INTERNATIONAL PERSPECTIVES

• University Library Buildings in Turkey: A Survey and a Case Study of Yildiz Technical University Main Library Building

by Ayse Balanli, Ayse Ozturk, S. Mujdem Vural, and Berrin Kucukcan

Available online 31 October 2007

Introduction

Higher education in Turkey has an ancient heritage, beginning in the 'medrese' or 'madrasah', schools for young men attached to a mosque, which date back to the tenth century and earlier throughout the Islamic world. The first university in Turkey, now known as Istanbul Universitesi, grew out of the Istanbul Medrese, founded as early as 1453, which gradually established itself as a pre-eminent science and technology school throughout the nineteenth century, taking the name Istanbul Darulfunun (House of Multiple Sciences) in 1912, and Istanbul Universitesi in 1933. Its former Schools, based on the schools of the former Medrese, have become Faculties in the modern university.

There are now more than ninety-seven universities and academies in Turkey, of which approximately two thirds are state owned, the others are funded by foundations, or are military or police academies. Yildiz Technical University, founded in 1911, is one of the largest and most prominent state universities in Istanbul, and one of two technical universities, the other being Istanbul Technical University (founded 1773). YTU offers programs within eight faculties (covering literature, languages, fine arts and design, engineering and architecture) across three campuses, and advanced research degrees in dedicated research institutes. Although not the oldest university in Istanbul, many of its buildings, especially on the historic Davutpasa campus, date from the first half of the twentieth century and are ill-equipped to provide for the needs of a modern university, let alone a modern university library.

According to Celik,[1] despite a very rapid increase in tertiary education in the past few decades, university libraries in Turkey continue to suffer from a number of factors hindering their development. These include a high level of decentralization to multiple campuses and/or faculty libraries, the appointment of senior academics without library qualifications as library directors, lack of trained staff, extremely small collections of monographs and serials by international standards (even Istanbul University Library, which is the national repository for Turkish publications had little more than 500,000 volumes in 2000), and grossly varying and inadequate budgets. Although the importance of technology to provide modern library services has been recognized, they lag behind European and North American counterparts in the use of integrated library systems, Internet access and access to bibliographic utilities. However, there have been initiatives in recent years to develop cooperative interlibrary loan systems, and document delivery on a national basis, and a national consortium to enable collaborative sharing of electronic bibliographic data, and cooperative collection management, and purchase of access to electronic bibliographic and full-text databases, through the consortium ANKOS.[2]

The value of a university library within its institution depends not only on the knowledge resources available, but also on its users' satisfaction, and this in term is partly dependent on the facilities and services offered by the university library. Despite the introduction of electronic services, the physical and social characteristics of the library building have been shown to be still relevant in creating an environment conducive to study and research, and in facilitating use of the university library. As Shill and Tonner noted "a high quality building does make a difference."[3] Even with the advent of networked electronic services which have potential to make a far greater impact in developing countries than in countries with well established academic libraries, an attractive library, with adequate study spaces, and professional staff available to assist users remain critical factors in achieving high academic standards in teaching and research. The question then arises, how well do the university libraries in Turkey measure up?

To answer this question, an investigation of the physical characteristics of twenty-two main libraries of all university libraries in Istanbul was conducted.[4] A questionnaire was distributed to the administrator of twenty-two state and foundation university libraries in Istanbul, to which twenty universities responded. Total populations (including full-time student and teaching staff) ranged from over 30,000 (two universities); 20,000–30,000 (one); 10,000–20,000 (three); 3000–10,000 (nine); and 3000 (five). Responses to a set of

Ayse Balani, Yildiz Technical University, Istanbul, Turkey <balanli@yildiz.edu.tr>;
Ayse Ozturk, Yeditepe University, Istanbul, Turkey <aozturk@yeditepe.edu.tr>;
S. Mujdem Vural, Yildiz Technical University, Istanbul, Turkey <vural@yildiz.edu.tr>;
Berrin Kucukcan, Koc University, Istanbul, Turkey <bkucukcan@ku.edu.tr>.

questions concerning the adequacy of the physical characteristics of the library buildings are given in Table 1.

