holistic learning, integrated learning, experiential learning, student-centered learning.

INTRODUCTION

This paper addresses the issue of the “head, heart and hands” in learning, paying special attention to formal, informal and non-formal education, its domains and strategies within lifelong learning. The aim is to apply the holistic, integrated and experiential approach in analyzing the culture of head, heart and hands learning as both a challenge and an imperative of contemporary education. It was Johann Heinrich Pestalozzi, a Swiss pedagogue and education reformer, who had already emphasized that teaching should be a unity of the head, heart and hands, that is, a unity of the cognitive, affective and psychomotor domains of learning. Mira Čudina-Obradović and Sanja Brajković (2009) state that despite the efforts of pedagogy (especially European pedagogy of the late 19th and early 20th century) to encourage the student to take an active part in the acquisition of knowledge, which includes an independent search for comprehensive answers, understanding life and the surrounding world and integrating facts from various areas into a whole defined by some content, schools continued to develop individual scientific disciplines. Contrary to the latest insights about the functioning of the human brain and learning styles, practical teaching still takes the

high road and focuses on the cognitive development of the student, as such skills are easier to be tested and evaluated. However, the question arises: are cognitive skills indeed the most important part of education, especially in the 21st century? Should not schools, as Carla Hannaford (2008) also asks, be more concerned about thinking, creativity, and the application of knowledge to real life situations? Finally, is not the main rallying cry of contemporary education for “school [that] is not preparation for life, but a part of life” (Hannaford, 2008, p. 13). Learning focused on the cognitive leads us to the situation that today “we have experts, but we have few thinkers” (Epstein, 1979, cited in Hannaford, 2008, p. 15). Modern education should not restrict its focus to the mere attaining of prescribed learning outcomes. It should address the whole person and his/her physical, mental and psychological development (Brühlmeier, 2010).

Over the last two decades, the population of students and teachers has become increasingly diverse, and schools today face the challenge of creating pedagogical environments sensitive to numerous individual differences for the purpose of supporting the academic and social success of students (Tirri, 2011). Some of the fundamental demands imposed on modern schools are for it to be effective and of high quality. Louise Stoll and Dean Fink (2000) define an effective school as a school that promotes the development of *all* students regardless of their initial performance and background; as a school that allows all students to meet the highest possible standards, that improves all aspects of their success and development and, finally, that enhances its quality year after year. It is precisely active and integrated learning, or learning with the head, heart and hands, that is one of the key elements for increasing the quality and efficiency of modern schools. For all those reasons, it is important to consider a new organization of learning, as well as the role of school and community, in order to ensure the full development of students and harmonize it with their capacities and potentials.

Since the aim of this paper is to analyse and describe the culture of head, heart and hands learning, the method of description of relevant literature (in Croatian and English) was used, related to holistic, experiential and integrated learning oriented towards student’s holistic development.

STARTING POINTS FOR HOLISTIC LEARNING

Modern society puts emphasis on various learning culture models, including the constructivist learning model, hands-on teaching (integrated learning), student-centred learning or the learning model focused on the development of competencies.

Martin G. Brooks and Jacqueline Grennon Brooks (1999; Čudina-Obradović & Brajković, 2009) observed that modern constructivism is based on the theories of Jean Piaget and Lev Vygotsky and supported by a large body of research on the way children learn, the role of experience, one’s own activity and the diversity of abilities. From the constructivist point of view, education should be seen as an assistant to the young to help them learn how to use tools for creating meaning and constructing reality. Also, it may help them adjust to the world they live in and facilitate the process of change it requires (Bruner, 2000). Student-centred learning is an approach that leads students directly into the decision-making process. Such a type of learning develops the feeling of responsibility and motivation in students. Students participate in de-

isions to a greater extent when they are included in the decision-making process. Additionally, their performance is improved and they enjoy the classes (Jensen, 2003).

