Job description requirements for systems librarians in Iranian university libraries

Abdol Hossein Farajpahlou
Department of Library and Information Science,
Faculty of Educative and Psychological Sciences, Shahid Chamran University of Ahvaz, Ahvaz, Iran

Farshid Danesh
Department of MLIS, Faculty of Management and Medical Information,
Isfahan University of Medical Sciences, Isfahan, Iran
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E-mail: philip.calvert@vuw.ac.nz

PUBLISHER
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Job description requirements for systems librarians in Iranian university libraries

Abdol Hossein Farajpahlou
Department of Library and Information Science,
Faculty of Educative and Psychological Sciences,
Shahid Chamran University of Ahwaz, Ahwaz, Iran, and

Farshid Danesh
Department of MLIS, Faculty of Management and Medical Information,
Isfahan University of Medical Sciences, Isfahan, Iran

Abstract

Purpose – The aim of this paper is to prepare and propose a job description for and identify the organizational position of systems librarians in university libraries in Iran.

Design/methodology/approach – The required data were collected in two ways: literature review and survey of opinions. The respondents completed a questionnaire designed by the researchers in order to specify the skills, duties, characteristics and other qualifications of the librarians in Iranian university libraries. The material covered by the questionnaire was extracted from the existing cultural and organizational structure systems librarianship texts and their recruitment advertisements. Differences between Iranian university libraries and those of developed nations are noted. The research population included all administrators and supervisors of information sections in university libraries of Iran.

Findings – It was found that in Iran information sciences librarians require assistance from computer experts, since the IT training programme on offer does not meet the required standard. This has resulted in a reduced ability to perform their duties adequately, prompting the proposed survey for the purpose of producing a revised job description.

Practical implications – Based on the findings of this research, a job description is formulated for systems librarians in Iranian university libraries. The job description thus presented includes: responsibilities, skills, job features, factors, tools of work, condition of work environment, intellectual capabilities required, body posture, and required technologies.

Originality/value – The survey is unique in that the focus is on an Iranian systems librarian's job description based on requirements resulting from the opinions expressed by the managers and the librarians of the Iranian university libraries. Its structure therefore corresponds to the occupations widespread in Iran.

Keywords Librarians, Job descriptions, Organizational structure, Iran, University libraries

Paper type Research paper

Introduction

The advancement of computer technology and the changing role of the libraries are clear to everyone. However, these developments are not solely sufficient and the main objective to be considered is their management and organization. In order to provide the best possible service to the complete satisfaction of their clients and to make the most efficient use of modern computer technology, libraries require staff who have
methodically and scientifically learned management techniques and the application of modern computer technology in libraries. The systems librarian is responsible for the management of modern computer technology and plays a fundamental role in the advancement of the library information services and the management of the information systems in the library. The significance of this role is such that Morgan (2001) believes that a systems librarian is one who enables the client to create new thoughts and ideas thorough the application of the data and collected, organized, disseminated and evaluated information. However nowadays all librarians are faced with new information technologies (IT) and apply them regularly in their work. But with reference to the existing descriptions in resources connected with the systems librarian, the most important modern IT related work includes saving data, debugging programs and the security of the library network.

The need for scientific and methodical management of the computer systems in libraries and especially those in universities has been obvious for almost two decades, and in practice in accordance with the circumstances resulting from technological developments and use of modern computing facilities in libraries, certain individuals hold the responsibility of managerial positions related to these. However, investigations of the official employment sources and observations indicate that no official position related to the management of the library systems has ever been defined. The preparation and proposing of a job description or systems librarians in Iranian university libraries is thus the object of this study.

**Literature review**

In order to prepare the literature review of the research on systems librarian, many information databases such as Elsevier, Science Direct, Emerald, Doaj, ProQuest and some search engines such as Google and Alta Vista were searched. The following background papers are the results of these searches.

Xu and Chen (1999, 2000) in the first and second part of their research studied the job advertisements for systems librarians in US libraries during the period 1996-1997. Their results specified the knowledge, skills and capabilities required by employers when employing systems librarians in various libraries. Their two studies carried out in 1999 and 2000 eventually resulted in the following conclusions:

- Recalling of the essential role of the systems librarians and the ever-increasing importance of this profession in the information area.
- Specification of the knowledge, skills and capabilities required by the systems librarians in order to perform the duties assigned.
- Determination of the capabilities and experience required by the actual and potential employers in the field of employment of systems librarians.

