

---

# Israeli college interlibrary loan practices: implications for Israeli universities

---

*Lynne Porat and  
Snunith Shoham*



## The authors

**Lynne Porat** is Head of the Interlibrary Loans Team, University of Haifa Library, Haifa, Israel.

**Snunith Shoham** is Head of the Department of Information Science, Bar Ilan University, Ramat Gan, Israel.

## Keywords

Interlending, Colleges, Universities, Document delivery, Israel

## Abstract

The recent establishment of academic colleges in Israel not only has affected the make-up of Israeli higher education, it also has affected university libraries, particularly the interlibrary loan (ILL) departments. This article describes a study that characterised the ILL borrowing practices of Israeli college libraries in general and, in particular, those of libraries that send the majority of their requests to universities. It also identified the disciplines of college library ILL requests and determined that there is a connection to the disciplines prevalent in their own collections. In addition, it identified the Israeli university libraries that received increased requests between 1997 and 2001, assessed the effects on them and identified changes implemented in interlibrary loan departments in order to deal with the increased demand.

## Electronic access

The Emerald Research Register for this journal is available at

[www.emeraldinsight.com/researchregister](http://www.emeraldinsight.com/researchregister)

The current issue and full text archive of this journal is available at

[www.emeraldinsight.com/0264-1615.htm](http://www.emeraldinsight.com/0264-1615.htm)

## Introduction

Interlibrary loan has long been accepted as the traditional method of library cooperation. Until the 1990s interlibrary loan in Israel was almost exclusively carried out among the seven universities (and some medical research libraries), as there were no other institutions of higher education and few other large research library collections. As Professor Shmuel Sever states:

Research libraries held most of the national reservoir and provided the bulk of information services to the entire population (Sever, 1983, p. 57).

In the past 20 years Israel has seen a massive growth in the number of higher education colleges, most of which have small libraries. Today, university libraries account for approximately 84 per cent of all Israeli library holdings, while the college libraries account for approximately 16 per cent (figures taken from ULI in September 2001).

In recent years many college libraries have begun approaching interlibrary loan (ILL) departments in university libraries in order to fulfil their patrons' information needs. This development has caused a huge increase in the overall ILL traffic in Israel. Statistics from the University of Haifa library show that between 1997 and 2002 the demand for ILL from all institutions grew by 27 per cent, and that requests received from colleges rose from 6 per cent in 1997 to 22 per cent of all incoming orders in 2002. Also, because many new colleges teach predominantly social sciences and humanities courses, universities that have strong collections in these fields have especially felt the pressures of the increased demand for ILL. This study analyses the characteristics of borrowing among Israeli college libraries in general, and among those that order from university libraries in particular. It also analyses the effects of college library requesting on Israeli university library ILL departments.

## Higher education in Israel

Since the mid-1920s, when its first universities were established, and until the early 1990s Israeli higher education has been provided by the eight universities. However, a growing demand for higher education at the end of the 1980s caused an upsurge of new colleges providing academic qualifications, in addition to an upgrading of the already existing teacher-training colleges, that were "gradually becoming more academic as institutions" (Katz and Coleman, 2001, p. 82). Elhanan Adler (1999, p. 137) notes that:

Until recently, higher education in Israel was synonymous with university education. In recent years, however, a large number of colleges, both

public and private have opened (or upgraded from non degree institutions) and today there are over forty accredited non-university Israeli academic institutions. These new colleges usually specialize in a few popular fields (particularly ... technology, management and law) ... in addition, a large number [sic] of foreign universities have opened branches in Israel ... most [of which] do not have significant libraries or information centres.

Kellerman (2002) has also noted that 50 per cent of all BA students in Israel now study at colleges. Moreover, the present government of Israel is in favour of the establishment of colleges providing higher education with "plans for the future (that) include expanding Israel's network of non-university higher education, by continuing the establishment of additional colleges, to meet the challenges of the coming century" (Ministry of Foreign Affairs, 1999, p. 6). Also, Limor Livnat, the current education minister, has endorsed the trend towards academisation of colleges by encouraging the granting of Masters' degrees in addition to Bachelors'. More importantly, she has provided the colleges with 50 per cent representation on the Council for Higher Education (and therefore increased government funding), a step fiercely opposed by the universities.

