THE IMPORTANCE OF USER-CENTERED UNIVERSITY LIBRARY DESIGN

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Introduction

The reason for the existence of all information centers and the focal point of the information systems is the user. The main objective of the information services is to act as a bridge between the existing information and the user. For ensuring an effective use of the information services, the information users, their information needs, their approaches to the information use and search should be well-known. The characteristics of the users play a decisive role ranging from the establishment of the information centers to collection and from determination service policies to restructuring the center. However, librarians had an information-centered approach for years; and while they exerted effort to establish efficient and effective information systems, they overlooked the characteristics, needs and approaches of the users. Sources and services gain importance in finding the solutions for information system questions; also an approach to the subject is based on the system. However, it is impossible to design a library by ignoring the needs of the people to whom we're obliged to render services. Also, without the knowledge of which information is needed and why it is needed, the design of a library becomes impossible. The user characteristics should be taken into account not only for the establishment stage of the information centers but also for the restructuring of the existing systems. Last but not least, directing our attention from the system to the user can help us better understand the problems and their reasons and design more efficient services.

University and university libraries

Information which gives its name to our era is of vital importance since beginning of the existence of human beings. However, it is the first time, in today's world the transmission of information is more rapid and becomes a more significant source of power for the people. Information knowledge doesn't merely mean knowing something; it also means finding solutions to the problems, adapting to the new requirements and taking sound decisions. In such a period for which information is of significance, the university, which produces information and ensures social development, is one of the most important institutions for restructuring the social life.

Today, the most important reason for different improvement levels among the countries is the significance they attach to the information and production of scientific information. Scientific information includes not only the technical information, which ensures technological improvement, but also the economic, social, cultural, and artistic information. It is impossible to make sound production even if the produced material is a written material such as an article or book or it is a tool, service or artistic production. The production of science, which has significance for the countries, is generally under the responsibility of the universities and public institutions in the countries which don't have well-established special research units. For this reason, the level and the evaluation level of science produced in universities are important (**Pak, 1994**).

Although the universities have a very old background, the modern concept of universities has been introduced after the universities start conducting researches besides dealing with education and training (**Çakın, 1998**). Furthermore, after the adoption of researches as one of the major functions of universities, the concept of today's libraries has been introduced. According to Çakın (2000), the success of university researches mainly depend on the libraries established in the universities. University libraries are the institutions which assume the responsibility of conveying every kind of information to the users and supporting education and research activities. The link between a university and its library is also closely related to the information need by users.

A modern university library is obliged to meet the information need of the academic group to which it renders service. However, the information needed with respect to the scientific branches, the ways to obtain this information and channels and sources are different from each their. For this reason, information services to be rendered for the academicians should be designed according to user characteristics rather than being designed as a single type. Characteristics, needs, working conditions and expectations of each user should be taken into account for improving the service to be rendered. And, a user-centered design of the services is closely related to the analysis of the users.

Academicians and their information use characteristics

Academicians constitute the group which uses scientific information and produces new information through application of information. Furthermore, scientists are a part of the social life. For this reason, their environments, culture, education as well as the political and economic system have an effect on them. Also, the instructors in the universities are both researches and trainers. A scientist working in an academic environment is responsible for education and research activities as well as restructuring the curriculum according to the changing conditions. Academicians assume administrative responsibilities and also they are responsible for department, faculty or university management. Sometimes it becomes necessary to receive projects outside the university and to conduct researches on these projects. When all of these are considered, the roles of academicians can be categorized as trainer, administrator and practitioner.

For playing their roles, these people have different information needs and approaches to the search for information (**Uçak, 1997a**). The conditions also affect these people with respect to the information use. Perception of a scientist has a relationship with his understanding of the needs. And, this is also closely related to many factors. These people have a milieu, which includes their colleagues; these people have an institution; they make use of information systems and information sources. Paisley (1968) sheds light on this by putting forward 10 interrelated factors which are as follows:

Culture: Culture constitutes the external circle which covers the individual. Every person is a part of his culture. It is very difficult to conduct research on the effect of this factor on the individual.

Political System: This factor can affect the subjects which the scientist deals with.

Profession: This factor is of great significance for shaping the user's information needs and approaches. Profession has also an effect on the articles and approaches to the studies.

Field of Study: Field of study defines the sub-division in the profession and has an effect on the approaches to the studies.

