

# SELF-EFFICACY TO USE ELECTRONIC INFORMATION RESOURCES. A STUDY ON THE USERS OF RESEARCH INSTITUTES OF PUNJAB

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## **ABSTRACT:**

*The major change in the way library stores and maintains knowledge came with the advent of computers and new technologies. Further, origin of Internet and the development of World Wide Web (WWW) have opened up new vista for communication of scholarly information and helping Libraries to create and maintain information through Libraries' Websites, Blogs to its users. As a result, more institutions are equipped themselves with new technology and their employees are challenged to be advanced with new technologies to complete their tasks. However, employees are sometimes express less enthusiastic response to adopt new technologies, even if it may helpful to complete their tasks. At this stage, Self-efficacy plays important role in mediating the impact of computer anxiety on the use of computer and related technologies. Present study covers three aspects i.e. computer anxiety, self-efficacy and ease of use of resources.*

**Keywords:** Electronic information resources, computer anxiety, self-efficacy, research institutes, Punjab

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## **1. INTRODUCTION**

With the advent of new technology, a lot of changes have occurred in human life. These changes in technology and in computer applications have led many research institutions and their employees to rely on the using of the new technology as a main media to complete their professional tasks. As technology is growing, it is difficult to imagine a task that should be completed without computers and advanced technology. As a result, more institutions are equipped themselves with new technology and their employees are challenged to be advanced with new technologies to complete their tasks. However, employees are sometimes express less enthusiastic response to adopt new technologies, even if it may helpful to complete their

tasks. The acceptance and use of computer and related technologies by employees appear to be limited due to the fear of low confidence, low ability to use and perceived difficulty to use. However, many previous studies indicate that employees of the reputed institutions still have many issues dealing with computer and advanced technologies. These existing studies indicate that employees interacting with new technologies experience a situation that is known as computer anxiety or techno-stress.

### **Computer anxiety**

Anxiety refers to a complex combination of negative emotional responses that include worry, fear, apprehension and agitation (Saade, Kira 2009). It is a natural and unavoidable reaction to a perception of danger or risk.

Sometimes, technology has unpleasant side effects, which may include strong, negative emotional states that arise not only during interaction but even before, when the idea of having to interact with the computer begins (Saade, Kira 2009). Anxiety, confusion, anger and frustration can affect not only the interaction with technology but also with usability and productivity etc. A person with computer anxiety may experience fear of using computers, feeling of frustrations, feeling difficult to find information, disappointment to find relevant information etc. therefore, he starts avoiding using technologies. Thus his performance might be poorer than those with little or no computer anxiety.

Therefore, it is necessary that certain steps must be taken to reduce the computers and related technologies' anxiety among employees and small steps must be taken to tackle employee's self-confidence.

### **Self- efficacy**

Self-efficacy plays an important role in mediating the impact of computer anxiety on the use of computer and related technologies (Achim, Kassim 2015). Self-efficacy is referred as knowledge and ability to use computer and related technology. Individuals must feel confident and competent in using technologies and skills, in order to employ them effectively. According to Bandura (1977), learning certain skills is not enough, individuals should also develop confidence in the skills that they are learning. In other words, success is not simply based on the possession of necessary skills for performance, it also requires the confidence to use these skills effectively. This leads to self-efficacy. Bandura (1986) defines self-efficacy as a belief that one has about the capability to perform a particular behavior. According to Compeau and Higgins (1995), computer self-efficacy represents an individual's perceptions of his/her ability to use computer in the accomplishment of the task. Self-efficacy is important, because people tend to avoid tasks and situations which they believe exceed their capabilities, but nevertheless they undertake and perform activities they judge themselves capable of handling (Bandura, 1986).

The above facts make it clear that self-efficacy leads to higher usage of computer-mediated technologies. Therefore, keeping in view the above facts, the present study makes an attempt to elicit the opinion of the respondents regarding the need for self-efficacy in using e-resources, since self-efficacy helps in exploiting the computers to meet their maximum information needs. This leads to a positive attitude towards computer-mediated technologies and to satisfaction and finally to maximum usage of computers.