## History of interlibrary loans in Israel

The first significant development in Israeli ILL was in 1970 when Dr K.W. Humphreys (Humphreys, 1970, p. 11) formally advocated the establishment of an "inter-library lending system ... [for university libraries in Israel]" in his report carried out for the Ministry of Finance. He proposed the use of uniform order forms, the use of telex and courier as the means of transmitting orders and items requested, and the establishment of a union list of serials. In her 1974 thesis on ILL in Israel, Yehudith Koren (Koren, 1974, p. 7) recommended setting up a "national ILL network for academic and special libraries" which she defined as:

A set of interlending libraries, none of which is a branch of any other, possessing agreed rules stipulating what materials should be requested from which libraries, or types of libraries, in which order and on what occasions (Koren, 1974, p. 15).

Another significant development in ILL practices was the creation of two union catalogues – the Israeli Union List of Serials (developed in the 1960s, and automated in 1981) and the Union List of Monographs (developed and automated in the 1990s), which enabled the university libraries to lend and borrow from one another after they had verified bibliographic details and library holdings. Unfortunately, the union lists were not developed to include ILL ordering and supply. A

similar arrangement was begun in 1977 between the Tel Aviv University Medical Library and the eight medical libraries in the central region of Israel, and to this day functions as an "interlibrary loan network ... for the sharing of medical resources" (Peled *et al.*, 1988, p. 156). An important technological development in the early 1990s for Israeli ILL was the use of e-mail as the main method of transmitting orders, replacing the telex, and in 1995 the use of Ariel software for supplying articles, replacing the fax. An additional development for Israeli ILL was the launching in 1992 of ALEPH 300 ILL management software for maintaining outgoing orders. Although most university libraries chose not to use this software, it has been in use by the University of Haifa since 1997 and Bar-Ilan University since 1998. State-of-the-art Windows-based ILL management software in Hebrew (ALEPH 500) was launched at the University of Haifa library in February 2004 and other Israeli universities are expected to follow suit.

In the early 1990s, the Israeli Standing Committee of National and University Libraries (SCONUL) initiated the setting up of groups of professional sub-committees to deal with issues such as interlibrary loan (Adler, 1994, p. 135). The ILL sub-committee provided another significant development for Israeli ILL in that it greatly encouraged cooperation and resource sharing among university libraries and provides an informal channel of communication. This sub-committee functioned as an interlibrary loan network similar to the one originally advocated by Koren (1974) and expanded her definition of interlibrary network to loosely include agreed sets of rules regarding the methods of ordering and supply and at agreed rates.

A more recent development is:

The Israel Centre for Digital Information Services (MALMAD) consortium [which] was set up [in 1998] by the eight universities of Israel [including the Open University] to serve as a common framework for the procurement and licensing of digital information (Adler, 1994, p. 135).

It has also created Union List of Electronic Journals (ULE) which has recently been transferred to Teldan's TdNet interface. Today, MALMAD is the main source for Israeli universities and colleges to purchase e-journal and database subscriptions.

In addition to increasingly making full-texts available to their patrons, Israel's universities extensively use BLDSC and OCLC for both book supply and electronic transmission of articles (via Secure Electronic Delivery and Ariel). As Israeli university library holdings are not in WORLDCAT due to the lack of transliteration of Hebrew and Arabic texts, they generally supply English-language materials to European and American libraries. Also, as Israeli

universities do not have ILL arrangements with their Middle East neighbours, they generally develop their collections, purchase state-of-the-art ILL technology and share resources with European and American libraries.

### College libraries

The major difference between the colleges and the universities is that the college libraries "are designed to provide post-secondary school knowledge" (Kimmerling, 2002), whereas the purpose of the universities is teaching and research, which is reflected in their library collections. In order to supplement their collections, which were not generally developed retrospectively, the colleges use interlibrary loan and document delivery requests (ILL) from university libraries as and when the need arises. A few never intended to create large collections, and as a matter of policy use a "just-in-time" rather than "just-in-case" policy of requesting via ILL rather than acquisitions. The phenomenon of "access" via ILL rather than "ownership" via acquisitions is not new in the library and information field, but it seems that this non-mutual relationship between university and college libraries and the latter's dependence on the universities for document delivery may be a somewhat uniquely Israeli situation.

