

Facilities as an Indicator of Quality Research in Distance Education Universities of Islamabad

Dr. Quratul Ain Hina

Assistant Professor, Department of Educational Sciences
National University of Modern Languages, Islamabad.
drquratulainhina@gmail.com

Dr. Mahek Arshad

Controller of Examinations, FBCOE, RWP
mehakrshd@gmail.com

Ms. Uzma Mazher

Lecturer, Department of Educational Sciences
National university of modern languages
Umazhar@numl.edu.pk

ABSTRACT

The study was developed with the one major objective that was to assess the effect of facilities provided to the students on the quality of research. The major objective of the research was further divided into five sub objectives based on the nature of facilities (Labs/ Library/ Internet, Professional /Technical Support, Scholarships/ Funds, Supervision and Organizational Support) targeted in the research process. The research was based on survey method. All the higher level distance education institutions of Islamabad were considered as the population of the research. The researcher used the disproportionate stratified sampling technique to draw the sample for the study. 66 teachers contributed in the data collection process among which 30 were from public and 36 were from private sector. The researcher used a self developed questionnaire for the purpose of data collection. The tool was based on two major parts that were related to the facilities provision assessment and research quality assessment. The first part was further divided into five sub sections according to the nature of the facilities (Labs/ Library/ Internet, Professional /Technical Support, Scholarships/ Funds, Supervision and Organizational Support) provided to the students. The data revealed that overall the facilities had 39 % effect on the quality of research that was also significant at 0.01 level of significance. Further all the types of facilities targeted were found having statistically significant effect on the quality of research. Labs/ Library/ Internet, Professional /Technical Support, Scholarships/ Funds, Supervision and Organizational Support were having 11%, 14%, 29%, 19% and 20% effect on quality of research respectively. Thus it was highly recommended that the facilities for the research students must be kept on improving and the other distance education institution all over the Pakistan may also focus on the provision of these facilities for the better outcomes.

Keywords: *Facilities, Quality of Research, Labs/ Library/ Internet, Professional /Technical Support, Scholarships/ Funds, Supervision and Organizational Support*

INTRODUCTION

The process of research is dependent on different factors. A researcher has to pass through different phases to get a fair amount of confidence in his work. Use of information technology is the dire need to maintain the quality of research. The new technology including information and communication technologies (ICT) and Electronic learning (E-L) are the most significant in this regard (Wang 2003). The concept of E-L has tremendously changed the student's learning and teacher's instructional methods. By this the world is becoming close. There are so many terms which are synonymous to E-L like, web based learning, e- education, open learning and virtual learning.

The needed research facilities includes, laboratory, library, internet, professional & technical support and scholarships and funds. There are also other factors which affect the research process like supervision and organizational support. In the field of pure and natural sciences, use of labs is very important as the majority of the work is related to practical nature. Scientific research mainly depends upon use of laboratories. Library is another variable which affects the research process. A huge old and updated material is available in the library. Use of internet is an emerging aspect of this changing technology. With the help of fast modes of communication, the distances and people get mix from different languages, races, religions, culture and communities. Television is not only the source of entertainment but it is a source of learning and information. With the use of these agencies people sitting at home can do so many things like teaching and learning, business, fashion. Internet has influenced different aspects of society. According to Marry and Isherwood, (1979) "necessities are defined as those goods which are bought in same quantities of change in price or income."

Presently no one deny the positive use of internet in research particularly and in education generally. This is providing the access to resources that millions of computer users are using today. It is observed that the facilities have changed the face and dimensions of education and teaching learning process. The facilities provided to the researchers will eventually open to a new globalization in education and resource finding and with the help of this the world will become as a source of wide cooperation in resource sharing.

Use of library is also a sound source for research purpose. Although the internet is a combination of several media technologies and electronic version of books, journals, magazines, newspapers and catalogs. By this the use of library has been limited. Scholars prefer to study on line and ready reference material. With the application of ICT and E- Learning the concept of library and librarian has been changing. With all advancement of e learning and use of internet for research the importance of books can't be denied. Studying a book in library or at home is more comfortable and easy. Distance education students also are in a need of libraries for their research work. There are some areas where availability of internet is difficult. Thus libraries are equally important for the quality of research. Scholarships are another source of boosting the scholars for research purpose. These are awarded on the bases of different criteria, which show the value and purpose of different institutions.

The present issue in Pakistan is the quality and excellence of education. To Academy of Education Planning and Management, Ministry of Education (2009) the present status of poor quality of education and deprived learning environment is due to the missing of basic structure in schools. To develop the output and quality of education there is a need to establish infrastructure. According to Saeed and Wain (2011) most schools of Pakistan are facing the same problem of physical structure such as, boundary wall, buildings, classrooms and furniture. Moreover there

are schools where the buildings are never renovated and white washed. Iqbal (2005) has analyzed that it is always expected that secondary education should be in such a way that it could produce the good citizens of Pakistan, having dedication to financial and technological development. These expectations can be fulfilled by providing human and physical facilities. The organizational support is also an important factor for the researchers. The quality of research can also be well judged by the cooperative attitude of the institutions. Supervision is also a variable that promotes the fair results of research.