Ross and Marmion (2000) examines the growth of automation at two university libraries, with particular attention to the four stages described by Lavagnino (1997). The authors then attempt to provide a more complete description of Stage Five. It seems to be an outgrowth of the distributed computing and networking components of Stage Four. New factors include a growth in digitized resources, integration of systems, and developments in client/server technology, especially as they relate to the world wide web. Finally, Stage Five libraries seem to have made changes in the
organizational structure, reflecting a need for a technical person at the upper management level.

Gordon (2001) propounded the accidental entrance of librarians into the systems librarian profession. He believes that a tendency towards solving the clients problems is the main reason behind the entrance of the librarians into the abovementioned profession. Jordan (2003) briefly points out the duties of the systems librarians and provides explanations for librarianship students and other interested parties. He analyzed the characteristics of the systems librarians, their significance and capabilities of executing responsibilities.

Goddard (2003) states that Canadian library schools are not adequately preparing new librarians for systems work, and there are simply not enough librarians with a computer science background to meet the demand for computer savvy librarians. This article proposes a third option – the combination of a Masters of Library and Information Science (MLIS) with a one year Information Technology Diploma. The paper discusses the author’s experience moving into systems librarianship by way of IT, and outlines the benefits of cultivating librarians with IT knowledge, rather than relying on non-librarians to perform technical work in the library.

Rhyno (2003) believes that systems librarians now find themselves managing or facilitating a wealth of mainstream technologies. Systems work revolves around many resources that live outside the library’s walls, securing access for our patrons and pushing access to the desktop of the user. XML is the web technology that is tying together systems, applications and formats and the possibilities for component-based applications seem revolutionary. The resulting need for mainstream IT web-based skills in addition to traditional library-specific technologies is expanding the role of systems librarians and offering a new world of possibilities.

Jilovsky (2003) describes the evolution of systems librarianship in Australia through two strands – the author’s personal work experience in libraries since 1977 and her professional involvement with the Victorian Association for Library Automation (VALA). The Proceedings of the eleven VALA Conferences and the Australian journal LASIE, which has been published since 1970, are used as reference material. The results of an informal survey of VALA members and other interested Australian librarians are also incorporated.

Chávez-Villa and Perezrul (2003) describes library automation development in Mexican universities, particularly the role of systems librarians in this process, together with the creation of new services. Systems librarian positions in Mexico do not officially exist. The activities that comprise the role practiced in American libraries were analyzed to define the equivalent profile in Mexican institutions and contrast the different approaches. Background information on Mexican library and information science programs is included. The results and conclusions of a survey applied to 66 Mexican institutions examine the role of systems librarians. Finally, some considerations about the relationship between systems administrators and librarians are included.

Tyson (2003) states that role of systems librarian is now common across a range of library types. The methods for becoming one still vary, with many systems librarians growing into the role without formal training. The role of systems manager is moving away from the person with the expertise to the management of the people with the expertise. Systems teams are more and more being comprised of both librarian and non-librarian technical people. For systems librarians, the role now is to know whom to
contact when something goes wrong and to forecast future needs. This article reviews the role of the systems team and its place as a resource for computer literacy training in libraries.

Guinea (2003) reviews the role of system librarians in the administration of a university library management system. It will focus library systems projects, which have been instigated as a result of library or university strategy and discuss the role that systems staffs play. In addition to their technical skills, systems librarians bring possess many other skills, and must often play the role of mediator. Systems librarians must be able to work and compromise within the framework of a university, but also continue to achieve technological improvements to services. Lundy (2003) believes that the role of the systems librarian has changed from a department head to a member of a team. A unique blend of timing and personalities made this transition both possible and practical. While the systems librarian now works on the same administrative level as non-librarians, there is still a fundamental difference in how the systems librarian functions within the library. This role of the systems librarian has changed in complexity but still comes down to bridging the worlds of library and technology.

Danesh (2005) after reviewing different resources presents responsibilities, functions and skills needed by librarian administration. Furthermore he explains formal and special educational courses of systems librarians in performing their given tasks. Afterwards the article considered features for accepting this job. Breeding (2005) describes his experiences in the automation of libraries and recognizes that initiation and support of the library’s automation system is one of the responsibilities of the systems librarians which cover all library departments such as lending and cataloguing.