### Networks of college libraries

Since their establishment in the late 1980s and early 1990s, college libraries have become more aware of the importance of cooperation and resource sharing. One of the stated objectives of the Regional Colleges Association founded in 1989 is "to formulate a common policy for the development of college libraries" (Regional Colleges in Israel Association, 1999, p. 3) indicating a recognition of the importance of coordination among libraries of the same type. The association also has its own administrative network comprising of 11 regional colleges. A second network is that of MACAM (the Teacher-Training College Network) established in 1998, comprising of 34 academic teacher-training colleges. In 2001, a Northern Region Consortium was established, comprising of eight college libraries, whose aim was to encourage free ILL services among themselves, (thereby reducing their dependence on the universities). However, there is no one central national college library consortium to coordinate ILL among the multi-type college libraries in the country (regional, vocational, teacher-training, foreign, and private), unlike the university libraries network.

### Automation in college libraries

Although college networking is still in its early stages, there has been much progress in the field of automation. Most college library catalogues have been automated (using the same software as the universities) and many have web catalogues, which have been incorporated into the web version of the Israeli Union Lists of Serials (ULS) and the Israeli Union List (ULI). However, no college library has an automated ILL software program. Recently, the MALMAD consortium began accepting college libraries as "associate" members, in addition to the universities, thereby further advancing multi-type library cooperation and improving college library access to electronic journals.

### Outsourcing of ILL

Outsourcing of ILL is not widely practiced in Israel or abroad. It has been defined by Dugan as:

Contracting entire lending operations out of the library ... or contracting out specific parts of ILL operations such as packaging and mailing, photocopying, invoicing and billing ... or subsidizing patron use of direct document delivery thus by-passing interlibrary loan (Dugan, 1994, p. 12).

Weaver notes that the outsourcing of ILL services began as early as the 1970s when:

Libraries began ... contracting with private vendors ... to deliver materials to member libraries in a regional consortium (Weaver, 1993, pp. 26-27).

A similar arrangement was also begun in Israel at the same time, with the national bus system delivering books and photocopies between the seven universities, and continues to this day by a courier service. Outsourcing, as defined by Dugan, is not practiced in Israel. However, one form of outsourcing is currently being practiced in Israel in at least one college library. The library, which has cancelled all its journal subscriptions, obtains journal articles from university libraries, thereby reducing labour-intensive tasks such as collection development and maintenance.

The current phenomenon in Israel of approximately 40 academic colleges making requests from the seven university libraries has created a new ILL dynamic. Instead of ILL being a mutual activity among equally-sized libraries on a non-profit basis, it has become a one-way activity, with the burden falling on the universities that are functioning as document delivery suppliers or outsourcers to the many colleges which request entirely from the universities rather than from commercial document delivery suppliers or from one another.

## Purpose of study

The study describes Israeli college library ILL borrowing practices in general, and in particular, the practices of colleges that order from Israeli university libraries. It also identifies the disciplines of college libraries' outgoing ILL requests, and to determine whether there is a connection to the disciplines that are prevalent in their own collections. In addition, it identifies the Israeli university libraries that have received an increase in the number of incoming ILL requests between the years 1997 and 2001, and assesses the various effects of the increase, changes already implemented, and those desired.

