Strategic Information and Communication Technology Skills and Effectiveness of Library Services in Jordan

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Abstract

The purpose of this study is to examine the information and communication technology skills and effectiveness of library services in Jordan. Presently, Information and Communication Technology is important in this era and librarians must use this technology to provide better services in libraries. This study was undertaken among librarians in Yarmouk university .Yarmouk university library has the largest number of librarians in Jordan. This study focuses on information and communication technology skills and effectiveness of library services. In the study 60 librarians from Yarmouk university library gave their responses. Based on the data provided by the librarians descriptive and correlation analyses were carried out. The results of the study suggest that information communication technology skills namely literacy, skills, and attitude are related to effectiveness of library services.

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Introduction

1.1 Introduction

Human resources consist of individuals who make up the workforce of an organization. Human resources is also the name of the function within an organization in charged with the overall responsibility for implementing strategies and policies relating to the management of individuals.

The human resources function is also important in library. The importance of human resources increases in libraries and in many other areas, where human resources people get a lot of information and advice and expertise human resources has an important role in libraries (Rao.K, Babu.K, 2001).

The field of strategic human resources management has enjoyed a remarkable ascendancy during the past two decades, as both an academic literature and management practice (Bidmeshgipour.M, 2009). Give a broader approach to looking at strategic human resources management by integrating various functions and establishing the linkage of these functions with the business plan, it is important not only to identify human resources competencies in concurrence with the business needs and to develop selection and development practices to secure those competencies, but also to evolve and implement a performance evaluation plan that links the performance of the employees to the strategic goals (Singh, 2003).

Librarian's face the challenges of the modern technology emerged in the management of libraries. Librarians must be able to deal with the challenges to provide information services to users of the library in order to assist the development of scientific research and increase the culture of the community and culturally literacy. The role of the public library in particular is a crucial role in cultural development as a good book is a compendium of human thought and well organized in every area and this reflected its impact on the reader thinking and behavior in general(Haughey, 2000).

Librarian's role at the present time is the ability to manage information efficiently and effectively, in scientific research or knowledge domain. In spite of the importance of that role that allows him to provide many advanced services to keep pace with modern technology, thus there is a need to examine the role of librarians in the new technology era and the importance of this role in light of the world witnessing from enormous wealth in information and in the various branches of human knowledge.

1.2 Problem Statement

One must never lose time in vainly regretting the past nor in complaining about the changes which cause us discomfort, for change is the very essence of life. There will always be changes in the environment, and these changes will affect librarians and information professionals: their role, job opportunities, self-image, motivation and even survival. Librarians

therefore need to find a solution to timely repositioning and role claiming. There will never be an easy solution.

Information and communication technology has brought a lot of changes not only on the library and information services but also on the roles and expectations of the librarians and information professionals. Librarian is expected to do more and more with fewer and fewer people. There is a real danger that librarians and information professionals will be left behind if it still insists on the old role of the traditional librarians. So it is important that there is a new change in paradigm. As the saying goes, change or perish. This paper will attempt to understand what a successful, relevant and dynamic librarians and information professionals must be in this Information Age. It will also focus on the issues, trends and challenges in preparing new era for librarians and information professionals.

1.3 Research Question

The objective of this study is to investigate the impact of the information and communication technology on librarians. The research questions are:

(1) What is the level of information and communication technology literacy among librarian in Jordan?

(2) How is information and communication technology skills acquired by librarian in Jordan?

(3) What is the level of attitude of librarians in Jordan towards information and communication technology?

(4) What is the level of information and communication technology effectiveness among librarian in Jordan?

(5) Is there a relationship between information and communication technology skills and effectiveness of library service?

1.4 Research Objectives

The objectives of this research are to examine impact of information and communication technology skills and effectiveness among librarians, and what the librarians need to do to ensure the development of the knowledge worker and to diffuse knowledge to others in the librarians. More specifically the research objectives of the study are:

1. To examine level of information and communication technology literacy among librarian in Jordan.
2. To examine information and communication technology skills acquired by librarian in Jordan.
3. To examine level of attitude of librarians in Jordan towards information and communication technology.
4. To examine level of information and communication technology effectiveness among librarian in Jordan.
5. To examine the relationship between information and communication technology skills and effectiveness of library service.

1.5 Significance of the Study

The study can bring gout several benefits. Among some of the significant factors that emerge from the study are:

1. The study can provide information on the level of technology literacy among librarians
2. The study can point out some of the deficiency among librarians as to their knowledge on information and communication technology.
3. The study can indicate how librarians acquire their knowledge on information and communication technology.
4. The study can also indicate the level of effectiveness of information and communication technology in the management of library.
5. Finally, most important, the study can add to the present on the important role of information and communication technology in the administration of library.

1.6 Scope and Limitations of the Study

The study is limited in a number of ways. First, the study is focused on librarians who are employed in a library in university. Second the study focused on librarians at Yarmouk University in Jordan .Third the result of the study in limited to the responses provide by the librarian through a structured questionnaire.

1.7 Definition of Terms

Information and Communication Technology is the technology used to communicate information efficiently and effectively to serve particular purposes and make life or tasks easier for us.

Literacy level of proficiency that is necessary to understand and apply Information and Communication Technology.

Skills are the learned capacity to carry out Information and Communication Technology activities.

Attitude is a hypothetical construct that represents an individual's degree of like or dislike for Information and Communication Technology. Attitudes are generally positive or negative views of a person, place, thing, or event.

Librarian is an information professional trained in library and information science, and working in a library.

1.8 General Research Framework

The rest of the research is structured as follows:

Chapter One Introduction of this study.

Chapter Two literature review of the frameworks relevant to the research.

Chapter Three presents the research methodology which includes description of the Questionnaire, the sample, procedure of data collection, research design, and Survey.

Chapter Four presents the study findings.

Chapter Five discusses the conclusions, recommendations.

Chapter Two

Literature Review

Introduction

This section reviews the available relevant literature to this research. The review consists of three major parts. The first part reviews some fundamental definitions and properties of strategic human resources management. The second part defines the concept of information and communication technologies and reviews relevant theoretical approaches to it. Finally, the third part introduces and defines selected aspects of impact information and communication technologies tools on librarian.

2.1 Strategic Human Resources Management

Strategic Human Resources Development concerned the development of human resources plans and strategies to the organization's strategic directions mission and vision, and business strategy. Human resources management also needs to provide tools to enhance execution of these strategies and manage the interface between processes and systems.

Strategic human resources management has been defined as the linking of human resources with strategic goals and objectives in order to improve business performance and

develop an organizational culture that fosters innovation and flexibility (Karadjova & Mujtaba, 2009). Human resources consist of individuals who comprise the labor force of society, and they work in all the sectors of the economy. Human resources is also the name of the function within an organization charged with the general responsibility for implement policies and strategies relating to the administration of individuals the human resource.

Strategic planning allows companies to put down on paper where they are, where they want to go, and how they plan to get there. But the best planning in the world does nothing for a company if it does not act on those plans in an appropriate manner (Karadjova & Mujtaba, 2009). Human resource policies can, if properly configured, provide a direct and economically important contribution to firm performance.

Strategic human resources means accepting the human resources function as a strategic partner in the formulation of the company strategies as well as in the implementation of those strategies (Karadjova & Mujtaba, 2009). Strategic human resources help the economy to identify and select management talent to ensure the companies have the true people and the right skills to achieve their goals and objectives. They present a blueprint for the necessary organizational structure needed to execute an operational plan.

Strategic planning is significant and recognizes that even the best plans should confront the reality of implementation of services and facilities in the library on a daily basis. Strategic planning offers solutions to direct operational problems within the library.

Ulrich (1997) noted that human resources strategy is the outcome: the mission, vision and priorities of the human resources function. Consistent with this view (Bamberger & Meshoulam, 2000) conceptualize human resources strategy as an outcome: the pattern of decisions regarding the policies and practices associated with the human recourses system. The authors go on to make a useful distinction between senior management's espoused human resources strategy and their emergent strategy. The espoused human resources strategy refers to the pattern of human resources-related decisions made but not necessarily implemented, whereas the emergent human resources strategy refers to the pattern of human resources-related decisions that have been applied in the workplace. Thus, espoused human resources strategy is the road map and emergent human resources strategy is the road actually traveled (Bamberger & Meshoulam, 2000).

Strategic human resources management involves the development of a consistent, aligned collection of practices, programs strategies, and policies to facilitate the achievement of the organization's strategic objectives (Mello, 2002). The strategic human resources management literature is rooted in manpower planning. Ouchi (1981) affirms the importance of the effective management of people advantage that encouraged academics to develop frameworks

emphasizing the strategic role of the human recourses function and attaching the prefix strategic to the term human resource management.

