

The Educational Role of Libraries in the Digital Age Among the High School and University Student in Slavonski Brod and Osijek

Tihana Lubina

Josip Juraj Strossmayer University of Osijek,
Osijek, Croatia

Ivana Brkic Klimpak

Elementary School "Antun Mihanovic" Slavonski Brod,
Slavonski Brod, Croatia

A society of knowledge has a mission based on information dissemination and its usage, but its purpose cannot be completely realized without library as an institution that collects, processes, archives, protects and provides library collections to the public. Elementary- and high-school libraries, as well as the academic ones, are ubiquitous as associates and promoters of importance of information in the Digital Age. Information literacy becomes a foundation of an individual's literacy in general and leads him/her toward lifelong learning that becomes a philosophy on the way to a society of knowledge. The paper presents research results of informatics and information literacy among students with a purpose of improving the library mission and vision within future education. Data were collected by poll and the pollees were high-school and university students of Slavonski Brod and Osijek. This study found that although the trend of Internet usage in a library is not high, the percentage of those possessing a basic Information and Communication Technology (ICT) literacy level is high. Another significant fact is that the number of those unskilled in ICT usage (online database and catalog search) is high which represents a challenge to the libraries and ICT experts who are the incumbents of great responsibility.

Keywords: society of knowledge, libraries in education, Digital Age, information literacy, library users

Introduction

For a long time, a traditional role of libraries and librarians has been recognized within a known framework—as a place wherein the books, i.e., the written word, are collected, stored, and utilized, whereas a librarian was a person in charge of the library fund management. Nowadays, the role and services of a librarian on a pathway to the society of knowledge necessitate the abandonment of traditional frameworks, involving informatical and informational literacy and lifelong learning via all forms of permanent professional in-service training. A librarian is an active participant in the Information Society, so s/he is required to possess a high-quality knowledge of various sources and an increasing technical and computer know-how; thus, both the libraries and librarians try to adapt themselves to a continuous Information and Communication Technology (ICT) advancement, which becomes a fundamental support to their further work and development. These

Tihana Lubina, teaching assistant, doctoral student, Department of Cultural Studies, Josip Juraj Strossmayer University of Osijek.

Ivana Brkic Klimpak, school librarian, doctoral student, Elementary School "Antun Mihanovic" Slavonski Brod.

aspirations play a key role in the Information Age and in the time of knowledge we live in. The development heading toward digital libraries that nowadays represent an information environment that aggregates the library collections, services, and human resources is being applied at numerous universities worldwide.

Many authors emphasize that the role of librarians in the 21st century will be to facilitate an information source access, instead of that of a human knowledge keepers heretofore. Namely, according to certain research, it has been established that the Internet has assumed the role of the main information supplier to the juvenile generations, significantly modifying their view and attitude to the libraries thanks to these users' inclination to the Internet browsers instead of library sources.

Educational Role of School and College Libraries in the Digital Age

In the recent vicennial, pronounced changes in the development of ICT were effectuated, and they have been mostly reflected on librarian operations and the library collection establishment. Heretofore, libraries based their funds on conventional materials, as to be directed to the electronic databases establishment and fund digitalization while procuring electronic media in parallel by the emergence of the Internet (Zubac & Tominac, 2012).

Basic objective of collegiate libraries is knowledge preservation, implementation of information literacy campaigns, and organizing an ICT-based lifelong learning for an overall academia. Consequently, collegiate libraries are nowadays confronted with an increasing pressure to expand their funds with digital databases as to accomplish a higher-quality educational process. As the acquisition of information literacy skills is a presupposition to the lifelong learning, collegiate libraries play a significant role in the stimulation of search, selection, and evaluation techniques pertaining to a necessary information, with an emphasis on individualized learning, critical thinking, and problem-solving, as well as a support to a distant scientific-research work.

Presently, libraries highly improve distant learning systems in the domain of services and educational material repository. Network sources are an unavoidable factor in a search for knowledge, so online services like classrooms, "ask a librarian", or "my library" become increasingly attractive and utilized by students and teachers. That emphasizes the role of university libraries as one of the possible access points and hubs for all information sources even more, for it is exactly here where the librarians, as information experts, deploy information in their job strategically as to improve the mission of an organization (institution) of their own through development, implementation, and material and service management (Aparac-Jelušić, 2004). They can have an important role in information acquisition and direction to possibly useful instructional resources, concerning the fact that traditional teaching forms increasingly lose their value in an educational and scientific process, while emphasis is placed on an explorative, project- and problem-oriented ICT-based instruction that facilitates an access to the Web 2.0 mechanisms (videoconferencing, blogs, RSS sources, social networks) and repositories as to achieve the stipulated learning outcomes (Zubac & Tominac, 2012). A collegiate library's mission is to support and alleviate learning, and it has to possess high-quality collections and services that one needs to supplement, restore, and primarily digitalized in order to achieve it, for it is the only way for them to completely fulfill their role in an academic environment.

