The librarian and the information scientist: Different perceptions among Israeli information science students

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Available online 9 May 2006

Abstract

This study examined the perceptions of 118 undergraduate information science students enrolled in three different higher education programs in Israel. The classical roles traditionally performed in libraries are still perceived as tasks of the librarian. Tasks related to information itself, such as information retrieval (building, operating, and managing Web sites), information filtering, and matching processed information to the client’s personal profile are ascribed to the information scientist. In the three different programs, students perceive the professional image of the information scientist as ranked more highly than that of the librarian. If students are to have a broad and positive perspective of their profession, then perhaps there is a need to emphasize the technical topics that are related to the role of the information scientist, as well as those related to the traditional roles of the librarian.

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1. Introduction: librarianship and information science

Since the early 1990s, many library schools worldwide began integrating information technology into their curricula. Many then changed their names to reflect this, and their new programs began emphasize the user’s perspective as well as the information technology. The University of California-Berkeley’s School of Library and Information Studies was renamed the School of Information Management and Systems. At the University of Pretoria, the...
Department of Information Science was integrated into the School of Information Technology. The terms information scientist and information specialist have become widespread, alongside the term librarianship (Mendeloviz, 2003).

In 1983, the American Library Association (ALA) defined librarianship as a profession that addresses knowledge applications, theories, techniques, and principles which contribute to the production, preservation, organization, and use of the library collections and information dissemination via different media (Roitberg, 2001). This definition identifies the librarian with the physical library premises or by the traditional roles of developing and preserving a printed collection. It also views librarianship as a process designed to assist various users.

In contrast to these definitions of librarianship, researchers have defined information science according to different parameters. Carr (2003) claims that information science is a discipline, a field of research, and a theory dedicated to the evaluation of the characteristics and processes of information systems, information retrieval, information seeking, and the interaction between humans and computers.

The Online Dictionary for Library and Information Science (ODLIS) defines information science as “The systematic study and analysis of the sources, development, collection, organization, dissemination, evaluation, use, and management of information in all its forms, including the channels (formal and informal) and technology used in its communication” (Reitz, 2004).

Taylor (1966) provided a different and much broader definition:

> [Information science is] the science that investigates the properties and the behavior of information, the forces governing the flow of information, and the means of processing information for optimal accessibility and usability. The processes include the organization, dissemination, collection, organization, storage, retrieval, interpretation, and use of information. The field is derived from or related to mathematics, logic, linguistics, psychology, computer technology, operations research, the graphic arts, communications, library science, management, and some other fields.

Several features of information science emerge from this definition:

1. The focus of information science is the phenomenon of information. The field covers all facets of information, regardless of the material format.
2. The information scientist is involved in the entire information life cycle.
3. The field is interdisciplinary.
4. This definition is not institution based, but it stresses the major purpose of the library: accessibility and usability of information.

Although this definition attempts to differentiate the profession of information science from the profession of librarianship, the definition adheres to the ALA definition of librarianship. Borko (1968) states that:

> Information science is that discipline that investigates the properties and the behavior of information, the forces governing the flow of information, and the means of processing information for optimum accessibility and usability. It is concerned with that body of knowledge relating to the origination, collection, organization, storage, retrieval, interpretation, transmission, transformation and utilization of information. (p. 3)

According to Borko (1968), information science is a discipline that overlaps with mathematics, logics, linguistics, psychology, computer technology, and communication.
The discipline of information science is very closely related to the discipline of librarianship. The major role of both is providing information to users, but the distinction between the two is not explicit. Is information science the new profession for librarianship? Is information science an expansion of librarianship? Are these two disciplines closely related professions? Is information science similar to librarianship but with a different and modern-sounding name?

Some researchers claim that information science is only a branch of librarianship involving the integration of technology, especially the computer, into the field (Stieg, 1992). Crosby (2000) asserts that, although most librarians use new technologies, the core of librarianship remains the same: to make information useful to the users. Others have argued (Borko, 1968; Hayes, 1969; Taylor, 1966) that information science is an independent discipline and a much broader one than librarianship. Fleck and Bawden (1995) found that most of the students who participated in their research, which examined how library information science was viewed by its users, drew a clear distinction between information specialist, information professional, and librarian. Prins and De Gier (1992) assert that a new title should be given to the profession.