Research methodology
The present authors faced the following questions while pursuing the object of their research:

(1) Do systems librarians have a place in the organizational structure of the university libraries in Iran?

(2) What are the duties of the systems librarians in the university library in Iran?

(3) What skills do a systems librarian in the university libraries in Iran require?

(4) What is the job description of systems librarians in the university libraries in Iran?

Regarding the type, method, population and tools used in this research and data collection techniques, the type of the research conducted is both descriptive and applied. This research was carried out using a survey, and the population of this study comprises all Iranian university library supervisors and all information department supervisors. The data for this study was collect in two stages: Stage one: library research – in this stage the theoretical and employment bases of roles, skills and the capabilities of the systems librarians and also the theoretical basis of the human resources management in the field of preparing job description were thoroughly researched by reference to various collection sources and texts. Stage two: using surveys in order to preparing and proposing job description and specify the organizational position of the systems librarians – two forms of questionnaire were designed, one for the manager and one for the information department supervisors.
In this survey reliability was measured using the content credibility method. The validity of the abovementioned questionnaires was measured using the software SPSS, the collected data and estimates of the Alpha validity coefficient. Alpha for both questionnaires was estimated at 0.8795 which was the result of their similarity and an indication very high credibility.

In order to determine the precedence in responsibility and skills of those who operate as systems librarians in the university libraries in Iran, and also to produce job description and specify the organizational position of the systems librarians, descriptive statistics such as frequency distribution table, percentage of frequency and mean value were used.

The position of system librarians
The reason behind the first research question was to discover whether a position has been anticipated for the systems librarians in the organizational structure of the university library or not. As indicated in Table I, the answers provided showed that 100 per cent of the managers and 97 per cent of fellow librarians believe that no such place has been anticipated. This in itself is yet another confirmation of the necessity of this study.

The system librarian's duties
The second research question focused on the duties of the systems librarians in the Iranian university libraries. In order to find the answer, all stated duties of the systems librarians in all universities of the world were extracted through reference to various texts and sources. These duties were then included in a questionnaire based on the Likert Scale. The mean mark given to each duty by the participant population formed the basis for the determination of the precedence of the responsibilities. The results are presented in Table II.

Skills required by systems librarians in Iran
The third research question addressed the skills required by the systems librarians in the university libraries in Iran. A list of the required skills by the systems librarians in the libraries of the universities of the world extracted from various texts and sources, formed part of the questionnaire which sought the views of the university library managers and supervisors of the information section of the libraries under research. As indicated in Table III, the managers and those working in information related posts both expect systems librarians should be familiar with the library and its state and also to be proficient in the software and hardware used in the libraries.

The different viewpoints of the managers and the librarians of the Iranian university Libraries with the texts of the systems librarian and the opinions of the specialists of this

<table>
<thead>
<tr>
<th>The position of the systems librarians participants</th>
<th>Yes Frequency</th>
<th>Yes %</th>
<th>No Frequency</th>
<th>No %</th>
<th>Did not answer Frequency</th>
<th>Did not answer %</th>
<th>Total Frequency</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>-</td>
<td>-</td>
<td>33</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Fellow librarians</td>
<td>-</td>
<td>-</td>
<td>32</td>
<td>97</td>
<td>1</td>
<td>3</td>
<td>33</td>
<td>100</td>
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<tr>
<td>Total</td>
<td>-</td>
<td>-</td>
<td>65</td>
<td>98.5</td>
<td>1</td>
<td>1.5</td>
<td>66</td>
<td>100</td>
</tr>
<tr>
<td>Details of the duties of the systems librarian</td>
<td>Frequency</td>
<td>Mean</td>
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</tr>
<tr>
<td>1 Cooperation with other sections of the library</td>
<td>63</td>
<td>4.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2 Participation in the acquisition of the software and hardware</td>
<td>65</td>
<td>4.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3 Recognition and analysis of the problems related to the automated system</td>
<td>65</td>
<td>3.95</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4 Tendering advice and recommendation in order to provide support for the automated system</td>
<td>66</td>
<td>3.94</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5 Investigation and evaluation of the existing modern computerized technology in the automated system</td>
<td>64</td>
<td>3.91</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>6 Marinating the electronic information sources</td>
<td>65</td>
<td>3.88</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>7 Familiarity with the activities and duties of the university libraries</td>
<td>65</td>
<td>3.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Maintaining the library's internal network</td>
<td>65</td>
<td>3.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9 Precise presentation and maintaining of the operation records and reports of the automated system</td>
<td>65</td>
<td>3.82</td>
<td></td>
<td></td>
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<tr>
<td>10 Maintaining the library's integrated system</td>
<td>65</td>
<td>3.78</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>11 Communication with the employees of the other sections</td>
<td>66</td>
<td>3.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Anticipation of future requirements</td>
<td>66</td>
<td>3.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Practical management of the systems</td>
<td>65</td>
<td>3.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Maintaining the hardware and software</td>
<td>64</td>
<td>3.72</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Communication and coordination with the library’s clientele</td>
<td>66</td>
<td>3.68</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>16 Training the employers and clients to enable them to use the library’s automated system</td>
<td>66</td>
<td>3.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 Design and execution of the policies and the library’s automated system program</td>
<td>66</td>
<td>3.62</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 Design and initiation of the library’s automated system</td>
<td>65</td>
<td>3.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 Determination of the budget for the automated system</td>
<td>66</td>
<td>3.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