## Methodology

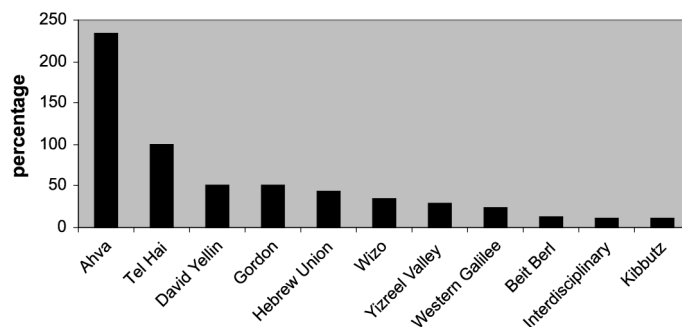
The main research tools were two questionnaires designed specifically for this research. One was sent to the directors of 38 college libraries and the other to the managers of the 17 ILL departments in university libraries. The colleges' questionnaire examined the current ILL practices of colleges, while the universities' questionnaire examined the impact of college libraries' ILL requesting on university libraries. Reminders were e-mailed and made by telephone in late 2002. A total of 52 libraries responded to the two questionnaires: all 17 university library ILL units and 35 out of 38 college libraries – a 95 per cent response rate. The results were analysed and the logistic regression and Spearman correlation coefficient statistical tests were performed on relevant questions.

## Results

### General characteristics of college libraries

The following general characteristics were most dominant. Israeli college library collections are small – 50 per cent hold between 30,000 and 80,000 books. In addition, more than half hold fewer than 500 periodicals; 63 percent had fewer than 2,000 students (predominantly BA) in 2001. Some Israeli universities had as many as 25,000 students (all degrees) enrolled in 2001. A total of 64 percent of the colleges (and their libraries) were founded after 1980; 37 percent were founded in the 1990s and another 27 per cent were founded in the 1980s. Most (75 per cent) do not have written collection development policies. Two-thirds are members of MALMAD (the Israel Centre for Digital Information Services). The increase in ILL requesting is illustrated in Figure 1. A total of 73 percent of college libraries reported an increase in the number of outgoing ILL requests between

Figure 1 Percentage increase in college library ILL requests



Note: Data for additional libraries was not provided

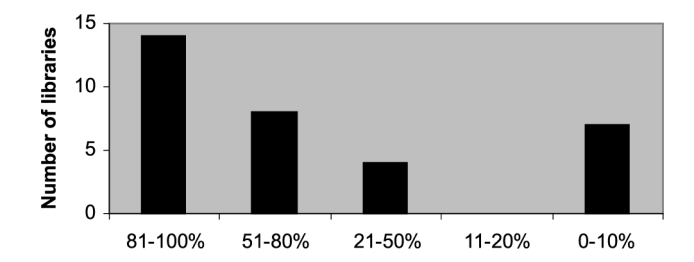
2000 and 2001. One library experienced an annual increase of 233 per cent (see Figure 1) possibly due to the newness of service.

The average annual increase from 2000 to 2001 for outgoing ILL requests was 47 per cent. Compared to the universities, college libraries have small numbers of outgoing ILL requests. Only 37 per cent had more than 100 outgoing ILL requests in 2001. A total of 88 per cent of college libraries have a formal ILL service, most commonly-established since 1990 – 70 per cent began their ILL service in the 1990s, and 20 per cent after 2000. Only 26 per cent keep statistics of their ILL transactions, and the same number have a written ILL policy. Almost half allow ILL service to faculty only, and 56 per cent of the colleges allow students to place ILL requests but pass on the full charges to their students, whereas 67 per cent do not charge faculty. ILL is not generally used to replace acquisitions, only 3 per cent intentionally order via ILL rather than purchasing books or journal subscriptions. Outgoing ILL requests are predominantly in the Hebrew language (statistics from the University of Haifa Library show that 75 per cent of items supplied to colleges in 2001 was in the Hebrew language). There is a high demand for Israeli Masters' and Doctoral theses (statistics from the University of Haifa Library show that 15 per cent of all items supplied to the colleges in 2001 was Masters' and Doctoral theses written at the University of Haifa). Statistical tests proved that there is a connection between the size of college library collections and the number of outgoing ILL requests they send; the bigger the library the more outgoing ILL requests.

College libraries depend on the universities to supply their ILL requests. A total of 91 per cent of colleges sent the universities some of their ILL requests in 2001, whereas only 56 per cent sent to other colleges; 22 of the 35 colleges estimated that in 2001 they sent more than 50 per cent of their ILL requests to university libraries. Of the 22, 14 sent more than 81 per cent of their orders to university libraries and eight of the 22 sent between 51 per cent and 80 per cent (see Figure 2).