In this paper it has been analyzed that how provision of facilities (laboratory, library, internet, professional and technical support, scholarships, supervision and organizational support) can affect the research in distance education.

Statement of the Problem

The study was developed with the one major objective that was to assess the effect of facilities provided to the students on the quality of research. The major objective of the research was further divided into five sub objectives based on the nature of facilities (Labs/ Library/ Internet, Professional /Technical Support, Scholarships/ Funds, Supervision and Organizational Support) targeted in the research process. Thus this research would be beneficial for higher education institution as research play the most important role at this level. The study finding would help to improve the quality of research.

Significance of the Study

The research in hand would be particularly beneficial for the scholars of Masters/MS/ M Phil and PhD level and teachers and educational administrators of all educational institutions in general and for distance education institutions specifically. It is well believed that facilities have a great effect on the quality of research. Scholars should be well aware of the facilities that can be utilized during research. As a scholar one should be well aware of the use computers, use of internet, having knowledge of different useful sites and search engines. During the research the role library is inevitable. Besides the role of e-learning and information and communication technologies (ICT) libraries play a key role in the development of knowledge. Professional and technical support is also beneficial for the novice scholars. With this help the scholars will be morally strong and required results can be obtained in short time. Provision of funds and scholarships is also a boosting end for research. Scholarships are financial aids which are provided without any loan. Quality of research can also made better if all required facilities are to be provided to the researchers at higher level. Role of these facilities at higher level is important for formal education whereas for the distance education it is indispensable. In distance education the teacher is at a distance from the learner and he has to rely on facilities generally and ICT particularly.

In Pakistan, the work of research is increasing day by day. Private sector universities have been established at higher level with the approval of higher education commission (HEC). Research in social sciences is being carried out at broader level. Novice researchers particularly and common readers generally will be beneficated.

LITERATURE REVIEW

Provision of better and qualitative facilities will result in better output of education and research. According to Kuuskorpi, Kaarina & Gonzalez (2011) quality education and environment

provided by the schools to the students facilitates the acquiring of skills and this is important for society. Government of Pakistan is doing some concrete steps in this regard irrespective of the fact that there are some remote areas where basic amenities are scarce. According to the idea of Duyar, (2010) educational facilities matters a lot and they affect the process of education and delivery of instruction. To the report of Lydiah and Nasongo (2009) those institutions which have better results each year have sufficient facilities for their students. Human (teaching, learning) and physical (infrastructure, classrooms, furniture) facilities provided by the institutions results in remarkable annual results. According to the research of Salfi and Saeed (2007) those institutions which have better facilities, conducive environment and positive culture have better results as compared to those schools having average or below average culture. There are some other factors which influence the school environment and culture. Yung and Fung (2005) have referred that a good atmosphere emotionally influences the climate of institution, for example an ideal guidance and counseling, administration and supervision, social interaction and awards and scholarships to the students. It is also important to note that provision of facilities at higher education institutions should also be given keeping into consideration the category of institution and strength of students along with infrastructure. To Saeed and Wain (2011) sufficient delivery of facilities according to strength and population of students is important as the quality of education depends upon the availability or non availability of physical facilities. Poor performance in examinations is the result of lack of adequate facilities. According to Bush and Bell (2002) the resources and facilities matter in terms of effectiveness of the educational institutions and these resources include knowledge, power, finance time, material, assessment and information. Different researchers have shown difference in satisfaction level between the students who joined the institutions with good infrastructure and poor infrastructure. Although it has been resulted in researches that there is a difference in satisfaction level of rural and urban students. But according to the study of Cuyvers, Dupont, Mols and Nuytten, (2011) if a school is deprived from the physical infrastructure then it will affect the up lift in the same way whether it is rural or urban. To Tayyaba (2012) the institutions with overcrowded classes have an adverse effect on the learning of the students; it also deprives the teachers to pay individual concentration to every child.

Scholarships are the financial aids that enable the students in their academic pursuit. These scholarships are awarded on the bases of academic achievements. There are some theories which are based on financial aids of the students. According to Becker (1993) and Schultz (1963) the students want to increase the amount of human capital so that they can get better earning from the local markets. Students seek to invest in education in such a way that they opted the field that gives increase in their productivity and lead to greater labor market rewards. This theory is like the theory of production among firms, like firms tries to enhance the financial and physical output to increase the maximum output.