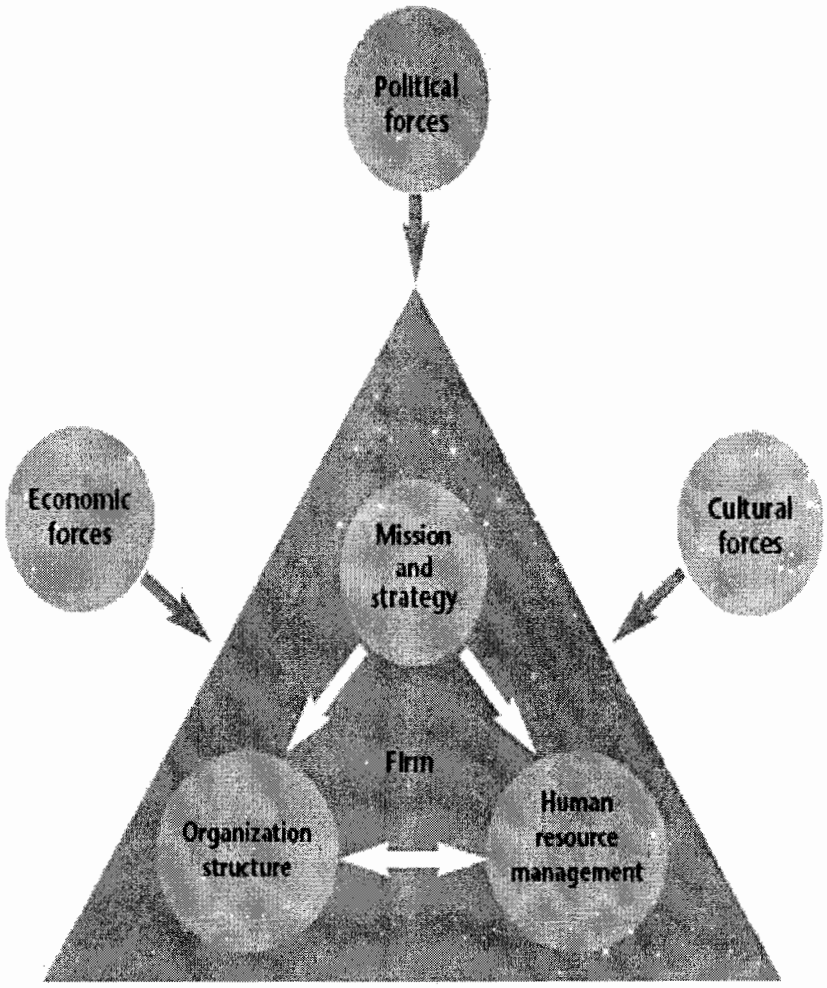
Information about and the ability to implement successful change strategies make the human resources management professional exceptionally valued. Knowing how to link change to the strategic needs of the organization will minimize employee dissatisfaction and resistance to change. Human resources management programs are used to gain employees commitment for institution.

2.1.1 Strategy and Human Resources Management

Strategic and human resource management is designed to help firm's best meet the needs of their employees while promoting firm goals. Human resource management deals with any aspects of a business that affects employees, for example hiring and firing, pay, benefits, training and management. Human resources may also provide work incentives, safety procedure information, and sick or vacation days.

When discussing business strategy, (Boxall & Purcell, 2003) argue that it is possible to find strategy in every business because it is embedded in the important choices managers and staff of the make about what to do and how to do it. It is referred to by them as strategic choice or as the strategies firms adopt in dealing with strategic problems. A further dimension to this is

that strategy is directed towards maintaining the viability of the organization or producing sustained in the markets in which the organization exists.



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Devanna et al.'s strategic human resource management "matching model" Source: Devanna et al. (1984)

The term strategic human resource appears frequently in the human resources literature. Articles and books that use this term generally urge human resource professionals to become

more active in shaping strategy and more a partner to line management in running the business. There is evidence to suggest that much movement has been made in this direction, but there is also evidence that human resource, as perceived by line management and human resource alike, is not moving fast enough or getting involved deeply enough in the organizational change aspects of its role. Clearly, this has strategy implementation implications, especially when strategy shifts. When strategies change, organizations have to change, and when organizations have to change, people are making those changes (McKnight, 2006).

What really makes the difference between successful and unsuccessful strategy deployment is the way management motivates and educates its people to act on a business strategy (McKnight, 2006). The entrepreneur himself as part of the dominant coalition can play an important role in shaping human resource management policies and bringing about an ideology and culture, which is quite determinative in the subsequent shaping of human resource management policies.

Strategic and human resource management is the proactive administration of people. It requires thinking ahead, and planning ways for an organization to better meet the needs of its employees, and for the employees to better meet the needs of the corporation. This can affect the way things are done at a business site, improving everything from hiring practices and employee training programs to evaluation techniques and discipline.

2.1.2 Classical Strategic Approaches in the Human Resource Management Area

In describing the traditional strategic approaches in the area of human resource management, it is needed to discern between process and content models. The process of strategy refers to the way a strategy comes about, whereas the content is concerned with the output of a strategy.

The impact of globalization and highly competitive markets has undoubtedly caused the human resource management to take on a more strategic role in the organization and management of human resources. Accordingly, the new positioning of human resources management to emphasizes the integration of human resource practices with business corporate strategy. To achieve strategic integration it is anticipated that each of the key activities making up human resource management, e.g. Recruitment and selection and training and development should be similarly integrated (Othman, 2009).

Recruitment should not be simply a question of filling gaps but should focus proactively on bringing into organization the skills and experience which cannot be built from within. Undeniably, effective recruitment selection is critical to success of the organization. Similarly, human resource teams are often criticized for developing training development strategies which do not match business priorities (Othman, 2009).

From the basis of a certain strategic alternative at business or firms level, the consequences are analyzed with respect to cost constraints and staff requirements. It is also to monitor the external environment and to analyses the current human resources with respect to both quantity and quality. The present and required human resources are compared.

Human resource management is critical to organizational effectiveness, human resource management is more likely to contribute to competitive success where it is introduced as an integrated and coherent package, or bundle of practices, companies that closely co-ordinate their business strategy and human resource management activities achieve better performance (Maxwell & Farquharson, 2008). Human resource policies can, if properly configured, provide a direct and economically significant contribution to firm performance.

Manager's involvement in human resource signals a connection between business performance and congruence in line and human resource manager opinions on line managers' involvement in human resource activities (Maxwell & Farquharson, 2008). Managers and staff specialists in the different functional areas of finance, marketing, accounting, and human resource management. Everyone currently maintains that human resource management must be business oriented and should contribute to the process of adding value.

According to Maxwell & Farquharson (2008). The majority of strategic human resource management models uses the chosen business strategy as a starting point and then tries to

establish the kind of human resource management policies and practices, which focuses on human resource management policies and practices. Large scale survey highlights a positive link between human resource practices and organizational performance (Maxwell & Farquharson, 2008).

Strategic human resource management is a continuing process that evaluates and controls the industries and the business in which the firm is involved; assesses its competitors and sets goals and strategies to meet all existing and potential competitors; and after that reassesses each strategy to determine how it has been implemented and whether it has succeeded or requests change by a new strategy to meet changed circumstances, new technology, new economic, a new competitors, or a new social, financial, or political environment.

2.1.3 The Importance of Human Resources Management

Human resources role provides important support and advice to line administration. The attraction, preservation and improvement of top quality people are a source of advantage for our business, and are the responsibility of human resources.

Many of the literature showed the importance of human resources management in influencing the human factor in order to achieve sustainable advantage. The theory of resource based view assumes that as the human resource can achieve sustainable competitive advantage for the organization.

Human resource is important due to the following reasons:

First, to stimulate and encourage those engaged in the performance of the work of the organization to what it was a special to encourage loyalty and dedication of members of the career, and work to achieve further progress within the organization through growth and career development and coordination between performance and rewards (Gordon, 1986).

Second, the efficiency associated with the efficient performance of the organization and its human element and desire to work within it, where the human element and its ability to work is a component of the influential and effective use of material resources available to help achieve the objectives of the organization with the highest degree of efficiency and achievement (Byers, 1991).

The growing importance of human resources management are attributable to several factors, such as to meet the needs of workers and the need to provide the expertise to perform the activities of human resources management and the rising cost of problems caused by the human resources (Cherrington, 1995).

Human resource management provides discussion and debate to promote the understanding of the significance of human resource management and people administration to business strategy.

2.2 Information and Communicate Technology.

It is the technology used to communicate information efficiently and effectively to serve particular purposes and make life or tasks easier for us. It encompasses mainly areas of computers, electronics and telecommunication. Information and communicates technology fit in to a modern library system.

2.2.1 The Important of Information and Communication Technologies

The importance of information and communication technologies fast changes in the field of information administration have to a great extent resulted from the dramatic progress we have witnessed in the field of information and communication technology. Information and communication technologies allows the movement of knowledge at increasing speeds and efficiencies, and thus facilitates sharing as well as accelerated growth of knowledge. And then quickly manipulate the data to better understand the phenomena.