Through a quotidian ICT usage, school libraries also consequently and visibly change an instructional process quality in the work of students, teachers, lecturers, extern associates, and parents on an educational level. Simultaneously, they are also key linkages to the accomplishment of basic lifelong learning competencies and inter-course contents within a school curriculum, so it is necessary to also mention the proposed strategies

for the librarian-informational development (Kovačević & Galic, 2009):

(1) recognition of persons (teachers/lecturers and associates) interested in a collaborative teamwork stimulation and reading skill development, learning of ICT literacy skills and their quotidian instructional implementation to enable the students to be more successful while learning for a certain course of studies;

(2) the development of essential steps in the study methods pertaining to the important skills in a curricular context while working with the instructors of all courses through small-sized programs, monitoring and evaluation of students' advancements in ICT literacy and new knowledge acquisition pertaining to certain courses;

(3) the development of a research method for certain courses where possible as to create a database of good, practice-proven exercises that can be further used and expanded for the melioration of the existent and the formation of the new research methods;

(4) stimulation and evaluation of research projects;

(5) proliferation of good practice examples through in-school and external presentations; and

(6) monitoring and evaluation of students' development and achievements in reading, ICT literacy, and cultural and public activity through courses pursuant to the students' age.

For the realization of high-quality educational programs on each educational level, it is necessary to enjoy a solid support in the form of high-quality knowledge sources, and educational policy should be directed toward a stronger and more economical usage of new technologies, improvement of linguistic and intellectual competencies, initiation of innovative projects and the development of inland cooperation and that with the international educational factors.

One may conclude that numerous demands are set before libraries in the forthcoming period, pertaining both to the accomplishment of their developmental visions and to the continuous challenges of monitoring the new technological trends, whereby the libraries continuously realize their essential role in education via active services of their own and through an adjustment to the users' needs in a search for a recorded knowledge.

Research Methodology

In the paper's introductory considerations, we have written about the role of libraries in education, with an emphasis on the implementation of modern technologies in quotidian business transactions. Users' attitudes on the perception of library as an important factor in educational process may greatly assist to the formulation of new librarian services and users' needs; therefore, conducted is a research that may be used as an orientation to the libraries in the future.

Research objective was to explore, establish, and critically analyze the skill level of students' ICT literacy, the modalities of library usage and its services, and students' perception on the status of the library in a networked society today and in the future.

The following *research tasks* ensued on the basis of an objective set in such a way:

(1) to explore and identify the role of library in an educational process,

(2) to establish the purpose of students' usage of library services,

(3) to establish whether the library provides for high-quality conditions for a new technology access,

(4) to establish the students' level of computer proficiency and an ability to search for necessary information, and

(5) to examine students' attitudes on a library of the future.

Poll was designated as a research implementation method, whereby a closed-type questionnaire with nine questions (a possibility to add an answer was left to the pollees in a single question) was applied to a sample of 405 pollees. The pollees were high-school students (198 students) and university students (207 students). The students of Matija Mesić Gymnasium in Slavonski Brod, Economic and Office Automation High School in Slavonski Brod, Catering and Tourism High School in Osijek, Medicine High School in Osijek, School of Mechanical Engineering in Slavonski Brod, Teachers' Training College in Osijek and its satellite campus in Slavonski Brod and the students of the Department of Cultural Studies of the Josip Juraj Strossmayer University of Osijek participated in the research. The research was launched on November 15, 2013 and was completed on February 1, 2014 with 405 filled questionnaires, i.e., with a 100% response.

Results and Debate

A direct insight into the level of users' ICT literacy, their usage of library funds and services, and a general perception on the importance of technology for librarian activities was obtained through the user research via questionnaire. The research results are possible to be deployed for the improvement of library services in order to advance their missions and visions in an education of the future.

The research saw participation of 405 pollees, whereof 124 were males (30.62%) and 281 were females (69.38%). The female sex domination emanates from the fact that the research was implemented in high schools and university schools commonly attended by females. A percentage in favor of the males was amended by a research conducted in the Mechanical Engineering School in Slavonski Brod. An almost equal percentage of students (49.37%) and high scholars (50.62%) participated in the research. A library exists in all the high schools and university schools wherein the research was conducted.

Table 1 depicts a percentage of usage pertaining to various library services by high scholars and student population (the examinees could select multiple answers).