According to Gagan and Rakesh (2013) in their article, “use of internet for research and educational activities” the increasing information available on the internet in electronic form, book form or non book form has created a phenomenon called “knowledge or Information explosion.” On the other side traditionally the library has become a gateway to information worldwide. These libraries can be accessed from any corner of the world. These advancements have compelled the library staff, researchers and IT professionals to equip themselves with the latest knowledge and communication technologies. Internet provides speedy information in more effective, useful way with low cost. The researchers at higher level prefer to use internet to get e-books, e-journals and other related material as this can be downloaded at a high speed. Different

scholars have studied and analysed the use of internet. According to Khan (2012) in his study “Use of Information Sources by Faculty of Commerce, AMU, Aligarh: A Survey” discussed that majority of the faculty members and Research Scholars gets information from journals, whereas students prefer to use general books for acquiring the required information. Internet enables the researchers, scholars and academic institutions to disseminate information to the wider audience thorough out the world having web sites. In present day android cell phones are also doing the same task. Educational apps have revolutionized and globalized e-research. According to Ali (2005), Adika (2003), Applebee et al (1997) and Mahajan (2006) in their study internet is mainly used for communication purposes as compared to the retrieval of information like in e-mail. The use of internet has increased its flow in distance education programs. It has been promoting and used as a substitute of virtual university (Ajadi, Salawu & Adeoye, 2008).

Distance education in most of the world is promoted by e-learning and use of information and communication technology (ICT). According to Hedge and Hayward (2004), e-learning is a revolutionary approach to deliver data electronically in a well organized, well designed, learner focused, interactive approach to the recipient without restriction of place and time. This can be utilized by internet and other digital technologies. Distance education (DE) is a form of delivering education that is characterized by the physical separation of teacher and the learner. The instructions are delivered through a variety of different media sources. This education is suitable for those who deny to formal face to face learning or could not continue due to socio-economic issues, family or other circumstances. To Jegede (2003) distance education can be defined as a system of education provided by mode other than conventional face to face methods whose goals are alike the formal system which is done on campus full time face to face education. Allama Iqbal Open University Islamabad (AIU) is the one of the largest university of South Asia which is providing open and distance education to the million of students throughout the country. Distance education has several prospects as compared to formal education. As far as research is concerned the facilities provided by distance learning universities are best utilized as compared to formal system universities.

Computer education is also considered as one of the best facility for the scholars at higher level and it also affects the researchers in many ways. The innovation of computer has influenced the different areas of life and has made this world as thrilling global world. Computers have now changed the concept of space and time. Its use is indispensable in offices, educational institutions, departments of business and industries. In developing countries the use of computers is effective for formal and informal educational settings (Aftab, 2012). Most educational institutions consider it as the basic necessity for the students in their curriculum. The use of computers in the class rooms is not a new concept, as “technology has played a role in education ever since some enterprising teachers used a handy stick to draw pictures in the dirt for an eager student” (Willis, Johnson & Dixon 1983).

For the developing countries, it is difficult to improve their network system but “information technology holds the promise of generating the economic efficiencies required to attract the investments that are engine of growth around the world” (Talero & Gaudette 1996). To compete in the advancing world, developing countries are required to adopt information and communication technology (ICT) facilities so that they can meet the global economy. The teachers who are professionally competent are the assets for a developing country. Pakistan is also trying to include this latest technology in its curriculum. All technologies have remained a part of learning since inception of civilization but information technology brings a new change in the process. According to Dewey, (1996) information technology is a process of transmission

and renewal of experiences from generation to generation. Industrial revolution and advancement is due to the growth of information technology. The task of research can be boosted by the advancement of computers and all other facilities related to research. Woodhouse & McDougall (1986) and Downes & Fattouros (1995) gave stress on the use of computers. They have highlighted three reasons for this. To them computers do things differently. They increase value and worth in teaching learning process. Computers give accurate and better results. To them computers perform in a better way and even they make impossible things possible. Computers have facilitated the learning and they also enhance the learning abilities of the students, besides this, the effective roll of teachers are there. Computers also play a beneficial roll in educational and social setting. Teachers, while keeping in mind this role, are required to upkeep themselves with the changing trend and also update their knowledge. In this way they will keep control over computer.

The Pakistani World of tomorrow is required to prepare young generation by having well awareness with this field. Practical and conceptual work is required to be done by the young researchers. Information and communication technologies (ICT) are required to be introduced in the curriculum.