Integrated teaching in schools is one of the models pursued, in which the holistic approach to learning would be applicable. It is defined as the planning and organization of teaching, which combines various disciplines, fields and courses, with the aim of attaining deeper understanding of certain content and, at the same time, acquiring the skills of reading, mathematical, scientific, computer and artistic literacy, as well as the skills of critical and creative thinking (Čudina-Obradović & Brajković, 2009, p. 23). The emphasis is put on independent work by the student and limited teaching, as well as an effort to direct students' mental activity in order to connect various forms of knowledge to one another and in order to attain an integrated understanding of different life phenomena. What differentiates the integrated teaching framework from traditional forms of teaching are their different emphases and objectives. Within the former framework, educational objectives are not only cognitive, but also affective (emotional) and social (Čudina-Obradović & Brajković, 2009). The main purpose of integrated teaching is to help children study and see the world around them the way it really exists (their closest and most familiar reality). Moreover, their acquisition of knowledge and skills is intended to proceed in a way that is natural to them and that will help them achieve a higher level of understanding and action (Čudina-Obradović & Brajković, 2009). Integrated learning (learning based on cooperation; it takes partnership and experiential and social learning seriously) focuses first on co-organization and co-responsibility, and then, gradually, moves to self-organization and self-responsibility. Learning is an action that can be done only by the student himself/herself. In order to achieve that, teaching has to be focused on the student (Buljubašić-Kuzmanović, 2007). Thus, the modern school also puts emphasis on self-determination, self-work, self-organization and self-management. Such a school teaches students self-reliance: prepares them to manage themselves, to act on their own, to study by themselves and to motivate themselves (Dryden & Vos, 2001). Self-directing learning is crucial. Provided that a suitable environment and means for independent learning are secured, even small children may become persons who study with thrill and educate themselves their whole life (Dryden & Vos, 2001).

Erickson (2007, cited in Čudina-Obradović & Brajković, 2009) highlights that we are used to thinking about knowledge as something happening only in our brain. Obviously, it is a very narrow way of looking at this complicated process. We know that this process also depends on our body (senses) and the environment in which our body and consciousness work. Findings about human learning emphasize the importance of the connection between mind and body and they account for the way our neurological, biological, emotional and spiritual capacities affect learning. Learning approach, as a critical individual-difference variable in human learning, has been widely investigated over the last three decades (Jarvis & Parker, 2005). Empirical studies have confirmed what many have already known for two millennia: that practising mindfulness enhances mental and physical health, creativity, and contextual learning (Yeganeh & Kolb, 2009). L. Stoll and D. Fink (2000) say that everyone possesses intelligence, and different intelligences work in different ways. According to Howard Gardner's theory of multiple intelligences (1983), one can infer that people have greater capacity in some fields,

and lesser in others. Apart from logical-mathematical intelligence, H. Gardner also distinguishes other types of intelligence: linguistic, musical, spatial, bodily-kinaesthetic and two types of personal intelligence – interpersonal and intrapersonal. His typology offers a much more democratic and inclusive concept of learning and intelligence. The challenge is not to categorize the capable and the less capable, but to develop all of those intelligences, which is achieved by allowing various styles of learning. At all of its levels, learning involves permanent use of mental capacities and collaborative interaction of multiple intelligences and tools as much as it involves the process of acquiring information (Dennie Wolf, Janet Bixby, John Glenn & Howard Gardner, 1991, cited in Stoll and Fink, 2000). Teachers become aware of individual differences among their students, as evidenced in the research done by Kirsi Tirri (2011) about holistic school pedagogy and values. K. Tirri conducted interviews at two high-schools in Finland. All the interviewed teachers emphasized the importance of teaching at the level that matched students' hitherto abilities. In both schools, the teachers and their students emphasized the emotional, social, moral and spiritual aspects of education.

