УДК 371. 315.7 **Babić N., Irović S.**

INTERNET CONSTRUCTIVIST POTENTIALS

Статтю Н. Бабич та С. Ірович присвячено аналізу питання про потенційні можливості використання мережі Інтернет у педагогіці. Зокрема автори приділяють увагу проблемі впливу сучасних інформаційних і комунікаційних технологій на суспільство, наводячи приклади як позитивних, так і негативних наслідків цього процесу. Автори намагаються з'ясувати роль інформаційних і комунікаційних технологій, особливо мережі Інтернет, у процесі сучасних трансформаційних змін у сфері навчання та викладання, причому потенційні можливості використання мережі Інтернет аналізуються відповідно до основних принципів конструктивізму. Автори пропонують конструктивістську модель викладання як ключове припущення ефективності застосування Інтернету з освітньою метою. Інтернет розглядається як джерело знань, засіб навчання та специфічне комунікаційне навчальне середовище, яке надає можливості більш гнучкого підходу до процесів навчання та викладання. Також у статті вивчаються ролі студентів та викладачів у процесі навчання за допомогою мережі Інтернет та розглядається поняття комп'ютерної грамотності та шляхи розвитку цієї компетенції у викладачів і студентів.

Social and Educational Internet potentials: from enthusiasm to distrust

Information and communication technologies (ICT) transform contemporary man's all walks of life: economy and politics, culture, mass and personal communication... Although the technical term ICT does not exclusively refer to the Internet, in this paper we deliberately use this particular one as a sort of paradigm to ICT. Reasons for that are as follows: expansion and dominance of the Internet over other media; the fact that the Internet incorporates both interpersonal and mass communication along with one-way and two-way influence of the participants; experiencing the Internet as "phychological space"; visitors' behaviour as a result of complex interaction of distinctive personality features and cyberspace characteristics; a wealth of Internet educational potentials; congruence of Internet with The (socio)constructivist approach to learning/teaching. We find essential to point out the understanding of possible social ICT influences, expecially the Internet, which rank from technological determinism to intrumentalism. Technological determinism is a belief that ICT, especially the Internet, will automatically result in the individual and social changes. On one hand, it is optimistically believed that the Internet will contribute to prejudice overcome and social privileges (Barlow, 1996), stir up and establish democracy, individual freedom and equality (Ess, 2002; Winkel, 2001). However, positive influence is not made directly. Warshauer (2000) explains the mechanism of ICT's indirect influence, expecially the Internet, in the following way: better information access, greater possibility of communication and opinion exchange develop individual's autonomy. In such a way they become less succeptable to the arbitrary control from the "above" and therefore conquer larger area of freedom. On the other hand, some authors (Pederson, 2001; Talbott, 1955; Clarke, 1994; Pannabecker, 1991) predict destructive potentials of the Internet, such as excessive commercialism, control loss, misuse of authoritarian power. Ess (2002) and Talbott (1995) warn us how ICT, especially Internet, under false pretences of "cosmopolitan vision of electronic democracy", actually serves as a tool of imposing values of one culture to another. Contrary to technological determinism is instrumentalism, which sees ICT as a mere tool, neither positive nor negative, but neutral, whose effects are resulted by the way of its implementation. We find Warshauer's interpretation (Warshauer, 2000, 2002), in which he does not believe in neutrality of ICT, the most accepted one. Hierwith, the author mentioned points at a new "digital divide" – those who do and those who do not have the access to computer or the Internet.[1]The fact is that the Internet use pre-

[1] Research results (Warshauer, 2003) have shown that the individual level of Internet access is connected to socio-economical statux: in the year 2001, 80% of the American families with yearly income higher than $75,000 had access

supposes resources access (computers, phone lines, English language, etc) and mastered computer literacy. In spite of Internet expansion, these are still privileges of the minority. The above mentioned could increase inequality in information access and hierwith power taking. Warshauer (2000) warns that the Internet and other ICT access to marginal social groups strives not only for "digital divide" prevailance but is also in broader function of social inclusion. To accomplish that, this process must be followed by educational promotion and computer literacy (Warschauer, Knobel, Stone, 2004). Interesting is also McKenzie's (2002) point of view of a certain pressure tendency to which contemporary man is daily exposed to – not only to master "computer literacy" but also to take over a digital lifestyle, even a digital mental set, in order to be "trendy". Naturally, this involves the use of ICT in education, as well as establishing "media pedagogy", "digital pedagogy", "web pedagogy"... We warn that educational use of ICT shouldn't be come down to trendy and hasty school computerization, that is to mere accumulation of computer technology. We find far more important creating their educational implementation, based on congruent broader theory framework.

