Hasrat A.I.

Available Opportunities of the Formation of Information Culture of the Pupils of Azerbaijani Schools Through the Use of ICT

The authors, noting the increased influence of technology on society in the modern age and the preference of young generation electronic information resources, instead of reading books, justify the need for the modern teacher ownership of new information and computer technologies of training. According to the authors, the coexistence of traditional teaching methods and modern information technologies, and the use of computer can help teachers in solving complex problems of teaching in the information age. Referring to recent studies carried out in Azerbaijan, the authors prove that the attitude towards education in the country has changed in schools and in the education system as a whole: the teaching and learning process is now closely linked to technologization of the modern education system. In this regard, the authors reveal the essence of the concept "information culture" in the context of modern developments of the Azerbaijani researchers. The following section discusses the process of using ICT in lessons at school. For example, is working with the educational blog on biology, created in Facebook in Azeri language. The blog functioned primarily as an online diary, and later transformed into the site helped the teachers in Information-rich lesson, and students in receiving the latest scientific information on the subject.

Key words: information culture, ICT, education, the Internet, information society, school, computer, pupil, social network, teacher.

Хасрат А.Й.

Әзербайжан мектептерінде АКТ-ны қолдану негізінде оқушылардың ақпараттық мәдениетін қалыптастыру мүмкіндіктері

Автор қазіргі дәуірдегі қоғамда технологиялар әсерінің көбеюін атап көрсете отырып, жас ұрпақтың кітап оқығаннан гөрі электронды ақпараттарды пайдалануды қалайтынын айтады және бүгінгі мұғалімдердің оқытудың жаңа ақпараттық компьютерлік технологияларды меңгеруі қажеттігін негіздейді. Ақпараттық дәуірдегі дәстүрлі оқыту әдістерінің және қазіргі ақпараттық технологиялардың бірлігі, сол сияқты компьютерді пайдалану мұғалімдерге қиын есептерді шығаруға көмегін тигізеді. Авторлар Әзербайжандағы соңғы зерттеулерге сүйене отырып, тәрбиеге деген көзқарастың: елде, мектепте және білім беру жүйелерінде тұтастай өзгергенін және оқыту мен оқыту үдерісінің қазіргі білім беру жүйесінің технологиялануымен тығыз байланысты екендігін дәлелдейді. Осыған орай авторлар „ақпараттық мәдениет" ұғымының мәнін қазіргі әзербайжан зерттеушілерінің дәйектемелерінің контексінде ашып көрсетеді. Одан кейін мектептегі сабақтарда АКТ-ны қолдану үдерісі туралы қарастырылады. Әзербайжан тіліндегі Facebook-та құрастырылған биология пәнінің білімдендіру блогының жұмысы мысалға алынады. Блок негізінен онлайн-күнделік ретінде жұмыс жасайды, содан соң сайтқа алмасқан түрде мұғалімге ақпаратқа толы сабақтарды ұйымдастыруға, ал оқушыларға пән бойынша соңғы ғылыми мәліметтерді жинақтауға көмектеседі.

Түйін сөздер: ақпараттық мәдениет, АКТ, ғаламтор, ақпараттық қоғам, мектеп, компьютер, тәрбиеленуші, әлеуметтік желі, мұғалім.

Хасрат А.Й.

Возможности формирования информационной культуры учащихся азербайджанских школ на основе использования ИКТ

Автор, отмечая увеличение влияния технологий на общество в современную эпоху и предпочтение молодым поколением электронных информационных ресурсов вместо чтения книг, обосновывает необходимость владения современным учителем новыми информационно-компьютерными технологиями обучения. Единство традиционных методов обучения и современных информационных технологий, а также использование компьютера может помочь учителям в решении сложных задач преподавания в информационную эпоху. Ссылаясь на последние исследования, проведенные в Азербайджане, авторы доказывают, что отношение к воспитанию в стране изменилось в школах и в системе образования в целом: преподавание и процесс обучения сейчас тесно связаны с технологизацией современной системы образования. В связи с этим авторы раскрывают сущность понятия «информационная культура» в контексте современных наработок азербайджанских исследователей. Далее рассматривается процесс применения ИКТ на уроках в школе. К примеру, приводится работа с образовательным блогом по биологии, созданном в Facebook на азербайджанском языке. Блог функционировал в основном как онлайн-дневник, а позднее преобразованный в сайт помогал учителям в организации информационно-насыщенного занятия, а ученикам – в получении последних научных сведений по предмету.