THREE AREAS OF LEARNING – „HEAD, HEART AND HANDS LEARNING“

Many researchers (Henting, 1997; Bruner, 2000; Stoll and Fink, 2000; Faultisch, 1999) believe, that quality education and successful education reforms can be achieved by changing the learning culture (with attention paid to the completeness and integrativity of a human being), especially in the context of lifelong learning which integrates all three domains of learning: cognitive (head), affective (heart) and psychomotor (hands), as well as various styles, strategies, methods and procedures of learning. A new learning model, which is called brain-based learning or brain-compatible learning, brings together many learning concepts. It is in line with the current neuroscience research about the ways in which our brain learns best in a natural way. It concerns the role of emotions, paradigms, survival, surroundings, rhythms, positive thinking, evaluation, music, gender-based differences and enrichment in organized teaching and learning (Jensen, 2003). In such a way, cognitive, affective, experiential and active learning interests are fully expressed, i.e. it is acknowledged that people learn, think, feel and act differently.

Marianna Papadopoulou and Roy Birch (2009) pointed out that all our real-world experience must necessarily involve both active consciousness, or an engaged mind, which “reaches out” to the world, and the body, which has a physical presence and lives through experience. This suggests that the learner and his/her world cannot be perceived separately, that is, via a binary distinction. Rather, the learner's activity, thought processes, interactions, behaviours, intentions, emotions and attitudes are all situated in his/her world, of which s/he is part. C. Hannaford (2008) states that the optimal state of learning is when the whole brain is integrated. In this state, both hemispheres of the brain are equally active all the time, with access to *all* sensory information and efficient communication, movement and action in accordance with information. In line with this view, Jerome Bruner (2000) maintains that the secret is that

the mind is an extension of, on the one hand, the hands and tools we use and, on the other, the tasks in which we use them. Learning, thinking, creativity and intelligence are not solely brain processes, but rather processes that involve the whole body. Ladislav Bogner (2005) expands this view by saying that knowledge is connected with intense motor activity and very strong emotions. Experience is always accompanied by certain knowledge and motor activity, and the learning of a psychomotor action is accompanied by pleasant or unpleasant emotions and certain knowledge. An important finding for understanding learning and for the theory and practice of education has been made by Antonio Damasio, Thomas Grabowski, Antoine Bechara, Hanna Damasio, Laura Ponto & Javad Parvizi. They experimentally proved that, when emotions and body are separated from knowledge, there is no reasonable behaviour and no learning occurs. It is the senses which supply the brain with information about the surroundings. And this information shapes our understanding of the world and serves a source for creating new possibilities. Theoretical knowledge is not acquired only by the head, but simultaneously by the heart, hands and all senses, even the whole body. "Pure" cognitive learning does not exist, as the head and the body remain interconnected, even if one tries to violently remove the bodily part from a theoretical study. We get acquainted with theories and we gain the capacity to judge their validity only if we establish an active relation to them, and not by "hammering them home" in class (Meyer, 2002).

Over the last forty years, researchers representing diverse theoretical perspectives have discovered that individuals develop consistent and routinised approaches to learning called learning styles (Sims & Sims, 2006, cited in Yeganeh & Kolb, 2009). The learning style is the preferred way of thinking about, processing and understanding information. Learners have to be offered diversity and choice (Jensen, 2003). Apart from the differences in their learning styles, learners also differ from one another in terms of these three main domains of learning: cognitive (what we know), psychomotor (what we do) and affective (what we feel). Every class at school should contain elements pertaining to each of those domains of learning (Jensen, 2003).

"Head" (cognitive domain of learning)

The head "stores" all psychological and intellectual functions that allow us to understand the world and form rational judgments about certain things. More specifically, these processes include perception, memory, imagination, thought and language (Brühlmeier, 2010). The cognitive domain is usually described "as what we know", but it is in fact determined by knowledge, understanding, application, analysis, synthesis and evaluation (Jensen, 2003). Since this domain is represented as predominant at schools, some room has to be given to the other two - affective and psychomotor - which are indispensable for the complete development of a student.

"Heart" (affective domain of learning)

Eric Jensen (2003) stresses that learning is not only a mental process, but that it is also influenced by our feelings. Emotions stimulate our learning and determine whether we are confident in this learning. Only when we have strong feelings about it do we believe something and give significance to it.