Marco (1996) rejects the notion that there is a separate field called information science. She states that the definitions applied to information science and to librarianship are completely identical. In addition, Marco argues that the definition of information science borrows and combines terms from librarianship, communication, and computer science. She also objects to Debon’s definition (as quoted by Marco, 1996) that explains that information science is the scientific study of communication of information in society. Thus, the professions of librarian and information scientist are identical in Marco’s opinion; the information scientist simply uses new and different technologies.

2. Problem statement

It is important for educators in schools of library and information science to be aware of the perceptions of their students regarding positions labeled with terms such as librarian, information specialist, or information scientist. Such perceptions are influenced by historical and social factors and may affect students’ career choices, as well as their attitudes towards libraries.

This study focuses on the perception of the profession of librarian and information scientist, and the perceived images of each, in first-year undergraduate information science students in three different programs of higher education. The study also examines whether students who major in information science perceive the roles of the librarian and of the information scientist differently from students who minor in information science.

3. Literature review: roles and perceptions

The integration of new technologies, especially the computer and the Internet, into the library is a major force changing the nature of librarianship and the careers of information professionals (Dolan & Schumacher, 1997). The focus in the library has changed from information in printed material to information itself. The classic role of the librarian has changed as the librarian is no
longer only the manager of the library (Stieg, 1992) or the keeper of books. The question that emerges is, “How do information, communication technology, and the new economy influence libraries?” Some researchers suggest that the new era brings opportunities and new roles to the libraries, and that librarians should adopt new roles and acquire new skills. Others assert that digital access to information will reduce the need to use physical libraries; that libraries and librarians will become anachronisms; and that the librarian’s profession will be diminished (Harris & Wilkinson, 2001, 2004).

There is no doubt that technology has changed the library and librarians’ working environments. The professional information specialist has emerged alongside traditional librarian. This information specialist needs to retain familiarity with a huge spectrum of databases to create effective search strategies and should be able to analyze data and formulate queries. (Mendeloviz, 2003). Firebaugh (1996) claims that it is better not to use the “librarian label” anymore as most clients will prefer the “information broker” label, but not all researchers share this view. Singer (1997), for example, in her criticism of the field of information science, states that librarians who have changed their job titles from librarian to information specialist often become computer technocrats, empowered by technology, but they do not advance the process of acquiring information.

The professional image of the librarian is one of the topics that concern librarians. A review of the literature on professional “prestige” indicates that a prestigious profession derives its strength from economic and governmental status. In the case of librarianship, economic and governmental status are negligible; the main strength of this profession is found in its management of information. Many studies have found that the status of the librarian is low, even in the information generation. A partial explanation for this may be found in Spaulding’s (1989) suggestion that groups associated with high status are perceived as having a monopoly on a body of specialized knowledge and skills (e.g., lawyers and doctors). It is not the same with information professionals as they cannot claim a monopoly on information because everyone uses it. Working with information is not limited to librarians and the library, and the product which the library supplies, information, is not unique to librarians. Some fear that librarians will be needed less and less in the future (Lahm, 1994). Furthermore, the public does not fully understand the librarian’s role or what it means to be a professional in this field. People often do not believe that librarians need a broad education (Fagan, 2002), and librarians are not considered professionals in information retrieval, information gathering, and processing. Institutions that employ librarians sometimes perceive them as doing little for the organization and earning more than they are worth (Lahm, 1994). Students in academic institutions often assume that the librarian’s knowledge is limited to the physical library (Fagan, 2002).

Research finds that the professional image of the librarian is feminine and powerless (Freeman, 1996; Harris & Wilkinson, 2001). Additional stereotypes related to female librarians are that they are unmarried, bespectacled, serious, humorless, and demand silence (Lahm, 1994; Rubin, 2000). Both male and female librarians have a poor professional image that is linked to stereotypical personality: they are introverted, lacking self-confidence, and exhibiting poor interpersonal skills (Atkinson, 1994; Fourie, 2004). Librarians are perceived as passive, conservative, introspective, orderly, and meticulous (Spaulding, 1989). They are seen as disliking change and making decisions (Rubin, 2000). Librarians are sometimes
perceived as educated clerks (Fagan, 2002) who are responsible for the dissemination and transmission of books. The librarian can be seen as a bit of an eccentric, an ultimate service provider, intelligent, a person not interested in material gain or prestige (Jackson, 1999). The association between librarianship, women’s work, and the public sector contributes to the poor image of the profession (Van House & Sutton, 1996).