Ключевые слова: информационная культура, ИКТ, образование, Интернет, информационное общество, школа, компьютер, воспитанник, социальная сеть, учитель.

UDC 371

Hasrat Almaz İsrail

İnstitute of Education Problems of Azerbaijan Republic,
Azerbaijan, Baku
E-mail: almazhasret@gmail.com

AVAILABLE OPPORTUNITIES OF THE FORMATION OF INFORMATION CULTURE OF THE PUPILS OF AZERBAIJANI SCHOOLS THROUGH THE USE OF ICT

Introduction

We observe a day-by-day increase of the impact of technology on the society in the modern age. This impact is mainly seen in the youngest members of our society: children, pupils and students. Today pupils prefer electronic information resources to libraries and reading books. Of course, the surroundings cause the emergence of this wish. The exceeding flow of new information at any movement, as well as advertisements, use of modern computer technologies in TV, constantly renewing computer games, the latest computer models, new electronic equipment, iPads, tablets, electronic games, etc. have a great impact on the upbringing and education of young generation, their behaviours and perceptions of the environment. Of course, activities of pupils, who live in such conditions, change practically. Our toys that we used, games that we played, fairy tale characters whom we loved in our childhood have disappeared. The nature of games, favourite heroes and hobbies of the modern young generation also change. Children obtained any information from various sources, such as textbooks, belles-lettres, teachers' lectures, their own lesson notes, etc. in past time; but now they use external sources of information. It must be said that a modern teacher should apply quite new methods in the education process in accordance with the current conditions.

Brains of modern children are adjusted to more easily receiving and perceiving new information from various media agencies, especially from entertaining TV programmes. In this case, children should be taught to select the necessary information in an age of information abundance, receive and use it effectively in their practical life activities. Therefore, the process of education should be built in such a way that pupils can be active, participate in lesson willingly and interestedly, and see the results of their work and assess them.

The unity of traditional teaching techniques and modern information technologies, as well as usage of computer can help teachers in solving such difficult tasks. The usage of computer allows teachers to make the teaching and learning process more interesting and diverse.

Feasibility of ICT in education

In past time, the most widely used tools in traditional education, such as TV, video, books, calculator, etc., made the lessons more interesting and had a positive effect on children's mastering the topics more easily. However the latest technology brought tools, which can make the lessons more interesting, into our classrooms. This tool is information and communication technology (ICT). The use of ICT in education stimulates its development. Modern pupils cannot imagine their lessons, classrooms and ways of perceiving the environment without the Internet. On the other hand, the process of education built through ICT is also very attractive for teachers. Teachers can understand pupils and involve them in new researches by using ICT. They even can assess pupils' knowledge and skills more quickly and qualitatively. Teachers search for newer methods and forms that differ from the traditional ones by using ICT in the process of education. It allows teachers to be more creative and reveal their research skills.

Azerbaijan Republic has become the developed and leader state of the region as a result of her increasing power. The increase of integration in the globalizing world occurs in parallel with the process of mastering modern information and communication technologies. The results of the increasing use of ICT in all spheres of our country, such as education, health, economy, and governance, have been being seen in recent years. The President of Azerbaijan Republic Mr. Ilham Aliyev announced 2013 the Year of ICT in order to increase the effectiveness of a variety of projects being implemented in this field. Thorough approach of our president to this issue demonstrates that ICT plays a very important role in all areas of our society. Preparation of pupils and any person in accordance with the conditions of the information society should be one of the main priorities. First of all, we should achieve formation of information culture of teachers and intellectual people in order to achieve good results in this process. «By information culture, we mean person's obtaining, processing and using necessary information in order to achieve the set goal for solving important issues during their lives or careers. As a computer is a very powerful and convenient tool for performing information processes, a person can perform a variety of necessary operations using it. From this point of view, working at a computer, having knowledge of computer software and hardware, as well as being able to use other information technologies are the main features that characterize a person's information culture» [1]. A modern teacher should be able to work at computer and be aware of its software and hardware that are updated daily. A teacher who has competencies in this field can come before today's pupils. A modern teacher should be able to come before modern pupils with the modern technology and his/her subject using modern methods.