field in some skills are notable in Table III. Evidence shows that computer programming skill is one of the principal skills of a systems librarian in other countries. However, it can be concluded from this table that the managers and the librarians of the Iranian university Libraries did not realize the significance of this skill and placed it as the last priority. This can be explained by the difference in the organizational structure of the university libraries and the syllabuses of the librarians at graduate and postgraduate degree level in Iran, in other words as skills such as computer programming are not officially taught to the students of LIS in Iranian universities, it cannot be expected that within the structure of the Iranian university libraries, librarians to know such skills, thus the utilization of computer experts alongside the librarians.

The proposed job description of systems librarians
The fourth research question addressed the proposed job description of the systems librarians in Iranian university libraries. In order to answer this question the preferred qualifications expressed in human resource management texts were extracted and then included in the questionnaire in the form of a number of questions – the results of which are presented below.

Possession of logical and intellectual capability
Logical and intellectual capability in this research means the ability to perform such things: programming, creativity, accuracy and concentration, judgment and analysis
Table III.
The participants' views on skills required by the systems librarian based on the frequency and mean value of each skill

<table>
<thead>
<tr>
<th>Row</th>
<th>The skills required by the systems librarians</th>
<th>Frequency</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Familiarity with the university library services</td>
<td>65</td>
<td>4.22</td>
</tr>
<tr>
<td>2</td>
<td>Capability of using all library software and hardware</td>
<td>66</td>
<td>4.21</td>
</tr>
<tr>
<td>3</td>
<td>Familiarity with the library's automated system</td>
<td>65</td>
<td>4.18</td>
</tr>
<tr>
<td>4</td>
<td>Awareness of the method of organizing the existing information in</td>
<td>66</td>
<td>4.08</td>
</tr>
<tr>
<td></td>
<td>the library and retrieval techniques</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Familiarity with the responsibilities in university libraries</td>
<td>65</td>
<td>4.03</td>
</tr>
<tr>
<td>6</td>
<td>Awareness of the experience of the dealers involved with the library's automated</td>
<td>66</td>
<td>3.86</td>
</tr>
<tr>
<td></td>
<td>system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Familiarity with the operation systems and their application</td>
<td>66</td>
<td>3.86</td>
</tr>
<tr>
<td>8</td>
<td>Familiarity with the organizational structure of the university libraries</td>
<td>65</td>
<td>3.85</td>
</tr>
<tr>
<td>9</td>
<td>Awareness of the host's function</td>
<td>66</td>
<td>3.83</td>
</tr>
<tr>
<td>10</td>
<td>Familiarity with the workplace organizational plans and priorities</td>
<td>66</td>
<td>3.82</td>
</tr>
<tr>
<td>11</td>
<td>Awareness of the network functions</td>
<td>65</td>
<td>3.80</td>
</tr>
<tr>
<td>12</td>
<td>Awareness of the server</td>
<td>65</td>
<td>3.80</td>
</tr>
<tr>
<td>13</td>
<td>Awareness of the problems of the university libraries and the ability to resolve</td>
<td>66</td>
<td>3.71</td>
</tr>
<tr>
<td></td>
<td>them and present suggestions for their resolution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Familiarity with the research process</td>
<td>65</td>
<td>3.71</td>
</tr>
<tr>
<td>15</td>
<td>Familiarity with the management theories and their application in the managing of</td>
<td>66</td>
<td>3.50</td>
</tr>
<tr>
<td></td>
<td>the university libraries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Capability of performing statistical analysis</td>
<td>65</td>
<td>3.44</td>
</tr>
<tr>
<td>17</td>
<td>Awareness of the networks security matters</td>
<td>66</td>
<td>3.44</td>
</tr>
<tr>
<td>18</td>
<td>Capability of performing statistical analysis</td>
<td>65</td>
<td>3.31</td>
</tr>
<tr>
<td>19</td>
<td>Familiarity with the accepted protocol between networks</td>
<td>66</td>
<td>3.26</td>
</tr>
<tr>
<td>20</td>
<td>Awareness of the networks technical matters</td>
<td>65</td>
<td>3.24</td>
</tr>
<tr>
<td>21</td>
<td>Possessing the knowledge and experience required in designing the library automated</td>
<td>65</td>
<td>3.17</td>
</tr>
<tr>
<td></td>
<td>system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Comprehension of the network and network design parameters</td>
<td>65</td>
<td>2.94</td>
</tr>
<tr>
<td>23</td>
<td>Awareness of the networks financial matters</td>
<td>66</td>
<td>2.83</td>
</tr>
<tr>
<td>24</td>
<td>Familiarity with computer programming principles</td>
<td>66</td>
<td>2.82</td>
</tr>
</tbody>
</table>