The importance of the need for organizations to develop robust and responsive information and communication technologies infrastructures to support organizational planning and control is now widely accepted (D. Williams.M, & Williams.J, 2007). Little studies have been done in past years to document the role of information and communication technologies in knowledge seeking and use. There is a small body of literature that addresses the role of information and communication technologies on health, in communities and social capital, in university career services, job seeking in different areas, etc. On whatever profession,

information and communication technologies use is basically on information seeking and use. The Internet as an information and communication technologies tool has been recorded to be widely spread and influence almost all human activities.

According to Zaidman, Schwartz & Te'eni (2008) in line with earlier research they found that organization culture takes an important role in the implementation of information and communication technologies tools. In their case, they found consistency between the technology orientation of the organization and the rhetoric and managerial efforts to establish technology centered organization culture. This consistency might be one factors explaining successful implementation.

The contribution of information and communication technologies as input factor in the production process is also somewhat higher these days (Dunnewijk, Meijers& van Zon, 2007). Empirical studies that focus on impact of information and communication technologies for development usually make a distinction between information and communication technologies as a production sector and information and communication technologies as an enabler of socioeconomic development. Although the developed countries are reaping very high benefits from the information and communication technologies, its diffusion in developing countries has been limited. It is often argued that for developing countries benefits from information and communication technology are more likely to accrue from consumption rather than production. Schuurman, Marez & Berte,(2010). Can characterize the contemporary information and communication technology-environment as an innovation spiral, with more and more innovative products, services and applications coming to the market.

The increasing use of technology in all aspects of society makes confident, creative and productive use of information and communication technologies an essential skill for life. Information and communication technologies capability encompasses not only the mastery of technical skills and techniques, but also the understanding to apply these skills purposefully, safely and responsibly in learning, everyday life and employment. Information and communication technologies capability is fundamental to participation and engagement in modern society.

2.2.2 Information and Communication Technologies in Library

The comprehensive change in libraries from a manual approach to one based on computers has occurred at quite different speeds. This uneven development can be described in terms of stages in the improvement process. The difficulty in coping with technological improvement can have many causes. One common barrier may be the lack of continuing education for librarians and information professionals.

The recent advances in information and communication technology have strengthened further the link between knowledge and broad based development and the knowledge revolution provides an opportunity to foster access to basic library services and improved education outcomes (Okon, Ani, Esin & Nkoyo, 2005). The accelerated adoption and of information and communication technology has resulted in the globalization of knowledge and information resources. Full-text documents and digital library collections are always available to users for get knowledge and Information.

According to King, McMenemy & Poulter (2006) the library profession has been affected by improvements in information and communication technologies. Notes that advances in information and communication technologies have changed the paradigm of librarians work from information storage to one of access to world literature resources using electronic databases, the Internet, and other digital resources. Digital technology has revolutionized the information acquisition, storage, and retrieval processes. The application of information and communication technologies in libraries has widened the scope of librarianship, conferred new roles on libraries, and has placed more demands on the ability of librarians. Information and communication technologies stresses that the contemporary environment indicates a pressing need to educate and train library staff for a sustainable professional competence.

With the introduction of information and communication technologies into the field of library and information science, it has become necessary that library and knowledge science practitioners possess the skill needed to role effectively in an information and communication technologies environment.

The wide-ranging benefits of both information and communication technologies raised levels of information and communication technologies literacy for university libraries and their mother institutions. They should also educate university administrators about the need to address the factors which have been identified here and elsewhere (Adeyoyin, 2005).

Information and communication technologies have aided in easy reach to variety of knowledge sources, speedy processing, bulk storage and fast dissemination of information and data. It also offers new ways of providing reach to knowledge and information from world libraries easy.

2.2.3 Impact Information and Communication Technologies Tools on Librarian.

The study carried out to investigate of the impact of the tool on learning and cooperation among target stakeholders in the library. The eventual aim is to develop the quality of learning in the e-learning environment.

If librarians are not fully conversant by information and communication technologies, it is difficult to see them having a role in the information literacy programmers. They may not be of any assistance in bridging the digital gap.

The proliferation of information and information products today means that users are increasingly unable to cope with the problem of information overload (Adeyoyin, 2005).The study by Moore (1987) indicated the impact of information and communication technology on librarians. Though the employment market may expand, librarians and information workers will face severe competition.

A major and very crucial constraint is lack of skill in using the internet on the part of library staff. And not every librarian can make effective use of the online catalogue (Adeleke & Olorunsola, 2006). And again complained about lack of training to improve information and communication technologies skills in employees.

Librarians who trained constantly refresh their skills and become skilled and who are engaged in life long learning are those who have greater chance of employability in such changing workplaces. In the past, employers made it a duty to train their employees but nowadays this responsibility is given less significance. In difficult economic situations, they downsize their personnel and redeploy those who suit the new market requirements. Others are easily laid off as they become redundant due to lack of new skills to fit the new institute.

An appreciation that staff with positive attitudes are desirable, and negative attitudes undesirable, in relation to implementing and using information and communications technology has been embraced in much of the library and information literature (Spacey, Goulding & Murray, 2004). Information and communication technologies can be used to find, develop, analyze and present information in libraries, as well as to model situations and solve problems. Information and communication technologies enable rapid access to ideas and experiences from a wide range of people, communities and cultures, and allows collaborating and exchanging information on a wide scale in libraries. Information and communication technologies acts as a powerful force for change in society, and citizens should have an understanding of the social, ethical, legal and economic implications of its use, including how to use information and communication technologies safely and responsibly. Increased capability in the use of

information and communication technologies supports initiative and independent learning, as are able to make informed judgments about when and where to use information and communication technologies to enhance their learning and the quality of their work in libraries.

Training and knowledge are the sine qua non of a positive attitude toward information and communication technologies. In this era, when new technologies are introduced almost daily, it is essential for librarians to keep up with information and communication technologies developments. The fear of some in the developing world toward information and communication technologies is widening the digital divide (Adekunle, Omoba & Tella, 2007). Libraries and librarians can play a critical role both in making their users of information literate and bridge the digital divide that exists at local or national levels. Libraries can supply digitized full-text content, provide free access to computers and Internet and become national portals of digital information resources. In the changed environment, the librarian's role has to shift from that of information locator custodian role to that of an information evaluator and instructor in the use and evaluation of information sources.

The role of librarians and information professionals in this new environment has been strongly influenced by these changes (Hashim & Mokhtar, 2004). Librarians with ability to use information and communication technology able to meet the new challenges stimulate discussion, diagnose the organizational environment and develop a sound human resource management strategy for organization.

Also the use of Internet and Web has changed the fundamental roles, paradigms, and organizational culture of libraries and librarians as well (Rao & Babu , 2001). The new librarian role is to a great extent the role of project manager process consultant. Extroversion, ability to communicate and mediation skills are quite essential. for he has to accept a more humble position (Rao & Babu, 2001). In information communication technology era became role of librarian to use Web and Internet environment as intermediary, facilitator, end-user trainer, Web site designer, interface designer, researcher, and knowledge manager.

The monopoly libraries have had on information provision is over. Today libraries are shifting their role from the custodian of traditional information resources to the provider of service-oriented digital information resources (Haneefa, 2007). Unfortunately there are still some big libraries which are entirely used print media. Automation of libraries is still a dream while workforces are often seen performing all library house-keeping jobs manually. With regards to information and communication technologies, the attitudes of some librarians having charge of significant libraries are really frustrating. As soon as they hear about computers or computer-related technologies, their first reflex is that such things are the realm of computer technicians, systems analysts, database managers, not for librarians or library people. Such behaviors on behalf of those at the head of institutions are detrimental to the library profession overall. They forget that technology permeates all branches of learning, all disciplines and every sphere of our life. Lawyers, engineers, medical practitioners, people of all walks of life need information and communication technologies in their daily personal and professional lives.

The new librarians will have to bridge several gaps and many will have to adjust themselves in personal improvement projects in order to be able to join in fully and reap the advantage of new co-operations, new networks and new tasks. Very few be able to get by with just a good borrower-librarian dialogue. The target group for mediation is no longer one person but often many and in diffuse contexts. Neither can a librarian expect to be sitting in splendid isolation, undisturbed behind the computer what she finds, has to be mediated, discussed, evaluated and used together with other people. Significant disciplines for new librarians are communication, feedback, mentor schemes, supervision, etc. And yet more knowledge-sharing and learning in networks.