Theoretical framework

The theoretical background the research was based on the interrelationship of the independent and dependant variables. As the researcher was interested to find out the impact of multiple types of facilities on the quality of research, so the researcher initially selected five types of facilities that are the basic need of the research process and being provided by the educational institutions. These were Labs/ Library/ Internet, Professional /Technical Support, Scholarships/ Funds, Supervision and Organizational Support as shown in Fig. No. 1

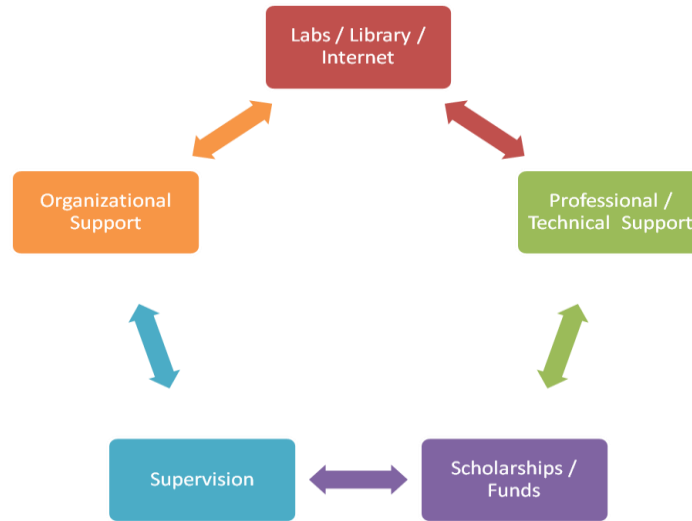


Fig. No. 1 - Types of Facilities for Researchers

While to address the main variable of the research that was the quality of research the researcher selected the parameters provided by Obiageil crystal oluka, shaofa Nie, Yi sun (2014). According to Obiageil crystal oluka, shaofa Nie, Yi sun (2014) there are seven factor that can determine the quality of research in any educational context. These seven parameters are Clarity In Aims/ Questions, Study Method, Data Collection, Research Context, Data Analysis, Results and Ethical Approval. By following the model given by Obiageil crystal oluka, shaofa Nie, Yi sun (2014) Researcher developed quality assessment scale that was divided into 7 sub sections according to the bellow mentioned factors in Fig. No. 2.

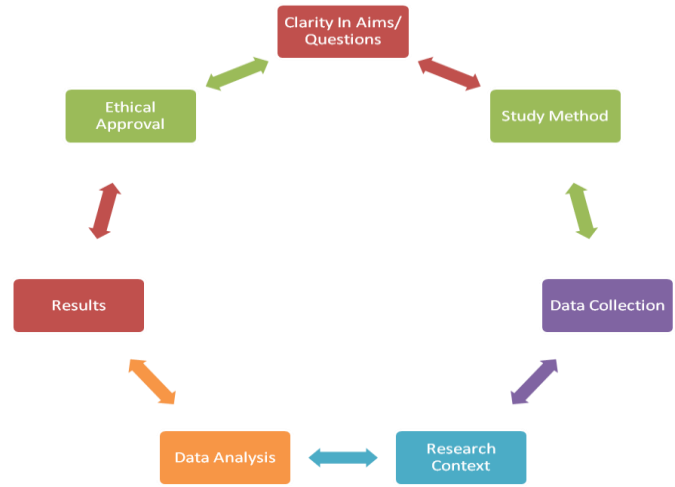


Fig. No. 2 - Quality of Research

The theoretical structure of the research can be further elaborated by the Fig. No. 3. That represents the interrelationship of the research that was the major focus of this current study.