Figure 2 College library ILL requests sent to universities



#### Characteristics of college libraries that order predominantly from universities

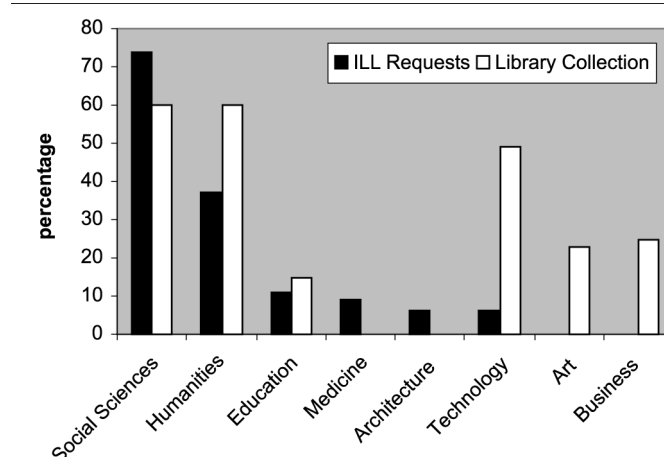
The 14 college libraries that sent more than 80 per cent of their ILL requests to universities in 2001 can be characterised by fairly large faculties – 87 per cent have more than 50 academic faculty members. They have small student bodies – 63 per cent had less than 2,000 BA students in 2001. More than a third of the colleges were founded in the 1990s or later. They have small library collections – 50 per cent have a collection of less than 30,000 books and 54 per cent have fewer than 500 periodicals in their collection; more than two-thirds (69 per cent) do not have a written collection development policy. A total of 64 per cent are associate members of MALMAD, and two libraries are members of the Northern Consortium and two are members of the education libraries network MACAM. They have experienced significant annual increases in outgoing ILL requests, with an average annual increase of 11 per cent. Five of the six libraries that keep ILL statistics experienced an increase in the percentage of outgoing ILL requests between 2000 and 2001.

#### Predominant disciplines of college libraries' ILL requests

The predominant disciplines of Israeli college libraries' ILL requests are social sciences and humanities; in 2001 74 per cent of colleges sent the majority of their ILL requests in the social sciences, while 37 per cent sent the majority of their requests in the humanities in 2001. The predominant disciplines of Israeli college library collections are social sciences and humanities technology and business. Figure 3 shows that colleges with predominantly social sciences and humanities collections also send ILL requests in these fields. It also shows that college libraries with strong collections in technology, art and business do not send ILL requests to the universities.

Statistical tests show that 95 per cent of social sciences libraries also ordered social sciences ILL requests ( $p = 0.046$ ) and 75 per cent of humanities libraries also ordered humanities ILL requests ( $p = 0.007$ ). Colleges send more ILL requests to social sciences and humanities libraries than they do to libraries specialising in other fields.

Figure 3 Comparison of disciplines of college library ILL requests and college library collections



The field dominating the library collection is not the only factor in the college library's decision to order from a particular university. Factors such as size of collection, speed of supply, price, quality of service and liberality of the book lending policy *vis-à-vis* colleges are also determining factors. Seven out of the 17 university libraries do not lend books to college libraries. As a consequence these libraries are in less demand by the colleges.

#### University libraries with increased ILL between 1997 and 2001

The data in Figure 4 show the six university libraries (out of 17) with the highest percentage increase in incoming orders between 1997 and 2001.

The two libraries with the greatest increases specialise in the social sciences/humanities (the fields most in demand by colleges). The other four libraries specialise in law and medicine, which suggests that these libraries are receiving increasing numbers of incoming ILL requests from sources other than colleges. Although one social sciences and humanities library experienced a decrease of 22 per cent in incoming ILL requests it supplied between 1997 and 2001, it nevertheless received a 33 per cent increase in requests from colleges between 2000 and 2001. Another social sciences library saw no overall increase over the five-year period, but saw a 50 per cent increase in requests from colleges between 2000 and 2001.

