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Information and Communication Technologies as means for self-improvement at remote universities: the example of Urgench State University, Uzbekistan

Shihova Hasiyat Ismailovna, Urgench State University (UrSU), Uzbekistan

Abstract

This paper describes the research conducted at the Information Resource Center of Urgench State University, located in the Khorezm region of Uzbekistan, on the possibilities and challenges the students and lecturers face in their pursuit for self-improvement and self-education. The article discloses new qualitative approaches and IT methods in the teaching and educational processes in higher education of Central Asian countries in transition, the overall aim of which is to close the gap and shape the spiritual values of the young generation in the globalizing world.

The framework conditions for this have been set by the Government of Uzbekistan through particular Decrees, aiming at the creation of e-education at universities and institutions throughout the country and specifically in the remote regions as to improve the access to regularly updated information, to motivate the use of IT in classes as well as to enhance the responsibility of the information services of universities for assuring the quality of research and teaching (pedagogical) activities of the lecturers.

The research showed that the Internet can function *inter alia* as a controlling device when education is delivered through the web. Collection, analysis and preparation of educational-methodological materials on specific subjects and extracurricular activities require specific knowledge on IT and information literacy both in the teaching staff and the students.

Keywords: Central Asian countries, remote regions, electronic resources, information literacy, self-improvement, globalization, information network, information resources center.

Introduction

There is much being done in Central Asian countries, and in Uzbekistan in particular, to facilitate the dissemination of IT technologies and to raise the IT competency of the population. In this regard, on February 23rd, 2011, a Resolution of the President of the Republic of Uzbekistan on the measures for further development of the quality of libraries and information resource services, based on information and communication technologies for the period of 2011-2015, was adopted. This Resolution set the framework for formulating the typical regulations of electronic libraries. For each information resource center (IRC) of higher educational institutions (HEIs) of the Republic, a programme has been approved for the creation of: (1) an electronic collection of full-text informational-library resources; (2) an electronic catalogue; (3) a database of electronic textbooks, journals; and (4) a database of electronic information resources of the world's scientific and academic publishing houses.

Concurrently a Decree of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan from May 20th, 2011 has been issued, according to which all higher educational institutions in the country need to enhance the responsibility of teachers in creation of high-quality training materials in electronic format in order to support the e-education processes throughout the country.

The Law of the Republic of Uzbekistan on 'Informatization' adopted on December 11th, 2003, is the main instrument to support information literacy at the government level. Article 3 of this Law allows: (1) the creation of a unified information space and the grounds for the Republic to join the world information

community; (2) the certification of engineering and operation process tools and resources imported into and created in the Republic of Uzbekistan; (3) the creation of a developed, functionally adequate and reliable information infrastructure; (4) the creation of conditions for intensive development of information literacy based on the prevention of excessive concentration and monopolization of the information sphere, transition from state-controlled, centralized methods of financing and management of information processes, to independent financing and management by private businesses; (5) the creation of conditions for attraction of funds from non-government sources for information literacy enhancement programs; (6) the encouragement of research and development and production aimed at development and introduction of advanced information technologies accessible for all users; and (7) the study and evaluation of the impact of information on the development of society.

Thus, the strategy of the reformation of the educational system of Uzbekistan focuses on the creation of electronic educational resources for e-learning of students at all educational levels (secondary and special secondary, higher and post-graduate) in the period 2011-2015.

The targets set could be achieved stepwise. Initially, a platform for e-learning must be created to develop e-learning whereas the main focus should be given to solve the technical and pedagogical problems. In the framework of the CANDI (Teaching Competency and Infrastructure for e-learning and retraining project), the TEMPUS Education Program (European Union funded programme which supports the modernization of higher education in partner countries) in collaboration with Urgench State University in Uzbekistan, conducts seminar-training courses for the teaching staff to enhance their computer skills, increase their knowledge and skills to formulate the Moodle platform on subjects they teach which is foreseen to serve as a basis for e-learning of the subject.

Then, free access is to be provided to online educational resources, including media. Materials for e-learning should be of high quality and should cover all curriculum areas of bachelor's and master's specializations. Including a training program on 'Information literacy' in the curriculum of the universities should be considered as well in order to enhance the ability of the students to locate information quickly, and evaluate and use it to their advantage.