This affective area is typically understood as values, feelings and attitudes, and presence, responsiveness, giving significance and expressing values (Jensen, 2003). Arthur Brühlmeier (2010) pointed out that the concept of the heart does not include only the diverse feelings that accompany our perceptions and thoughts, but, first and foremost, the basic moral feelings of love, faith, trust and gratitude, plus also the activity of our conscience, our sense of beauty and goodness, the ordering of our lives according to moral values. E. Jensen (2005) states that the affective side of learning is of key importance in the interplay of our feelings, actions and thoughts. Jack Mayer, one of the original experts on the theory of emotional intelligence, believes that emotions carry information to the same extent as data or logic do. E. Jensen (2005) highlights that good learning does not avoid emotions, but rather hopes for them. A school teacher should use emotions as a part of the learning process, not as its accessory because they are a form of learning and an integral and invaluable part of every child's education.

Engaging emotions helps activate the area of the central brain and when they are involved, we understand what we learn better. Furthermore, we believe in what we have learned and remember it (Jensen, 2003).

“Hands” (psychomotor domain of learning)

The first proof of the connection between body and mind emerged several decades ago in the research done by neuroscientists Henrietta Leiner and Alan Leiner. They focused their research on the cerebellum, which is of key importance for maintaining posture, coordination, balance and movement. The part of the brain that processes movements is the very same part that processes learning. Movements and learning are thus in continuous interplay (Jensen, 2005). The area covered by “hand” is also very complex. It is the area of “physical faculties”, “manual faculties”, “faculties of art”, “faculties of profession”, “domestic faculties” or even “social faculties”. What one has in mind with “hand” is our practical activity in which manual dexterity and physical strength are combined with common sense and will power in productive action (Brühlmeier, 2010). The psychomotoric area is responsible not only for physical skills, but also for precision, coordination and manipulation (Jensen, 2003). According to C. Hannaford (2007), the body is a mediator in learning because it collects all senses that inform us about the world around us. Her research established that movements activate neuronal connections in the whole body, turning the body into an instrument of learning. Many researchers established that sensorimotor integration is a requirement for maturity to attend school (Houston, 1982; Ayeres, 1972; Hannaford, 1995; cited in Jensen, 2005). In the opinion of Rita Dunn and Kenneth Dunn, who have researched in learning styles, almost 85% of learners are kinaesthetic learners, and yet the school program offers few techniques of kinaesthetic learning, if any at all (Hannaford, 2008). This claim is reinforced by L. Bogнар's contention (2005) that sedentary teaching encourages aggression: when children are required to sit still in their places, there is a proper explosion of motor activity during shorter recesses, often accompanied by aggressive behaviour. To neglect the body in learning is to neglect the fact that the human body possesses an integrated system of cells, molecules, muscles and organs which are completely in-

terdependent (Jensen, 2003). The contemporary brain, mind and body research established significant connections between movement and learning. Brain-compatible learning means that teachers should integrate mathematics, movement, geography, social skills, imitation, natural science and technical content and physical education (Jensen, 2005).

STRATEGIES FOR SUCCESSFUL HOLISTIC AND LIFELONG LEARNING

Education focuses on stimulating the cognitive, experiential and active interests of a person, and it is realized by scientific, artistic and technological education. Cognitive interests are satisfied through learning and teaching strategies; experiential ones – through experiencing and expressing the experienced; and active ones through exercising (Bognar, 2005). Since the new approach to learning proposes that everybody possesses intellectual abilities that function in different ways, various strategies are necessary to address those differences. If the point of teaching is to provide content-related, contextualized learning so that learners could understand and transfer knowledge, then the traditional approaches are not suitable for all students. Thomas Armstrong (2006) points out that, due to great individual differences among students, teachers should use a broad range of teaching strategies. The most influential strategies are those that increase memory, understanding and the ability to apply the concepts they are learning. Teachers need to consciously select strategies that assist students in learning broad concepts embedded within rigorous, relevant content (Wolfe, 2010). Teaching plans, in contrast to teaching unit plans, involve interactivity strategies to encourage and facilitate learning and multiple learning styles that contribute to hands-on teaching, or teaching focused on action and integrated learning (Wood, 1995, cited in Buljubašić-Kuzmanović, 2007).

