ZBIÓR
ARTYKUŁÓW NAUKOWYCH

PEDAGOGIKA.

NOWOCZESNE BADANIA PODSTAWOWE I STOSOWANE

Sopot *(PL)*

29.04.2017 - 30.04.2017

#2

Zbiór artykułów naukowych.

WSPÓŁORGANIZATORZY:

International research group (Belarus, Poland, Russia, Serbia, Ukraine)
Global Management Journal
Virtual Training Centre „Pedagog of the 21st Century"

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SPIS/СОДЕРЖАНИЕ

APPROACHES TO DEFINING STUDENTS' INFORMATION LITERACY LEVEL

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Keywords: information literacy, information communication technologies, information culture, data mining, information processing

Intensive development of information technologies in the 21st century formed the prerequisites for the increase in the importance of information in the society and brought education to the new level. The problems of formation of the information society ant the role of every individual in it have attracted increased attention in the world. One of the major problems is the issue of providing individuals with free access to information and the ability to analyze the obtained information in order to streamline working and learning processes. The developing society needs modern well-educated, morally upstanding, enthusiastic people able to make important decisions independently and forecast their possible consequences, people who are able to cooperate, are mobile, dynamic and creative [4, c. 44].

One of the most important features of an individual of the 21st century is considered the capability to constantly upgrade their qualification and acquire knowledge independently. The education process must be fully oriented at the future future-oriented. Thus, the individual must be capable of professionally handling large amounts of information, as knowledge and information are interconnected notions. Rapid data mining and information processing have become crucial skills.

The modern concept of qualitative education is based on fluency in information technology. For this reason, higher economic education establishments along with other academic institutions must provide students with a wide range of information as well as various means of its obtaining and processing. It is essential to develop information mindset contrary to the technocratic line of thought, which determines the absolute impact of technology in the individuals' social life. [1, c.117-123]. Information mindset presupposes understanding the complexity of human relations of the personality and their mental world, so knowledge of the peculiarities of information distribution and its perception by individuals, mastering analytical and synthetic information processing methods, formation and further definition of the level of formedeness of the individuals' skill to analyze information, distinguish the cause-and-effect relationship of the facts and join separate facts into a system, interpret them appropriately, are one of the main tasks of higher economic education establishments at the current level of education and economic development. Students must form their skills to orient in the transient information situation, make right the decisions based on rational, aesthetic, moral and ethic criteria.

The beginning of the 21st century is characterized by the information boom. Education, medicine, production, management and even cultural and sports fields are substantially influenced by computer technologies enabling to find, process and effectively use abundant information. One of the key elements necessary to form the information society is the introduction of information communication technologies (ICT) as a means of obtaining and processing information. Their implementation must be accompanied by information literacy enhancement. Appropriate implementation of scientific and technical information fosters socio-economic transfor-

mation in the society. The success of this transformation depends on the level of formedness of every citizen's information culture. The present-day society demands sound management, which will be carried out by highly qualified staff. The basic demands to such specialists include understanding of the aims and tasks of the society and the ability to achieve them, high level of computer literacy as well as the ability to implement information technology in order to achieve aims, which are the features that form the basis of information culture, and, thus, information literacy. [2, c. 30-33].

Several notions exist at the current stage and, to a certain extent, they characterize the presence of competences and skills to use information. In domestic scientific publications, the term "information culture" has been widely used while foreign scholars use the term "information literacy". Therefore, it is necessary to compare these notions and give the accurate definition of the term "information literacy". Information culture is regarded as a specific phenomenon of the information society. Depending on the object of study, scientists distinguish information culture of the society, information culture of certain information user categories and information culture of the individual.

Information culture is a complex of principles and mechanisms, which provide interaction between different ethnic and national cultures, their integration into overall human experience. This refers to the provision of optimal means for working with information and its supply to the user for the purpose of solving theoretical and practical tasks, which presupposes creation of technical environment upgrade mechanisms necessary for information creation, storage and transfer as well as the development of the individual's education and training system for the effective use of information resources. [4]. Considerable congruence of the notions of information literacy and information culture can be explained by the fact that they characterize the multi-level and multi-faceted phenomenon of the interaction between an individual

and information. These notions involve the ability to find the necessary information, use the available information sources, to assess it critically and analyze data for personal and professional problem solution.