We often use the concept of «the use/usage of ICT.» But what does ICT mean?

«ICT is a collection of methods, production processes, technical and programming tools that ensure collecting, processing and storing of information and combine it in the technological cycle in order to reduce hardships in the use of information resources and increase their safety and operativeness» [2]. Teachers can implement methods that they use constantly for collecting, processing and storing of information faster only by using a computer. Therefore, we can call this technology instructional computer technology, too. By the instructional computer technology, we mean the process of preparation and transmission of information specifically by a computer. In short, a computer is a tool. Nevertheless, an innovation is that everybody can upload and transmit any information through ICT. That is to say, citizens who study or give education are also able to upload and spread information. Let us imagine 5 pupils in each class of any school upload new information and 20 of 100 teachers of the same school publish their sample lessons, reviews, outcomes, tests, etc. in various social networks in a day. It is apparent that this process will lead to the improvement of the Internet with new information. Nevertheless, we should take into account that the accuracy of this information is unknown. Maybe the information is true or maybe it is wrong. The quality of information cannot be controlled as its amount is very large. In this case, information abundance occurs and consequently, an information society emerges. It is a society in which a great part of the population is engaged in producing, storing, processing and transmitting information, especially knowledge, the highest form of the information, using modern information technologies [3]. Profound information culture of the younger generation should be formed in order to get access to true information in the information society. First of all, information culture of schoolchildren is shaped by the impact of their families and then educational institutions and their own surroundings.

The essence of information culture of the person

As it is stated in the article «Information Culture: its Essence, Problems of Formation and Ways of

Solution» by R. Aliguliyev and R. Mahmudova, information culture is not a product of the computer age. Information culture has accompanied mankind since its emergence. The structure of a person's information culture was very simple as information tools were very simple in the early periods of the human history [4].

The additional information sources of pupils were only teachers at secondary schools until 1990. However, development-oriented changes show that one can find more additional information on the Internet. It is also stated in the article that well-informed people evoke curiosity among other people. Various people gathered around well-informed people in order to get new information and to learn something new. In past time, people who live in conditions of scarce information resources, especially in villages, far from scientific and cultural locations gathered together and listened to tales and legends. Afterwards, book publishing reduced information scarcity to some extent; but as there were few resources of information people read books that they got over and over again because of hunger for information. The growth rate of the volume of information and the process of updating information were very slow; therefore, it was not so difficult to work with information [5]. At last, the emergence of the Internet, owing to a wide range of opportunities of ICT, facilitated instant access to information. It was very convenient for all learners. Now we can meet all learners in the Internet and social networks. We can meet schoolchildren as well as teachers on the Internet. «The emergence of the information society opens wider opportunities for securing the human rights; because the main goal of the information society is to satisfy people's demand for information at any time, regardless of their age, sex, race, physical capabilities, social status, and to create tools for conveying their thoughts without any obstacles. Freedom of conviction and expression, freedom of dissemination of information are carried out through blogs, i.e. online diaries that are actual today [6].

There is a reality that each pupil can access the Internet like other ICT users. They can get information they need in the virtual world and even upload information on the Internet themselves. Pupils also have their rights in this field like every other citizen. «Everyone has the right to education and these opportunities should be convenient for everyone. Education should be directed to the development of the human personality and to the strengthening of respect for human rights and freedoms. The traditional education system of the industrial society is being replaced by innovative education, individualized and uninterrupted education programs and distance education which eliminate limitations on time and place» [7].