In the responses to this questionnaire, inadequate space (including the reading halls) emerges as the main problem in these libraries. Except for facilities for disabled users, the findings (taking into account the figures that indicate facilities are currently adequate, but will not be adequate in future) suggest that the other problems are less important. However, responses also indicated that, in 70 percent of the libraries, the number of users were below the expected figures. To determine some of the reasons for this lack of use, a closer study of the Yildiz Technical University Library was made.

Yildiz Technical University Library and Documentation Building

Yildiz Technical University (YTU) has three campuses in different parts of Istanbul. The main campus, in which a number of the buildings were once part of historic Yildiz Palace, is placed within a part of the garden of the Yildiz Palace in Besiktas, and includes the Sevket Sabanci Main Library Building, as well as the Institutions of Science and Social Sciences, the Faculties of Economics and Administrative Sciences, Civil Engineering, Mechanical Engineering, Architecture and Art and Design, the Department of Metallurgical and Materials Engineering, as well as restaurants and the sports center. The Davutpasa Campus, eighteen kilometers from the main campus, contains the Arts, Sciences, and the Chemical and Metallurgical Engineering Faculties. Schools of Vocational Studies and Foreign Languages are located on the Ayazaga Campus, which is eight kilometers away from the main campus. On these two campuses, a total of 5625 students were studying during the 2002–2003 academic year.

The Sevket Sabanci Main Library Building provides library services to all YTU students and teaching staff, a total of 18,391 students and 1330 teaching staff in the 2002–2003 academic year. The library, which was specifically designed and constructed as the main library building of YTU, contained at that time approximately 15,000 books and bound volumes of 154 periodicals, placed on open shelves according to the Dewey Decimal Classification system. Rare books and theses were kept in closed bookcases.

Methods of Investigation

In an initial study conducted between 1999 and 2002, the physical and social characteristics, and environmental aspects of the Sevket Sabanci Main Library Building of Yildiz Technical University (YTU) were investigated by a research group, led by A. Balanlý and supported by the YTU Research Foundation.[5,6] As part of the investigation of the internal environment, it was observed that approximately eighty people visited the library building each day during the busy time of the term. A questionnaire completed by users who were actively using the library during the investigation also showed that about 20 percent of those eighty people used the library for research. In order to obtain data from the total population of 17,427 full-time students and 1146 teaching staff in the university for the 2001–2002 academic year, it was decided to undertake additional research to identify the reasons for the insufficient use of the library. In a follow-up investigation, which was done in the 2002–2003 academic year, the active users within the library building were re-counted, by counting library users twenty-five

Table 1
The Physical Characteristics Affecting the Usage of University Library Buildings in Istanbul

Questions	Sufficient Percent of Respondents	Insufficient Percent of Respondents	Not Answered or Comments
Are the spaces designed for the librarian and library staff sufficient?	60	40	
Are the reading halls sufficient?	50	50	
Are the bookshelves sufficient?	35	15	50 percent indicate currently sufficient but in future will be insufficient
Are the shelves for periodicals sufficient?	30	5	65 percent indicate currently sufficient but in future will be insufficient
How is the lighting quality in offices?	80	10	5 percent did not answer 5 percent indicate sufficient in some areas
How is the lighting quality in reading rooms?	70	10	20 percent indicate moderately sufficient
How is the thermal comfort in offices?	65	15	20 percent indicate moderately comfortable
How is the thermal comfort in reading rooms?	60	15	25 percent indicate comfortable in some areas

Questions	Easy Percent of Respondents	Difficult Percent of Respondents	Not Answered or Comments
Is it difficult to reach the library building?	90	–	10 percent did not answer
Is the building suitable for disabled?	60	40	50 percent have a suitable elevator, 40 percent have a suitable WC

times, at different times of the day and week, during the 2002–2003 academic year, and a survey of a sample of all members of the university was conducted. Results of all these investigations are reported below.