All the social sciences and humanities libraries that supplied an increased number of requests to all institutions also experienced significant increases in orders supplied to colleges over the five years studied (see Table I).

There are however huge differences in the total number of orders supplied by each university. The number of incoming orders supplied by Tel Aviv University Life Sciences and Medicine Library (TULS), the National Medical Library (JMLB) and University of

Figure 4 Increase in university library incoming requests between 1997 and 2001

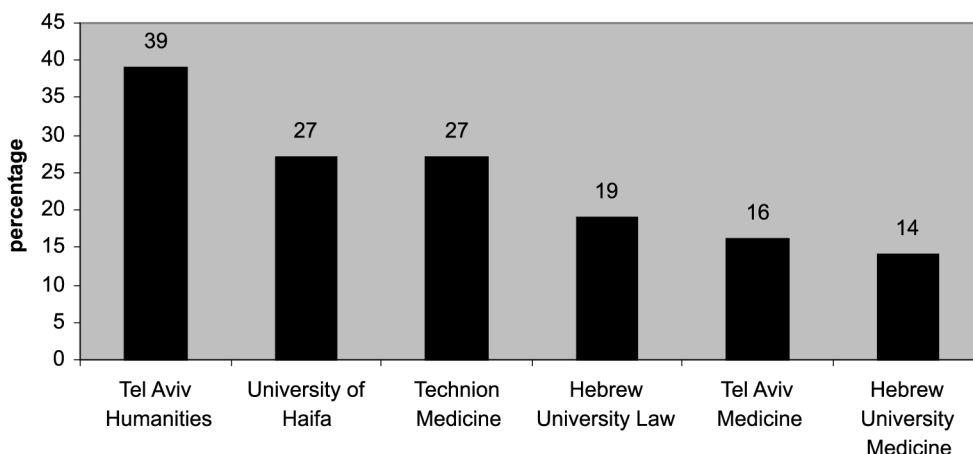


Table I ILL orders from colleges as percentage of total incoming orders

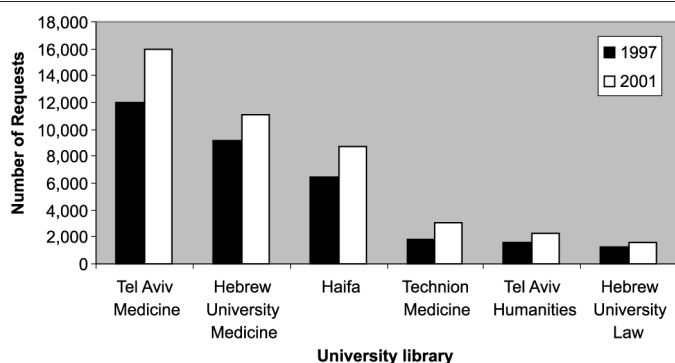
University library	1997 (%)	1998 (%)	1999 (%)	2000 (%)	2001 (%)	Total per cent increase between 2000 and 2001
Bar Ilan	-	-	-	30	40	33
Haifa	6	8	9	12	20	63
Tel Aviv Social Sciences	-	-	-	10	15	50
Hebrew University Law	-	-	-	10	14	140
Tel Aviv Humanities	-	-	7	8	10	25
Tel Aviv Medicine	-	-	-	2	5	150
Hebrew University Agriculture	-	-	-	-	1	-
Weizmann Institute of Science	-	-	-	-	1	-

Note: Arranged by percentages for 2001

Haifa Library (HAI) are much greater numbers than those supplied by the other libraries with marked increases in demand (see Figure 5).

The number of incoming requests supplied by all the university libraries rose from 45,001 in

Figure 5 University libraries with most incoming ILL requests 1997 and 2001



1997 to 65,193 in 2001. However, the increase cannot only be attributed to college ordering. Some is due to the proliferation of article publication and the availability of online indexes, in addition to the cancellation of journal subscriptions in most libraries. Furthermore, the development of new disciplines has created new departments of study at many institutions. However, the increase may have been somewhat mitigated by widespread access to electronic journals, which might eliminate the need for ILL. A total of 66 per cent of colleges are associate members of MALMAD and therefore have access to large numbers of full-text articles that they might otherwise have ordered via ILL from the universities.