of the problems that may arise. The participants were asked to express their views on the existence or otherwise of each of the above as part of the characteristics and capabilities of the systems librarians by selecting "Yes" or "No".

The figures in Table IV which represent the view of the managers and fellow librarians indicate that they answered "yes" to the categories listed together with the

Table IV.
The distribution of the participants' views on logical and intellectual capability as a characteristic of the systems librarians

<table>
<thead>
<tr>
<th>Participation's views</th>
<th>Yes Frequency</th>
<th>Yes %</th>
<th>No Frequency</th>
<th>No %</th>
<th>Total Frequency</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming and determination of future policy</td>
<td>51</td>
<td>86.4</td>
<td>8</td>
<td>13.6</td>
<td>59</td>
<td>100</td>
</tr>
<tr>
<td>Creativity, innovation and planning</td>
<td>59</td>
<td>93.7</td>
<td>4</td>
<td>6.3</td>
<td>63</td>
<td>100</td>
</tr>
<tr>
<td>Accuracy and concentration</td>
<td>55</td>
<td>91.7</td>
<td>5</td>
<td>8.3</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Judgment and decision making</td>
<td>49</td>
<td>84.5</td>
<td>9</td>
<td>15.5</td>
<td>57</td>
<td>100</td>
</tr>
<tr>
<td>Problem analysis</td>
<td>61</td>
<td>96.8</td>
<td>2</td>
<td>3.2</td>
<td>63</td>
<td>100</td>
</tr>
</tbody>
</table>
relevant percentage. It can be said otherwise that first, as far as the supervisors and fellow librarians are concerned all of the categories are considered to be part of the characteristics and duties of the system librarians, and second if we place these characteristics in their order of importance, it will be as follows:

(1) programming;
(2) creativity;
(3) accuracy and concentration; and
(4) judgment and problem analysis.

Existence of physical threats to the systems librarians while at work
The participants were asked to express their views on the existence or non-existence of physical threat to the systems librarians while at work, by selecting “Yes” or “No. As Table V figures indicates 57.6 per cent of the managers and fellow librarians believe that this job does not involve any physical threats. Therefore it can be concluded that the systems librarian’s job is of those jobs that is free of any physical threats.

Minimum practical experience required to become a systems librarian
The participants were asked to determine the minimum time required to obtain a post as a systems librarian in the Iranian university libraries. The views expressed can be observed in Table VI. According to the table, the minimum practical experience required to become a systems librarian in the Iranian university libraries can be thought of as between one to five years.

Minimum academic qualification required to become a systems librarian
The participants were asked to express their views on the minimum academic qualification required to obtain a post as a systems librarians in the Iranian university libraries. The views expressed are indicated in Table VII. By looking at the figures and numbers in this table the following is indicated for the minimum academic qualification requirement as either a bachelors or a master’s degree.