L. Bognar (2005) points out that there are certain principles in didactics that make education more successful if they are applied at the stage of selecting methods and procedures: positive psychology principle, success-for-all principle, the principle of individualization, appropriateness, action and economy. The positive psychology principle means that in selecting an education procedure, one chooses those that develop a positive self-image and self-confidence in every individual student, that find and encourage the positive traits in every individual. School has to ensure success for everyone, as the principle of success-for-all states, and one has to consider differences among students when choosing methods and procedures. Also, one has to choose the procedures that will allow every student to advance at their own pace and in their own individual way. Furthermore, the procedures have to be suited for the tasks, content, children's age, their capacities and potentials.

The learning environment can be designed or enhanced to support whole-brain learning. One of the ways this can be done is to make sure that the seating arrangement is stimulating, but also as least stressful as possible. Students should be offered a broad range of opportunities in which they can use several senses at the same time. C. Hannaford (2008) reports that if learners are given the opportunity to watch

presentations, listen to explanations and touch and disassemble models or objects that they can handle, there is a greater probability that learning will take place in line with the preferences of all students. The opportunity to move often, to activate the brain and to bolster learning is another important factor of successful learning. Phillip Schlechty (1990, cited in Hannaford, 2008) highlights that probably the most efficient way to find time for the preference of all, especially for teachers and learners, is to organize school life in order to focus on students' work rather than on teaching. This includes more frequent use of technology, flexible schedules, teacher and student collaborative teams and doing away with organizational divisions into departments and subjects. Research and professional articles concerning education indicate that the changed concept of teaching and learning, called the emerging paradigm of learning, is not just a fad, but an imperative for all learning contexts: formal, informal and nonformal education, or lifelong learning. To be more precise, contemporary education is "suffering" from increasingly greater, deeper and serious fragmentation, and the problems that have to be addressed are increasingly poly-disciplinary, transversal, multidimensional, transnational, planetary and global (Morin, 2001). Connection should replace disassociation in all fields of learning and development. All three domains of learning – cognitive, affective and psychomotor – should be promoted using diverse strategies, methods and procedures.

SOME STRATEGIES THAT INCLUDE HOLISTIC LEARNING

Meaningful application of technology in teaching is one of those strategies. Children have to be prepared for life in a new, knowledge-based and technologically driven economy. As educators, we have to use it in such ways that make the best of the positive aspects of technology, while preserving the aspects of humanity that technology reduces: creativity, thinking, common sense, morality and ethics. Research in collaborative learning shows that the strategy of using technology can prove to be an important alternative to traditional competitive models of teaching because it can help all students attain success. It contributes to affective goals, such as cooperation, team work, tolerance and positive self-image.

Other strategies whose importance has been confirmed by research include *creative problem-solving, use of visualizations and metacognition* (Hannaford, 2008). C. Hannaford (2008) says that a wide range of activities can be efficient in embedding learning into the mind and the body. Among such activities are Brain Gym (activities encouraging integration of the whole brain, which allow students to discover parts of the brain that were earlier unknown to them), eurythmy, tai chi, independent or group singing, music, spontaneous dance, noncompetitive physical education programs, artistic activities in which a person expresses himself/herself alone or in a group, joint problem solving and time to think in silence. Multiple intelligences can also be encouraged by creative dance classes. Basically, creative dance involves the use of movement elements to express thoughts and feelings. Dance is an interpretation of a child's ideas, feelings, and sensory impressions expressed symbolically in movement forms through the unique use of its body (Bergmann, 1995). Our body has a library of memories that become activated in every physiological condition, and the use of role play and other learning games creates