**Effects of increased demand for ILL**

The effects of the increased demand for ILL on the university library ILL departments are as follows: nearly three-quarters of university libraries (73 per cent) reported that some changes had taken place. Of the 27 per cent with no effects, two are science libraries whose collections are not in demand by the colleges. Of the 73 per cent who stated that changes had taken place, half reported an increase in pressure, 44 per cent reported delays in the supply of orders. One-fifth reported that they had incurred additional expenses (staff and/or equipment) and 13 per cent reported making more mistakes because of the increased workload. Statistical tests show that there is a statistical significance between an increase in incoming ILL requests and an increase in the pressure felt by ILL librarians ( $p = 0.0848$ ). Statistical tests also show that there is a positive connection between the size of the university library's book collection and the number of incoming ILL requests received from colleges ( $p = 0.0165$ ). Table II shows that the libraries with the largest book collections did indeed receive a higher percentage of requests from colleges.

Table II Size of university library book collections and requests from colleges as a percentage of total requests

University library	Number of books in collection	Requests from colleges as a percentage of total requests
Ben-Gurion Medicine	Up to 100,000	1
Hebrew University Agriculture	Up to 100,000	1
Hebrew University Law	Up to 100,000	14
Hebrew University Medicine	Up to 100,000	–
Technion Medicine	Up to 100,000	–
Tel Aviv Law	Up to 100,000	–
Tel Aviv Medicine	Up to 100,000	5
Tel Aviv Exact Sciences	Up to 100,000	–
Weizmann Institute of Science	Up to 100,000	1
Bar-Ilan	100,001-500,000	40
Ben-Gurion	100,001-500,000	–
Hebrew University Social Sciences	100,001-500,000	–
Technion	100,001-500,000	–
Tel Aviv Humanities	100,001-500,000	10
Tel Aviv Social Sciences	100,001-500,000	15
Haifa	500,001-1,000,000	20
Hebrew University and National Library	500,001-1,000,000	–

Note: Collection sizes taken from Union List Israel (ULI) in September 2001

### Organizational or policy changes implemented by universities

A total of 88 per cent of university libraries have implemented some organizational or policy changes since 1997. A total of 76 per cent of libraries purchased hardware and equipment including computers, scanners, printers and software such as Ariel. Two-thirds raised their prices and nearly half changed their work procedures in some way. One-third reported that they had added professional staff and one-third had added non-professional staff. One-fifth reported that the ILL librarian had been promoted as a result of the increased demand for ILL. A total of 12 per cent reported that the status/prestige of the ILL department in the parent organization had improved as a result of increased demand for ILL. In addition, the need for efficiency had led to an upgrading of the level of professionalism and expertise on the part of the ILL librarians. The two libraries that reported that no changes had been implemented; also reported no increased demand for ILL.

### Discussion

College libraries with predominantly social sciences collections send more outgoing ILL requests in the social sciences than other libraries. This is because the predominant field in their collection is the field in most demand by their faculty. Even though their collections are stronger in social sciences they still do not meet all the needs of their faculty. This is also true of college libraries with predominantly humanities collections. The fact that colleges with larger collections send more outgoing ILL requests than colleges with smaller collections

maybe explained by larger libraries offering more services, publicising ILL more and being more inclined to invest resources in the ILL unit.

The general increase in outgoing ILL requests by colleges may be explained by the fact that most college library collections are significantly smaller than those of the universities, and that many colleges have recently opened new courses creating new information needs. Although many college libraries (56 per cent) would prefer to order from other college libraries (which do not charge for ILL) and not from the universities, the majority of libraries (91 per cent) order predominantly from the universities. Budgetary restrictions in most libraries prevent the acquisition of all the items they desire, and ILL (financed by the library's patrons) is a viable alternative to acquisitions. Even the benefit of membership in MALMAD (which enables access to thousands of electronic journals) has not significantly reduced the need for ILL for many libraries.

