Patrons' Expectations on New Technologies:
Faculty of Humanities and Social Sciences Library Case

Visnja Novosel
Faculty of Humanities and Social Sciences Library
I. Lucica 3, Zagreb
vnovosel@ffzg.hr

Ivana Oresic
Faculty of Humanities and Social Sciences Library
I. Lucica 3, Zagreb
ioresic@ffzg.hr

Abstract. *Changing role of academic libraries and environment in which learning process in higher education takes place will be discussed. Paper is focused on Faculty of Humanities and Social Sciences Library project which is a main example of the integration of information technologies at University of Zagreb. Main goal of research which will be presented is to determine expectations of patrons on information technology and software use.*

Keywords. Information society, ICT, academic libraries, RFID, KOHA, library patrons.

1. Academic library environment in changing society

The new technologies of information and communication (ICTs) have been thoroughly implicated in some of the big cultural shifts associated with globalization [14]. According to Castells globalization cohesion process and new technologies make "network society". Although network society is based on technology and communication it also defines modern societies with all its influences, such as cultural, economical and political factor. Influence of this rapid technological transformation in our society also underlines Sarkodie-Mensah [18]. The social changes brought by the new technologies can only lead to the emergence of knowledge societies under certain conditions – which are those associated with 'learning' societies [20].

Information technologies are embedded in almost every type of specialized technological system – including those used in education. After all, information technology is a very broad term encompassing all aspects of the management and processing information by computer, including the hardware and software required to access it [17]. The explosion of new communication technologies has generated widespread controversy over their potential effects on the workplace [4] or in education. Fulk, Schmitz and Steinfield suggest that accurate claims of effects must be rooted in valid assumptions about just how the technologies are used [4]. According to UNESCO, institutions of higher education are destined to play a fundamental role in knowledge societies, based on radical changes in the traditional patterns of knowledge production, diffusion and application [20]. The University of Zagreb E-learning Strategy also underlines the need of open and flexible learning environment [21] which may be the key to the task of educating teachers and parents about how young people might best be prepared for participation in the future national economic success within global cultural economy [14].

Idea of the library as a centre of the intellectual and educational life of the community [6] indicates its role through the contribution into dissemination of knowledge from all and for all [20]. Because of that libraries can become crucial actors in development, which must entail a reduction in the strong polarization of our world as regards access to cultural goods and to information [20]. The library, no matter the size, will also remain an institution located in a physical space, a meeting place and a centre for cultural activities. As a true cultural centre and clearing house for knowledge, it could represent a kind of portal for new knowledge [20] or "information centre". For many years, library represents the place where students come to study, research, and engage in the discourse of the disciplines [5]. Today, uses of technology brings much more.

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Library environment has changed. According to Gorman libraries use a variety of technologies to acquire, give access to, disseminate, and preserve recorded knowledge and information. Information and communication technology has always been a part of library services. During history technology impact on libraries have been seen and felt [18] into developing their services and activities. As academic libraries are an integral part of a faculty or university institution [17] its role is to serve academic community in teaching and scientific need. Due to information and communication technology development, libraries, whether specialized or general, increasingly split into a physical place and a virtual space, between printed materials and screen, will now have to work with a considerable mass of documentation. Library future requires a realignment of services, collections, and resources [5], especially incorporation of electronic sources. Since such places are no longer concerned exclusively with books and printed matter but also with house documentation and works presented or even designed outside the book format [20].

From mobile library to huge contemporary architectural complex, the library will remain a pillar of the social circulation of knowledge and a factor of vitality for learning networks [20]. From those points of view paper discusses Faculty of Humanities and Social Sciences Library project.