On the other hand, Fleck and Bowden’s (1995) find that library and information science is highly regarded and is perceived as service oriented and not as a dynamic or proactive profession. Librarians are regarded as unambitious people who find satisfaction in helping others to “fulfill” their needs. They are efficient, intelligent, and possess specialized knowledge.

Many research studies in librarianship and information science have examined the professional image of the librarian but not the professional image of the information specialist, except for Singer (1997, in Mendeloviz, 2003), who claims that most librarians are female (who are powerless) and most information scientists are males (who work with computers). Research indicates that technologies are “socially shaped,” particularly by gender (Cockburn & Ormrod, 1993), and there is a complex relationship between gender and technology. Computing has a masculine history. Van Oust (in Harris & Wilkinson, 2004) argues that computing is associated with high status, expense, mystery, danger, and mastery. As computers symbolize power and status, this may be the reason the image of the information scientist is held in higher esteem than that of the librarian. Because librarianship is considered to be a feminine profession, many male librarians call themselves information scientists, not librarians (Morrissic & Case, 1988, in Rubin, 2000).

Although most research studies do not focus on the professional image of the information specialist, there are some studies which emphasize the professional image of information “producers.” Harris and Wilkinson (2001, 2004) assert that computer engineering and systems analysis are careers with higher prestige and salary than librarianship. They predict that information “producers,” such as science and technical workers and private information service providers, will experience better jobs opportunities than information “distributors,” who usually work as public information disseminators. The students who participated in this research underestimated the level of education librarians need and their average starting salary. They also felt that librarians’ work is less challenging and interesting than the Internet researcher’s work. Furthermore, according to United States Bureau of Labor Statistics (1998, in Martin, 1998), people who pursue careers such as database administration, computer engineering, or system analysis can expect good employment opportunities. Information workers who are perceived as “distributors,” such as librarians and archivists, are predicted to experience a slowdown in opportunities as their labor becomes routinized as a result of information computer technology.

4. Method

Perceptions were studied in first-year undergraduate information science students in three different programs of higher education. In two programs, information science is studied as a major. The first program is a university that grants a Bachelor of Arts (B.A.) degree in information science. The curriculum includes courses in classical librarianship and information science. The second program is a professional academic school for information
science. Students earn a professional certificate as a librarian or information scientist or both. The curriculum, as in the university, also includes courses in classical librarianship and information science. The third program is a teachers college. Students here earn a B.A. degree in education and work as teachers. These students take several courses in information science. The curriculum only includes courses in information science, not in classical librarianship.

This study differentiates the terms information science and classical librarianship. Information science relates to the new discipline, which emphasizes technology, and classical librarianship relates to the traditional job description.

The research was conducted in the first semester of the first academic year in three different information science training programs. In each of these programs, the researcher received permission from the head of the departments to administer the questionnaires to first-year students. One hundred eighteen first-year undergraduate information science students participated in the study. The students were randomly selected. Of this total, 31 participants study in a university, 39 participants study in a professional academic school for information science, and the remaining participants study in a teachers’ college.

Data were gathered using a personal details questionnaire, a professional role questionnaire, and a professional image questionnaire.

The personal details questionnaire includes 15 primary information items about the students. The questionnaire includes demographic details as well as more specific skills—such as students’ familiarity with PowerPoint and the computer.