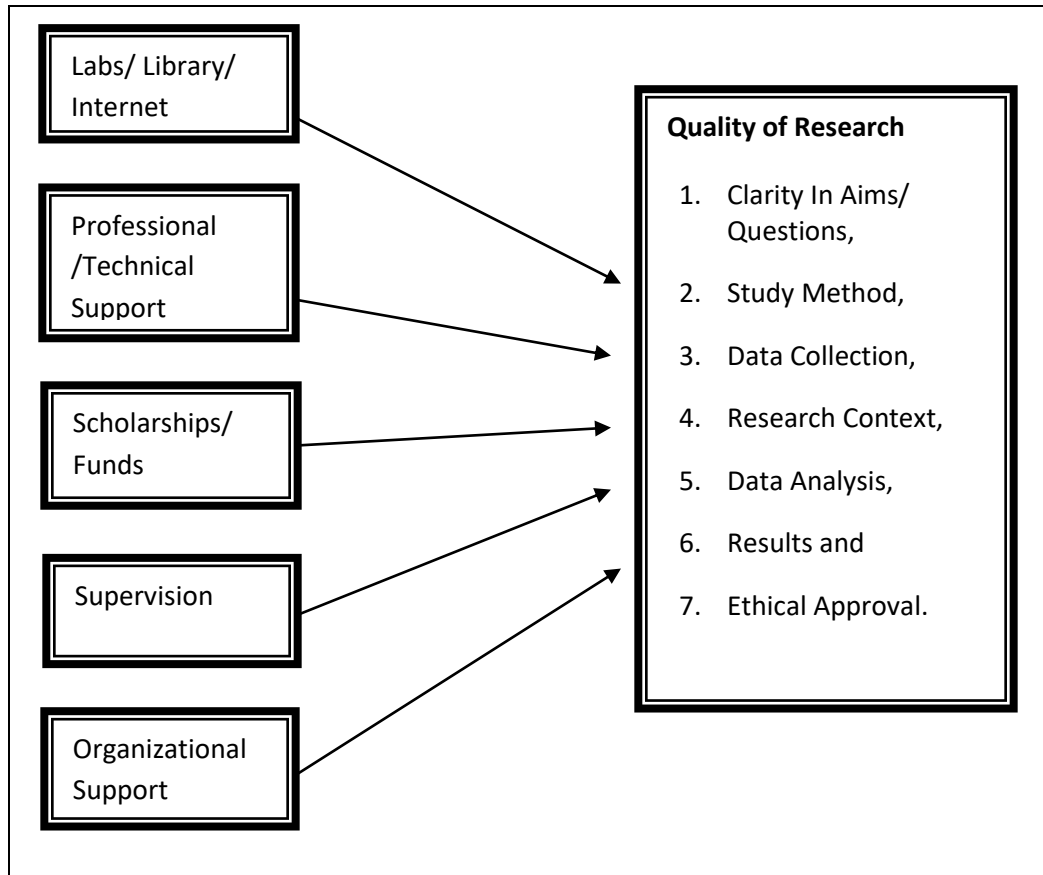


Fig. No. 3 - Impact of Facilities on Quality of Research

Research Objectives

1. To assess the effect of facilities provided to the students on the quality of research.
 - a. To assess the effect of facilities related to Labs/ Library/ Internet provided to the students on the quality of research.
 - b. To assess the effect of facilities related to Professional and Technical Support provided to the students on the quality of research.
 - c. To assess the effect of facilities related to Scholarships and Funds provided to the students on the quality of research.
 - d. To assess the effect of facilities related to Supervision provided to the students on the quality of research.
 - e. To assess the effect of facilities related to Organizational Support provided to the students on the quality of research.

Null Hypotheses

1. There is statistically no significant effect of facilities provided to the students on the quality of research.
 - a. There is statistically no significant effect of facilities related to Labs/ Library/ Internet provided to the students on the quality of research.
 - b. There is statistically no significant effect of facilities related to Professional and Technical Support provided to the students on the quality of research.
 - c. There is statistically no significant effect of facilities related to Scholarships and Funds provided to the students on the quality of research.
 - d. There is statistically no significant effect of facilities related to Supervision provided to the students on the quality of research.
 - e. There is statistically no significant effect of facilities related to Organizational Support provided to the students on the quality of research.

METHODOLOGY

Research Design

The design of the present research was descriptive. Descriptive research is the type of research that deals with the daily life based current issues. As quality of research in distance education institutions is one of the most important issues in the field of education. So the researcher selected the survey based descriptive research for the selected area.

Research Population

The population of the research was based on all the faculty members serving in the distance education institutions (Higher Level). There were 7 universities present in Islamabad that were offering distance education courses, among which 04 are public and 03 are private. There were 3,734 faculty members serving in these universities who were considered as the population of the research.

Following is the list of these universities.

Table 1 - List of the Distance Education Universities

Name of university	Sector	Faculty
--------------------	--------	---------

1.	Allama Iqbal Open university	Public	159
2.	COMSATS Institute of Information Technology	Public	2163
3.	International Islamic University	Public	500
4.	NUML	Public	513
5.	Comwave institute of Sarhad University	Private	65
6.	Virtual university of Islamabad	Private	280
7.	Preston university	Private	54
	Total		3,734

Research Sample

The sample of the research was based on 66 faculty members. Disproportionate stratified random sampling technique was used for the selection of sample. Initially 100 questionnaire were distributed among the teachers included as sample. However 66 questionnaires were returned back with the required response properly. Thus the rate of return was 66 %.

Data Collection Tools

The data was collected with the help of scales developed for the research. Two scales were developed to address the independent and dependant variables. To deal with independent variable (Facilities Provision), “Facilities Provision Assessment Scale” based on 23 items was developed. This scale was further divided into 5 sub sections dealing five major types of facilities (Labs/ Library/ Internet, Professional /Technical Support, Scholarships/ Funds, Supervision and Organizational Support).

The second scale was developed to address the dependant variable (Quality of Research). The “Research Quality assessment scale” was based on 34 items. The Scale was developed under the guide line of the parameters given by Obiageil crystal oluka, shaofa Nie, Yi sun (2014). Research quality assessment scale was divided into 7 sub sections (Clarity In Aims/ Questions, Study Method, Data Collection, Research Context, Data Analysis, Results and Ethical Approval).

Data Collection

The data was collected with the personal visits to the targeted universities.