Invisible College: Invisible College can be defined as a group of scientists who work in similar fields or who are in contact with each other due to the researches. The scientists in the same social structure frequently make references to each other. This structure has its effect mainly on access to information in the field of science and engineering.

The Institution/Organization of Work: The task of the individual includes the level of his responsibility and his relationship with the production. The institution where the individual works has an effect on the individual's approaches to the search for information by facilitating his access to the information or imposing limitations.

Working Group: Working group can be defined as the team who is working on a certain subject or problem. The working group, which is the most effective elements of the transmission of information, plays a determining role for the choice of the information source and channel and can have an effect on the flow of information.

Individual Characteristics: This factor includes intelligence, creativity, cognitive structure, level of perception, drawing conclusions from the information obtained, and the ability to use the information

Legal and Economic System: The value of information, to which the system of the individual attaches importance has an effect on obtaining information. The competition for patents, trade and marks, business secrets, researches and improvement is included within this scope and affect the flow of information.

Information Systems: The characteristics of the information systems and services, their opportunities and shortcomings affect the flow of information.

The most difficult fields of study are the culture as well as the political system. The most frequently preferred topic of study is the effect of profession and information systems on the academicians. Many researches conducted on individuals' approaches to the search for information put forth many factors that have an effect on the issue of approaches. Besides the profession of the individual, his characteristics, status, task, the characteristics of his institution and the information system have an effect on his approaches to the search for information. These factors can be summarized under three titles.

- Factors related to the source of information and access to the information: The accessibility of information, its reliability, current, its scope, level, quality and its accuracy.
- Factors related to the environment of the individual: Culture; legal, economic and political system.
- Factors related to the individual characteristics: Age, gender, level of perception, whether the individual is ready to obtain information, unclear tolerance, curiosity, interest, systematic and perceptual type of learning (**Uçak 1997a**).

Besides the social structure of the academicians, their ideas and opinions have also an effect on their choice and use of information; and these elements affect the rate and level of the use of information technology. Furthermore, the topic of research or background information of the fields plays an effective role for individuals' activities for access to the information. Individual's background information on the subject matter has an effect on the choice of terminology for searching, the expression of the search, and, in turn, the access to the information.

While it is very difficult to carry out studies on the effect of the factors on the approaches of the individual to the information and to assess this effect, the effects of some factors have been put forward by certain researches. The most important factor is academic discipline/professional factor.

The effect of academic discipline on the use of information

Conduction of any work necessitates the professional knowledge with respect to this work. Individuals' perception and interpretation of information depend on the link they produce between their background information and the necessities occur with regard to the information. Individuals' perception of the work as well as their perception of the necessity of information is similar especially in an atmosphere where they are colleagues exerting effort for the same work (**Belkin, Brooks and Oddy, 1982**). The profession and the field of work have an effective role on the choice of the information channel and the use of different information sources. The choice of the primary and secondary channels, electronic environment, level of the utility of libraries, and participation to the conferences and meetings are closely related to the field of profession. In some professions, the productivity obtained from the work depends on the contact between the colleagues whereas in some fields of profession, the productivity depends on publications and the use of libraries instead of the contact between the colleagues. According to Palmer (1991), the academic discipline and institution of the individual have an effect on his perception of the problems and production of solutions to these problems.

The field, objective, environment, and organization of every field of expertise are different from each other. For this reason it is very important to understand the professional characteristics and fields of implementation of the individuals before conducting research on the characteristics of their information use. The researches reveal that there is a close link between the tasks related to the search for information and the other tasks required by this search. Besides the academic discipline of the academicians, their activities for training and research affect their approaches to the search for information and use of information. The information use of an individual belonging to a field of profession can change according to his age, level of career and field of expertise. As the career of the individual improves and as he gets older, there is a decrease in his activities for the information search (**Leckie, 1996**).

The differences among the academic disciplines lead to different information requirements of the people and use of different information sources. The quality of the information needed also affects the property of the information source. Whereas the academicians working in the fields of science and technology, where updated information is of importance, frequently make use of the electronic environment and periodicals; books are the primary sources of information in the social and humanitarian sciences. Since the old information is as important as the updated/current information in the social sciences, books are as significant as the periodicals. The need for original information in the humanitarian sciences, increase the interest in the older sources of information. The quality of the information needed plays an effective role for the approaches to the search for information and the information use. Academicians frequently use index, abstracts, and databases especially in the fields where updated information is of great importance. The properties of the professions are closely related to the formation of information sources and information use. All of these characteristics have an effect on the level of the library use and utility of services (**Uçak, 1997a**).