The professional role questionnaire was created by Mendeloviz (2003). The purpose of this nine-item questionnaire is to check if the participants differentiate between the librarian and the information scientist roles. The questionnaire was reviewed for reliability by two professional judges. Each participant was required to read the nine statements and then indicate the degree to which the item (on a scale from 1 to 5) is related to the identified role (i.e., librarian or information scientist). The participants were asked to mark their answers in the table based on the Likert scale. By choosing number 1, the participant signifies disagreement with the statement at hand, and by choosing number 5 the participant signifies complete agreement with the statement. The higher the score, the more the student perceives that librarian or the information scientist performs the specific job. The statements that were included in the questionnaire related to the following issues: information retrieval; building, managing and updating sites; information filtering; information summation; guidance to reference resources; indexing and classification; matching processed information to the client’s personal profile; instruction in and use of information resources; and advice and recommendation about specific items. Mendeloviz’s research provides proof for the questionnaire’s validity in distinguishing between the roles of librarian and information scientist. In her research, a clear distinction was made between the roles, except for item eight, which discusses instruction and use of information resources.

The professional image questionnaire was also created by Mendeloviz (2003). This five-item tool was modified according to the needs of the current research. In completing the questionnaire, participants were asked to rank the different statements (on a scale from 1 to 5) describing the librarian’s or information scientist’s professional image. The statements that were included in the questionnaire related to the following issues: gender, professional level of
interest, salary, professional status, and professionally required knowledge. The participants were asked to mark their answers in the table based on the Likert scale. In choosing number 1, the participant signifies disagreement with the statement at hand, and by choosing number 5 the participant signifies complete agreement with the statement. The validity of the questionnaire was described in Mendeloviz’s research, in which a clear distinction was found between the professional images of the librarian and of the information scientist.

5. Results

To test whether there is a difference in the perception of the roles of librarian and information scientist between students who major in information science and those students who minor in this subject, a $3 \times 2$ (program $\times$ information scientist, librarian) MANOVA analysis was performed, with the repeated measures for the differences between librarian and information scientist. In this analysis, a significant difference was found between the perception of the librarian and that of the information scientist, $F(9,107) = 16.32, p < 0.001$.

Table 1 presents the means and standard deviation of the characterization of the roles of librarian and information scientist, as well as the results of the univariate ANOVA analysis for each role separately. Table 1 indicates significant differences in almost all items. The exceptions are items that discuss instruction in and use of information resources, and advice and recommendation about specific items.

Participants found that items that relate to information summation, guidance to reference resources, and cataloguing, and indexing are part of the librarian’s role. Items that relate to information retrieval, building and managing sites, information filtering, and matching processed information to the client’s personal profile describe the information scientist’s role. The items that describe instruction in and use of information resources, and the item that discusses advice and recommendation about specific items, are perceived as related both to the librarian and the information scientist.

In the MANOVA analysis, a significant difference was found among the three different programs, $F(18,214) = 3.54, p < 0.001$. In univariate ANOVA for each role separately,

<table>
<thead>
<tr>
<th>Role</th>
<th>Mean Librarian</th>
<th>Mean Information Scientist</th>
<th>Std Dev Librarian</th>
<th>Std Dev Information Scientist</th>
<th>F(9,107)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrieval</td>
<td>4.39</td>
<td>4.70</td>
<td>0.81</td>
<td>0.59</td>
<td>14.36*</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Building sites</td>
<td>2.58</td>
<td>3.86</td>
<td>1.17</td>
<td>1.19</td>
<td>101.55*</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Filtering</td>
<td>3.49</td>
<td>4.41</td>
<td>1.20</td>
<td>0.73</td>
<td>51.83*</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Summation</td>
<td>2.98</td>
<td>2.10</td>
<td>1.22</td>
<td>1.05</td>
<td>75.31*</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Reference</td>
<td>4.44</td>
<td>4.02</td>
<td>0.93</td>
<td>1.16</td>
<td>8.39**</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Indexing and classification</td>
<td>4.48</td>
<td>4.08</td>
<td>0.87</td>
<td>1.15</td>
<td>13.93*</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Client’s personal profile</td>
<td>3.42</td>
<td>4.35</td>
<td>1.34</td>
<td>0.93</td>
<td>51.86*</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Instruction</td>
<td>4.43</td>
<td>4.33</td>
<td>0.76</td>
<td>1.09</td>
<td>0.41</td>
<td></td>
</tr>
<tr>
<td>Advice and recommendation</td>
<td>4.20</td>
<td>4.22</td>
<td>0.99</td>
<td>0.88</td>
<td>0.04</td>
<td></td>
</tr>
</tbody>
</table>

* $p < 0.001$.
** $p < 0.01$. 
significant differences were indicated relating to three tasks: building and managing sites, $F(2,215) = 3.32, p < 0.05$, guidance to reference resources, $F(2,215) = 4.12, p < 0.05$, and advice and recommendation of specific items, $F(2,215) = 3.83, p < 0.05$.