Physical Features of the Library Building

The spaces within the library building were measured, along with luminescence, color, direction, and reflection of light. Visual pollution within the spaces – such as surface pollution and inelegance – were determined by observation. Indoor noise levels in reading halls and offices on the first second and third floors were determined by a total of five measurements within a year during term time and the vacations. Finishes of walls and floors within the spaces were noted, including their special characteristics such as hardness, roughness, slipperiness, sharpness, propensity to dirt and staining or pollution. Indoor air temperature, relative humidity and rates of airflow in reading halls were evaluated by means of measurements taken in five different periods during term time and vacations. To determine the indoor air quality levels of radon, inhalable and respirable particulates and micro-organisms were measured. Odors and fire risks within the spaces were noted.[5,6]

Characteristics of the outdoor environment were determined by measurements of levels of outdoor daylight, outdoor noise, outdoor air temperature, relative humidity, airflow, dust and micro-organisms. Besides these characteristics, the surroundings of the library building, including roads, other buildings and plants, were examined. The outdoor social environment and its relationship with the library building were examined through questionnaires and other data related to YTU. All measurements, observations and findings were compared to standards of the required and recommended levels, and environmental features likely to have negative effects on users' health and health risks were determined.

During the examination and evaluation of these internal and external environmental characteristics, the low rate of use of the library building was realized. To find out the actual number of users using the library for research and study, active users were re-counted twenty-five times in different hours of the day on different days of the weeks during the fall term of the 2002–2003 academic year. The number of the daily users and percentages according to their activities (research, studying and computer use) was determined.

Because of the small number of library users compared with the whole population of the university, it was decided that the relationship between this result and the negative environmental features documented in the earlier research project required examination through additional research. A second questionnaire consisting of four key questions derived from the results of the earliest research project (see Table 2) was distributed to students and teaching staff on all three campuses to ascertain their opinions about the use of the Sevket Sabancý Main Library Building. This second questionnaire was distributed randomly to a total of 395 people, including twenty-seven teaching staff, twenty-seven students of vocational studies, 293 undergraduate students, forty graduate students, and eight PhD students. The respondents to this questionnaire comprised two percent of the total population of YTU's three campuses.

Findings from the second questionnaire were compared with the environmental features of the building determined by the first investigation into the library as an environment and the results of the first user questionnaire, in order to explore the negative effects of environmental features on the use of the library building.

Table 2
Responses from Staff and Students on All Campuses Concerning the Main Library Building

Questions	Choices	Total Percent
1. How frequently do you use the library building during the terms?	None	20.25
	Rarely	69.62
	1–2 days in a week	8.61
	3–4 days in a week	1.52
	Everyday	–
2. How long do you stay within the building if you are using the library?	Less than an hour	23.04
	1–2 hours	47.09
	3–4 hours	8.10
	More than 4 hours	1.52
3. What is your aim to use the library building?	Research	55.95
	Studying	27.59
	Internet searching	5.57
	Book borrowing and return	8.35
4. What is the reason if you are not/or rarely using the library?	The building is distant	21.01
	Study area is inadequate	18.48
	I cannot find the reference I require	48.35
	It is difficult to get access to references	29.37
	Inadequate lighting	9.87
	Spaces and surfaces are dirty	7.09
	Spaces are noisy	8.35
	Inadequate thermal comfort	11.14
	There is an unpleasant odor in spaces	9.37
	Spaces are airless	26.58
	Other (Please specify) ...	34.43
	I use other libraries	6.56
	I have no time	6.06
	Technical facilities are inadequate (photocopying, computers, etc.)	9.35
	I have no need/or knowledge of the facilities within the library	9.53
	...	2.93

Findings

According to observations made during the second study, during the 2002–2003 fall term, the main library building was used daily by fifty-four people, of whom 18 percent were doing research, 78 percent were studying and 4 percent were using

computers. Only ten people per day were using the library for research.

In the following paragraphs findings from the second questionnaire are added to and compared with the results of the first research project.