a “physical memory” that allows us to learn both with our muscles and brain (Jensen, 2003). In her research and consulting work, C. Hannaford (2008) used a system of evaluation of learning styles called *domination profiles*, which implies a strategy for successful lifelong learning. The method was developed by Paul Dennison and Gail Hargreve. It determines the lateral dominance of eyes, ears and hands as compared to the dominant brain hemisphere. This dominance largely influences the way a person processes information internally and, consequently, the types of learning activities preferred by that person. Domination profiles provide an understanding of how to approach and respect the learning style of every individual child. They should be used in teaching as a way to understand that all people learn, act and react in their own individual ways and at their own pace. They are a “window” into human diversity and it allows us all to respect our fellows and to sympathize with them. They help us to understand that each of us is a necessary part of a creative and evolving society (Hannaford, 2008, p. 13). Everybody has the potential for learning, but we learn in our own individual ways. Since human beings are flexible and adjustable, the basic profiles provide a starting point for understanding. The author sees those profiles as models that help us respect every student in such a way that we can create an optimal environment for learning which supports the capacity of each individual student to achieve and make use of both brain hemispheres are active. In such a scenario, both hemispheres are active. The profiles are based on the assumption that a hemisphere is dominant under stress or in the case of new learning material, functions or learning modalities preferred by the person in those situations and functions that are limited when a person is exposed to stress (Hannaford, 2008, p. 50).

If used appropriately, strategies that can improve learning are “restructuring for learning” (Stoll & Fink, 2000): innovation is something new, and it is done instead of something else rather than supplementing it. If we want to introduce a new learning paradigm that encompasses contextualized learning, cohesive programs, authentic evaluation types and flexibility in teaching, and to leave its trace on our students, we should thoroughly reconsider the organization structures of our schools. Restructuring is a complete rethinking of our use of time and space, roles and relations, considering the adoption of new structures that improve learning of all students and whether we are abandoning the structures that are unproductive and obsolete (Stoll & Fink, 2000).

In order to establish holistic learning in school curricula, it is necessary to consider every learner and have in mind that any given strategy will not be equally suitable and efficient for every student, but it rather depends on the person of the teacher and learner. It is necessary to find creative solutions that will fit into specific circumstances and that will not respect the uniqueness of every student.

THE ROLE OF THE SCHOOL COMMUNITY

The school community is made up of members of a specific group/class and it is the basis of social development. Life in communities, and thus life in school, should in many ways function similar to family life. The context of a community is not always easy to achieve, but it is possible. The construction of a community starts from the preschool institution, and entails preschool teachers, parents and the wider context of the educational institution of society (Buljubašić-Kuzmanović, 2012).

Children's need for community has not changed, but social reality has. Due to changes in family environments, children need relations, which through a longer period reliably ensure both intensive attachment and participation in the ever more complex reciprocal activities, and kindergartens and schools have become a potentially important source of close lasting experiences (Katz i McClellan, 1999).

A holistically oriented pedagogy has a comprehensive view on school as a community of growing up in which family, school and the social environment design and operate in favour of balanced and positively oriented child development (Antić, 1999, p. 645).

L. Stoll and D. Fink (2000) highlight that schools are not islands and that they need support. Every school has multiple users and if we seek change, the objectives and actions of those individuals and groups have to be coherent. The school system, parents, school boards, agencies, companies and universities (among others) can be efficient and influential in helping schools and their students. It is the responsibility of teachers and schools to improve the learning of students who come from different backgrounds and have different needs. The world is changing, and we all have to be our own students and be able to adapt to this changing world. In other words, we need to be independent thinkers. The role of the teachers and parents is changing: from experts and managers to colleagues and assistants. The role of the child also changed from a *sponge* to an active participant in the process of learning (Johnson, 2006).

Teachers have to be familiar with child development, strategies of multiple teaching, various evaluation strategies and have a knowledge of students' learning styles. They are those communicate to their students their belief in the latter's capacity to learn by using appropriate teaching strategies. The most important challenge for teachers is the necessity to move from the teaching-learning paradigm or model, which has served many teachers and students to this day, to a different concept, compatible with the problems of the new century (Stoll & Fink, 2000).