Scheffe-paired comparison tests revealed that concerning the item that describes building and managing sites, there is a significant difference between university information science students, $M = 3.58, SD = 0.74$, information science students at the teachers college, $M = 3.15, SD = 0.93$, and students at the professional, academic school, $M = 3.01, SD = 1.10$. University students perceive the subject of building and managing sites as related to both the role of librarian and information scientist, more so than students who study in other two programs. Concerning the task of providing guidance to reference resources, a significant difference was found between professional, academic institution students, $M = 4.45, SD = 0.56$, and university information science students, $M = 3.98, SD = 0.65$. The teachers college students were not differentiated significantly from students at the other institutions, $M = 4.21, SD = 0.77$. Concerning the task of advice and recommendation about specific items, a significant difference was found between the teachers college students, $M = 4.46, SD = 0.74$, the professional academic institution students, $M = 4.03, SD = 0.97$, and the university students, $M = 4.06, SD = 0.66$. In the MANOVA analysis, we found a significant interaction effect of program X role $F(18,214) = 2.62, p < 0.01$.

Univariate ANOVA analysis for each role separately indicated a significant interaction effect concerning cataloguing and indexing, $F(2,115) = 14.31, p < 0.001$. This interaction is demonstrated in Fig. 1.

Fig. 1 indicates that a difference exists concerning the characterization that describes cataloguing and indexing among information science students at the professional, academic institution. Among these participants, the differences concerning this characterization are

![Graph](image_url)

Fig. 1. Means of indexing and classification according to the kind of program and different profession.
higher than among the other two groups of students. Indeed, a simple effect test also confirmed these findings, $F(1,38) = 33.54, p < 0.001$.

The questionnaire contained items that related to the professional image of the librarian and the information scientist concerning interest, salary, status, knowledge, and the perception of the professions as feminine or masculine. In MANOVA analysis comparing the three programs, a significant difference was found concerning the professional image of the librarian and that of the information scientist, $F(5,11) = 22.81, p < 0.001$. Table 2 presents a univariate analysis conducted for each characterization of the professional image individually. Here, significant differences were found in each characterization.

Table 2 demonstrates that the professional image of the information scientist is perceived as having a higher estimation than the librarian. In a variance analysis, which was performed for each characterization of the professional image individually, significant differences were found among the three different programs. The analysis involved all the characterizations, except for the second item, which describes the professional image as feminine or masculine. These differences are demonstrated in Table 3.

To understand the origin of the differences among the participants of the research, Scheffe-paired comparison tests were performed. A significant difference was found concerning interest in the professions. Professional academic institution students perceive the professions of the librarian and the information scientist as more interesting than the other two groups of students.

A significant difference was found between the professional academic institution students and teachers college students regarding perception of salaries. The professional, academic institution students perceive the information scientist as receiving a higher salary.

Table 2
Means and standard deviations of the professional image of the librarian and the information scientist

<table>
<thead>
<tr>
<th>Characterization</th>
<th>University</th>
<th>Teachers college</th>
<th>Professional institution</th>
<th>$F(2,115)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>3.25</td>
<td>1.28</td>
<td>4.01</td>
<td>1.09</td>
</tr>
<tr>
<td>Professional image: feminine or masculine</td>
<td>2.58</td>
<td>0.90</td>
<td>3.04</td>
<td>0.73</td>
</tr>
<tr>
<td>Former knowledge</td>
<td>2.26</td>
<td>1.10</td>
<td>3.24</td>
<td>1.01</td>
</tr>
<tr>
<td>Salary</td>
<td>2.98</td>
<td>1.22</td>
<td>2.10</td>
<td>1.05</td>
</tr>
<tr>
<td>Status</td>
<td>3.99</td>
<td>1.18</td>
<td>4.54</td>
<td>0.69</td>
</tr>
</tbody>
</table>

* $p<0.001$.