The notion of information culture is broader and refers to the field of an individual's culture connected with information circulation in the society and an individual's personal qualities formation. This is a field of science and, at the same time, it is a field of activity, which results from determination and understanding by the academic community of the global role of information in society formation and every individual's daily activities. [2, c.40] Besides information literacy, information culture of an individual also includes information mindset, creativity enough to create their own information product in order to solve problems in the professional and educational spheres as well as daily routine on the basis of the obtained and processed information. That is why, in order to estimate the level of information culture it is necessary to solve the same problems and to follow the same principles as at the estimation of information literacy formedness.

Information culture is one of the critical factors that foster professional activity and provide an individual's social security in the information society of the 21st century. Information literacy can be defined as the body of knowledge and skills necessary for effective information processing. Information literature involves knowledge and the optimal selection of the necessary information sources, knowledge of the reasons and means of using these sources as well as critical information analysis. An individual with the sufficient level of information literacy can not only search for information using such sources as electronic media, catalogues and filing systems, but is also a skilled user of advances technologies. It is worth noting, that, in the opinion of N. Gendina, the term "literacy" can be defined as the ability to read and write, an the scope of the notion "information literacy" encompasses such criteria as knowledge of the variety of information sources,

ability to search for and use various information sources and critical information analysis [2, c. 29-42]. Jesús Lau, Chair of the Information Literacy Section, IFLA, regards information literacy as the complex of skills and abilities necessary to identify the information needed to perform a certain task or to solve a particular problem, for effective data mining, its arrangement and rearrangement, interpretation and analysis of the obtained information, its verification including its conformability with the social etiquette and rules of information use when information analysis and interpretation results are required for their further application to achieve certain aims [3, c.6-10]. This definition can be considered most accurate and complete.

Several types of literacy connected with the notion of information literacy can be defined but at the same time they cannot be homologated with it: 1) skills of digital technology use (a set of skills involving the ability to use computer-based information systems, devices, to master any kind of interface and information systems management facilities); 2) internet literacy (a set of skills of Internet browsing and search, selection and processing of big amounts of data); 3) computer literacy (skills of using computer technologies, understanding the basics of informatics and the role of information technologies in the modern society); 4) media literacy (body of knowledge necessary for critical analysis of information, entertainment and advertisement materials provided by mass media, which presupposes use of critical thinking, life experience, ability to formulate questions as to any information product and news in mass media, to analyze aims and influence of media products on the society, thus developing the research approach to media messages).

Information literacy of every individual can be considered the basis necessary to achieve personal, professional, social and educational aims. Therefore, information literacy is a prerequisite for effective application of information communication technologies in lifetime learning as well as to put into action the strategy of economic and social development of Ukraine at the national and international level. Information literacy should be estimated not only as the level of an individual's accomplishments, but also in the wider scope encompassing such spheres as the civil society, work, healthcare, living standards etc. It can be regarded as one of the key elements of functioning of the society.

Factors which determine individual's information literacy include the following abilities: 1) to distinguish the need in information; 2) to apply all the available resources in data mining including traditional and advanced electronic resources; 3) analyze critically and use information in the creative way; 4) to use advanced information communication technologies; 5) to analyze data and on their basis to produce valuable information.

Every individual in the modern information society must be capable of defining their information needs, know how to obtain the required information, arrange and use it, thus, possess the following information competences: 1) data mining (ability to find information that meets the needs, analyse it and distinguish the relevant data); 2) interpretation (ability to transform information into knowledge by means of processing); 3) new ideas production. [3, c.6-14]. An individual with the sufficient or high level of information literacy must be aware that nowadays information can be obtained in various formats and from varying sources both geographically and virtually. So, the ability to define which data are required is one of the crucial skills that facilitate data mining to a certain extent. It is necessary to understand which sources are widely available in general and which ones can be used in order to achieve particular aims. An information literate person is capable of determining the advantages and disadvantages of every type of available resources and ability of their mutual substitution, distinguishing the optimal sources for each situation, understanding that information sources can provide the full text or supply only bibliographic data and references to other sources and have a different degree of scientificity. The user must also be

able to implement effective search strategies and distinguish the required information. These strategies include: 1) search in several sources simultaneously; 2) data mining with various search engines; 3) implementation of logical statements; 4) use of bibliographic and abstract publications; 5) use of reference indexes and recommendations for further study on the given topic; 6) use of relevant search. Another indicator of a high level of information literacy is the ability to assess information as to its relevance, topicality, authenticity and necessity within the frames of the aims, estimate the means of achieving results in order to ensure that the search results are not errant or incomplete. In this case, an individual must take into account to what extent the obtained data are relevant to the aims set before the search as well as their authenticity, the degree of the information source or author's trustworthiness.