Table 1
Usage of High School/University School Library Services

	High school (%)	University school (%)
Additional instructional literature	19.61	64.85
Reading	30.45	26.42
I borrow books and read them at home	80.47	52.53
I find homework-related information	4.63	49.07
I write my homework/learn	8.01	14.85
I find information pertaining to my hobbies and interests	3.89	10.47
I use the Internet	39.89	23.10
I learn with my friends	5.70	14.09
I read newspapers/magazines	20.69	9.03
I attend literary promotions/literary clubs	4.53	13.89
Other:		
I do not use the library	0.24	0.24
I use a Xerox copy machine	0.24	0
I write my novel	0.24	0

The results demonstrate clear directives how high scholars and students experience library and what the reasons for their visits are. From the data obtained, it is visible that a traditional role of library as a spot where a

user would borrow a book and read it at home is most represented in high-school population, with a percentage higher than 80.47%, whereas the percentage is visibly reduced in student population, to 52.53%, being still considerably high. We could assume that the reason for such a high percentage in high scholar is a fact that the high scholars visit the library mostly because of instructional demands, i.e., their reading assignments. In addition to students' borrowing of books and reading them at home, a low percentage of high scholars using the Internet in library premises is also visible, but that percentage would be significantly higher if we had invested in the equipment of libraries by new technologies and if the funds were digitalized. Simultaneously, library users should be educated, and marketing that would attract the users to the library should also be devised. A fact that a small percentage of users declared that they also use the library for other purposes, e.g., finding information on hobbies, visits to literary promotions/literary clubs, additional vocational literature research (except students) and magazine reading, testifies to a great potentials of libraries that could be utilized much better while supplementing them by user-friendly contents. It is worth emphasizing the data favoring the future of libraries, i.e., that only 0.48% of examinees out of 405 high scholars and students involved in the research declared that they do not use the library at all.

The next data of our interest pertained to a high scholars and students' self-evaluation of the Internet speed in a high- or university school library. Table 2 presents examinees' answers through the four levels offered.

Table 2

Internet Speed Evaluation in a High School/University School Library

	Quick (%)	Adequate (%)	Slow (%)	Do not know (%)
High school	8.81	40.27	15.77	35.15
University school	7.77	31.37	24.14	36.72

With regard to the high- and university schools' modern technology equipment and users' habits while utilizing their services visible from the previous Table 1, the results should not be surprising. A high percentage of high scholars and students does not know what the Internet speed in the library is, what corresponds to the data from the aforementioned Table 1, wherein a relatively low percentage of students uses the Internet in library premises. A low percentage of users who evaluate the Internet speed as rapid and a satisfactory percentage of users who evaluate the Internet speed as adequate circumstantiate that a difficult financial situation is reflected and causes poor, i.e., partially satisfactory, conditions, influencing the overall education-related satisfaction quality. A worrisome data pertain to the fact that only one third of students opines that the Internet speed in the university school-based library premises is adequate, for without the Internet, electronic materials, and global monitoring of events the students cannot become a competitive educational structure that should effectuate changes to the better, bearing in mind the known demands posted before the students nowadays. A significant factor in a high-quality library equipment is also the level of its technical equipment. The results of examinees' considerations on a technical equipment of their high/university school libraries are represented in Table 3.

Table 3

Evaluation of Technical Equipment of High School/University School Libraries

	Good (%)	Bad (%)	Extremely bad (%)	Do not know (%)
High school	52.78	7.36	3.54	36.32
University school	39.91	19.12	9.43	31.54

The data obtained in the Table 3 above are a good indicator of a positive high scholars and students' picture concerning the librarians who still keep pace with the trends disregarding the not-so-good labor conditions.

In the following questions, the examinees should have evaluated a computer proficiency skill and an information search ability of their own. The results obtained are represented in Table 4 as follows.

Table 4

Individual Skill Level Evaluation

	Very qualified (%)	Partially qualified (%)	Partially unqualified (%)	Unqualified (%)	Do not know (%)
PC usage	84.30	14.71	0.99	0	0
Software usage (Word, Excel)	51.14	40.15	5.48	0.74	2.49
Emailing	50.13	38.15	5.73	2.75	3.24
Data printout	70.84	23.94	3.24	1.24	0.74
Computer problem-solving	11.47	22.96	13.96	42.14	9.47
Search for specific information on the Internet	75.06	22.19	1.74	0.27	0.74
Browser usage	80.32	9.47	2.74	4.73	2.74
In-class technology integration	11.22	49.64	13.96	11.72	13.46
Graphical and web design	12.21	42.14	33.19	2.74	9.72
Online database/catalog search	36.43	28.67	21.44	5.73	7.73

Table 4 demonstrates a high percentage of high scholars and students who consider themselves very qualified in PC usage, software usage, emailing, Internet browser usage, and data printout. This percentage is rapidly decreased in computer problem-solving, graphical and Web design, and online database or catalog search. A basic informatical literacy level opens additional possibilities to the libraries and librarians, who can educate and make their users literate not only informatively but also informatically.