Necessity of specialization in order to become systems librarians
The participants were asked to express their views on whether or not specialization was required in order to obtain a post as a systems librarian, by selecting “Yes” or “No. As indicated in Table VIII, 96.3 per cent of those asked think it is necessary for systems librarians to specialize. This is an indication of the post of the systems librarian being a specialized position and in order to present services productively, it is necessary for the person responsible to have obtained the necessary qualifications.

<table>
<thead>
<tr>
<th>Existence of physical threats to the systems librarians while at work</th>
<th>Yes</th>
<th>No</th>
<th>Did not answer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>The participants</td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>Manager</td>
<td>9</td>
<td>27.3</td>
<td>22</td>
<td>66.7</td>
</tr>
<tr>
<td>Fellow librarian</td>
<td>16</td>
<td>48.5</td>
<td>16</td>
<td>48.5</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>37.9</td>
<td>38</td>
<td>57.6</td>
</tr>
</tbody>
</table>

Table V. The distribution of the participants' views on the existence of physical threats to the systems librarians while at work.
### Minimum practical experience required to become a systems librarian

<table>
<thead>
<tr>
<th>The participants</th>
<th>Less than 1 year</th>
<th>1 to 5 years</th>
<th>5 to 10 years</th>
<th>More than 10 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>Frequency 2</td>
<td>Frequency 17</td>
<td>Frequency 13</td>
<td>Frequency 1</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>% 6.1</td>
<td>% 51.5</td>
<td>% 39.4</td>
<td>% 3</td>
<td>100</td>
</tr>
<tr>
<td>Fellow librarians</td>
<td>Frequency 2</td>
<td>Frequency 21</td>
<td>Frequency 7</td>
<td>Frequency 3</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>% 6.1</td>
<td>% 63.6</td>
<td>% 21.2</td>
<td>% 9.1</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>Frequency 4</td>
<td>Frequency 38</td>
<td>Frequency 20</td>
<td>Frequency 4</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>% 6.1</td>
<td>% 57.6</td>
<td>% 30.3</td>
<td>% 6.1</td>
<td>100</td>
</tr>
</tbody>
</table>
**Required level of competency in foreign languages by the systems librarians**
The participants were asked to express their views on the level of competency in foreign languages required by the systems librarians. Their reply is reflected in Table IX from which it is clear that more than 80 per cent of the participants believed that the systems librarians should be very highly competent in foreign languages. This an indication of the high level of foreign language competency expected in the systems librarians.

**Daily work time required by the systems librarian**
The participants were asked to determine the daily work time required by the systems librarians engaged in the libraries under research. It can be seen from the results in Table X that nearly half of systems librarians in Iranian university libraries spend an average of between six to eight hours at work, though more than one third spend up to ten hours per day.

**Existence of unsuitable working conditions in the systems librarian’s working environment**
The participants were asked to express their views on whether or not unsuitable working conditions exists in the systems librarian’s working environment in the university libraries covered by this research through selecting “Yes” or “No”. Of the

<table>
<thead>
<tr>
<th>Minimum academic qualification required to become a systems librarian</th>
<th>An associated degree Frequency</th>
<th>%</th>
<th>A bachelor's degree Frequency</th>
<th>%</th>
<th>A Master's degree Frequency</th>
<th>%</th>
<th>Total Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The participants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managers</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td>45.5</td>
<td>17</td>
<td>51.5</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Fellow librarians</td>
<td>2</td>
<td>6</td>
<td>17</td>
<td>51.5</td>
<td>14</td>
<td>42.4</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>4.5</td>
<td>32</td>
<td>48.5</td>
<td>31</td>
<td>47</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table VII.**
The distribution of the participants’ views on the minimum academic qualification required to become a systems librarian

<table>
<thead>
<tr>
<th>Necessity of specialization by the systems librarians</th>
<th>Yes Frequency</th>
<th>%</th>
<th>No Frequency</th>
<th>%</th>
<th>Total Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The participants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td>32</td>
<td>97</td>
<td>1</td>
<td>3</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Fellow librarian</td>
<td>29</td>
<td>87.9</td>
<td>4</td>
<td>12.1</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>92.4</td>
<td>5</td>
<td>7.6</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table VIII.**
The distribution of the participants’ views on the necessity of specialization by the systems librarian