Data Analysis

The data was analyzed by using SPSS 21st edition for the purpose of analysis regression analysis, reliability analysis and inter section correlation was used.

Tables

Table 2 - Cronbach's Reliability of Facility Provision Assessment Scale

Section	Items	Cronbach's Reliability
Facility Provision Assessment Scale	23	.84
1. Labs / Library / Internet	05	.92
2. Prof / Tech Support	05	.88
3. Scholarships / Funds	04	.91
4. Supervision	05	.89
5. Organizational Support	04	.93

Table No.2 shows the reliability analysis of the facilities provision assessment scale. Overall the scale found reliable at 84. As far as the sub sections of the scale were concerned, the reliability of the section 1,2,3,4 and 5 was found .92, .88, .91, .89 and .93 respectively.

Table 3 - Cronbach's Reliability of Research Quality Assessment Scale

Section	Items	Reliability
Research Quality Assessment Scale	34	.94

Table No.3 shows that research quality assessment scale was also found reliable. The Cronbach alpha reliability was found .94. Thus the scale can be further utilized by the other researchers as well.

Table 4 - Inter Section Correlation of Facility Provision Assessment Scale

	Labs / Library / Internet	Professional / Technical Support	Scholarships / Funds	Supervision	Organizational Support	Facility Provision Assessment
Labs / Library / Internet	1					
Professional/	.643**	1				

Technical Support						
Scholarships / Funds	-.046	.206	1			
Supervision	.226	.412**	.473**	1		
Organizational Support	.370**	.606**	.118	.274*	1	
Facility Provision Assessment Scale	.658**	.838**	.496**	.697**	.710**	1

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

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

Table No. 4 shows the inter-section correlation between the sub sections of facilities provision assessment scale. The table shows that all the sub sections were correlated positively and significantly with each other. The highest correlation was found between the Organizational Support and Facility Provision Assessment (.710**).

Table 5 - Impact of Facilities on Research Quality

Independent Variable	Dependant Variable	B	t	Sig.	R Square
Facilities	Research Quality	.87	6.46	.00	.39

Table No. 5 shows the effect of facilities provided to the students on the quality of research produced. R Square value shows that facilities provision was having 39% effect on quality of research while this effect was also found significant (B= .87) at 0.01 level of significance. Thus the hypothesis No.1 is rejected

Table 6 - Impact of Labs/ Library/ Internet on Research Quality

Independent Variable	Dependant Variable	β	t	Sig.	R Square
Labs/ Library/ Internet	Research Quality	1.49	2.90	.00	.11

Table No. 6 shows the effect of Labs/ Library/ Internet facilities provided to the students on the quality of research produced. R Square value shows that Labs/ Library/ Internet provision was having 11% effect on quality of research while this effect was also found significant (B= 1.49) at 0.01 level of significance. Thus the hypothesis No.2 is rejected

Table 7 - Impact of Professional/ Technical Support on Research Quality

Independent Variable	Dependant Variable	β	t	Sig.	R Square
Professional/ Technical Support	Research Quality	2.91	5.17	.00	.29

Table No. 7 shows the effect of Professional/ Technical Support facilities provided to the students on the quality of research produced. R Square value shows that Professional/ Technical Support provision was having 29% effect on quality of research while this effect was also found significant (B= 2.91) at 0.01 level of significance. Thus the hypothesis No.3 is also rejected

Table 8 - Impact of Scholarships/ Funds on Research Quality

Independent Variable	Dependant Variable	β	t	Sig.	R Square
Scholarships/ Funds	Research Quality	2.20	3.94	.00	.19

Table No. 8 shows the effect of scholarships/ funds facilities provided to the students on the quality of research produced. R Square value shows that scholarships/ funds provision was having 19% effect on quality of research while this effect was also found significant (B= 2.20) at 0.01 level of significance. Thus the hypothesis No.4 is also rejected

Table 9 - Impact of Supervision on Research Quality

Independent Variable	Dependant Variable	β	t	Sig.	R Square
Supervision	Research Quality	2.10	4.03	.00	.20

Table No. 9 shows the effect of Supervision facilities provided to the students on the quality of research produced. R Square value shows that Supervision provision was having 20% effect on quality of research while this effect was also found significant (B= 2.10) at 0.01 level of significance. Thus the hypothesis No.5 is also rejected

Table 10 - Impact of Organizational Support on Research Quality

Independent Variable	Dependant Variable	β	t	Sig.	R Square
Organizational Support	Research Quality	1.64	3.28	.00	.14

Table No. 10 shows the effect of Organizational Support provided to the students on the quality of research produced. R Square value shows that Organizational Support provision was having 14% effect on quality of research while this effect was also found significant ($B= 1.64$) at 0.01 level of significance. Thus the hypothesis No.6 is also rejected.