Chapter Three

Methodology

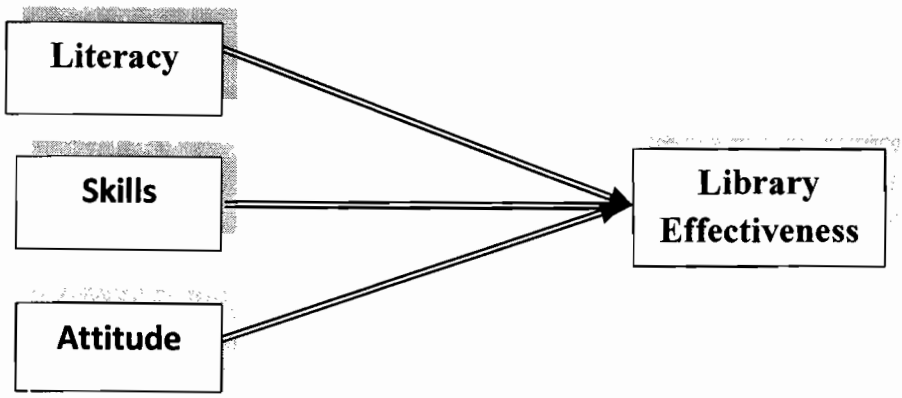
3.1 Introduction

This chapter explains the research methodology used in conducting this research. This chapter also explains the various procedures that were used to collect, measure, and to analyses the data for this study.

3.2 Research Framework and Hypothesis

The research model in this study consists of two variables which are information and communication technology skills and effectiveness of library services in Jordan. Based on the existing literature on information and communication technology and human recourses, this model views that the two variables are related. This model views that Information and communication technology skills can have an impact on effectiveness of library services. The relationship between information and communication technology skills and its effectiveness on library services is show in Figure 3.1.

Information and Communication Technology Skills Effectiveness of Library Services



Figur.3.1: Relationship between information and communication technology skills and its effectiveness of library services.

3.3 Sample of Study

The sample of respondents consisted of librarians working in Jordan at Yarmouk University. Jordan has about twenty-five Universities and every university has library. The study selected Yarmouk University librarians, because Yarmouk University has the biggest library compared to other libraries in Jordan. The number of librarians at Yarmouk University totaled 70.

3.4 Data Collection

The data for this study is collected from the respondents by using structured questionnaires. A total 70 questionnaires for the study were distributed to the respondents by hand.

The data collection procedures began in 28 September 2010, until the 25 of October 2010. Initially the researcher has called the librarian to have appointment and to distribute copies of questionnaire to their librarians. Next, the questionnaires were collected from the librarians and the data were analyzed. A total of 60 questionnaires were filled and this represent a response rate of 85.7 percent.

3.5 Survey Instrument

By reviewing some of the literature and previous studies related with human resources management, and information and communication technology, the following questionnaire was prepared for the study. The questionnaire was based on Adekunle and Tella (2007), and Ugwuanyi (2009).

The questionnaire that used in the research comprised five main sections. Section one tackles factors which include gender, status, age, education level, and years of experience. Section two consists of twenty-five questions related to strategic human resources management information and communication technology literacy. Section three measures the acquiring information and communication technology literacy skills of strategic human resources management. This section consists of seven questions. Section four measures the attitude of the librarian to information and communication technology. This section consists of twelve questions. Finally section five measures the effectiveness of information and communication technology. This section consists of six questions. The questionnaire is shown in appendix A.

3.6 Reliability Analysis

A reliability test was carried out for each variable: literacy, skills, Attitude, and Effectiveness. The results of the reliability test are shown in Table 3.1. the results ranged from 0.706 to 0.886. The results are within acceptable limit for social studies.

Table 3.1: Values of Cronbach's alpha of the research constructs

Construct	α- Value	Number of the items
Literacy	0.706	25
Skills	0.886	7
Attitude	0.884	12
Effectiveness	0.869	6

3.7 Method of Analysis

In the research two kind of statistical analyses were carried out on the data obtained from the respondent. First, descriptive analysis was used to analyze the background of the respondent. Second, Pearson correlation analysis was carried out between the Information and communication technology variable and effectiveness.

Correlation analysis is executed to test the strength of relationships between variables. Statistical test at 5% level is used to test the significance of the relationships between the independent variables in this study. It is also used to examine the potential issue of multicollinearity that exists when two explanatory variables are highly correlated. A Pearson product-moment correlation coefficient describes the relationship between two continuous variables or when the researcher is interested in defining the important variables that are associated with the problem (Sekaran, 2000).

Correlation is appropriate for interval and ratio-scale variables and is the most common measure of linear relationship. This coefficient has a range of possible values from -1 to +1. The value indicates the strength of the relationship, while the sign (- or +) indicates positive or negative correlation. Table 4.10, 4.11, and 4.12 show the correlation matrix among the independent variables and dependent variable.

Chapter Four

Findings

4.0 Introduction

This chapter shows the finding, of the study. This chapter is divided into three sections, the first section discuses the personal information. The second sections show the mean and standard deviation for the information and communication technology skills and effectiveness of library services. Variables and the third section discuses the correlation analysis among the variables following which is all about test hypotheses.

4.1 Demographic Analysis

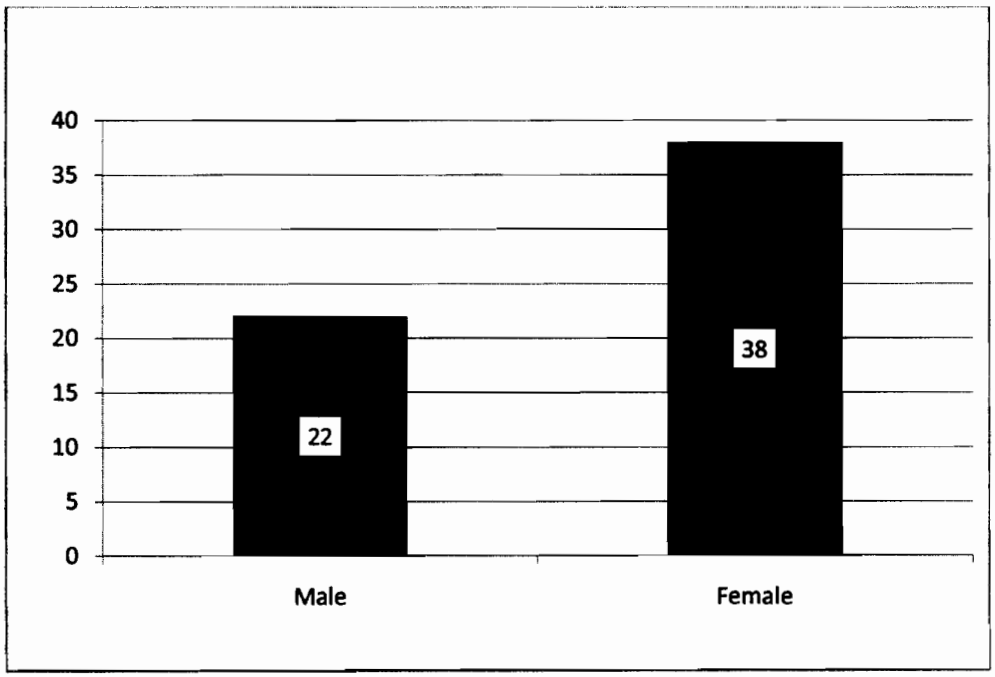
4.1.1 Gender

Table 4.1 illustrates the gender of the respondents who are working in library. It can be observed that the gender of the respondents were 22 (37 %) male respondents and 38 (63%) female respondents.

Table 4.1: Gender, N = 60

Gender	Male	Female
	22	38
%	0.37	0.63

Figure 4.1: Gender



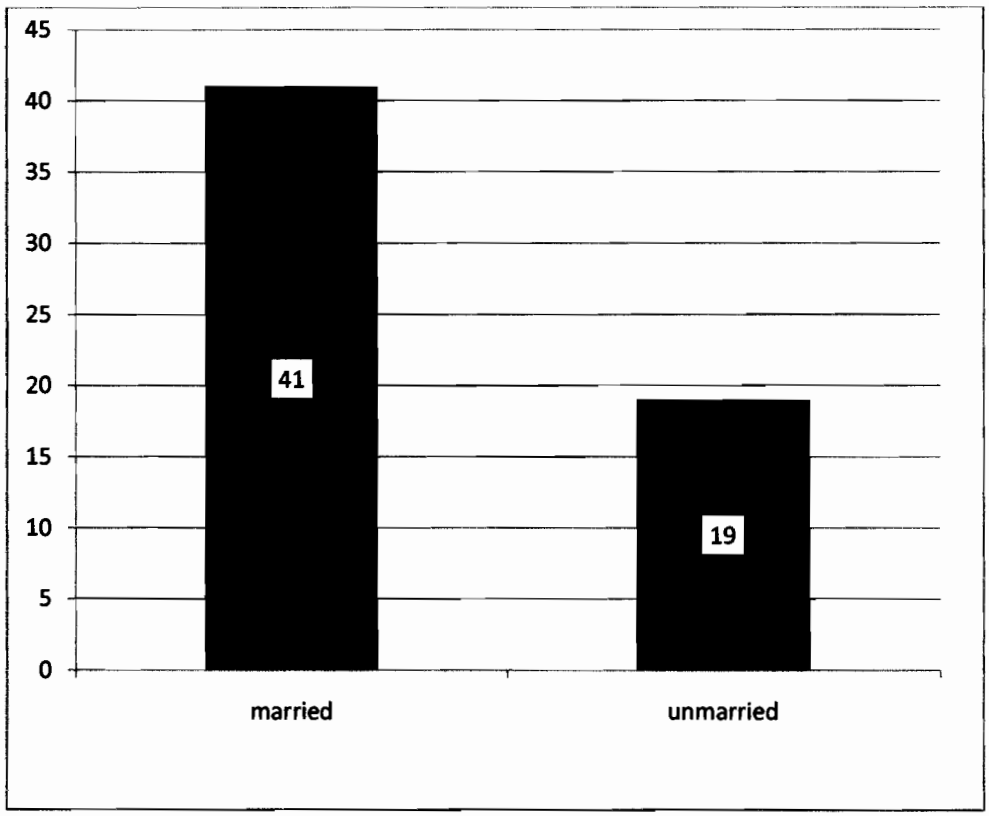
4.1.2 Status

Table 4.2 illustrates the marital status of the respondents. There were 41 (68 %) respondent married, in the other side of the marital status, it can be observed that there were 19 (32 %) respondent unmarried.