The user satisfaction cannot be ensured if such differences among the users aren't taken into account. The user-centered design of the information systems becomes very important when the information technology has become wide-spread.

User-centered library design

For years, the information users have been regarded as passive individuals who are obliged to make use of the information centers in order to meet their needs and to look for information. The effect of the users on the information centers has been gradually understood. It has also been understood that the users aren't a part of the elements of library such as the building, collection, and budget; but that users are the reason of existence of the libraries. Although the users are the main reason for the formation of the libraries, they don't have a right to directly express their thoughts. In designing the information centers, the approach should focus on for whom the information is ideal rather on the idea of ideal information center. Thus, we should take into account how the systems will be designed according to the user needs rather than how the user will be integrated with the existing information system. According to Savolainen (1993), the librarians should bear in mind from which perspective and point of view the problems are handled. At this point we encounter two points of view. The first one is the system-centered approach belonging to the library which is a intermediary for the access to the information. The problems and designing matters have been handled in the light of this point of view for years. However, the librarians altered their point of view since the existing information centers have been unable to meet the needs of the users. Thus, it has been understood that the characteristics of the user group should be considered and user-centered approach should be dominant (**Uçak, 1997b**).

According to Karakaş (1998), the concept of modern marketing has left out the understanding of its service of selling its products and focuses on designing the service and products to meet the needs of the customers. As the customers are the objectives of the establishment of the markets, the users are of vital importance for the existence of the libraries. If regard the customer as the user and the market as the library, we can understand that the libraries have directed their attention to the user as a result of the developing information technologies. Such an understanding has been beneficial for the development of the idea of user-centered libraries.

Designing the university libraries as user-centered

In today's world, the libraries encounter technological developments, increasing information density, the variety in the environments where the information is saved and the increase in the expectations of the users. While adapting themselves to the changing conditions, the libraries should bear in mind the user characteristics. Rouse and Rouse (1984) puts fort that in order to call this era "information era", it is necessary to understand the needs and characteristics of the people who use the computer and communication technology; thus the interest directed to the computer and communication technology should be directed to the users. It is also suggested that although the technologies are adapted to the information systems rapidly, the users of information aren't taken into consideration.

Wilson (1995) suggests that the designing of the user-centered library has been established in the light of the three following stages under the leadership of Betty G.Bengston at Washington University:

- Development of the philosophy of user-centered service which can act as a guideline for the policies and procedures to be followed.

- Determination of the needs of the users by having sufficient knowledge of them; conducting research on to what extent the users needs have been met; determination of the support of the library for the training and research activities.

- Introduction and marketing information services to the library users.

The main property of this design is the user satisfaction and rendering a high quality service to the users. All the members of the library staff should take into account this understanding for the success of the design. The interest has focused on the information and communication needs of the users rather than routine procedures. The decisions on the management, planning and rendition of service in the library are taken within the institutional framework, bearing in mind the user characteristics. In such an arrangement the communication between the staff and the users should be effective and permanent. The feedback obtained from the users should be taken into account, and the results of the individual service design as well as the user satisfaction should be considered. The following steps should be realized for the achievement of the conditions mentioned above.

- Making a user-centered objectives and policies within the framework of the mission of the university.
- Definition of the information needs and expectations of the users.
- Determining the differences between the users.
- Rendering the relationship between the users and librarians more effective.
- Analysis of the information sources which met the user needs.
- Improvement of the cooperation between the business circle and academic departments in the university.
- Conveying the experience required by the user-centered library practices to the staff in the library.

Conclusion and Recommendations

It is important to make a user-centered library design for rendering the university libraries more effective. To achieve this, those who are responsible for the libraries should take into account their active and passive users. Furthermore, not only the academicians who make use of the libraries but also the academicians who don't make use of them should be considered. The academic discipline has an effect on an individual's approach to the search for information and use of information. For this reason, the above mentioned points should be taken into consideration for a wide range of activities from choice of sources to the design of the services. Besides the literature, scientific data collection methods such as questionnaire, observation and negotiation facilitate determination of the user characteristics. All the library staff should believe in the advantage of a user-centered library design; they should also develop individual service and they should have the necessary knowledge and ability to achieve this. The contact to be established with the user should include all the users, and the communication with the users should be permanent. The effect of the services rendered should be controlled by determining the user satisfaction.

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