The fact that university libraries with the greatest increase in incoming ILL requests felt more pressure than libraries with no increase can possibly be explained by the relatively sudden increase in workload without the addition of professional staff. A statistical connection was found between libraries with large book collections and a higher percentage of incoming ILL requests from colleges, indicating that colleges request more books than photocopies.

Israeli college libraries are not using university libraries as "outsourcers" and are actively developing their collections. Only one library had cancelled journal subscriptions in favour of obtaining articles via ILL. Moreover, it is possible that the number of colleges supplying items to the universities is also rising. Statistics from the University of Haifa Library show that

there has been a 5 per cent increase in ILL orders supplied from colleges since 2000.

## Conclusions

College libraries are indeed sending increasing numbers of ILL requests to universities. Those colleges with predominantly social sciences and humanities collections send more outgoing ILL requests in those fields than to libraries with collections in other fields. Colleges with larger library collections send more outgoing ILL requests than libraries with smaller library collections. However, the libraries with smaller collections send more ILL requests to universities than college libraries with larger collections.

Most university libraries have experienced increases in the number of incoming ILL requests they supply since 1997. Statistically, those with larger book collections receive more incoming ILL requests from colleges than libraries with smaller book collections. University libraries that specialise in the social sciences and humanities and are also willing to supply books can expect to receive more ILL requests in the future from colleges than libraries that do not specialise in these fields.

University libraries that experienced a greater increase in incoming ILL requests also reported an increase in pressure. Organisational changes were carried out in most university libraries and most librarians desire national coordination of ILL policies and practices, as well as the implementation of sophisticated ILL software.

In order for standards of service to remain high and prices low in all types of libraries, it is essential that ILL departments be allocated

sufficient professional staff, state-of-the-art equipment and software, ample physical space, and adequate budgets.

## References

- Adler, E. (1994), "University library cooperation in Israel: the MALMAD Consortium", *Information Technology and Libraries*, Vol. 18, pp. 135-8.
- Dugan, C.A. (1994), "Plastics, fiber optics, and the future of interlibrary loan", *Technicalities*, Vol. 14 No. 8, pp. 11-12.
- Humphreys, K.W. (1970), *Co-operation between Academic Libraries in Israel: A Report Prepared for the Ministry of Finance*, Ministry of Finance, Jerusalem.
- Katz, E. and Coleman, M. (2001), "The growing importance of research at academic colleges of education in Israel", *Education + Training*, Vol. 43 No. 2, pp. 82-93.
- Kellerman, A. (2002), "Universitaot beidan shel shinui vemashber (Universities in an era of change and crisis)", *Work Organizations in an Era of Crisis and Instability*, Symposium conducted at the meeting of the Center for Organizational Research and Personnel Management, University of Haifa, Israel, p. x.
- Kimmerling, B. (2002), "An end to the universities", *Haaretz*, 8 January.
- Koren, J. (1974), "Inter-library lending among academic and special libraries in Israel", MA thesis, Hebrew University of Jerusalem, Israel.
- Ministry of Foreign Affairs (1999), "Spotlight on Israel – higher education", available at: [www.mfa.gov.il/mfa/go.asp?MFAH0gmz0](http://www.mfa.gov.il/mfa/go.asp?MFAH0gmz0) (accessed 2 November 2001).
- Peled, I., Tel-Raz, M. and Lubin, M. (1988), "ILL network in Israel", *Interlending & Document Supply*, Vol. 16 No. 4, pp. 156-7.
- Regional Colleges in Israel Association (1999), "Objectives of the association", available at: [www.folklore.org.il/colleges/eassoc.htm](http://www.folklore.org.il/colleges/eassoc.htm) (accessed 21 October 2001).
- Sever, S. (1983), "Cooperation in Israel's libraries", *ISLIC Bulletin*, Vol. 13 No. 1/2, pp. 57-69.
- Weaver, B.F. (1993), "Outsourcing – a dirty word or a lifeline?", *The Bottom Line*, Vol. 7 No. 1, pp. 26-9.