Table 4.2: Status

status	married	unmarried
	41	19
%	0.68	0.32

Figure 4.2: Status



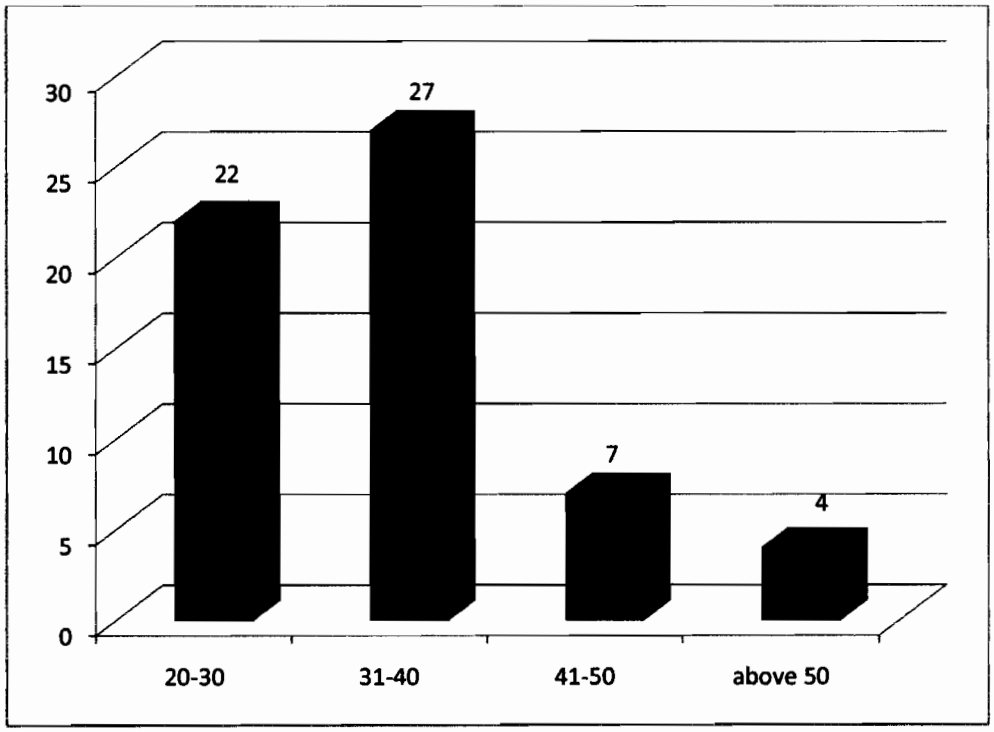
4.1.3 Age

Table 4.3 shows the age of the respondent. The age of the respondents were 22 (37 %) respondents between 20-30 years, 27 (45 %) respondents between 31-40, 7 (12 %) respondents between 41-50, and 4 (7 %) respondents more than age of 50.

Table 4.3: Age

Age	20-30	31-40	41-50	above 50
	22	27	7	4
%	0.366667	0.45	0.116667	0.066667

Figure 4.3: Age



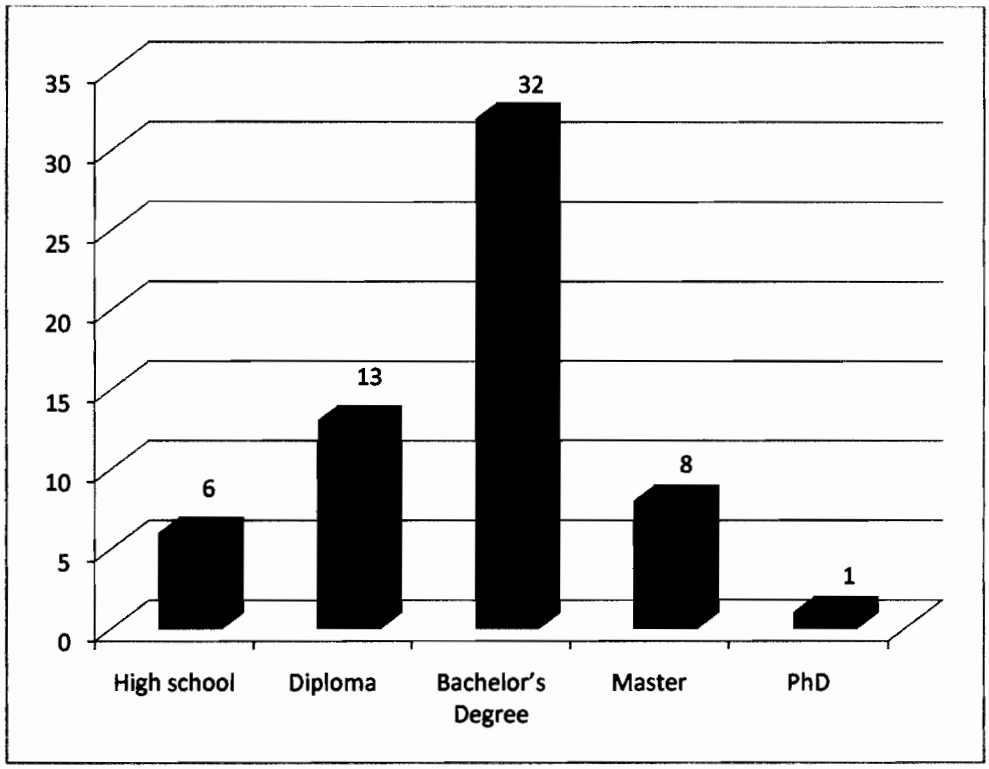
4.1.4 Level of Education

Table 4.4 shows the level of education of the respondents. It can be clearly seen that there were 32 (53 %) Bachelor's Degree holding, 13 (22 %) respondents were diploma, 6 (10 %) respondent were high school. However, in term of postgraduate level it can be observed in the table that there were 8 (13 %) respondent were master holders and one respondent who is a PHd holder.

Table 4.4: Level of education

Level of education	High school	Diploma	Bachelor's Degree	Master	PhD
	6	13	32	8	1
%	0.1	0.22	0.53	0.13	0.02

Figure 4.4: Level of education



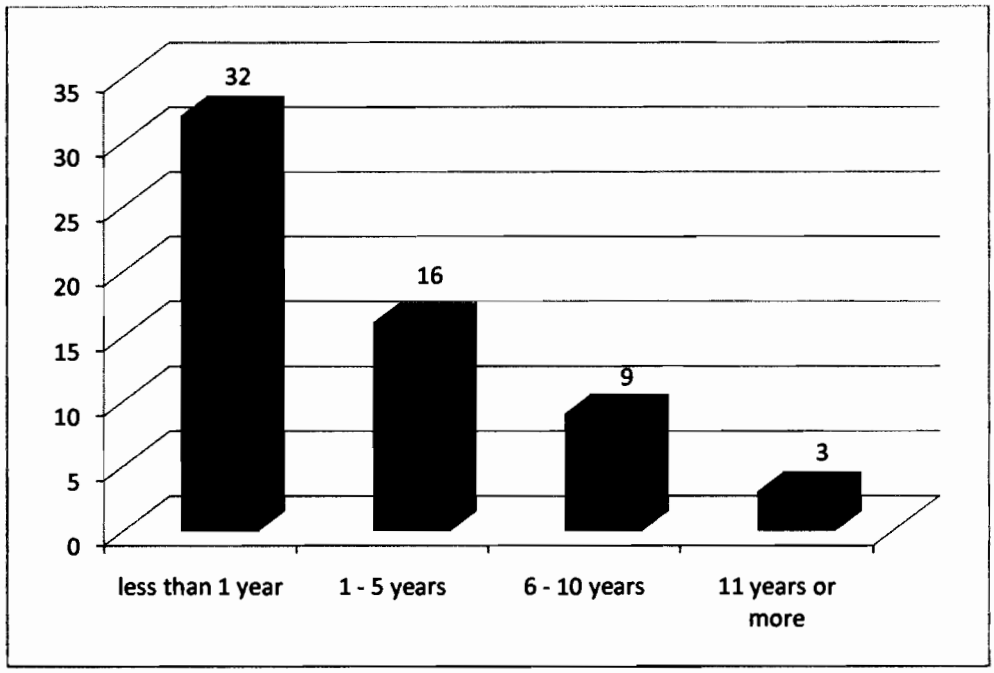
4.1.5 Years of Experience

The experience of the respondents is shown in table 4.5. It can be observed that most of the respondents have experience less than one year, following by 16 (27 %) respondents have experience between 1-5 years. In addition there are 9 (15 %) respondents with experience between 6-10 years, and 3 (5 %) respondents with experience more that 11 years.