DISCUSSION

Research is the key to progress for the nations (Becker, 1993). The history shows that countries who invest on the research and education get its benefits in form of development and progress (Yung and Fung, 2005). In all fields of life, We are dependent on research and its finding. The life style that we are enjoying today, the learning theory that facilitates our learning and teaching process. The electronic devices that we use in our daily life and many more are the examples of the benefits of research in human life. Thus there is a need to develop critical thinking and research based altitude among the students from the early stages of education.

Especially at higher level the research based education and activities become more important to produce skills graduates with productive altitudes. As a nation we need skilled, well aware, productive and positive minded graduates to progress. But to develop such citizens and to develop research based skills we need to invest in form of facilities without providing proper facilities we cannot expect to get desired out comes.

Researchers (Salfi & Saeed, 2007) proved that the quality of research in any area is dependent on the facilities provided. The more government will invest the more nation will get its fruit. All practical areas need certain facilities, equipment or labs in order to train the individuals. Similarly researchers also need Library, Labs, Internet, Computers, Professional assistance and organizational support. Researchers (Saeed & Wain, 2011) have proved that these facilities are essential to regulate the system of research and it effects positively on the work productivity of the students. Jegede (2003) says that facilities are the key element to produce quality work. Quality of work depends upon the quality of supervision and support provided by the organization. People are willing to work but they need basic equipment in hand to work with, which is the responsibility of the organization (Iqbal, 2005). So is the case in the present research that also proves that facilities are having 39% effect on the quality of research. The current study also proves that all types of facilities (Labs/ Library/ Internet, Professional /Technical Support, Scholarships/ Funds, Supervision and Organizational Support) have positive and significant effect on quality of research produced.

CONCLUSION

The facilities provision was having 39% effect on quality of research while this effect was also found significant. The Labs/ Library/ Internet provision was having 11% effect on quality of research while this effect was also found significant. The Professional/ Technical Support provision was having 29% effect on quality of research while this effect was also found

significant. The scholarships/ funds provision was having 19% effect on quality of research while this effect was also found significant. While the Supervision provision was having 20% effect on quality of research while this effect was also found significant. Organizational Support provision was having 14% effect on quality of research while this effect was also found significant.

RECOMMENDATIONS

1. It is recommended that in distance education institution specially and in other formal higher education institutions generally, special library sections need to be established with special focus on the material related to research writing. So that the students may have books and sample thesis drafts and other relevant literature.
2. It is also recommended that in all higher education institution there must be labs established with internet and access to digital library facilities for the research students.
3. It is recommended that to encourage researchers, the university management need to provide some funding, scholarships or awards annually at least at the departmental level.
4. In all such educational institutions a full time mentor need to be appointed. So the students can get guidance at any time related to the issues faced during the research.
5. It is also recommended that along with facilities, there may be one course related to research in each semester in order to ensure continues practice of research based activities. As students need to develop research based altitude so there is a need to split the context of research as subject into smaller portions and practical based activities.
6. For the students who lack in computer related skills, here is a need to introduce short computer course to train them with basic use of Ms Office, SPSS and searching skills.
7. Latest additions o f research based journals may be available at libraries for the case of access.

REFERENCES

- Academy of Education Planning and Management AEPAM, (2009). Annual Pakistan
- Adika G, Internet use among faculty members of universities in Ghana, *Library Review*.52 (1) (2003) 29-37.
- Aftab, M. (2012). Provision of computer education in public secondary schools of Karachi, *Indus journal of management and social sciences*, 5(1) 31-37 (Spring 2012)
- Ajadi, T. O Salawu, I.O & Adeoye, F. A. (2008). E-Learning and Distance Education in Nigeria, *The Turkish on line Journal of Educational Technology- TOJET* October 2008 ISSN: 1303-6521 volume 7 Issue 4 Article 7.
- Ali. N. The use of electronic resources at IIT Delhi Library: a study of search behaviors, *The Electronic Library*, 23(6) (2005) 691-700.
- Applebee AC, Clayton Pand Pascoe C, Australian academic use of the Internet, *Internet Research*, 7 (2) (1997) 85-94.
- Becker, G. S. (1993). *Human capital: A Theoretical and Empirical Analysis with Special Reference to Education (3rd ed.)*, University of Chicago Press, Chicago.
- Bush, T., & Bell, L. (2002). *The Principles and Practice of Educational Management. (1st Ed)*. SAGE Publications, California.