Upon reflection on wide social influence of ICT, it is also inevitable to consider their potentials and effects in the educational context. Let us see how such predictions have varied through time. They have ranged from euphoric and unconditional acceptance to extreme criticism. Let us take the example of the Internet to illustrate it. Felix (2003) discloses some of the unrealistic expectations and prejudices connected to educational use of the Internet: on-line learning and teaching will suppress traditional learning and teaching; will reduce the need for "live" teachers; traditional and on-line learning and teaching are mutually exclusive. Practice of educational Internet implementation disproved most of such prejudices. ICT criticism in education, especially the Internet, usually gives a devastating picture of alienated youth surfing the net in chronic social isolation (Johnson, 2005). We agree with Felix's claim (2003) which warns about how extreme criticism of the Internet and other ICT is hardly more realistic than extreme optimism.

Is it possible to create a "protective shield" against Internt misuse? Such preventive and "defensive" acts are seen in creation of social and educational context of their use. Ess (2002) suggests, as a possible ban of "computer mediated colonisation" on global and personal issues, critical opinion and dialog based education, which qualifies the Internet users for culture wealth and varieties acceptance, and for personal identity protection. Due to the English language prevailance in on-line communication, Internet can become footing of the cultural hegemony. However, lately, we have witnessed a trend of lessend domination of the English language on the net – increase of non-English websites and Internet newsgroups which use their national languages have been noticed. (Warschauer, in press). ICT, especially Internet, make a strong effect on the identity of the individual or groups. Some authors (Ess, 2002; Zurawski, 1999; Hongladarom, 1998) find that the Internet does not represent a threat of culturally homogenous world creation, but contributes to the cultural values exchange and promotes multicultural awareness.

Internet in (socio)constuctivist approach to learning and teaching

With increased awareness of ICT educational potentials, it has been strived for the idea of combining pedagogy with their technological characteristics. (Nachmias, 2001). We find that thoughts about ICT in education should be inevitably included into more general theoretical framework – the theory of learning and teaching. One of the possible choices we are in favour of is (socio)constructivism.[1] Precisely the Internet enables establishment of such a study environment which supports student's acquisition and application of knowledge. This makes it a medium whose

to the Internet, whereas in families with lower income only 25%.Warschauer, Knobel, Stone (2004) claim that "digital divide" in education results in educational inequality.

[1] Constructivism as a theory framework, a group of approaches and/or methods and principles, explains the knowledge of nature and cognitive process. Construcivism is not "monolithic" but includes numerous directions: trivial/personal, radical, social, cultural and holistic constructivism. (Socio)construcitivsm emphasizes the social nature of learning, but does not deny its individual dimension. Therefore, we find precisely (socio)constructivism a theory framework compatible with the educational application of ICT, particularly the Internet.

educational potentials are mostly congruent with constructivisic paradigm of learning /teaching. In this paper we seek to supply an answer to a question we find relevant: how do we apply educational potentials of the Internet to the realization of the major principles of constructivism?