Table 4.5: Years of experience

Years of experience	less than 1 year	1 - 5 years	6 - 10 years	11 years or more
	32	16	9	3
%	0.53	0.27	0.15	0.05

Figure 4.5: Years of experience



4.2 Means and Standard Deviation

4.2.1 Information and Communication Technology Literacy

The mean and standard deviation for information and communication technology literacy is shown in table 4.2. There are 25 items for the information and communication technology literacy. The mean for the information and communication technology literacy ranged from 2.633 for "MS – Power point" to the highest mean score of 3.3167 for "Sending an attachment with an e-mail message". Moreover, the standard deviation for the information and communication technology literacy ranged from 0.86095 for "Copying a file from one disk to another" to the highest standard deviation score of 1.26446 for "Opening a computer file".

Table 4.6 (Mean and Std. Deviation) for literacy.

No.	Items	N	Mean	Std. Deviation
Q1	Turning a computer on	60	2.8333	.88618
Q2	Opening a computer file	60	2.8333	1.26446
Q3	Making a backup copy of a computer file	60	3.1167	.99305
Q4	Deleting a computer file	60	3.1333	1.19981
Q5	Creating a directory or folder	60	3.1333	1.01625
Q6	Copying a file from one disk to another	60	3.2667	.86095
Q7	Connecting to the internet from a remote computer e.g. from home	60	3.1333	1.03280
Q8	Installing a program onto a computer	60	3.2833	1.02662
Q9	MS – Word	60	2.8667	1.09648
Q10	MS – Excel	60	3.1167	1.05913
Q11	MS – Access	60	3.2833	.97584
Q12	MS – Power point	60	2.6333	1.14931
Q13	Any Library Software such as LIB+,CDS/BIS, TIN LIB, Alice for Windows etc	60	2.8500	1.10200
Q14	Using the World wide Web (www)	60	3.0000	1.05766
Q15	Sending an email message	60	3.0833	1.06232
Q16	Using the www to find specific information	60	2.9333	1.10264
Q17	Taking part in an online discussion or chat (video conferencing)	60	3.1167	1.00998
Q18	Sending an attachment with an e-mail message	60	3.3167	.91117
Q19	Downloading a file from the internet or www eg music, games	60	3.0167	1.04948
Q20	Saving an image or graphic from a www page	60	2.9000	1.05284
Q21	Using a www search engine e.g. yahoo, Google, MSN etc	60	3.1833	1.08130
Q22	Using keywords phrases to search for information on the www.	60	3.1833	1.01667
Q23	Using more advanced searching techniques than keywords or phrase	60	3.0167	1.06551
Q24	Finding useful information from www searching	60	2.9667	1.07304
Q25	Using information from the www in projects	60	2.8500	1.08651

4.2.2 Acquiring Information and Communication Technology Skills

The mean and standard deviation for acquiring information and communication technology Literacy skills is shown in table 4.7. There are 7 items for the acquiring information and communication technology Literacy skills. The mean for the information acquiring information and communication technology Literacy skills ranged from 2.6667 for both items "Through colleagues" and "Attending IT programmer" to the highest means score of 2.9500 for "Training at work place". Moreover, The standard deviation for the acquiring information and communication technology Literacy skills ranged from 0.92226 for "Informal Education (distance education)" to the highest standard deviation score of 1.08456 for "Formal Education".

Table 4.7 (Mean and Std. Deviation) for acquiring information and communication technology skills

No	Items	N	Mean	Std. Deviation
Q26	Formal Education	60	2.9000	1.08456
Q27	Informal Education(distance education)	60	2.8833	.92226
Q28	Through colleagues	60	2.6667	.98577
Q29	Self-study	60	3.0167	.98276
Q30	Training at work place	60	2.9500	1.04840
Q31	Attending IT programmer	60	2.6667	.96843
Q32	Attending workshops/seminars	60	2.9000	1.02014

4.2.3 Attitude of Librarian towards Information and Communication Technology

The mean and standard deviation for Attitude of the Librarian to information and communication technology is shown in table 4.8. There are 12 items for the Attitude of the Librarian to information and communication technology. The mean for the Attitude of the Librarian to information and communication technology ranged from 2.6167 for "ICT enables most effective ways of resource sharing" to the highest mean score of 3.0333 for "Data retrieved through print resources is authentic". Moreover, the standard deviation for the Attitude of the Librarian to information and communication technology ranged from 0.98276 for "Changes occurring due to information and communication technology application are out of control of librarians" to the highest standard deviation score of 1.11487 for "information and communication technology will not appreciably reduce the number of library staff".

Table 4.8 Mean and Std. Deviation for Attitude of the Librarian to information and communication technology

No	Items	N	Mean	Std. Deviation
Q33	ICT enables most effective ways of resource sharing	60	2.6167	1.09066
Q34	ICT helps in making specific information available	60	2.8667	1.04908
Q35	ICT will not appreciably reduce the number of library staff	60	2.6667	1.11487
Q36	Card catalog can be modified more easily than OPAC through ICT	60	2.8333	1.09183
Q37	Online databases provide more up-to-date Information	60	2.9500	1.08025
Q38	Data retrieved through print resources is authentic	60	3.0333	1.07304
Q39	Each year ICT offers more efficient ways to carry out library operations	60	2.8833	1.00998

Q40	Computer creates health and environmental Problems	60	2.8167	1.08130
Q41	Data storage on computers is highly risky in the library	60	2.8667	1.06511
Q42	Extensive use of ICT has created job fears amongst Librarians	60	2.8500	1.00549
Q43	Automated acquisition is not feasible for our libraries	60	3.1667	1.01124
Q44	Changes occurring due to ICT application are out of control of librarians	60	2.6833	.98276

4.2.4 Effectiveness of Information and Communication Technology

The mean and standard deviation for Effectiveness of information and communication technology is shown in table 4.9. There are 6 items for the Effectiveness of information and communication technology. The mean for the Effectiveness of information and communication technology ranged from 2.6833 for "More visitors visit the library because of information and communication technology facilities" to the highest mean score of 3.2833 for "information and communication technology help staff in improving their knowledge". Moreover, The standard deviation for the Effectiveness of information and communication technology ranged from 0.93201for "information and communication technology is helpful to me" to the highest standard deviation score of 1.09686 for "More visitors visit the library because of information and communication technology facilities".

Table 4.9 Mean and Std Deviation for Effectiveness of information and communication technology

No	Items	N	Mean	Std. Deviation
Q45	ICT is helpful to me	60	3.2500	.93201
Q46	More visitors visit the library because of ICT facilities	60	2.6833	1.09686
Q47	ICT makes works efficient	60	2.9833	1.04948
Q48	Easy access of ICT	60	3.0667	1.02290
Q49	ICT make fast sharing information among staff	60	2.8333	1.06033
Q50	ICT help staff in improving their knowledge	60	3.2833	1.02662

4.3 Relationship between Information and Communication Technology Skills and Effectiveness

Correlation analysis was carried out to test the relationship between the three dimensions of information and communication technology skills, which are literacy, skill, and attitude and effectiveness of library series.

4.3.1 The Relationship between Literacy and Effectiveness

The correlation between literacy and effectiveness is shown in table 4.10. As shown there are fourteen significant correlations between literacy and effectiveness. The correlation coefficient ranged from -.341 to 1.000, the significant level is 0.05.

Table 4.10: Correlation between literacy and effectiveness

Literacy	Effectiveness	R	Sig. level
Making a backup copy of a computer file	ICT is helpful to me	.444**	0.05
Creating a directory or folder	ICT is helpful to me	.465**	0.05
Copying a file from one disk to another	ICT is helpful to me	.338**	0.05
Opening a computer file	More visitors visit the library because of ICT facilities	.340**	0.05
Deleting a computer file	More visitors visit the library because of ICT facilities	.419**	0.05
Making a backup copy of a computer file	ICT makes works efficient	.343**	0.05
Creating a directory or folder	ICT makes works efficient	.352**	0.05
Copying a file from one disk to another	easy access of ICT	.326*	0.01
Installing a program onto a computer	easy access of ICT	-.341**	0.05
Connecting to the internet from a remote computer e.g. from home	ICT make fast sharing information among staff	.268*	0.01
Installing a program onto a computer	ICT help staff in improving their knowledge	1.000**	0.05
MS – Excel	ICT help staff in improving their knowledge	.561**	0.05
Taking part in an online discussion or chat (video conferencing)	ICT makes works efficient	-.318*	0.01
Taking part in an online discussion or chat (video conferencing)	ICT help staff in improving their knowledge	.295*	0.01

4.3.2 The Relationship between Skills and Effectiveness

The correlation between skills and effectiveness is shown in table 4.11. As shown there are two significant correlation between skills and effectiveness. The correlation coefficient ranged from -.260 to -.312, the effectiveness level is 0.01.