- Difficulties in reaching the library building. This included some respondents on the main campus. Due to the lack of automation at the time, this was a critical factor, since users had to visit the library building to search the catalogue.

- Inadequate study area. The existing spaces within the main library building fell short of those recommended by Edwards[7] and the IFLA/UNESCO guidelines (2001).[8]

- Lack of resources. According to standards cited by Withers,[10] there should be seventy-five books for each student. For the student population of YTU (18,391 students), there should be approximately 1,379,325 books, in the main library building. In fact there are only 15,000 books available for use in open shelves, and 10,000 books in storage, waiting to be classified.

- Difficulties in accessing resources. There was no electronic catalogue (OPAC) available in the library. In addition, it has been recommended that there must be one professional librarian and one additional staff member for every 300 students.[9] In YTU, this would mean that sixty-one librarians and sixty-one non-professional staff are needed, compared with the existing staff of eighteen librarians and two additional staff working in the library. However, the inadequate size of the collection for the number of users is more likely to be more a barrier to access to resources than lack of trained staff.

- Poor lighting quality. Levels of illumination in all reading halls are inadequate and uneven; the color of lamp light and direction of day light in the basement floor were found to be unsuitable; reflectance of table surfaces was found unsuitable for visual comfort. According to the results of the first questionnaire 19.70 percent of users in the library building complained about the insufficient lighting quality.

- Visual pollution in library spaces and on surfaces. It was observed that, except on the staircases, the floor finishes in all other spaces are damaged, some of the paint is faded and flaking off the walls, and some of the trimmings and skirting are unmatched by other finishes. These cause visual pollution on the surfaces and within the spaces.

- High noise levels. Except on the third floor, the levels of noise in reading halls were found to be above the standard defined in the Turkish "Noise Control Regulation"[10] based on WHO recommendations[11] (defined as 35 leq dBA). In the first questionnaire 20.50 percent of users complained about indoor noise and 8.30 percent of users complained about outdoor noise.

- Poor temperature control. During the cold season, indoor air temperature and surface temperatures of windows, walls and floors were found to be inadequate. In the first questionnaire, 30.98 percent of users complained about the temperature during the cold season, and 13.79 percent of them complained about the temperature during the hot season.

- Airlessness. Airflow within the spaces of the library building did not meet the required standard of 0.1–0.8 m/s,[12] and is insufficient to make the users feel comfortable. 50.84 percent of users complained about the airless feeling within the spaces while they were in the library, and in some areas a distinctive and heavy odor was perceived.

The Use of YTU Sevket Sabanci Main Library Building

In the second questionnaire, which was conducted with a sample across all members of the university, 20.25 percent of respondents stated that they had never used the library building and 69.62 percent of them declared that they rarely used the library. Based on this it is likely that about 90 percent of staff and students at YTU either never or rarely use the library. Even more concerning, is the finding that 80 percent of graduate students and 100 percent of PhD students, who are expected to submit theses for the award their degree, indicated that they rarely used the main library. Most of these students stated that they experience difficulties in getting access to the resources they needed. The percentage of the library users who stated that they use the library for research is 55.95 percent. However, answers to the first in-library questionnaire showed that 20 percent and observation in the second study showed that 18 percent of active users were doing research.

Conclusions and Recommendations

The main reasons for the insufficient use of the main library building are stated as the inadequate collection and difficulties in gaining access to resources. These are the result of the lack of finances to install a computerized system and to purchase new resources. If an integrated computerized library system was networked across the entire university, it would be easier to classify the new resources, make them accessible for use and enable users to access the collection.

Use was also affected by many physical considerations, including airlessness. Architectural design decisions affect the environmental characteristics of the building. However, while airlessness, insufficient temperature control, poor lighting, odor, noise and surface pollution can be improved by taking remedial action, the lack of required space is more problematic. Although the required additional study area is about six and a half times more than the existing study area, it is impossible to extend the library building due to the limitations of the site.