To those who study, the Internet leaves great possibilities of choosing time, place or corpus to do so. Fast development and amazing increase in information wealth, information structure according to author's preferences, quick change and variety of approach to the specific information to which Ewing, Dowling and Coutts (1999) point at, are all characteristics that distinguish the Internet from other study settings. Internet incorporates "unique ability of representing multiple and complex nature of primary terms within the chosen topic" (El-Hindi, 1998,3), along with a characteristic way of context presentation (combination of text, graphics, animation, sound etc).[1] With these characteristics Internet draws and keeps students' attention. It also enables continuous approach to the current information, definition of personal study needs and study process structure. "Online learning" is offered as an alternative to the traditional classroom activities, with advantages such as better individual approach, asynchrony – free from place or time, easier access to lesson materials, interaction.[2] Oliver (2002) sees ICT, especially Internet, as a "change catalyst" in the following areas: influence on the changes in the content of learning; way of learning, choice of time and place of learning. Influence on the content of learning is primarily evident in the transformation of traditional curriculum into competency and performance-based curricula. Characteristics of such curricula are insuring access to various information resources, establishing authentic, student-centered learning setting, concentrating on problem-centred and inquiry-based activities, along with coaches and mentors and not mere content experts. ICT, especially the Internet, points out the above mentioned author, incourage a shift towards problem learning and allow students to choose experts they want to learn from. Owston (1997) mentions three characteristics of the Internet which teacher can capitalized in promoting the most benefitial way of learning: (1) "learning through Internet" as a favourite way of learning with nowdays students, (2) Internet as a medium which enables more flexible learning and teaching approach, (3) Internet as a medium which allows new "learning techniques" (cooperative learning, distant learning etc.). In the world today there are more and more schools, universities, libraries and different interest groups involved in the production and use of web-based learning materials and web-based learning environments, which allow new ways of learning. Educational use of the Internet brings new vocabulary: "Internet-based education", "Internet-based learning", "Internet-based training", "Internet-supported distance education", "computer-managed learning", "web-supported teaching and learning", "online learning", "web pedagogy"... whereby some terms overlap or are synonymous. We find it necessary to "work on" clearifying this term mess up. Anohina (2005) suggests the "top term" – "virtual learning", pointing at differences in respect to traditional learning process. "Virtual learning", according to the mentioned author, characterizes technology-based learning which partially or fully "substitutes" and completes the theacher him/herself; whereby space and time distance between the teacher and the student modifies the characteristics of their communication. Frequently used terms are also "online learning" and "web instruction". Felix (2003) points at two major types of "online learning": (1) online courses that strive to operate as virtual classrooms, in which the technology acts both as tutor and tool; (2) add-on activities to classroom teaching or distance education courses in which technology is used primarily as a tool and communication device. The advantages of online learning are: greater possibility for exploring and refining ideas, students' higher degree of material control, flexibility allowing better material access and improved level of interaction with such a material.

[1] In one of his interviews, the leading expert on the area of educational technologies Chris Dede, a professor of educational technologies at Posgraduation studies of Pedagogy and Education at Harvard, almost poetically describes accomplishments of the virtual surroundings: "Virtual surroundings can maintain active learning because they allow us to bring magin into light, which is completely impossible in the real world. In multiusers' virtual surroundings, students overcome the distance by teleporting, they see impalpable things which normally wouldn't be accessible to their senses.

[2] Certainly, we should be aware of Internet technological, cantextual and social boundaries: possibility of communication disconnection, slow connections, occasional connection difficulties, textual communication dominance, huge amount of information whose reliability can be questionable, larger number of Internet addicts …

There are also possibilities of active learning through conferences, discussion groups and collaboration projects. We agree with the above mentioned author when it comes to good reason warning about the key questions of productive use of "online learning": why would we want to teach online; what are the constraints; and how can we do it well?

Under the term "web instruction" we understand the use of the Internet as the *knowledge resource and learning tool* but also as a *communication medium and learning setting.* Internet offers student the tools for information search (search engines, theme catalogues), tools for information presentation (electronic magazines, weblogs, webquest, simulations, "teletrips") as well as communicational-collaborational tools (chat, e-mail, discussion forums, video conferences etc). Numerous authors (Tsai, 2005, Griffiths, Brophy, 2002, McMahon, 1997, Schneider, 1994) see in the above mentioned the possibility of exploring the Internet as a cognitive tool for research and knowledge representation as well as a significant way of implementing constructivism ideas. Hier are some of the Internet-based instruction characteristics which make this instruction "construcitivist": multiple representation of the real world in its natural complexity and contradiction; exchange of apstract information with authentic assignment; possibility of student's search for information, along with resource evaluation (relevance for assignment, quality estimation, reliability, authenticity). However, we also point out that in the learning situations which include Internet use, the student may face difficulties in coordinating assignment aims with the structure of information available. Nunes and Fowell (1996) warn about the abundance of available information in which the student can be easily "lost" or simply taken into contents irrelevant to the assignment. Tremendous amount of information can be misleading, putting stress on the search rather than on the assignment itself.[1] Therefore Tsai (2005) warns that metacognitive activities such as critical judgement, reflexive thinking and ephystemiological consciousness. Key steps to successful websearch (topic identification/problem of key terms, synonym search, syntagm variations) presupposes preparation and consistency, acquaintance and use of different tools (*search engines* and *subject directories).* While traditional teaching is primarily focused on information, constructivistic use of Internet is more concentrated on the actual *use* of information. If the teacher follows the logic of constructivism, he expands his role web search technique to enrolling students into "information use technique". Numerous authors in their works (Feng-Kwei Wang, 2001; Motschnig-Pitrik, 2001; Owston, 1999; Schneider, 1994) permanently warn how Internet shouldn't be reduced only to the medium for "beforehand written contents" delivery.