In order to be efficient, school has to become a learning organization. One feature of such a learning organization is that a teacher is treated like a professional. In other words, learning organizations presume that students are not standardized and that teaching is not a matter of routine. Within this model, teachers have to be familiar with child development, multiple teaching strategies, and various evaluation strategies. Learning organizations have confidence that teachers will make decisions that benefit children. E. Jensen (2003) argues that, to make teaching more efficient, the role of the teacher in today's changing world should be equated with the role of the coach, a person who discovers talent and learning, teaches and gives inspiration. For a teacher, being a coach means that she/he is no longer interested in providing a direction in learning but only in learning itself. The teacher is a leader, not an authority. Consequently, the personal, philosophical and emotional part of the student is also trained and directed as much as the intellectual part. Many issues connected with overburdening teachers would be resolved by a simple procedure: the inclusion of parents, grandmothers and grandfathers, the community and students themselves into the teaching process (Dryden & Vos, 2001). Students benefit both socially and academically when they are supported by a caring class-

room and school environment (Noddings, 1992; Tiri & Husu, 2006, cited in Tirri, 2011). In their study of active learning conducted on the example of five first-grade classrooms in elementary schools in Scotland, Christine Stephen, Jennifer Ellis & Joan Martlew (2010) investigated how teachers create active learning and put it in practice. Although active learning was interpreted in individual ways by each teacher, and children's experiences depended on the class they attended, the study indicated that in each of the five classes, there had been a move away from the dominance of pencil and paper towards manipulating objects, physical actions and verbal responses. L. Stoll and D. Fink (2000) point out that the survival of our schools and the survival of our civilization depend on our capacity to take care of others and to take sufficient care to secure success in school and life for *all* children. The change in pedagogy does not only involve the change of the practice, but also entails a different way of thinking about the process of learning and the role of the teacher and the student.

CONCLUSION

The holistic learning approach, which embraces the affective, psychomotor and cognitive domains in equal measure, has made a great impact on the ways schools are organized and supported to promote learning among all students. Therefore, the aim of this paper was to analyse the culture of head, heart and hands learning as both a challenge and an imperative of contemporary education, using a holistic, integrated and experiential approach. The paper described various models of learning culture oriented towards student's holistic development, taking into consideration the new roles of teachers, students and the school community as a basis of growing up and successfulness.

A holistically oriented pedagogy has a comprehensive view on school as a community of growing up, in favour of balanced and positively oriented child development. It is necessary to embrace the newly developing learning paradigm, which is the opposite of traditional and commonsensical learning model based on cognitive development, acknowledging the culture of „head, heart and hands“ learning. The analysis of relevant literature revealed that holistic learning is oriented towards satisfying individual's cognitive, affective and practical interests, which is also the objective of contemporary education.

In this context, L. Stoll and D. Fink (2000) emphasize that innovation implementation needs to be attuned to theoretical and practical knowledge about teaching and learning and knowledge about students' needs and their holistic development. We need to think of all students as equally important members of the community and ensure space for each other's actualization of potentials in all domains of development (head, heart and hands) and active participation in school life and school work (Tirri, 2011). In this way, the cognitive, experiential and active interests of learning will come to full effect and it will be acknowledged that one learns, thinks, feels and acts in different ways.

