

The Effect of Information and Communications Technology (ICT) on Teaching Library and Information Science

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Introduction

Rapid advances in information technology have provided new learning methods and environments. This has been the case for the teaching of librarianship in Iran, which has a 40-year history. More advancement is needed, however, and Iranian LIS programs need more use of technology and an examination of methods of delivering instruction. This article examines the role of IT and ICT in education, and ways that they can improve LIS instruction.

Literature Review

A number of studies have been done on the effect of IT and ICT in LIS teaching. Tafreshi (1997) found that more than 80 percent of the population studied did not find LIS programs suited to the needs of the profession. Jowkar and Hamdipoor (2001) wrote about the need to review the BA curriculum and suggested instruction in IT and ICT. Hayati (1998) also assessed the effect of IT on teaching library science and expressed the need to review the curriculum. Tahouri (2006) did further research along these lines and made suggestions for change, including reviewing programs of universities in Tehran, Mashhad, and Al-Zahra University. Torkiantabar (2007) recounts the results of a 1984 study of LIS programs in the UK and the attention given to IT.

The literature reveals that many scholars are scrutinizing Iranian LIS programs and asking for review.

Information and Communications Technology (ICT)

Asnafi defines ICT as the technologies that help us record, store, process, retrieve, transfer, and receive information. IT and ICT are dependent on each other. IT may refer to the machine and ICT to its products (Asnafi 2005). The concept of IT has been expanded to include electronic communications, and the use of the term ICT reflects that ("Information Technology" 2008). IT may imply one-way communication, while ICT implies interaction between the user and the data (Zamani 2005). IT can be considered the convergence point for communication (Mahdavia 2000: 32). Zins defines IT as the scientific study of products, services and information systems (Zins 2007). IT also refers to a set of disciplines and techniques used in handling and processing data (Rahadoust 2007:138).

IT and ICT and Their Effects on Teaching and Learning

Technology has changed the way people live, work, and learn. The use of technology in education is one of the main challenges for education policy makers (Zalzadeh 2006). Traditional

methods of education are no longer able to meet the needs of today's learners. New technologies provide opportunities including the ability to tailor learning to the individual (Aminpoor 2007).

There are three approaches to IT and ICT in education that are often discussed:

- IT and ICT in the form of lesson units or workshops for students and teachers.
- IT and ICT as a means of information storage and retrieval and a method of doing research
- IT and ICT as the channel for delivering instruction

There is no discussion of content in these approaches. The influence that IT can have on teaching methods depends on the knowledge and skills of students and teachers, and the implementation of IT and ICT in courses (Kousha 2006). The effect of IT and ICT varies across disciplines. Medicine has been more affected than history, for example. Regardless of the discipline, however, the advantage is that students and teachers are not limited by time and place (Fattahian 2004).

Educating Librarians in IT and ICT

Librarians need special knowledge and skills including techniques of using software and hardware, selection and assessment of resources, use of information systems, ability to search networks and databases, as well as problem-solving and research skills and the ability to teach users. Librarians should acquire these skills before entering the job market. The LIS education system must prepare librarians to enter the field through proper college curriculum (Tahourie 2006).

New technology has made librarians network specialists, information mediators, and system designers. If librarians are to be the first to use new technology, they must have the skills and knowledge. Those can be acquired formally or informally. LIS programs must help develop skills such as communication, interpersonal relationships, research, specialized subject knowledge, analytical ability, updated IT skills, and flexibility (Ali Akbarzadeh 1998).

Librarians interact with more groups and provide services for users with various characteristics. They need patience and initiative and a user-oriented approach. LIS education must include social and communicative skills. Librarians should also have the ability to learn new skills and have complete mastery over them. Technical expertise is also important, including the ability to identify and retrieve useful data. Librarians' skills must meet the needs of this new era (Mansouri and Pashootanzadeh 2007).

The cultural environment is also important. The country's information infrastructure, the value society puts on information, attitudes of programmers, policymakers, and decision makers, and the country's level of technological development should be taken into consideration as well (Vallejo 1998).

Requirements for Improvement in LIS Education

A number of steps are necessary for LIS teaching to find a proper place in Iran, improve its quality, and librarians who are useful and who meet today's needs. Strategies include:

Reviewing LIS curricula

Changes in IT have affected developing countries along with others. Educational programs are longer fixed entities, but are continuously changing and adapting (Hayatie 1998). LIS has seen rapid changes in all aspects of dealing with information. LIS curricula must be reviewed and rebuilt to acknowledge those changes (Jowkar and Hamdipoor 2001). Some programs have done this. Mashhad Ferdowsi University reviewed its BA program and made changes effective with 2003-2004. Tehran University, Ahvaz Shahid Chamran University, and Al-Zahra University of Tehran have also made changes (Tahourie 2006). Tabriz University made a preliminary review in 2004-2005 to accommodate IT

and ICT, including teaching four units on processing Persian and Roman scripts and presenting Internet lessons. LIS programs need universal and continuous review. Moreover, will there be problems if new lessons are taught by the same old teachers?

Educating Teachers and Reviewing Teaching Methods

Selection and education of LIS faculty is very important. Norouzie, in an interview with IBNA, compared Iranian and French library and information science disciplines and stated that "library and information science teaching methods in faculties have weaknesses which can be removed by knowing and interacting with faculties of developed countries." He described French LIS methods such as using teachers and experts for teaching monthly and quarterly and group teaching of a lesson by various professors. He suggested using group problem-solving and collective wisdom in the department and using IT and ICT, especially the Internet, in education and research. He added that students apprenticeships should pay at least 30 percent of a regular employee's salary (Norouzie 2008).

The entrance of IT into library science had changed teaching it and made it attractive. If LIS teachers learn to use new technologies in education, teaching this discipline would also be more interesting. In recent years, using IT and ICT in LIS education has increased. With optimized use of IT and ICT, virtual and electronic education might increase. In addition, sending professors abroad to study and research and holding educational workshops for applying IT and ICT in teaching using foreign skilled professors would significantly develop LIS teaching.

Conclusion

The growth of IT and ICT has had a profound influence on higher education. Today, students can pursue scientific, educational, and research goals using the Internet. The entrance of IT and ICT into LIS has led to review of educational programs and teaching methods. LIS programs have reviewed their curricula in light of the needs of society and the market. Continued reviews are needed to meet future needs. Teaching methods in many disciplines must change, and LIS must continue to incorporate IT and ICT into teaching. For this to happen, it is necessary to educate teachers, possibly by using foreign professors and/or other methods.

LIS can preserve and improve its identity by applying IT and ICT and can educate librarians who can prove their benefit to the society by being in step with changes and advances in technology, economy, society, and culture.

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