2. New technology and software at Library

University of Zagreb's Faculty of Humanities and Social Sciences has 23 departments and offer 34 undergraduate, 37 graduate and 18 postgraduate programs. There are more than 6100 students, around 500 teaching stuff, 39 librarians, mostly subject librarians and around 130 employees. There were 21 department libraries before 2009, which mainly served mostly their own programs. Libraries were physically separated from each other, as well as their management and collections. Each library has its own patrons evidence and own rules. Computer technology use in libraries started during 2001, when Ministry of science, education and sport started a financial support of SZI project (System of science information). In first period main goal was to start cataloguing online so library catalogue can be visible via internet to patrons. For that assignment software

was needed. After consideration WebPAC have been chosen as a first step to create joined library catalogue. This software covered library online catalogue, data bases and digital archive of faculty access. For several years that was appropriate solution, but not when, during 2005 the project of new library started. As a second largest library in Croatia, library building cover 8.415 square meters with more than 750.000 volumes of books and periodical. There will be around 800 studying spaces with 200 computers situated on 6 floors (Figure 1)[1].
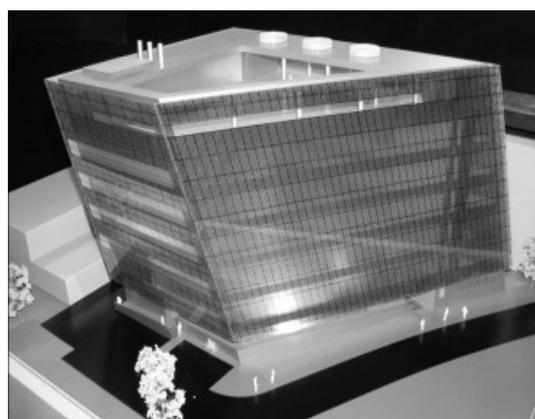

Figure 1. Faculty of Humanities and Social Sciences Library[1]

Specific part of the project is bringing together 21 department libraries. While libraries used the simplest technology, just for cataloguing and managing collection, this project required new software and the new technology to serve all library activities (circulation, cataloguing, managing collection, acquisition etc.). Joined Faculty of Humanities and Social Sciences Library, is imbued with information technology, using radio frequency identification (RFID) system and an open source integrated library system – "Koha". Most important was use of new information technology which can beneficially affect an organization and members [23]. New library software "Koha" is a full-featured open-source ILS (Integrated Library System). Developed initially in New Zealand by Katipo Communications Ltd and first deployed in January of 2000 for Horowhenua Library Trust, it is currently maintained by a team of software providers and library technology staff from around the globe [10]. "Koha" is built using library standards and protocols that ensure interoperability between "Koha" and other

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[1] Taken from: http://knjiznica.irb.hr/blog/wp-content/uploads/2009/03/ff_knjiznica.jpg [01/28/2008]

systems and technologies, while supporting existing workflows and tools [10]. Software offers a library catalogue front end/OPAC, a library system intranet, a circulation tracking system and acquisitions / budgeting system [10]. For Faculty of Humanities and Social Science Library it was important that "Koha" was compatible with 3M RFID system. One of the biggest jobs that library has to manage was conversion of all data into the "Koha" software, but without that all former work would be lost.

New technologies offer many benefits to this library. From librarians' point of view, it will be easier to manage collections, circulation and cataloguing. Benefit of RFID in the library environment is especially related to the staff productivity. Speed of operations, as the RFID enables fast check-outs and renewals, with the library patrons being able to process the circulating items and wirelessly access their personalized information (due dates, fines/fees, books on-hold, etc.). Integration of "Koha" and 3M RFID system, as information-processing and communication technology provides significant improvements in speed and quality of services [13]. New technology and software use will also have an influence on staff management. This ability to manage both staff and resources skilfully is more crucial than ever; and recognizing and developing staff appropriately are key for meeting the challenge to provide dynamic services [11].