Use of the Internet as a communication medium and learning setting gives student a possibility to interact with his/her colleagues-peers and a teacher. Communicational dimension of the Internet is congruent with the constructivist learning models which give place to peer interactiona and collaboration rather than students' competition characteristic for traditional approach. Cooperative problem solution is superior to the solitary one – working with a more competent partner, in the "zone of proximal development", student is able to cope with the assignment he previously, in an individual action, he wasn't up to. McMahon (1997) and Warshauer (1997) stress strong potentials of the Internet regarding the social interaction: establishing the "virtual student group" which works on the common assignment. Traditional Internet communication tools (E-mail, Newsgroups, Chat itc) allow fast synchronized communication between the virtual group members. This is how social and psychological space characterized with status equility, identity flexibility, simultaneous inerpersonal communication possibility, meaning and content is being created. McLellan, Stansfield, Connolly (2005) point at collaborative tools which Internet offers (computor conferences, online discussions, educational games ...). With the help of these tools a student can become a part of a collaborative group, take an interest in the team's progress and get the *feedback.* The above mentioned collaborative tools enable informal talks, discussions on different topics, and pedagogically created activities, such as debates and role plays, along with "group memory". Participation presupposes student's intellectual involvement –

[1] Although *browsing* can be benefitial (as anintentional learning), the aim is to teach students how to find, gather and use information and then transform them into knowledge.

coming up with opening ideas, going through possible replies, giving feedback to colleagues' comments and reflect on ideas relevant to the discussion results.

New teachers and students' role in Internet-based education

Above mentioned characteristics of the Internet and its constructivist use in the educational process significantly transform traditional roles of the teachers and students. How has the role of the teacher changed? Since the teacher can no longer supervise student's progress by predetermined learning sequence, he has been losing a huge amount of control. Hierwith, he is no longer able to have insights into all of the student's learning resources, or to study them ahead. However, occasionally, the result might be the situation in which the student would be able to instruct the teacher. Green and O'Brien (2002) claim that in such a way more symetric partnership communication between the teacher and the student is achieved. McLellan, Stansfield and Connolly (2005) warn of an online teacher who lacks a direct contact with the students, as truly exists in the traditional classrooms – the teacher cannot observe his students, interpret their facial expressions and nonverbal behaviour, make a diagnosis of the signs of boredom or inattention. However, they also emphasize what a teacher can do: give assignments, announce the discussion themes, participate as a facilitator in the students' dialogue, encourage students to articulate their ideas, inspire them to think and comment, give support in task performing. Preparation of the online teacher includes: choosing the form of content presentation, encouraging students communication, choosing and creating methods of observation and evaluation, choosing and applying different tools. This includes high degree of teacher's "technological literacy" as well as successful cooperation with the staff maintaining such technological support. ICT, especially Internet, could play a crucial role in increasing and developing the student's critical skills only in the hands of creative and competent teacher. If the teacher supports constructivist approach, then he will accomodate his teaching style, bringing ICT potentials into it. The degree of assimilation into the teacher's implicit theory, and later even educational practice, will determine the scope of teacher's use of education technology, including the Internet.

And what happens to the role of the student? The student in the context of "web instruction" lacks teacher's confidence in guiding and directing. Particularly for this reason the "Internet-based instruction" is in some aspects superior to the traditional instructions. The advantages Campbell (1998) emphasizes are: multiple and complext reality repesentation; authentic assignment opposed to the teacher's predetermined instrustional sequence; increasing student's reflection and selfreflection. Today, "Online learning" is frequently the favourite way of learning because already mentioned characteristics of Internet make the learning itself interesting and attractive. Student's role of an active and curious researcher, who through Internet freely searches for materials relevant to task solving, is congruent with the student-centered approach (Motschnig-Pitrik, 2001). Also, it allows the student to search for information in his/her own, individual way, satisfying his learning style (Babić, Irović, Krstović, 2003; Churach, Fisher,1999; Schneider, 1994). That means that he could define his own learning needs and take over the responsibility for his learning structure. Internet-based learning and teaching promote students' self-control and self-discipline, but it does not necessarily imply taking greater responsibility for their own learning. We estimate that resistance of the "taditional" and authoritarian teachers towards Internet use is caused by the difficulty to agree on such transfer of responsibility.