Formation of students' information literacy is a complex problem the successful solution of which depends mainly on the availability of software and hardware and learning materials as well as the means of information literacy diagnostics and control of the level of learning materials mastering. The factors that can enhance students' information literacy as well as facilitate its further diagnostics are: 1) mandatory introduction of the course "Basics of Information Culture" in the curriculum, which can foster formation of the basis for students' skills and knowledge acquisition in the sphere of information self-management and self-sufficiency; 2) availability of training software, theoretical and practical learning materials, namely, a set of tasks, trainings, workshops, business games and case studies; 3) availability of information literacy diagnostics means and systematic monitoring of the degree of learning materials mastering, the basis of which must be the components, which will form technological knowledge, develop skills to use any kind of information products and processes; the complex of learning materials to provide for information literacy formation must be represented by both traditional publications, i.e. printed materials, and electronic resources aimed for tutors ans students; 4) implementation of the distributed informative-teaching environment, which encompasses information resources, namely, documents and information publications, traditional and electronic catalogues and literature sources, computer devices, means of access to domestic and foreign remote information sources; components of such information learning environment are concentrated in libraries and education establishments, which stipulates their interrelation and interaction in the sphere of information education, namely, forming information literacy skills; 5) organization of special training programs for the staff of higher educational establishments who will be responsible for forming students' information processing skills; the most important condition of training the university faculty is the sufficient level of computer skills and mastering techniques of forming students' information literacy on the basis of the single methodological approach, which presupposes definition of the notion body. Thus, lecturers must acquire basic information processing skills, basic laws of information flow functioning in the society, methods and techniques of analytical and systematic processing, criteria of effective data mining and knowledge of the psychological and pedagogical basics of teaching.

Hence, in times of globalization, full automation of all spheres of human life and digitization of data, computer devices create perfect conditions for obtaining these data and their effective processing with the application of advanced technologies. Computer technologies and access to the Internet are the main prerequisite for individuals' productive life in the society as well as a sound way to manage information. Computer devices greatly facilitate data mining, processing, storage and systematization. However, one of the major problems at the current stage, the solution to be solved is finding optimal ways to assess individuals' level of information literacy and to distinguish the efficiency of information literacy training process. In order to solve these problems it is reasonable to

take advantage of the whole body of pedagogical diagnostics methods and techniques aimed at learning process monitoring, assessment and optimization and pedagogical influence methods improvement. These assessment methods, which are based on oral and written forms of testing, encompass oral recitation, written tests, questionnaires, discussions, observations, information products analysis, which are to be prepared by students. Another issue lies in the fact that easy access to information via the Internet creates the problem of data credibility, their topicality and applicability as well as the copyright violation problem. Thus, it is necessary to develop training programs with account taken of the copyright issue, literary piracy, confidentiality, information freedom, security as well as ethical and moral principles of the society.

REFERENCES

1. Информационная культура в системе культурологического образования специалиста / М.Г. Вохрышева // Проблемы информационной культуры: Сб. статей.– М., 1994. – С. 117-124

2. Гендина Н.И. Формирование информационной культуры личности: теоретическое обоснование и моделирование содержания учебной дисциплины / Н.И. Гендина, Н.И. Колкова, Г.А. Стародубова, Ю.В.Уленко. – Москва: Межрегиональный центр библиотечного сотрудничества, 2006. – 512 с.

3. Лау Х. Руководство по информационной грамотности для образования на протяжении всей жизни [русский перевод Jesus Lau, Guidelines on Information Literacy for Lifelong Learning, 2006] [Электронный ресурс] / под ред. А.В. Федорова. – М.: МОО ВПП ЮНЕСКО «Информация для всех», 2007. – 45 с. – Режим доступа: http://www.ifap.ru/library/book101.pdf, c.6-10

4. Филиппов В.М. Модернизация российского образования [Электронный ресурс] / Филиппов В.М.– М.: Просвещение, 2003. – 96 с. – (Тематическое приложение № 1 к журналу "Вестник образования") – Режим доступа: tomsk.gov.ru/ru/civil-service/avards/behaviour/filippov.html