Studies show that only a person, who has high-level information culture, can be headed in the right direction in an age of information abundance and be secured from a variety of negative cases. First of all, informative activities should be carried out in order to lead schoolchildren in the right direction. These activities should firstly be carried out in families. Schools also should not deny their assistance; they have great responsibilities. All teachers should teach rules for Internet usage to their pupils, regardless of subjects they teach. A teacher should exactly know the rules for using the Internet, selecting and disseminating the accurate information, etc. Of course, it very much depends on teacher's creative potentials and skill of selecting the right information.

«As long as the teacher's personality is a significant factor of the upbringing, his/her emotional attitudes and reactions are also of great importance during the upbringing of children in the teaching and learning process. A teacher should be a model with his/her attitude, facial expression, speech, honesty; expressing his/her objection, indifference, carefulness, punishment, and defending a child who is against injustice. All these features foster pupils' emotional attitudes about education and improve the quality of teaching and learning process» [8]. Taking into account the latest innovations, a new term related to modern period should be added to the opinion stated above: the phrase «information culture». In other words, a teacher should have computer skills and proper behaviour on the Internet along with the qualities mentioned above. Let us give an example… There are many teachers among users of Facebook, one of the most popular social networks. Sometimes, teachers are not registered with their real names and surnames and name their Facebook profiles with weird names like «A White Flower», «A Sad Lady», «A Teacher», «A Yellow Leaf», «Girl from Baku», «Disloyal», etc. How can a teacher, who is registered with such names, talk his/her pupils about rules for Internet usage? After all, a teacher should always be a good role model in society. When pupils see that their teachers are registered with fake names, they also use weird names in social networks. In this case, nobody knows each other in social networks and the communication becomes unclear. A teacher should be registered with his/her real name and be a model for pupils through this deed.

«A person simultaneously receives, maintains, processes and transmits information while working

with it. Nevertheless, some people cannot perform all of these functions because of various reasons. That is to say, norms of information culture can be violated because of psychological factors, defects in the organs of sense, as well as unfulfillment of the demands connected with characteristics of information» [9].

Generally, recent studies conducted in Azerbaijan show that attitudes towards upbringing have changed in schools and in the education system, on the whole. Now teaching and learning process plays a crucial role in the education system and upbringing acts as an element of teaching and learning process. Therefore, teaching and learning process is closely connected with its technologization in the modern education system. The technologized teaching and learning process opens wide opportunities for ensuring its quality and developing a personality with predetermined characteristics» [10]. Meanwhile, we have already been using one of such technologies in the process of education. This teaching-learning technique is called computer based education which is mainly fulfilled through a computer.

A teacher, who teaches today's pupils methods of transmitting information and getting new information, is considered to be creative and professional. The amount of information is abundant and there are different ways of its presentation. «Information must be presented in a specific form. If it is not possible, at least an interest for information should be evoked. Therefore, first of all, a teacher must convey to his/her learners where, when and why the information can be needed. B. Stewart, the famous English philosopher, said: « Do not read what you do not want to remember and do not what you will not use. If the material is difficult and uninteresting, but it is necessary to learn it, it is more efficient to modify its content» [11]. In this case, a teacher can use a computer and different interesting programs suitable for teaching and transform materials into forms which can be learnt by pupils; for example: by making a video, using interesting illustrations or photos on the Internet, citing to websites appropriate for the topic, involving pupils in researches, etc.

The use of ICT in lessons at school

While using ICT, a teacher should not forget that he/she conducts a lesson. So a teacher should make a lesson plan conforming to the main didactic principles of the syllabus; differential approach, scientific and systematic character and coherence in order to achieve his/her goal. In this case, computers do not replace teachers; they just complement their activity. Teachers' using ICT during lessons evoke admiration of pupils. Modern pupils and students show interest towards lessons of teachers with such competencies and attend their lessons willingly.

The essential features of a lesson, in which ICT is applied, are the following:

adapting a lesson to individual characteristics of each pupil (student);

options for making changes during lessons at any time, i.e. availability of handling lessons;

a constant dialogue between teachers and pupils, and ensuring interactivity of lesson owing to computer technology;

optimal conformity between individual and group activities of pupils in the lesson;

a teacher's control over pupils when they work at computer;

getting much and useful information more quickly during a lesson by economizing on time.