Considering rapid development of information and communication technologies, especially mobile phones, mobile TV and mobile Internet, it is necessary to recognize the ability of students to connect to the universal information environment and information resources to support self-development. However, the employees of IRCs face a more important task: systematization of educational information resources, to improve the information literacy of users. They have to become the navigators in the information environment, the professionals which will facilitate and speed up browsing in virtual network and the experts which will help to evaluate the information received. Thus it is necessary to teach communication opportunities of the Internet to the users of information resources.

The program of modernization of higher education in the Republic of Uzbekistan sets up important requirements for the academics. There is a growing need for the improvement of the traditional model of teaching by the way of introducing electronic education, introducing e-learning directly into the teaching process. If the teaching process uses only e-learning resources unilaterally in the form of the 'teacher to student' approach, then teaching will remain old-fashioned. If in the teaching process, teachers continuously improve the requirements of the 'student to teacher' approach in combination with the updated IT capacities, software and online work, then and only in this case, can a certain level of coverage with e-education be achieved which is the main objective of the strategy of the entire educational system.

Today, in the century of information technology, the intellectual creativity of the young people of the Republic of Uzbekistan is a critical element for the prosperity of the country. After all, information, knowledge and creativity are the driving forces of further development of the country. Finally, only professionally oriented teachers and lecturers with information literacy can correctly guide the thinking of students to learn, analyze and determine the choice of information in order to preserve the national identity of their culture and spiritual heritage of the nation.

Experience from other countries
A survey on introducing a training program on 'informational literacy' to the curriculum of the universities conducted by South Korean researchers showed that the motivation to be IT literate is directly dependent on the age of the students: the older the student, the higher the motivation. Among the reasons for keenly learning the new course, the students mentioned that the course helped them to understand the situation in modern society, that it was relevant and interesting, useful in real life and that without the information, success could not be achieved in any business. Last but not the least, the course was found useful when entering the university.

In the period of globalization, the information–communication environment performs a dual role in the development, both for the country and the society, the positive and the negative. The positive role consists of a high-speed transmission of information to almost any point of the Earth and even beyond, addressing the problems of education, science and manufacturing, accelerating the design as well as modelling the processes and projects and many more other work. The negative role is about setting the ground for creation of misleading knowledge, manipulation of people, and especially the youth, for the sake of selfish interests of a group of people, dissemination of the values of 'mass culture', etc. In this flow of information, only

professional teachers with information literacy are able to direct the thinking of students correctly, teach them to analyze and decide on the right choice of information in order to preserve the national identity of their culture and spiritual heritage of their nation.

Experience of the State University of Latvia on creating a database of electronic resources showed that the active participation of each faculty in obtaining access to the global electronic publishers is very important. In accordance with the subjects and thematic disciplines, a database is created first at the faculty level. The rational use of data resources is monitored by the users at each faculty when the faculty pays for acquired e-resources from educational grants or funds in their account. Existence of information resources on the university website will not fulfil the tasks of the higher educational institutions but will provide support to the educational process.

Development status of the Information Resource Center
Selected lecturers and Masters' students from Urgench State University took part in on-line courses of the Virtual Academy of Information Technologies (AVA) in the Asia–Pacific countries, South Korea, which opened to the participants the broad opportunities that the Internet provides today for enhancement of information literacy. The successful on-line course participants have been awarded e-certificates, improved substantially their knowledge of the endless IT potentials in all sectors of the economy, and particularly in the educational system.

In the framework of the reformation of the educational system of Uzbekistan, a special attention should be given to the preparation of information resources, to the characteristics, special features and needs of educational institutions of all levels and of higher educational institutions in particular. The same strategy refers to the creation and installation of electronic educational materials through the network, so that all students have equal access to electronic scientific–educational database on the electronic catalogue of digital libraries of educational institutions. In this regard the site, online educational materials of educational institutions are gathered at Ziyo.net for a broad range of users under the support of central and corporate networks.

The electronic library created at the Information Resource Center of the University – IRBIS 64 (Integrated library information system) – currently contains over 3,000 full-text materials by the President of the Republic of Uzbekistan, 17,000 full-textbooks and handbooks, and teaching methodological sets of over 1,000 thematic disciplines taught at the University. The users of the electronic catalogue of IRBIS-64 can find resources in foreign languages as well.

The database of the Information Resource Center is being regularly updated with the resources of foreign scientific and educational libraries. In order to increase

the information resources, Urgench Virtual Reading Room (Urgench-VRR) of the digital library of theses of the Russian State Library opened its doors in July 2010 to virtual library users: students, researchers, teachers of educational and scientific institutions in the Khorezm region of Uzbekistan. The users are provided with free access to about 190,000 master and doctoral theses and abstracts on all branches of national economy, in all the languages of the world.