## Review of literature

Young JuJoo (2000) observed that most research on WBI had been primarily descriptive in nature, with its emphasis on the technological aspects of classroom implementation. The study further examined effects of correspondence between self-efficacy beliefs and target performance on their predictive relations. Most hypotheses derived on the basis of the self-efficacy theory received support in the current WBI application. Abele, A. E. and Spurk, D. (2009) study uses self-efficacy, as a domain specific measure of computer anxiety due to its greater predictive power over general and task specific measures. Usher, E. L. and Pajares, F. (2009) conducted study in order to see how computer anxiety has an influence on employees' computer self-efficacy. Sources of computer self-efficacy were measured using a 24-item Sources of Computer Self-efficacy (SCSE) scale adapted from the 24-item Sources of Mathematics Scale. Guy, and Jackson (2010) study was also based on the self-efficacy believes measured by researchers at Historically Black College or University (HBCU) in the South. Study revealed that not all students are proficient with office applications. Mathew, D. (2012) studied that anxiety is a natural and unavoidable reaction to a perception of danger or risk. In her study, Gurpreet randhawa (2014) revealed that in determining the work performance level of employees, job specific self-efficacy plays a significant role. She also suggested that Employee's self-efficacy can be enhanced through counseling, proper guidance, training and development

## 2. METHODOLOGY

The main purpose of this study is to find out the need of self-efficacy to use Electronic Information Resources by users in the Libraries of Research Institutes of Punjab. This study adopted the survey approach to gather information on the use of EIRs. Questionnaire was used to collect the information.. The total no of 766 registered members of fifteen Research Institutes Libraries were selected for the study. These members have been grouped into three categories:

- Scientific staffs: include the Scientists and the Technicians. 357
- Research Scholars. 199
- Non – Scientific staffs: include staff working in Administration, Finance, Marketing, Doctors, etc. 210

## 3. DATA ANALYSIS AND INTERPRETATION

### 1. Need of self-efficacy to use EIRs

	S (N=357)		Rs (N=199)		NS (N=210)	
Strongly agree	259	72.55	157	78.89	59	28.10
Agree	98	27.45	42	21.11	119	56.67
Neutral	0	0.00	0	0.00	32	15.24
Disagree	0	0.00	0	0.00	0	0.00
Strongly disagree	0	0.00	0	0.00	0	0.00
Total	357	100	199	100	210	100
		$X^2=185.435$		DF=4		p <sup>value</sup> 0.01

The table 1 indicates that all the scientific respondents [strongly agree (72.55%); agree (27.45%)] and research scholars [strongly agree (78.89%); agree (21.11)] agree and strongly agree that self-efficacy is necessary for using EIRs. On the other hand, around half (56.67%)

of the non-scientific respondents agree and one-fourth (28.1%) strongly agree as to the need of self-efficacy for accessing EIRs. Whereas, 15.24 percent of the non-scientific respondents are neutral regarding the need of self-efficacy.

The chi square test was carried out to determine the association between respondents' opinion regarding the need for self-efficacy for accessing EIRs.  $X^2=185.435$  with p value 0.01 shows that there is a significant association between respondents' opinion regarding the need of self-efficacy for accessing and using EIRs.

## 2. Use of EIRs between Scientific Respondents, Research Scholars and non-scientific respondents

List of EIRs	Scientific respondents		Research scholars		Non-scientific	
	Mean	SD	Mean	SD	Mean	SD
E-journals	4.53	0.8	3.57	1.46	4.65	0.68
E-books	4.39	0.85	3.29	1.59	4.33	0.77
Databases	4.31	0.8	3.64	1.5	4.33	0.75
Blogs	4.11	0.95	3.67	1.41	3.9	1.12
Internet	4.81	0.55	4.62	0.69	4.84	0.52
OPAC	3.83	1.1	2.73	1.64	4.12	1.16
Patents	3.4	0.96	2.31	1.53	3.42	1.11
Standards	3.07	0.95	2.37	1.44	3.15	1.11
Dictionaries	4.51	0.82	4.1	1.04	4.51	0.87
Online Theses and Dissertations	3.91	1.14	2.01	1.25	3.78	1.17

Table 2 indicates that both scientific respondents and research scholars use all the EIRs to the level of score 4, except patents and standards. Few resources like internet and E-journals are used up to the level of 5 i.e. to the level of full extent. But in the case of non-scientific respondents, the use of EIRs is lesser than scientific respondents except for internet i.e. internet is used up to the level of 5.