REFERENCES

- Antić, S. (1999). *Pedagoški pojmovnik* [Pedagogical glossary]. U: Mijatović, A. (ur.), *Osnove suvremene pedagogije* [The basics of contemporary pedagogy]. Zagreb: Hrvatski pedagoško-književni zbor, 641-655.
- Armstrong, T. (2006). *Višestruke inteligencije u razredu* [Multiple Intelligences in the Classroom]. Zagreb: Educa.
- Bergmann, S. (1995). Creative Dance in the Education Curriculum: Justifying the Unambiguous. *Canadian Journal of Education*, 20 (2), 156 – 165.
- Bognar, L., Matijević, M. (2005). *Didaktika* [Didactics]. Zagreb: Školska knjiga.
- Bruner, J. S. (2000). *Kultura obrazovanja* [The Culture of Education]. Zagreb: Educa.
- Brühlmeier, A. (2010). *Head, Heart and Hand: Education in the Spirit of Pestalozzi*. Cambridge: Open Book Publishers.
- Buljubašić-Kuzmanović, V. (2007). Studentska prosudba učinkovitosti integrativnog učenja [University Students' Evaluation of Efficiency of Integrated Learning]. *Odgovne znanosti*, 9 (2), 147 – 160.
- Buljubašić-Kuzmanović, V. (2012). Škola kao zajednica odrastanja [School as a Community of growing up]. *Pedagogijska istraživanja*, 9 (1-2), 43 – 59.
- Čudina-Obradović, M., Brajković, S. (2009). *Integrirano poučavanje* [Integrated learning]. Zagreb: Pučko otvoreno učilište Korak po korak.
- Dietrich, S., Fuchs-Bruninghoff, E. (eds.) (1999). *Selbstgesteuertes Lernen auf dem Weg zu einer neuen Lernkultur* [Self-directed Learning on the way to a new Learning Culture]. Frankfurt/Main: Deutsches Institut Erwachsenenbildung
- Dryden, G., Vos, J. (2001). *Revolucija u učenju* [Revolution in Learning]. Zagreb: Educa.
- Faulstich, P. (1999). *Einige Grundfragen zur Diskussion um selbstgesteuertes Lernen* [Some basic questions to the discussion of self-directed learning]. In: S. Dietrich, E. Fuchs-Bruninghoff (eds.). *Selbstgesteuertes Lernen auf dem Weg zu einer neuen Lernkultur* [Self-directed Learning on the way to a new Learning Culture]. Frankfurt/Main: Deutsches Institut Erwachsenenbildung.
- Hannaforđ, C. (2007). *Pametni pokreti: zašto ne učimo samo glavom: gimnastika za mozak* [Smart Moves: Why Learning Is Not All in Your Head: Brain Gym]. Buševac: Ostvarenje.
- Hannaforđ, C. (2008). *Očima i ušima, rukama i nogama* [Eye, Ear, Hand & Foot]. Buševac: Ostvarenje.
- Hentig, H. (1997). *Humana škola* [Humane School]. Zagreb, Educa.
- Jarvis, P., Parker, S. (2005). *Human Learning: An Holistic Approach*. London: Routledge.
- Jensen, E. (2005). *Poučavanje s mozgom na umu* [Teaching with the Brain in Mind]. Zagreb: Educa.
- Jensen, E. (2003). *Super-nastava: Nastavne strategije za kvalitetnu školu i uspješno učenje* [Super teaching: Over 1000 practical strategies]. Zagreb: Educa.
- Johnson, P. E. (2006). Learning as a Process. General Observation and Suggestions for Parents. *ENCOUNTER: Education for Meaning and Social Justice*, 19 (1), 35 – 39.
- Katz, L. G., McClellan, D. E. (1999). *Poticanje razvoja dječje socijalne kompetencije* [Encouraging the development of children's social competence]. Zagreb: Educa.
- Meyer, H. (2002). *Didaktika razredne kvake* [Didactics class handles]. Zagreb: Educa.
- Morin, E. (2001). *Odgoj za budućnost* [Education for Future]. Zagreb: Educa.
- Papadopoulou, M., Birch, R. (2009). "Being in the World": The event of learning. *Educational Philosophy and Theory*, 41 (3), 270 – 286.
- Stephen, C., Ellis, J., Martlew, J. (2010). Taking active learning into the primary school: a matter of new practices? *International Journal of Early Years Education*, 18 (4), 315–329.
- Stoll, L., Fink, S. (2000). *Mijenjajmo naše škole* [Changing of our Schools]. Zagreb: Educa.
- Tirri, K. (2011). Holistic school pedagogy and values: Finnish teachers' and students' perspectives. *International Journal of Educational Research*, 50 (3), 159 – 165.
- Wolfe, P. (2010). *Brain Matters: Translating Research into Classroom Practice*. Alexandria, VA: ASCD.
- Yeganeh, B., Kolb, D. (2009). Mindfulness and Experiential Learning. *Od Practitioner*, 41 (3), 13–18.