In March 2011, a meeting was held by Urgench State University with the representatives of the world's leading academic publishers. As a result of the meeting, publishing companies such as Springer, OCLC, IFLA, KONEK and IVIS decided to grant free access to their databases for certain periods of time. Furthermore, in 2011 the University signed contracts to provide free online access to databases, the e-IFLA series *Knowledge Without Borders,* Cambridge journals, *Oxford Handbooks Online*, *EBSCO Publishing*, EMERALD, OECD i-Library and others. The total volume of electronic resources exceeds 300,000 scientific and educational e-books, e-journals, etc.

The OECD i-Library is one of the world's largest sources of data for the development of society in economic, social and environmental fields. Having subscribed to the OECD i-Library, the University has direct access to all analytical and statistical materials of the information library, open economic development, cooperation, comprising 6,200 full-text publications (downloadable PDF files); 20 journals covering more than 1,000 publications; 30 interactive statistical databases comprising about 4 billion records; 2,700 working papers; 35,000 Excel tables. Users of OECD i-Library: students, faculties lecturers, researchers of the University and other educational and scientific institutions in the Khorezm region of Uzbekistan, now have access to statistical and analytical studies that will help them find explanation of the trends observed in the global economy, social life and the environment. Access to one of the world's largest sources of economic data would reinforce their research activities with relevant and reliable statistics.

Survey, approach to increase the IT capacities and first results
The survey on the development of IT capacities and enhancement of IT use at Urgench State University aimed to identify the main problems in the teaching process with regards to creation of electronic teaching resources. Monitoring the process and results revealed that the majority of lecturers lacked enough skills to create electronic materials, skills to select Internet resources, to compile various multimedia and audio files, installation of educational resources in the Moodle platform for subsequent installation on the educational network platform for e-learning. Furthermore, observations illustrate that the main problems currently lie in the competence of teachers in finding and handling suitable educational material. They have insufficient skills in the use and development of opportunities related to e-learning environments, although there is

sufficient information and communication technologies at the university. Statistics show that teachers are provided with unlimited Internet access and Wi-Fi opportunity on campus which is not used fully. The teachers from Humanities and non-computer profiles during classes did not systematically use information and communication technologies (audio, video, media equipment).

To solve the above mentioned problems and to improve the IT capacities of all university staff, an internal strategy has been elaborated to improve the teachers' knowledge and skills needed to ensure e-learning. Mixed techniques have been commonly used as an ongoing activity to develop electronic resources. Thus, efficiency of the ongoing seminars and trainings, trainings in the virtual reading rooms, and participation of teachers in online courses have been continuously monitored. Quantitative and qualitative methods have been used for teachers to integrate the method to refine the intellectual capacity of the university staff. Research material has been collected through thematic meetings, interviews, surveys and reports on the implementation of information technology in the educational process at Ugench State University.

In order to promote the IT literacy and develop IT capacities, 15 lecturers from the Computer Science and IT faculty of Urgench State University have organized off-duty hour classes for the lecturers from other faculties of the university on 'Introduction of IT into the teaching process'. This has given positive results, but still is not sufficient for the complete transition to e-learning at the university.

The seminar trainings conducted for the University teachers on creation of the Moodle teaching platform proved to be complicated for teachers of the humanities sciences. They had to spend more time to acquire necessary teaching materials and translating them into convenient electronic material supported by Moodle. At the time of the creation of electronic materials, the teachers needed support to solve technical problems; some teachers relied on their assistants who were sometimes unwilling to work independently in the process of creating electronic materials. Many teachers had no idea about the capabilities and capacities of their e-learning teaching and how to combine these and how to reach the best indicators of the quality of learning materials to be mastered by the students.

On the students' side, at the beginning of each academic year, courses are organized for the students on 'The rules of use of automated workplaces (AWP) of the integrated library information system, IRBIS-64', functioning on the campus of the university and local network – Intranet. These classes help the visiting students of the Information Resource Center to acquire the skills and knowledge for using the automated library. As per the 4-hour program introduced, over 6,000 undergraduate Bachelor students of all profiles improved their computer skills in order to rationally use the university Information Resource Center resources.

This, however, was also not enough to achieve information literacy of the students.