An overall analysis makes it clear that the scientific respondents and research scholars are using more of each types of EIRs, than their non-scientific counterparts. This may be due to the fact that the information contained in these documents available in these libraries is more of scientific and technical value and it may be not useful for their professional work. Further, the lesser usage of patents and standards by both scientific respondents and research scholars could be the type of information contained in them, which either the scientific respondents or research scholars do not need regularly or frequently for their research and professional work. Thus, although the users (scientific respondents and research scholars) are aware of all the EIRs, the usage of them, depend on the information content of the EIRs and its need in their research or professional work.

## 3. Ease of use of electronic information resources

	Scientific respondents		Research scholars		Non-scientific	
	(N=357)		(N=199)		(N=210)	
very easy	125	35.01	112	56.28	34	16.19
Easy	75	21.01	55	27.64	41	19.52
To some extend	87	24.37	32	16.08	54	25.71
Difficult	70	19.61	0	0	81	38.57
Very difficult	0	0	0	0	0	0

It is observed from the table 3 that more than three-fourths (83.92%) of the research scholars [very easy (56.28) and easy (27.64)] and around half of the scientific respondents [very easy (35.01) and easy (21.01)] find the use of EIRs easy and very easy. It is also observed from the table that around one-fifth (19.61) of the scientific respondents find that EIRs are difficult to use. On the other hand, around one-third (35.71) of the non-scientific respondents opined that EIRs are easy (19.52%) and very easy (16.19%) to use. But 38.57 percent of the non-scientific respondents found out that EIRs are difficult to use.

#### 4. Problems they faced while using EIRs

Problems	Scientific respondents		Research scholars		Non-scientific	
	(N=357)		(N=199)		(N=210)	
Slow access speed	255	71.43	153	76.88	174	82.86
Privacy	87	24.37	20	10.05	47	22.38
Skills using EIRs	21	5.88	17	8.54	150	71.43
Pay and access	81	22.69	79	39.70	110	52.38
Information overloaded	97	27.17	67	33.67	121	57.62

The common problem faced by majority of the respondents from all the categories is the slow speed in accessing EIRs (scientific respondents 71.43%; research scholars 82.86%; non-scientific respondents 82.86%). Nearly three-fourths of the non-scientific respondents (71.43%) find the skills required for using EIRs to be a problem. Pay and access is another difficulty faced by half of the non-scientific respondents (52.38%), around one-third of the research scholars (39.70%) and one-fifth of the scientific respondents (22.69%). It is also observed that information overload also poses difficulties in accessing EIRs (scientific respondents 27.17%; research scholars 33.67%; non-scientific respondents 57.62%).

#### 4. FINDING OF THE STUDY

This is clearly observed from the study that although the libraries of the Research Institutes, under study, have been providing different types of EIRs, the maximum used are the ones which are considered useful by the respondents. For ex. Internet, e-journals and Dictionaries in the case of Scientific respondents and Research Scholars and Internet in the case of non-scientific respondents. Apart from usage, as far as the computer – mediated resources are concerned, ease of use is equally important for using an EIR as has been stated by Mooer (1959), an information retrieval system will tend not to be used whenever it is more painful and troublesome for a customer to have information than for him not to have it. At this juncture, it is found from the study that around two-fifths of the non-scientific respondents and around one-fifth of the scientific respondents find the use of the EIRs difficult. When a user finds the use of technology difficult, it inhibits the use of the EIRs. Thus, apart from ease of use, confidence in the ability to use the technology, i.e. self-efficacy, is equally important. Belief in one's confidence and competency in using the technologies boosts the usage of the EIRs. Finding of the study brings forth many points of concern. Library should provide access to every type of resources i.e. general resources apart from the subject related materials. Library should organize training programme to overcome the anxiety of users. Furthermore, majority of users face slow internet access speed problems. Therefore there is a need to provide high bandwidth to overcome poor network connectivity.

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