Students and teachers' Internet literacy

Modern times demand redefinition of the traditional concept of litteracy. Updated term literacy combines development of various skills, knowleges and attitudes, including cognitive processing skills, motivation and self-confidence. Nowdays, we talk about numerous kinds of literacy: technological, computer, information, digital, Internet ... In defining technology literacy, "general definitions", by which it is determined as multidimensional term, prevail: understanding, control management and technology use (knowledge of nature, technology "behaviour" and technology power and consequences of its implementation), with abilities to adopt to technological

changes. El-Hindi (1998) warns of practical dimension of technology literacy which should be completed with the discrimination competence and relevant information selection, estimation of reliability and resource quality, interpretation and use of data for informed decision making, solving problems and generating new ideas. Items of information in a virtual setting are at least partially art-effect of technology by which they are presented, so that the information evaluation cannot be separate from the technological competences, that is users' information literacy. However, information literacy is far a broader term than digital and computer literacy. (Candy, 2002; Hoić-Božić, 2003; Špiranec, 2003). With effective knowledge of technology use and infrastructure, information literacy includes number of skills, knowledge and attitudes which allow critical reexamination of information resources, independent from the medium by which they are intervened. These are: ability to make difference between reliable and unreliable, relevant and trivial information, discussing moral and ethical questions connected with information use.

There have been numerous research lately (Babić, Irović, Krstović, 2003; Bilal, 2002; Churach, Fisher, 1999; Griffiths, Brophy, 2002; Thórsteinsdóttir, 2001; Lynch, Bishop, 1998; Warshauer, 1997) which deal with "Internet literacy" – students' knowledge, attitudes and behaviour associated with the use of the Internet. The subject of these research are mostly Internet users' habits: frequency of use, purpose(s) of use, techniques and strategies of web search. The focus of such research is often narrowed down to complex phenomenon of "search behaviour". Single research (Griffiths and Brophy, 2002) show that students are mostly inclined to overestimate their skill levels based on the Internet use. Reasons for such overestimation could be speculated on. But, we assume that it is caused by reducing information literacy to technological dimension. The fact is, however, that a student can possess remarkable computer skill, yet, at the same time, low degree of critical evaluation of the Internet-based information. Everything above mentioned has been confirmed by our own web-use experience in the higher education courses as well as in the research (Babić, Irović, Krstović, 2003.) done on the sample of students at two teacher training colleges in Croatia. Hier we present a part of such a case study. The insight into the level of "Internet literacy" of preschool education students at two teacher training colleges in Croatia[1] has shown that there are 92,8% Internet users among the students questioned. They estimated their own personal skills in using Internet in the following way: most of them (88,79%) is able to search for and find desired information on the Internet, and only 11,20% have no trouble in finding the same, using "advanced research" with more than one search engine. The majority of students (42,4%) usually "surfs", taking time to check interesting topics that they accidently come accross. The most frequent systematic search is the one on previously chosen topic, 41,6% of the students. Systematic search, including later "offline" overview, usually use 12% of the students (4% of the students denied the answer). Noticable is the tendency towards nonselective "surfing" with rare systematic search and "data saving". Information on the the most common ways of Internet use is completed with the data on students' evaluation of the value and accuracy of the website contents. While more than half of the questioned students (53,6%) do not find themselves competent to evaluate the value and authenticity of the contents, the others do. Distribution of those who find themselves competent to evaluate the value and authentcity of websites is as follows: 25,6% of the students evaluates according to the attractiveness of the content presentation, 15,2% according to the author, 3,2% according to the content, amount of information, topic. More than a half of the questioned students (65,6%) see Internet as a tool for easier communication and bringing people closer together, while 32% of the students think that Internet alienates people and deprives from direct communication. Only 18,4% of the students are familiar with the behaviour rules on the Internet. Only 2,4% of the questioned students find piracy, that is disrespect of intellectual ownership, "Internet misuse". Disturbing is the fact that most of the questioned students think that mastering the technique web search is the most important component of the information literacy, while only negligible number of students appreciate evaluational skills of media contents, including a code of ethics on how to use

[1] Sample: 125 first and second year students of Preschool Education at Teacher Training College in Osijek and Teacher Training College in Rijeka.