A teacher can use a computer in different stages of a lesson: introduction; motivation; research; determining the result and outcome; assessment; and revision. In other words, a teacher can give useful information, show images or videos, solve tests, make notes of results during the lesson and assess pupils at any stage of a lesson.

We can mention several functions of a computer in the process of education:

to help teachers and pupils:

as an educational and informational resource;

as a visual aid;

as «an instructor» or «a trainer»;

a function of diagnostic testing tool.

As a working tool:

for preparing texts and storing them in its own memory;

as a graphic editor;

a tool for preparing presentations;

a function of calculating machine with a wide variety of options.

A teacher should be able to use a computer as a teaching aid while preparing and conducting a lesson. First of all, each teacher should know whether there are Internet resources covering topics of the subject that he/she teaches. A teacher should attempt to have resources for each topic at his/her disposal and prepare texts, tables, questionnaires, tests, create images and videos, etc. corresponding with the personal interests of each pupil in a class. Of course, it requires a teacher to put much effort. However, electronic resources, which are prepared daily, will become a great collection at the teacher's disposal after a while. A teacher will have many electronic resources in his/her folder.

For example, an educational biology website in the Azerbaijani language [12] was founded in order to increase schoolchildren's interest in biology. The blog functioned primarily as an online diary; and later it was transformed into a website for everyone, as its content was improved. You can get acquainted with biology syllabuses for secondary education; biology curriculum; textbooks; methodical aids and additional materials; videos; and information about famous biologists of the world and Azerbaijan on this website. Now the website contains nearly 1,000 interesting news on biology. A group of the website has been created in Facebook in order to introduce it to the broader public, to expand informative activities [13]. More than 1,000 pupils, students and teachers interested in biology joined this website. Interesting contests are conducted by using sharings, discussions, virtual multiple choice tests and tests without answers on this website. It leads to the creation of a new communication/contact tool, in which modern pupils and teachers come together, and emergence of advantages of this communication/contact.

Thus, our studies show that ICT can help everyone in our changing world, as well as it plays an important role in creating an efficient education process.

References

1   Aliguliyev R.M., Mahmudova R.Sh., Functions of Education System in Formation of Information Culture of Personality. Journal of «*Azerbaijan* mektebi» (i.e. *Azerbaijani School*). – 4. – 32. – 2012.

2   Information technologi || date of access 3.12.2015 http://az.wikipedia.org/wiki/İnformasiya_texnologiyaları

3   Information society || http://az.wikipedia.org/wiki/%C4%B0nformasiya_c%C9%99miyy%C9%99ti

4   Aliguliyev R.M., Mahmudova R.Sh. Information Culture: its Essence Problems of Formation. Problems of Information Society. 1,14-22. – Baku, 2010.

5   Respublikada dərc olunan jurnal məqalələri|| http://www.csc.gov.az/az/downloads/TestPrograms/IT/word/Informasiya-Medeniyyeti.doc; http://www.rasim.az/index.php?option=com_content&task=view&id=62&Itemid=75 ; http://jpis.az/storage/files/article/3ea43775b52482610cee5261d4335f83.pdf

6   In the information society, human rights || http://az.wikipedia.org/wiki/%C4%B0nformasiya_c%C9%99miyy%C9%99tind%C9%99_insan_h%C3%BCquqlar%C4%B1

7   Ahmadova A. Opportunities of Implementation of Human Rights in Information Society // Express Information, Baku, «İnformasiya Texnologiyaları» (i.e. Information Technologies) publishing house. – 2009.

8   Karimov Y.Sh., Teaching Methods. Textbook (Baku, 2009), 241.

9   Aliguliyev R.M., Mahmudova R. Information Culture: its Essence Problems of Formation and Ways of Solution. The Institute of Information Technologies of Azerbaijan National Academy of Sciences.

10   Mehrabov A. Methodological Problems of Modern Education. – Baku, 2012. – 117 p.

11   Mehrabov A. Modern Problems of Education System of Azerbaijan. – Baku, 2007. – 146 p.

12   DIAMOND LONGING SUBJECT THE WEBSITE || http://www.biologiya.org/

13   Facebook || https://www.facebook.com/groups/375248589217002/