Table 3
Means and standard deviations of the professional image of the librarian and the information scientist

<table>
<thead>
<tr>
<th>Characterization</th>
<th>University</th>
<th>Teachers college</th>
<th>Professional institution</th>
<th>$F(2,115)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>3.35</td>
<td>0.70</td>
<td>3.30</td>
<td>1.10</td>
</tr>
<tr>
<td>Professional image: feminine or masculine</td>
<td>2.71</td>
<td>0.59</td>
<td>2.81</td>
<td>0.53</td>
</tr>
<tr>
<td>Former knowledge</td>
<td>2.71</td>
<td>0.70</td>
<td>2.99</td>
<td>0.85</td>
</tr>
<tr>
<td>Salary</td>
<td>3.82</td>
<td>0.89</td>
<td>4.24</td>
<td>0.79</td>
</tr>
<tr>
<td>Status</td>
<td>2.98</td>
<td>0.69</td>
<td>3.57</td>
<td>0.78</td>
</tr>
</tbody>
</table>

* $p<0.05$.

** $p<0.01$.

*** $p<0.001$.
As for the knowledge of the profession and its professional status, significant differences were found among all three groups of students. The students who study at the professional academic institution and at the teachers college think that the professions of the librarian and the information scientist require broader knowledge and have a higher professional image than the university students.

In the MANOVA analysis, a significant interaction was found in programs by roles, $F(10,122) = 3.20, p < 0.001$. In a univariate analysis, which was performed for each characterization of the professional image individually, a significant interaction was only found concerning the salary, $F(2,115) = 7.56, p < 0.001$. This interaction is demonstrated in Fig. 2.

Fig. 2 indicates that, in all three training programs, students perceive the information scientist as earning more than the librarian, but the difference among students who study at the professional, academic institution is greater than the differences among the other two groups of students.

6. Discussion

The main research question explored in this study is, “How do first-year undergraduate information science students in three different training programs understand the roles of the librarian and the information scientist?” As noted earlier, the distinction between the two roles is not explicit. Some researchers argue that there is a significant difference between the two; the information scientist is involved with digital material and the librarian with printed material. Other researchers think that the role of both professionals is the same: to meet users’ needs, regardless of the format of the material (Rubin, 2000; Taylor, 1966). Furthermore, some researchers claim that the professional roles are identical, except that they use different terminologies (Singer, 1997; Stieg, 1992). There are even some researchers who claim that the discipline of information science does not exist (Marco, 1996).

One major finding is that all study participants, who study in three different training programs, perceive differences between the roles of librarian and information scientist, except for the following components: instruction, utilization of information sources, giving advice,
and recommending specific items. Participants perceive information summation, guidance to reference resources, and cataloguing and indexing as part of the librarian’s role in the library. The components of information retrieval, building, operating and managing Web sites, information filtering, and matching processed information to the client’s personal profile (roles that are related to information itself) are perceived as belonging to the information scientist. These findings confirm Baruchson-Arbib’s and Mendelovitz’s (2004) study, which explored only Israeli university library and information science student’s perceptions of their profession. Baruchson-Arbib’s and Mendelovitz found that university participants associated the role of the librarian with the work they saw taking place in the library itself, including giving theoretical advice on sources of information. Furthermore, the university participants associated the role of the information scientist with information itself, knowledge organization, and management.

The present study found that the university students identify building and operating Web sites as a role of the librarian and information scientist to a greater degree than did their counterparts in the professional academic school and the teachers college. The university students tended to associate the role of the librarian and information scientist with the Internet, perceiving this role as having more to do with technology, computers, and the digital aspects of information more than the two other student groups. The professional academic school students, by contrast, considered cataloguing and indexing to more the role of the librarian than the information scientist. Compared to university students, professional academic school students assigned a greater value to providing guidance to reference sources as a role of the librarian and information scientist. The teachers college students associated the role of the librarian and information scientist more highly than the other two student groups with giving advice and recommending specific items.