In addition, due to opening of new departments in the university, there was a 5.5 percent increase in the number of students and a 16.8 percent increase in the number of the teaching staff in the 2002–2003 academic years compared with the previous year. This growth continues within the university, and the number of the students and teaching staff is likely to increase in the future. To provide an efficient service in terms of spreading knowledge and producing new knowledge, the university began to recognize the importance of the library system to support high quality research and scholarship.

This study was done during the years 1999–2002 and 2002–2003. As a result of improvements that were already beginning at the end of the study, moves were made toward introducing electronic resources to the library in 2002, and by July 2006, the current number of bibliographic databases available, which include standard resources such as EBSCO, ProQUEST, Science Direct, Blackwell Synergy and Ebrary e-Books, reached twenty-two. Previously inadequate resources have been enhanced by online resources, accessible across campus. These include 24,521 full-text e-journals, 31,342 full-text e-books, 34,462 standards, 3293 conference papers, 13,107 scientific journals and approximately 6300 postgraduate and PhD theses. Following these improvements, significant numbers of users are now accessing resources via the university library Web pages (for example, the total number of users who visited the library Web page from May 4, 2006 to July 16, 2006 was 29,049.)

While the physical inadequacies of the YTU Sevket Sabanci Main Library building are still waiting to be addressed, it is the electronic revolution that has made the greatest difference to the staff and students of Yildiz Technological University Library. The provision of very significantly enhanced access to resources, both through dramatically increasing the number of items available and reducing the barriers of physical access, has clearly met the needs of many of our users. And yet, if the library building is as important to the work of the modern university as Shill and Tonner indicate, then ongoing attention must be paid to the features of the library building that are deterring users.

Notes and References

1. Celik, A. University libraries in Turkey: a state of the art review. *Information development,* 17(2) June 2001.
2. Karasozen, B., and J. A. Lindley. The Impact of ANKOS: Consortium Development in Turkey. Journal of Academic Librarianship 30(5): 402–409, 2004.
3. Shill, H. B., and S. Tonner, Does the Building Still Matter? Usage patterns in new, expanded, and renovated libraries, 1995–2002. *College & Research Libraries,* (March 2004): 123–150.
4. Kucukcan Balkas,B. *Üniversitelerde Kütüphane Binalarý Kullaným Verimliliginin Yapý Biyolojisi Açýsýndan Incelenmesi (Examination of Use Productivity of University Library Buildings in Terms of Building Biology)*, PhD Thesis (University of Istanbul, 2005).
5. Balanli, A. et al., *An Examination and Evaluation of YTU Library and Documentation Department Sevket Sabancý Building in terms of Building Biology* (Istanbul, Turkey, 1999–2002), Unpublished Research Project, Supported by Yildiz Technical University (YTU) Research Foundation.
6. Balanli, A. and A. Ozturk, "A Systematic Approach To Solve Building Biology Related Problems," in *Healthy Buildings/IAQ'97 Global Issues And Regional Solutions Volume 3*, ASHRAE Annual IAQ Conference, ISIAQ Fifth International Conference On Healthy Buildings (Washington DC, USA, September 27–October 2 1997), pp. 147–152.
7. Edwards, H. *University Library Planning,* (New Jersey, USA: The Scarecow Press, 1990).
8. IFLA, *Library Building Standards – Ontario, Canada and Barcelona, Spain*, The Public Library Service: IFLA/UNESCO Guidelines for Development (München: IFLA Publications 97, 2001).
9. Withers, F. N. *Standards for Library Service: An International Survey,* (Paris, France: UNESCO, 1974).
10. RESMI GAZETE, *Gurultu Kontrol Yonetmeligi 19308 (Noise Control Regulation 19308)* (1986).
11. Berglund, B. T., Lindvall, T. and Schwela, D. H. (eds.), *Guidelines for Community Noise,* (Geneva, Switzerland: World Health Organization, 2000).
12. Fanger, P. O. *Thermal Comfort,* (Mcgraw-ill Book Company, 1972).