It is high time to think about the possibility of entering into the curriculum the subject on 'Information literacy' as an additional subject at every faculty. Increasing the number of teaching hours will accelerate the process of mass and compulsory education for information literacy of the bachelor and master students of all profiles and the faculty teaching staff who are responsible for updating educational process with the latest information on the subjects they teach. Introduction into the curriculum of the subject 'Informational literacy' will allow acquisition of the necessary skills, competence in teaching, to improve Internet knowledge and skills during their subsequent careers in pedagogy, research and operations. The learning period of each graduate will not finish after graduation. Joining the team of teachers of secondary, secondary special, higher education or other sectors of the economy, they will need efficient use of existing materials and technical opportunities, namely, information and computer technology intended for improvement of learning process and development of the industries. The approach to teaching the young generation with the basis of information, science and education resources will accelerate the process of modernization of the educational system the main driving force of which are teachers having the knowledge of information of all levels of the educational system.

Conclusions

Preliminary results show that many lecturers who are responsible for facilitating and enhancement of the intellectual and spiritual development of young people themselves need assistance for the improvement of IT capacities and skills in creation of and support of the electronic learning environment. This requires them to create conditions (training seminar, conference presentations, e-courses) for a real sense of the effectiveness of teaching in an educational environment. Exchange of experience and mutual assistance while building e-learning resources during practical exercises generated a spirit of cooperation in their conscious joint efforts, the core of which is the ability of individual disclosure of intellectual capabilities of each teacher.

So, teachers of one profile are given an opportunity to collaborate with the staff of the IT faculty in the learning process of creation of training resources. The result, in our case, is that the new online resource will open opportunities for teaching in the electronic environment and to enhance the professional skills of teachers, involving them in the process of self-education. Feeling the results of the process of self-education, the teachers become filled with enthusiasm, they lose control of the time they spend, they enjoy morally the electronic resources created by them. Moreover, the method of creation of the electronic resources by lecturers, serves as a model for students in improving their learning.

While the electronic resources at the university were created, the need for systematic education of both

lecturers and the students in IT opportunities and capacities was pinpointed. Achieving the sustainability of electronic educational and educational resources, introduction of new teaching systems, rational use of ICT tools, existence of technical support, and professionalism of teachers serve as the key to the modernization of higher education in Uzbekistan.

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An Investigation into Students' Perceptions of Group Assignments

Yongmei Bentley & Shamim Warwick, Business School, University of Bedfordshire

The collection of student feedback is a central strategy to monitor the effectiveness of teaching and learning at educational institutions (Meyer, 2010). This paper analyses the feedback and findings from a recent questionnaire survey of students' experience and perceptions of group work at the University of Bedfordshire at both undergraduate and postgraduate levels. The main objective of this study is to raise practical issues that teachers need to consider in designing and carrying out group assessments. This is aimed at overcoming the drawbacks, while amplifying the benefits, of group work, and improving students' engagement and performance in this type of assessment.

The following are the key findings from analysis of the questionnaire replies:

a) Group assignments were indeed valued by students despite the perennial problem of perceived unequal contribution from group members. Respondents recognised the benefits of group assignments as well as the drawbacks.

b) A wide variety of communication strategies had been employed between students for working on group assignments, as well as individual assignments when seeking input and support from peers.

c) Students had developed a number of strategies for dealing with team members who did not 'pull their weight', and it was suggested that some of these could be formalised, such as requiring minutes to be taken of key meetings.

A comparative analysis was also undertaken of the difference in responses between the undergraduate and postgraduate student groups. Overall, the research underlined the utility of group assignments, and suggested a number of ways in which the potential drawbacks can be mitigated.

As group work is a common approach for education institutions in teaching and learning activities, the outcomes of this study should contribute to a better understanding of students' feelings and perceptions about these, and to a better designed approach to overcome the drawbacks of group assignments.

Keywords: students, group assignment, questionnaire survey

Introduction

Group work at education institutions is now considered as one of the best approaches for developing students' communication skills and acquiring knowledge. This agrees with the results from the study by Smith and Bath (Smith & Bath, 2006) who revealed that interaction of members engaging in group assignments would develop generic skills, such as communication and critical thinking. Group work appears to offer teachers an effective way to engage students, to increase the complexity and challenge of the tasks that students gain experience of working on, to offer students the opportunity for collaborative working, and to offer the possibility of reduced marking loads (Gibbs, 2009).