Table 4.11: Correlation between skills and effectiveness

Skills	Effectiveness	R	Sig. level
Formal Education	ICT is helpful to me	-.260*	0.01
Self-study	ICT makes works efficient	-.312*	0.01

4.3.3 The Relationship between Attitude and Effectiveness

The correlation between attitude and effectiveness is shown in table 4.12. As shown there are eleven significant correlations between attitude and effectiveness. The correlation coefficient ranged from -.264 to 654, the significant level is 0.05.

Table 4.12: Correlation between Attitude and effectiveness

Attitude	Effectiveness	R	Sig. level
ICT enables most effective ways of resource sharing	ICT is helpful to me	.296*	0.01
CT will not appreciably reduce the number of library staff	ICT is helpful to me	.277*	0.01
Data retrieved through print resources is authentic	ICT is helpful to me	.466**	0.05
Computer creates health and environmental Problems	ICT is helpful to me	.349**	0.05
Data retrieved through print resources is authentic	More visitors visit the library because of ICT facilities	-.264*	0.01
Each year ICT offers more efficient ways to carry out library operations	More visitors visit the library because of ICT facilities	.394**	0.05
Computer creates health and environmental Problems	ICT makes works efficient	.654**	0.005
Extensive use of ICT has created job fears amongst Librarians	ICT makes works efficient	.287*	0.01
Data storage on computers is highly risky in the library	easy access of ICT	.413**	0.05
Data storage on computers is highly risky in the library	ICT help staff in improving their knowledge	-.383**	0.05
Changes occurring due to ICT application are out of control of librarians	ICT help staff in improving their knowledge	-.313*	0.01

4.4 Conclusion

This chapter explained the results of the statistical analysis. The results comprised background of the respondents, the mean and standard deviation for the major variables namley literacy, acquiring information and communication technology literacy skills, attitude of the librarian to information and communication technology, and effectiveness of information and communication technology. In addition the results of the correlation among the variables are also provided.

Chapter Five

Conclusion

5.0 Introduction

This chapter consists of three sections. The first section discusses the results of the study. The second section provides the limitation of the study. Final, the third section highlights same studies for future research.

5.1 Discussion

The main idea of this study is to examine information and communication technology skills and effectiveness of library services of information libraries in Jordan. The objectives of the study are:

1. To examine level of information and communication technology literacy among librarian in Jordan.
2. To examine information and communication technology skills acquired by librarian in Jordan.
3. To examine level of attitude of librarians in Jordan towards information and communication technology.

4. To examine level of information and communication technology effectiveness among librarian in Jordan.
5. To examine the relationship information and communication technology skills and effectiveness of library service.

The information and communication technology consists of three dimensions which are literacy, skills, and attitude. It is expected that the three dimensions are related to information and communication technology. The three variables will have implication on information and communication technology.

5.1.1 Literacy

Literacy is the first dimension of information and communication technology. The results of the analysis show that the respondents placed rather high priority on information and communication technology literacy. As shown the literacy mean score range from a lowest scare of 2.633 for micro soft power point to 3.28833 for installing program on a compute.

5.1.2 Skills

Skills are the Second dimension for information and communication technology. The result of the descriptive analysis shows that the information and communication technology skills among the librarians are not particularly high. The mean score for acquiring

information and communication technology only recorded high of more than 3 for only one item, self study, 3.0167. The remaining six items all recorded mean score less than 3.

5.1.3 Attitude

Attitude is the third dimension for information and communication technology. The results of the descriptive analysis also allowed that the mean scores for attitude not high. Most of the mean scores except for tow items all recorded less than 3. Only two items recorded score of more than 3.data retrieved through point resources is authentic and automated acquisition is not fraise for our libraries. The mean score for attitude seems to suggest that on the whole the attitude towards acquintlg information and communication technology is only what mild.

5.1.4 Relationship between Information and Communication Technology Skills and Effectiveness

The mean score for effectiveness item seems to suggest that the application of information and communication technology is guile effective among the librarians. This is evidenced form high score for score of the effectiveness items. Three items rewarded score greater then 3. They are item information and communication technology is helpful to me, (3.2500) Easy access of

information and communication technology (3.0667) and information and communication technology help stuff in improving their knowledge (3.2833).

5.1.5 The Relationship between Literacy and Effectiveness

The correlation score between Literacy and effectiveness is shown in Table 4.10.The table shows that there are fourteen significant correlations between Literacy and effectiveness. .However only one correlation is positive while twelve are negative correlation. Nevertheless the result indicates there is a positive relation between Literacy and effectiveness although it is good.

5.1.6 The Relationship between Skills and Effectiveness

The correlation score between Skills and effectiveness is shown in Table 4.11.The table shows that there are two significant correlations between Skills and effectiveness. All correlation is negative. This result seem to sagest that there is a negative correlation between acquiring skills and effectiveness of library services. This can be due to the notion that some of the librarians may not be eager to enhance their information and communication technology skills. This may affect the effectiveness in providing better services.

5.1.7 The Relationship between Attitude and Effectiveness

The correlation score between Attitude and effectiveness is shown in Table 4.12.The table shows that there are eleven significant correlations between Attitude and effectiveness. .However only one correlation is positive while one is negative correlation. Nevertheless the result indicates there is a positive relation between Attitude and effectiveness. On the whole the study suggest that the there dimensions of information and communication technology skills, literacy, skills, and attitude are important for librarians at Yarmouk University library. Additionally the information and communication technology skills particularly literacy and attitude are positively related to the effectiveness of library service.

5.2 Limitation of the Study

As with any study, the findings obtained in the thesis display information and communication technology skills and effectiveness of library services of information libraries in Jordan. This limitation need to be recognized when interpreting the findings of this thesis while also recognizing the opportunities they present for the future research. The sample that was employed in this thesis has limited generalizability because of the sampling plan used. The questionnaire was distributed in Yarmouk University librarian only. Thus the findings of the study cannot be generalized over other University.

5.3 Suggestion for Future Research

The study suggests several options for future research that would build on the findings of this study. First of all, further study is recommended to refine the survey in this study in order to improve reliability and validity of the skills. Another could be to conduct a pre and post-test to compare the responses of the subjects to create a more accurate model of functions of human resources management.

Second, this study can be done and replicated in different location since. The finding of this study is only applicable to the sample used in this study. This could be accomplished by conducting the research in other library and enabling the use of the random sample that will represent other library.

Third, an extension of this study for further studies can be developed in several areas. The researchers in future are suggested to include more variables which are not examined in this study and also carry out studies in other libraries and resource centers.

5.4 Conclusion

This paper examined information and communication technology skills and effectiveness of library services the study shows that the three dimensions of information and communication technology skills, literacy, skills acquisition and attitude and essential characteristics for librarians to acquire. Having there three components would allow librarians to discharge their services more effectively. From the study it positively two of the dimensions is positively related to effectiveness. Information and communication technology literacy and attitude towards information and communication technology are positively related to the effectiveness of library serves.

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Appendices

Appendix (A): Research Questionnaire

College of Business

University Utara Malaysia

Questionnaire Survey

Dear Participant:

Thank you for agreeing to participate in this research

I would appreciate it very much if you could answer the questions carefully as the information you provide will influence the accuracy and the success of this research. It will take no longer than 30 minutes to complete the questionnaire. All answers will be treated with strict confidence and will be used for the purpose of the study only.

If you have any questions regarding this research, you may contact me at the following address. *ansmsgr@yahoo.com*

Thank you for your cooperation and the time taken in answering this questionnaire

Yours sincerely

Section A: Demographic Profile

Please tick (✓) the appropriate box to answer the questions.

1.1 Gender **Male** ☐ **Female** ☐

1.2 Status **Married** ☐ **Unmarried** ☐

1.3 Age **20 – 30** ☐ **31 – 40** ☐

41 – 50 ☐ **Above 50** ☐

1.4 Level of Education **High school** ☐ **Diploma** ☐

Bachelor's Degree ☐ **Master's Degree** ☐

PhD Degree ☐

1.6 Years of Experience **Less than 1 year** ☐ **1 – 5 years** ☐

6 – 10 years ☐ **11 years or more** ☐

Kindly put a tick √ in the appropriate box and provide elaboration wherever required.

VD = Very Difficult D= Difficult N= Neutral E = Easy VE = Very Easy.