Figure 2. Use of RFID in the library environment[2]

In the library environment (Figure 2), the RFID technology promises a significant improvement of staff productivity. This is especially related to the speed of operations, as the RFID enables fast check-outs and renewals, with the library patrons

being able to process the circulating items and wirelessly access their personalized information (due dates, fines/fees, books on-hold, etc.). This enables library staff to save time and concentrate on higher level tasks such as cataloguing, patrons' education on library services use etc. Practical experience from the Faculty of Humanities and Social Sciences in Zagreb provides an assessment of productivity enhancement in as many as 21 department libraries, in which sign-put slips are extensively used, which results in most of the library staff working hours being devoted to circulation operations [1].

As the fundamental role of the academic libraries is to develop, manage and secure collections, which provide quick and high-quality assessment to information required for teaching and research, RFID has a potential to become the next 'disruptive technology' in this environment. Namely, the RFID-enabled library items (including multimedia collections) are more efficiently managed, which includes tracking throughout the library, easier and faster charge and discharge, as well as inventory keeping and handling [1].

To bring together all 24 subject librarians who are specialist in their specific subjects, and several librarians who cover commonly jobs with varying skills, personalities and experience [11] is crucial and responsible assignment which can develop a cohesive, collaborative and effective team [11]. Practical experience from the Faculty of Humanities and Social Sciences in Zagreb provides an assessment of productivity enhancement in which sign-put slips are extensively used. It results in most of the library staff working hours being devoted to circulation operations [1]. According to Butter RFID may also be seen as an enabling technology with products such as smart-shelving and smart dump-bins considered by many to be technically feasible [2]. Before 2009, Faculty of Humanities and Social Sciences libraries have had closed access and in-person communication only. Innovative technologies implicit that new library will develop on-line services also, moreover as new generation of students technology resides at a social and cultural centre [5].

Moreover, new technology will bring out necessity of developing ICT skills that every librarian or information professional in 21st century need. This is not just computer use skills but also communication skills to access and use appropriate software. Literature review suggests,

according to contemporary tendency, new ways of communication between librarians and patrons such as social networking and instant message use because of today's college students are active in several online communities [12].

3. Patrons' expectations on new technology: survey background

Former Faculty infrastructure made impossible entirely use of information technologies and implementation of University strategies standards. According to that it wasn't possible to develop educational claims of contemporarily society. For lack of properly infrastructure one of the main University projects of new Faculty of Humanities and Social Sciences Library started. In view of popular believe in technology as the driving force in history [19] and domination of techno-optimism [22] we attempt to determine expectations of patrons on new technologies use. New library will, beside innovative technologies contribute to a new Faculty identity. According to Henke and Gieryn globalized science is at the same time emplaced science where research happens in places that acquire distinctive cultural meaning in discrete locations recognizable as centres where most science happens [7].

Any technological advancement presents social scientists an opportunity to gain insight into human behaviour [12]. According to Osa patron expectations have changed dramatically by the advent and continuous invasion of new technologies in the information arena [16]. Today, most of library patrons expect stellar, quick-response service from library [16].

This research attempting was to determine patrons' expectations on library technology use. Survey aims were:
- to determine the level of computer software and internet resources use;
- to determine student attitude about information technology use in teaching methods;
- to determine student attitude about library as place;
- previous levels are used to determine patrons' expectations about new library.

To examine patrons' expectation we conduct a student sample (N=176) at the Faculty of Humanities and Social Sciences Library and we used non-probability quota convenience sample. Among the examinee there were 85,2% females and 14,8% male; 75% Bologna study program and 25% "old" study program students whose average grades are in 54,9% higher than 4,01. All studying programs were presented equally (11% Croatian language, 11% Roman languages, 10% Slavic languages, 8% Pedagogy, 8% Sociology, 8% History students and 44% other programs students).

The study results can be used to develop library services and policies of communication. It could also be an opportunity to develop a library program of education in computer, library and information literacy.

4. Results

Computer use become everyday requirement for Faculty of Humanities and Social Sciences students (83,5% daily, and 97,1% weekly in general purpose use). Among this, 75,5% of students use computer weekly for educational purpose and 51,1% is using it daily. On an average students use (average score on the scale from 1-never to 5-very often): search engines (4,78); e-mail (4,59); MS Office (4,38); catalogue (3,01); e-learning system Omega (2,71); and Data bases (2,62). It is important to underline the following:
- 97,7% students use search engines as Google, often or very often;
- 79,4% students never or occasionally use data bases
- 70,5% students never or occasionally use library catalogue.