<table>
<thead>
<tr>
<th>Competency level of the systems librarians in the English language</th>
<th>Average Frequency</th>
<th>%</th>
<th>High Frequency</th>
<th>%</th>
<th>Very high Frequency</th>
<th>%</th>
<th>Total Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The participants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td>6</td>
<td>18.2</td>
<td>18</td>
<td>54.5</td>
<td>9</td>
<td>27.3</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Fellow librarian</td>
<td>6</td>
<td>18.2</td>
<td>18</td>
<td>54.5</td>
<td>9</td>
<td>27.3</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>18.2</td>
<td>36</td>
<td>54.5</td>
<td>18</td>
<td>27.3</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table IX.**
The frequency distribution of the participants’ views on the level of competency required by the systems librarian

---

**Job description requirements**

67
Table X.
The participants' views on the daily working hours of the systems librarians based on frequency and percentage.

<table>
<thead>
<tr>
<th>Systems librarians daily working hours</th>
<th>Less than six hours</th>
<th>Six to eight hours</th>
<th>Eight to ten hours</th>
<th>More than ten hours</th>
<th>Did not answer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>The participants</td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>Managers</td>
<td>4</td>
<td>12.1</td>
<td>15</td>
<td>45.5</td>
<td>9</td>
<td>27.3</td>
</tr>
<tr>
<td>Fellow librarians</td>
<td>2</td>
<td>6.1</td>
<td>13</td>
<td>39.4</td>
<td>15</td>
<td>45.5</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>9.1</td>
<td>28</td>
<td>42.4</td>
<td>24</td>
<td>36.4</td>
</tr>
</tbody>
</table>
managers and fellow librarians, 62.1 per cent had declared the working conditions as adverse (Table XI). They pointed to such matters as the irregularity of the air conditioning system in producing more cold or heat than required, humidity, lack of sufficient space, lack of sufficient lighting, noise pollution, dust and finally the lack of necessary facilities to manage the work. This indicates that generally speaking, the working environment of the systems librarians in Iranian university libraries is far from ideal.

**Proposed job description for systems librarian**
The figures and numbers in the aforementioned tables were a brief representation of the most significant analysis performed. Using the official model used by organizations connected with providing job presentations and based on the resultant research data, the full description of a proposed job based on the findings of this research is presented below for the attention of the systems librarians (and their employers) in Iranian university libraries.

**Job title**
The title of the job for which this job description is provided is “Systems librarian”.

**Place of work**
The place of work for systems librarians in this research is the Iranian university libraries.

**Brief description of the job**
The systems librarians are responsible for new technologies in the university libraries of Iran.

**Supervisor or subordinate**
The systems librarians in the university libraries work under the authority of the library supervisor but most have no supervisory roles. Another point to which attention must be directed is that the assistant supervisor and the supervisor of the library, its research assistant, members of the university’s information technology board, members of the library council and members of the university academic board are people who examine the activities of the systems librarians in the university libraries. The research findings also indicated that systems librarians can function without the assistance of their superiors. Their subordinates, selection and order of various information sources required by the library, analysis of the

<table>
<thead>
<tr>
<th>The unsuitable working conditions in the systems librarian's working environment</th>
<th>The participants</th>
<th>Yes Frequency</th>
<th>%</th>
<th>No Frequency</th>
<th>%</th>
<th>Did not answer Frequency</th>
<th>%</th>
<th>Total Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td>20</td>
<td>60.3</td>
<td>10</td>
<td>30.3</td>
<td>3</td>
<td>9.1</td>
<td>33</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Fellow librarian</td>
<td>21</td>
<td>63.6</td>
<td>11</td>
<td>33.3</td>
<td>1</td>
<td>3</td>
<td>33</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>62.1</td>
<td>21</td>
<td>31.8</td>
<td>4</td>
<td>6.1</td>
<td>66</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

**Table XI.**
The frequency distribution of the participants' views on the unsuitable working conditions in the systems librarian's working environment.
library system, improvement of the systems under the library’s authority, how service is provide and necessary pursuit of whether or not to maintain contact with data bases are all matters which systems librarians in the Iranian university libraries can resolve without the assistance of their supervisors. Presentation of daily and ongoing reports to their supervisors is also part of the systems librarian’s duties.