them. This fact suggests some necessary reflections upon ICT integration in the process of further teacher training. For all that, there are two main directions of action: (1) teacher's preparation for the technology use and (2) technology implementation in the process of teacher's education. Teacher's preparation for technology use cannot be merely reduced to the technology lesson itself. Necessary is the lesson on education potentials, implications and ICT application contexts, whereby the teacher qualifies for the choice and implementation of the specific technological design in the specific educational situation.We also warn about the fact that the ICT use in the process of teacher's education could become a replication mechanism of the way in which the teacher himself was educated in his personal teaching practice.We therefore think that, aside from the course of Computer Science as an tearcher training program, we also need the following courses: Computer Science in the Educational Studies, Media Didactics/Pedagogy, Information Ethics, ...This also includes the integration of ICT in the act of learning/teaching as a part of the teacher training program, that is, their fitting into a personal learning experience (Babić, Irović, 2001, 2005). It is also crucial not to neglect the sense of value – to train teachers in a way they could understand social and ethical questions connected to the ICT use, as well as ethical sensitivity of the students.

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Not one educational technology, including the Internet, can replace a competent and creative teacher. Not one competent and creative teacher of today can "turn a deaf ear" to the existence of ICT. However, "meadia are only the vessels, ready to be filled with varieties of contents and pedagogical approaches" (Morrison, Dede, 2004). Educational effect of ICT, especially the Internet, depend not only on the nature and characteristics of the media, but primarily on *how* they are applied in the learning and teaching situations. Efficient and beneficial ICT application therefore includes a new vision of education, based on original thoughts on the nature and new ways of learning and teaching.

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УДК 37 (09) **Пустовіт Г.П.**

ДЕЯКІ АСПЕКТИ РОЗВИТКУ І СТАНОВЛЕННЯ ЕКОЛОГІЧНОЇ ОСВІТИ І ВИХОВАННЯ УЧНІВ У ПОЗАШКІЛЬНИХ НАВЧАЛЬНИХ ЗАКЛАДАХ

Розгляд в історико-педагогічному аспекті проблеми розвитку і становлення екологічної освіти і виховання учнів у позашкільних навчальних закладах дає підстави змогу стверджувати, що поетапному розвитку педагогічної думки в Україні відповідали певні форми і методи організації навчання і виховання підростаючого покоління, а їх взаємозв'язок з соціально-економічними і політичними змінами в суспільстві призводив до відповідних змін у змісті, меті і завданнях освітніх і виховних технологій різноманітних навчальних, зокрема, і позашкільних закладів. Доцільним є характеристика цих процесів за двома взаємопов'язаними напрямами. Перший напрям – це історико-генетичний аналіз розвитку і становлення системи позашкільної освіти в Україні, як специфічної освітньої галузі. Другий напрям, який логічно пов'язаний з першим – це дослідження соціально-педагогічних та історико-педагогічних передумов розвитку змісту, форм та методів екологічної освіти і виховання учнів у позашкільних навчальних закладах [1; 2; 3; 4].

Отже, вихідною позицією у розгляді сутнісних характеристик змісту цих двох напрямів є актуалізація проблеми взаємодії людини і навколишнього середовища, визначення особистістю свого місця в довкіллі та значення природи у формуванні її світогляду. Ця соціально-педагогічна проблема була в тій чи іншій мірі актуальна для будь-якого суспільства. Вихідною ланкою у розумінні процесів взаємодії людини і природи нами визначені провідні ідеї філософів і мислителів античного світу відображені у працях Платона, Арістотеля, Теофраста та Гіпократа. Саме вони вперше здійснивши спроби усвідомлення внутрішнього світу самої людини, визначились з певними формам навчання і виховання молоді, поклавши в основу знання про оточуючий людину світ. Тим самим, створені ними певні освітні та виховані системи мали на меті формування загального світогляду особистості та розглядались як органічна складова частина цього загального світогляду [5; 6].

У зв'язку з цим, як стверджує Платон, кожна з його складових (загального світогляду) ефективно усвідомлюється лише у процесі індивідуального впливу на особистість та її індивідуальної розумової діяльності у процесі пізнання довкілля [7: 37–44].

Значно далі у вирішенні цієї проблеми пішов Арістотель, він встановивши певну вікову періодизацію у розвитку дітей, розробив відповідні організаційні форми їх освіти й виховання, підтвердивши тим самим яку увагу він надавав організації навчання і виховання дітей у певній системі з врахуванням їхніх вікових можливостей. А знання про