Although Faculty is investing great efforts to ensure access to data bases and develop information library system infrastructure 56,3% students assume that they are not systematically encouraged to library catalogue and data bases use. At the same time, 70,4% assume that they are systematically encouraged to MS Office use. This could indicate the lack of synchronisation between teaching and departments' libraries infrastructure.

Results also indicate that 73,3% of patrons' expect new library to become a centre of educational and intellectual Faculty life, they perceiving it as a place of contact and socializing (75,7%), and assume that library will never become completely digital / virtual (84,7%). New technology at Faculty Library will develop competence in the use of computer (41,2%) and support the use of information technology

appropriate to pedagogy standards in 21st century (85,8%).

Inadequate conditions in departments' libraries during past period can explain students' focus on practical claims on expectations. Expectations on new library are (average score on the scale from 1-not at all important to 5-very important): comfortable space to study (4,66); fiscally access to all collections (4,61); library staff consultation (4,56); helpful and available library staff (4,45); open access (4,41); personally and e-mail staff contact (4,36); collection management staff contact (4,19); e-journals and e-resources collection (4,13); dynamic service (4,06); continuous research catalogue and data bases education (3,99); new services (3,97); contact and socializing place (3,68); courses organization (3,48); and summers schools (3,35). It is important that library provide continuous education on library catalogue and data bases use according to 84,1% examinee. Those students also assume library as a place of contact and socializing[3], believe that new technology in library will develop competence in computer and technology use[4], and expecting more e-journal and e-resources[5]. Students who are more satisfied with their information literacy level are those who more often use computer in educational purpose[6], e-learning system Omega[7], and Faculty catalogue[8].

5. Information technology use and future suggestions

Survey results shows that information technologies use is already everyday requirement which new library has improved with a self check in / out service and open access which could impact on patrons' information literacy level and ways of collaboration between library and teaching. According to Jenkins academic librarians should play active roles on campus so they help keep the library vibrant and vital [9]. Patrons' use of library is crucial to develop information literacy skills. American Library Association standards [8] declare that the information literate person is able to: (a) determine the information needed; (b) access

needed information; (c) evaluate information; (d) use information; and (e) understand economic, legal, and social issues surrounding the use of information. Being able to find and critically evaluate information is most important thing in contemporary society which life is fast and instant is better [9]. Faculty of Humanities and Social Sciences Library now have excellent information technology infrastructure which should be, according to survey better presented to Faculty students. It implies that communication between patrons' and library staff should be increase. According to OCLC finding [3] it seems that college students are relatively unfamiliar with online presence of their academic libraries. Our results and all other relevant surveys can help in future defining aims of library services such as information literacy courses, social software use etc. Library staff can also be encouraged with survey on information literacy level made in 2008 [15] at Faculty of Humanities and Social Sciences, which shows there is a raise in a various aspects of students' information literacy and positive changes in students' opinion about information literacy courses [15]. According to ALA (American Library Association) information literacy survey in 2001 nearly all educational institution recognizes a need to help their students to use technology and information effectively [9]. Gibbons also suggests that there is still work to be done to make students more comfortable with online library resources and thereby increase their self-assessed library skills [5]. According to Leahy challenges of library services are in flexibility and the quality and agility of outreach and communication with students and faculty which will determine librarians' effectiveness [11].

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[3] Pearson's correlation: r=0,366, p<0,001

[4] Pearson's correlation: r=0,443, p<0,001

[5] Pearson's correlation: r=0,281, p<0,001

[6] Pearson's correlation: r=0,268, p<0,001

[7] Pearson's correlation: r=0,233, p<0,001

[8] Pearson's correlation: r=0,281, p<0,001

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