Job requirements of the systems librarian
The research findings indicted that “programming and determination of future policy”, “creativity, innovation and planning”, “mental concentration”, “judgment and decision” and “problem analysis” form part of the responsibilities of the systems librarian. Physical ability is also beneficial in the systems librarian’s work as systems librarians do most of their work in a standing position. The systems librarian forms the pivot of the library work and uses certain tools. Existence of audio – visual facilities is essential. Compact discs containing educational programs, video projectors, data projectors, overhead projectors, scanners, printers, computers and digital cameras are examples of audio – visual facilities used by systems librarians.

Qualification requirements for systems librarians
The following criteria are proposed for employment as systems librarians:

- Obtaining a bachelor or masters degree in library and information science.
- Possession of at least five years’ work experience.
- Competency in foreign languages.
- Specialization.

As well as the points mentioned above it should be noted that:

- One of the requirements of the post of systems librarians is interpersonal and inter-organizational communication both within and outside the library. Members of the academic board, students, The library research assistant’s office, The library supervisor and assistant supervisor, other librarians, computer specialists, dealers of databases, the university computer network supervisor, companies that provide the library’s required hardware and software, the university’s informatics centre and the libraries of other universities used in the production of articles are the usual people and organizations that systems librarians in the Iranian universities communicate with.

- Systems librarians in the university libraries are not involved in financial matters.

- Accounting and statistical matters, the production of designs and regulations are not part of the systems librarian’s duties in the Iranian university libraries.

- Handling confidential material is usually not part of the systems librarian’s duties.

- Systems librarians are not normally faced with physical dangers, but they are usually faced with unsuitable working conditions concerning humidity, extreme
heat and cold, lack of space, lack of lighting, noise pollution, dust and lack of necessary facilities for the running of the library.

Recommendations
As the present research is solely for the purpose of producing a job description for the systems librarian, it is therefore proposed that a separate research investigates their educational needs and specifies relevant subject headings.

As employment of people in the position of systems librarians requires the necessary experience and expertise, therefore as in Western nations have a field of study called "systems librarianship" in their departments of library and information science, it is proposed that a research in relation with the feasibility of establishing the "systems librarianship" field is initiated so that the required foundation for the establishment of relevant courses in order to educate the specialists required for the post of systems librarians is provided.

Conclusions
The present research was conducted in order to prepare and propose a job description for the post of systems librarian in Iran by conducting a survey among the librarians and managers in Iranian university libraries. The respondents completed a questionnaire designed by the researchers in order to specify the skills, duties, characteristics and other qualifications of the librarians in Iranian University libraries. The material covered by the questionnaire was extracted from the systems librarian texts and their recruitment advertisements.

The existing cultural and organizational structure differences between Iranian university libraries and those of the developed countries should be noted. Investigations indicate that in Iran the librarians in the section of information sciences work alongside a computer expert and should any acute IT related problems arise, this expert will be called on to alleviate the problem. The failure to obtain the necessary skills and qualifications required to operate the latest IT software during their education is one of the reasons for the inability of the librarians in the section of information sciences to fully perform their duties. Evidences indicate that the syllabus provided at present for the LIS academic department does not conform to the skills and characteristics required by the librarians in order to confront the IT related problems and therefore computer specialist fill the obvious vacuums.

Finally, it should be added that skills, characteristics, duties and other qualifications stated in the proposed job description has been extracted from the recruitment advertisements and texts of the systems librarian, although in accordance with the differences pointed out in the Iranian LIS educational system and her university libraries with other developed countries, the job description and priorities for Iranian librarians for the position of a systems librarian is somewhat different. Thus the job description proposed is merely the result of the opinions expressed by the managers and the librarians of the Iranian University Libraries and its structure therefore corresponds to the occupations widespread in Iran.

References


Further reading


About the authors

Abdol Hossein Farajpahlou obtained a BA degree in commercial management from the University of Tehran, then a Masters degree in library and information science from the same
university. Following graduation in 1982 he went to Australia to undertake a PhD which he obtained in 1994 from the University of New south Wales. He is currently an Associate Professor in the Department of Library and Information Science at the University of Shahid Chamran of Ahvaz, Iran.

Farshid Danesh obtained a BA degree in library and information sciences from Ferdowsi University of Mashhad, Iran followed by a Masters degree in library and information science from the Chamran University of Ahvaz. Currently, he is an academic staff member in the Department of MLIS in Isfahan University of Medical Sciences, Iran. He is the corresponding author and can be contacted at: farshid_danesh@yahoo.com