Section B: Information and Communication Technology Literacy

No	ICT Literacy	VD	D	N	E	VE
		1	2	3	4	5
1	Turning a computer on					
2	Opening a computer file					
3	Making a backup copy of a computer file					
4	Deleting a computer file					
5	Creating a directory or folder					
6	Copying a file from one disk to another					
7	Connecting to the internet from a remote computer e.g. from home					
8	Installing a program onto a computer					
9	MS – Word					
10	MS – Excel					
11	MS – Access					
12	MS – Power point					
13	Any Library Software such as LIB+,CDS/BIS, TIN LIB, Alice for Windows etc					
14	Using the World wide Web (www)					
15	Sending an email message					
16	Using the www to find specific information					
17	Taking part in an online discussion or chat (video conferencing)					
18	Sending an attachment with an e-mail message					
19	Downloading a file from the internet or www eg music, games					
20	Saving an image or graphic from a www page					
21	Using a www search engine e.g. yahoo, Google, MSN etc					
22	Using keywords phrases to search for information on the www.					
23	Using more advanced searching techniques than keywords or phrase					
24	Finding useful information from www searching					
25	Using information from the www in projects					

MD = Most Disagree D= Disagree N= Neutral A = Agree A = Most Agree

Section C: Acquiring Information and Communication Technology Literacy Skills

No	Means/Methods	MD	D	N	A	MA
		1	2	3	4	5
1	Formal Education					
2	Informal Education(distance education)					
3	Through colleagues					
4	Self-study					
5	Training at work place					
6	Attending IT programmer					
7	Attending workshops/seminars					

Section D: Attitude of the Librarian to Information and Communication Technology

No	Attitude Statement	MD	D	N	A	MA
		1	2	3	4	5
1	ICT enables most effective ways of resource sharing					
2	ICT helps in making specific information available					
3	ICT will not appreciably reduce the number of library staff					
4	Card catalog can be modified more easily than OPAC through ICT					
5	Online databases provide more up-to-date Information					
6	Data retrieved through print resources is authentic					
7	Each year ICT offers more efficient ways to carry out library operations					
8	Computer creates health and environmental Problems					
9	Data storage on computers is highly risky in the library					
10	Extensive use of ICT has created job fears amongst Librarians					
11	Automated acquisition is not feasible for our libraries					
12	Changes occurring due to ICT application are out of control of librarians					

Section E: Effectiveness of Information and Communication Technology

No	Details of ICT users	MD	D	N	A	MA
		1	2	3	4	5
1	ICT is helpful to me					
2	More visitors visit the library because of ICT facilities					
3	ICT makes works efficient					
4	Easy access of ICT					
5	ICT make fast sharing information among staff					
6	ICT help staff in improving their knowledge					

Thank you

Appendix B: Correlation among Variables
Section F: Correlation between Literacy and Effectiveness

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25
Q45	Pearson Correlation	-.236	.137	.444**	.182	.465**	.338**	-.018	-.146	.083	-.202	-.154	.024	.120	.172	-.021	.033	-.212	-.075	-.074	.060	-.080	.094	-.124	.076	-.247
	Sig. (2-tailed)	.069	.298	.000	.164	.000	.008	.894	.265	.529	.122	.241	.857	.363	.189	.871	.802	.105	.570	.576	.646	.544	.475	.346	.562	.057
	N	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Q46	Pearson Correlation	-.090	.340**	.066	.419**	.023	-.106	-.112	.141	-.205	.062	.133	.095	-.152	-.205	-.050	-.088	.065	.085	.108	.148	-.007	.159	.034	-.024	.087
	Sig. (2-tailed)	.494	.008	.618	.001	.860	.418	.395	.282	.116	.641	.312	.472	.246	.117	.706	.505	.624	.518	.413	.258	.955	.224	.799	.858	.506
	N	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Q47	Pearson Correlation	-.076	.036	.343**	-.039	.352**	-.070	.127	-.043	.086	.124	.087	.037	.188	.000	.016	-.089	-.318*	.094	-.015	.029	-.057	.098	-.182	.105	-.240
	Sig. (2-tailed)	.564	.784	.007	.770	.006	.595	.333	.746	.512	.346	.506	.779	.150	1.000	.901	.500	.013	.474	.909	.825	.665	.455	.165	.425	.065
	N	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Q48	Pearson Correlation	-.156	-.149	-.108	-.118	-.090	.326*	.007	-.341**	.205	-.195	-.121	.252	-.217	.016	-.192	-.011	-.040	.232	.015	-.072	.050	-.045	.077	.203	.131
	Sig. (2-tailed)	.235	.257	.412	.370	.493	.011	.955	.008	.117	.135	.357	.052	.097	.905	.141	.933	.759	.075	.911	.583	.704	.735	.560	.120	.318
	N	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Q49	Pearson Correlation	-.247	-.122	.019	.058	-.042	-.043	.268*	.044	.199	.108	.194	-.162	-.138	.045	-.183	-.111	.066	.073	-.074	.046	.219	.186	.243	-.243	.037
	Sig. (2-tailed)	.058	.352	.887	.661	.750	.742	.038	.738	.127	.411	.138	.215	.294	.731	.161	.398	.617	.579	.576	.730	.092	.155	.062	.061	.780
	N	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Q50	Pearson Correlation	.109	.207	.017	.093	-.021	-.068	.092	1.000*	.049	.561**	.155	.018	-.231	.156	-.131	.137	.295*	.047	-.083	-.052	.120	.112	-.144	-.022	-.098
	Sig. (2-tailed)	.408	.113	.898	.481	.876	.607	.486	.000	.709	.000	.236	.893	.075	.234	.319	.297	.022	.719	.528	.695	.360	.395	.273	.867	.456
	N	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Section F: Correlation between Skills and Effectiveness

	Q26	Q27	Q28	Q29	Q30	Q31	Q32
Q45 Pearson Correlation	-.260*	-.143	-.148	.051	-.039	-.056	-.009
Sig. (2-tailed)	.045	.276	.260	.699	.767	.669	.946
N	60	60	60	60	60	60	60
Q46 Pearson Correlation	-.041	-.037	-.225	-.058	-.073	.154	.123
Sig. (2-tailed)	.754	.778	.084	.660	.580	.239	.350
N	60	60	60	60	60	60	60
Q47 Pearson Correlation	-.091	.103	-.087	-.312*	.199	-.239	.078
Sig. (2-tailed)	.490	.433	.507	.015	.126	.066	.556
N	60	60	60	60	60	60	60
Q48 Pearson Correlation	.052	.224	-.129	-.018	.066	.023	.039
Sig. (2-tailed)	.693	.085	.326	.892	.614	.863	.767
N	60	60	60	60	60	60	60
Q49 Pearson Correlation	.236	-.072	.092	-.127	.114	.044	-.063
Sig. (2-tailed)	.070	.583	.485	.332	.384	.738	.634
N	60	60	60	60	60	60	60
Q50 Pearson Correlation	.163	-.144	-.106	-.072	-.223	-.108	-.021
Sig. (2-tailed)	.214	.274	.420	.585	.087	.412	.873
N	60	60	60	60	60	60	60

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Section F: Correlation between Attitude and Effectiveness

		Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44
Q45	Pearson Correlation	.296*	-.104	.277*	.092	-.038	.466**	-.167	.349**	.034	.041	.225	.106
	Sig. (2-tailed)	.022	.429	.032	.486	.774	.000	.203	.006	.796	.758	.084	.418
	N	60	60	60	60	60	60	60	60	60	60	60	60
Q46	Pearson Correlation	.138	-.067	-.005	.012	.187	-.264*	.394**	.036	-.167	.202	.125	-.063
	Sig. (2-tailed)	.294	.612	.972	.929	.153	.041	.002	.785	.201	.122	.342	.632
	N	60	60	60	60	60	60	60	60	60	60	60	60
Q47	Pearson Correlation	.098	-.125	.212	.027	.059	.151	-.082	.654**	-.108	.287*	.019	-.022
	Sig. (2-tailed)	.456	.340	.103	.837	.654	.249	.534	.000	.411	.026	.888	.870
	N	60	60	60	60	60	60	60	60	60	60	60	60
Q48	Pearson Correlation	.038	.103	.124	.040	.110	-.126	.024	-.142	.413**	-.089	.038	.190
	Sig. (2-tailed)	.770	.433	.346	.759	.401	.339	.855	.279	.001	.499	.772	.146
	N	60	60	60	60	60	60	60	60	60	60	60	60
Q49	Pearson Correlation	-.159	.163	.124	.151	-.141	-.055	.203	-.057	-.050	-.040	-.021	-.117
	Sig. (2-tailed)	.226	.215	.344	.249	.284	.679	.120	.667	.704	.763	.873	.375
	N	60	60	60	60	60	60	60	60	60	60	60	60
Q50	Pearson Correlation	-.068	-.043	.128	-.093	-.063	-.193	.180	.017	-.383**	.173	-.210	-.313*
	Sig. (2-tailed)	.606	.744	.328	.479	.630	.139	.170	.897	.002	.186	.108	.015
	N	60	60	60	60	60	60	60	60	60	60	60	60

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).