The next question for the examinees to respond was that of how important the access to the new technologies in a high/university school library is. The data obtained are shown in Table 5.

Table 5

Importance of Access to the New Technologies in a High School/University School Library

	Very important (%)	Important (%)	Neither important nor unimportant (%)	Unimportant (%)	Do not know (%)
High school	33.82	39.92	9.25	3.35	13.66
University school	55.43	30.21	6.06	0	8.3

A good indicator to the libraries and librarians is exactly this Table 5, wherefrom it is visible that the high scholars and students recognize an educational role of library and that a high percentage of examinees recognizes the importance of new technologies' implementation in library activities.

We were interested in the examinees' attitudes and viewpoints on the high/university library operation in the future (three to five years). The examinees' responses on a connection between the obsolete/modern technical conditions of library operation and the promotion of users' technical skills are depicted in Table 6.

From Table 6, it is also clear that the high scholars and students recognize the importance of library and librarian operation improvement and that they observe the library as a significant factor of an educational process by virtue of such operations, as to facilitate the deployment of new technologies and greater information access. Also indubitable is the fact that both library and librarians have to keep pace with the trends

and have to cope with digitalization and its implementation in an educational process. As per the future, i.e., per the Digital Age, a high percentage of examinees has recognized the significance of obsolete technology replacement, an increase in user-dedicated PC numbers, and an improvement in library websites.

Table 6

Attitudes on a High School/Academic Library in the Future

	Important (%)	Partially important (%)	Partially unimportant (%)	Unimportant (%)	Do not know (%)
Be capable of employing the personnel having technical skills	51.14	27.68	9.47	0.74	10.97
Provision of more technical training to the existent personnel	47.15	30.67	12.21	3.99	5.98
Surmounting the personnel's resistance to technology	47.38	35.68	12.21	1.99	2.74
Improved personnel skills connected to digitalization	46.38	34.18	6.98	4.73	7.73
Corresponding technical support for a school library	46.40	23.69	7.23	1.99	20.69
Improved library website	48.37	21.46	7.73	3.24	19.20
An increased number of user PCs	56.13	23.44	12.21	4.48	3.74
Library equipment protected from viruses and other problems	53.64	33.66	6.48	4.73	1.49
Outdated technology replacement	78.82	11.22	5.48	2.49	1.99
Possibility to install Wi-Fi technology	77.83	16.45	2.99	1.99	0.74
Elevation of user-related technical skills	53.39	25.68	10.47	6.23	4.23
Harmonization of technology with other information sources	52.14	30.67	8.47	3.24	5.48

Conclusion

A modern society we live in demands from librarians in an educational process an immense engagement and responsibility in the development of reading and information needs of high scholars and students who are the library's end users. Education is confronted with a task to render each high scholar and student capable of coping with a rapid increase in information, as to be able to select and evaluate them critically. The formulation of learning modality with the aid of a state-of-the-art technology also modifies the learning paradigm, and the new skills in this new paradigm include browsing the Internet, usage of multimedia, and network communication. Thanks to a user-related research, we are able to get acquainted with the motives of individual arrival to a library, how the users perceive the library, what the level of their informatical and informational literacy is and what their attitudes on the improvements pertaining to the future library operations are.

The research has provided interesting data and realizations, e.g., the fact that the high scholars and students continuously perceive the library as a significant educational center, with an emphasis on the circumstance that the motives of their arrival are still book and expert literature borrowings. Although the trend of Internet usage in a library is not high, high is a percentage of those possessing a basic ICT literacy level, but also significant is the fact that the number of those unskilled in ICT usage, i.e., in online database and catalog search, is high, representing a challenge to the libraries and ICT experts who are the incumbents of great responsibility. The pollees have primary recognized the significance of library and librarian operation improvement in the future, for they observe the existence of a new technology in a library (as a support to the services based on the existent library funds) as an extremely important factor of an educational process that could also vouchsafe a greater information access to them.

One may thus conclude the following:

- (1) As to improve their societal position, libraries should be directed to those Internet aspects that could

assist them expand their influence and quality in their role of a central research and learning hub.

(2) An in-library computer usage should be a quotidian practice to increase a number of activities and librarian duties.

(3) As to preserve its place and role in an educational process, library has to be a place of digital and information gap reduction.

(4) The best way would be to primarily offer library services to the users through an access to all collections via Internet-connected computers, various software, and databases.

(5) High scholars and students as users need a continuous assistance in learning in an epoch of constant adjustment to the newly created conditions and Digital Age demands.

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