- Cuyvers, K., Weerd, G.D., Dupont, S., Mols, S., & Nuytten, C. (2011). *Well-being at School: Does Infrastructure Matter?. Organization for Economic Co-Operation and Development OECD*: ISSN 2072-7925. Access by <http://www.oecd.org/education/pdf>
- Dewey, J. (1966). *Democracy and education*. Free Press, New York.
- Downes, T. and C. Fatouros. (1995). *Learning in an Electronic World*. Primary English Teaching Association, Australia.
- Duyar, I. (2010). Relationship between school facility conditions and the delivery of instruction: Evidence from a national survey of school principals, *Journal of Facilities Management*, Vol. 8 Iss: 1 pp. 8 – 25 <http://dx.doi.org/10.1108/14725961011019058> Downloaded on: 25-06-201
- Gagan, S. & Rakesh, P. (2013). Use of Internet for research and educational activities, *I.J.E.M.S.*, Vol, 4(2) 2013; 193-199.
- Hedge, N. and Hayward, L. (2004). Redefining roles. University e-learning contributing to Life-long learning in a networked world. *E-Learning*, 1:128 – 145 <http://www.nationmaster.com/country/ni/Internet>
- Iqbal, M. (2005). *A Comparative Study of Organizational Structure, Leadership style and Physical Facilities of Punjab and Private Secondary Schools in Punjab and their Effect on School Effectiveness*. Online thesis. Institute of Education and Research. University of Punjab, Lahore.
- Jegede, O. (2003). *Taking the distance out of higher education in 21st century Nigeria. Paper Presented at the Federal Polytechnic, Oko, Anambra state on the occasion of the Convocation ceremony and 10th anniversary celebration held on Friday, 28.*
- Khan, Abdul Mannan, (2012), "Use of Information Sources by Faculty Members, Research scholars and Students of the Faculty of Commerce, AMU, Aligarh: A Survey". *Library Philosophy and Practice (e-journal)*, Paper 782.
- Kuuskorpi, M., Kaarina., & Gonzalez, N.C. (2011). The Future of Physical Learning Environment: School Facilities that Support the User. *Organization for Economic Co-Operation and Development OECD*: ISSN 2072-7925. Access by <http://www.oecd.org/education/pdf>
- Lydia, L.M., & Nasongo, J.W. (2009). Role of the Head Teacher in Academic Achievement in Secondary Schools in Vihiga District, Kenya. *Journal of Social Sciences* 1(3): 84-92, 2009. ISSN: 2041- 3246
- Mahajan P, Internet use by the researchers: a study of Punjab University, Chandigarh, *Library Philosophy and Practice*, 8 (2) (2006) [http://www.webages. uidahoo.edu/~mbolin/mahajan2.htm](http://www.webages.uidahoo.edu/~mbolin/mahajan2.htm) retrieved on 12/2/2016.
- Marry, D. and Isherwood, B. (1979). *The World of Goods*, Basic Books, New York.
- Oluka OC, Nie S, Sun Y. (2014). Quality Assessment of TPB-Based Questionnaires: A Systematic Review. *PLoS ONE* 9(4): e94419. doi:10.1371/journal.
- Putnam, R. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, Vol. 6, 65–78, 1995.

- Saeed, M., & Wain, K.R. (2011). Status of missing facilities in Government Schools of Punjab. *Journal of Reflection and reflection in Education*. December 2011, Vol 5, No.2, pp 105-127. <http://www.ue.edu.pk/jrre>
- Salfi, N. A., & Saeed, M. (2007). Relationship among school size, school culture and students' achievement at secondary level in Pakistan, *International Journal of Educational Management*, Vol. 21 Iss: 7 pp. 606 – 620 <http://dx.doi.org/10.1108/09513540710822201>
Downloaded on: 15-06-2016
- Schultz, T. W. (1963). *The Economic Value of Education*. Columbia University Press New York.
- Talero E. and P. Gaudette. (1996). *Harnessing Information for Development: A Proposal for a World Bank Group Strategy*. World Bank Discussion Paper.
- Tayyaba, S. (2012). Rural-urban gaps in academic achievement, schooling conditions, student, and teachers' characteristics in Pakistan, *International Journal of Educational Management*. Vol. 26 Iss: 1 pp. 6 – 26 <http://dx.doi.org/10.1108/09513541211194356>
Downloaded on: 23-06-2012
- Wang, Y. (2003). Assessment of learner satisfaction with asynchronous electronic learning systems. *Information & Management*, 41(1), 75–86
- Willis, J.W., D.L Johnson and P.N Dixon. 1983. *Computers, Teaching and Learning: An Introduction to Computers in Education*. Oregon: Dilithium Press.
- Woodhouse, D. and A. McDougall. 1986. *Computers: Promise and Challenge in Education*. Blackwell Scientific Publications, Melbourne.
- Yung, M. and Fung, L.I. (2005). Enhancement of classroom facilities of primary schools and its impact on learning behaviors of students", *Facilities*, Vol. 23 Iss: 13 pp. 585 – 594
Downloaded on: 25-06-2012 <http://dx.doi.org/10.1108/02632770510627561>