There are some significant differences among the students who study in three different training programs. First, university students emphasize the technological and digital elements of the role the librarian and information scientist. These students assume that this role is associated with digital information, information management, and organization. We can infer from this that the university’s orientation emphasizes the technological and digital aspects of their studies, and that the students have already internalized this orientation. And indeed the university prospectus declares this technical aspect to be one of the objectives of the training the institution provides. The university aims to provide its information science graduates with a broad education, enabling them to take their place in today’s information society. The conclusion that emerges is that when those university students graduate they will not use the “librarian” label, but rather something more like the “information broker” label (Firebaugh, 1996). We may also assume that university students would like to be perceived as information “producers” (Harris & Wilkinson, 2001, 2004). Those students will hope to experience better job opportunities than information “distributors,” who usually work as public information disseminators.

The second difference relates to the fact that the professional academic school students consider the librarian’s role to be more concerned with cataloging, indexing, and guiding students to reference resources, whereas the information scientist’s role is perceived to be much less so. We can infer that the orientation of the professional institution is to expose the
students both to the traditional roles of the librarian and to the new and modern roles of the information scientist. According to the professional institution’s prospectus, this school offers a high level of professional training to students who want to work as librarians, information scientists, archivists, and knowledge managers in both traditional and technological work environments. These students, who are exposed to the whole spectrum of the profession, understand that the librarian’s traditional role is more associated with providing guidance to reference resources as well as cataloguing and indexing than the role of the information scientist. The significant conclusion is that the professional academic students are not worried about perceiving their future jobs as information “producers” or information “distributors,” in contrast to university students, who would like to be perceived as information “producers.”

The third difference concerns the teachers college students, who assume that the role of the librarian/information scientist is associated with providing advice and recommending specific items, more than the other two student groups. The teachers college students, who do not major in information science, associate the classical and traditional roles as those of the librarian and information scientist.

In the three different training programs, the study found that the professional image of the information scientist is higher than that of the librarian. This finding is consistent with the professional literature on this topic (Harris & Wilkinson, 2001, 2004; Lahm, 1994; Martin, 1998; Singer, 1997). Differences were also found among students who study in the three different training institutions concerning the professional image of the librarian/information scientist.

The professional academic institution students think that the professions of librarians and information scientists are more interesting than the other students do. The professional academic institution students also claim that the information scientist earns a larger salary than was estimated by the other student groups. Both these students and those who study at the teachers college believe more than university students that the both professions require a broad knowledge and have a higher status.

Professional academic institution students study information science as a major, similar to university students. However, there is a difference in their estimation of the professional image of the librarian/information scientist. Perhaps the difference between the students who study in these two programs is derived from the different training these students receive. In both programs, the participants must undergo a training period, in which they work as librarians and as information scientists. But at the professional academic institution, there is a major emphasis on this training period, and in addition, the students must participate in different professional visiting tours that occur at different libraries and information centers. These students see different patterns of management and organizations. Perhaps this exposure increases their estimation of the professional image of the librarians and information scientists. In addition, the professional, academic institution students study a profession and not a theoretical discipline. These students will earn a practical degree and be able to work upon graduation. Perhaps this situation improves the professional image of the librarian and information scientist among these students. In contrast, university students complete and receive their first academic degree, not a professional certificate. This degree enables them to continue their university studies in information science or in other disciplines. Perhaps these students do not want to work directly in the information science profession. This may be the
reason for their lower estimation of the professional image of the librarian and of the information scientist.

Another finding which characterizes the teachers college students and the professional academic institution students is that these two groups perceive the profession as requiring broad knowledge and having a high status. We may infer that the exposure of students to courses in information science led them to understand that this profession requires a great degree of former knowledge and that studying technology-related topics gives these professions a high status.

7. Practical conclusions

The findings suggest that there is a distinction among the three different training programs concerning the roles of the librarian and the information scientist. There is a need to encourage students to take a broader perspective and more accurate perception of the professions. There should be room in all three programs to emphasize both the technical and digital topics that are related to the role of the information scientist and also the traditional and classical roles of the librarian. The students in the different programs might then perceive their future employment as information “distributors” as well as information “producers.” The findings also point to the need to expand the training aspects of the different programs (currently only in the professional, academic institution) to include intensive practical work and mandatory field work at different libraries. This exposure may lead to a higher estimation of the professional image of both the librarian and the information scientist.

References


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