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## EDITORIAL

**T**rends in Information Management (TRIM) which started its journey in the year 2005 has now reached to its new heights with a wider global audience both as readers as well as contributors.

TRIM has also received a good score of citations for its manuscripts indicating a qualitative growth in the research publication world. With 10 volumes in the archival store and 9 papers in the current issue, TRIM brings research flavours from different subjects and from different geographical regions like *Saudi Arabia, Australia, Kuwait* and *Nigeria*.

*Bappa Magagi Abubakar* beautifully portrays the historical perspective of public libraries in Nigeria. The article traces the history and current status of public libraries in Nigeria stressing more on their current situation. *Umar Mufeed and Ajaz Akbar Mir* have studied the relationship between transformational leadership and learning organization practices in academic libraries of select universities of Jammu and Kashmir. The purpose of the study is to analyze the perception of university library staff towards the existing transformational leadership practices prevailing in the libraries. Moreover, the present study also aims to examine the perception of library staff towards the learning organization practices. On the other hand, *Mubashir Majid Baba* examines the level of transformational leadership and its elements among university librarians as perceived by the library staff. An internationally collaborated paper by *Samir N. Hamade, Sheikh Shueb, Rabia Shah, Aabid Kharadi and Huma Shafiq* showcase the productivity and relative impact of research from the University of Kashmir in comparison to the rest of the world using InCites as a benchmarking tool. *Mudasir Khazer Rather and Shabir Ahmad Ganaie* explore, analyse and discuss the use of electronic sources of information by the students pursuing various courses in the universities of Jammu & Kashmir. *Abid Sultan* focussed on describing competitive performance of the selected agro-food processing firms of J&K and influence of the information & communication technology (ICT) in improving competitive levels of processing firms of an agriculture & horticulture rich state of Jammu and Kashmir. One paper from Saudi Arabia by *Saima Qutab, Farasat Shafi Ullah and Faiza Saqib* take the readers in to glorious past by reviving the Urdu literary magazine '*Nuqoosh*' Research Center (NRC). The study reports the development of Urdu literary magazine '*Nuqoosh*' based on a unique collection of Urdu literary letters and original literary scripts submitted to editors of '*Nuqoosh*'. It also brings into light the initiative for collecting the intellectual memory of literary works, its management and technical handling. *Shazia Manzoor and Tania Farooq* have examined the role ICT plays in promoting gender equality in India. The study helps to



understand the linkages between ICT and women empowerment. *Nazir Ahmad Bhat and Shabir Ahmad Ganaie* have researched the preferential places and gadgets for accessing e-resources in agricultural libraries of Northern India.

I am highly thankful for the editorial team of TRIM especially *Dr. Shabir Ahmad Ganaie, Dr. Sumeer Gul* and *Dr. Tariq Ahmad Shah* for their efforts in giving their best to the current issue.

It was not possible to get this issue in this format without the tireless efforts of *Dr. Sumeer Gul*. He worked hard in giving final shape to the journal. I would like to place on record my appreciation to him for his help & cooperation in making the issuance of this journal possible.

We expect more for the coming volumes from the contributors so that TRIM will have both a qualitative as well as quantitative growth.

**Abdul Majid Baba**



## To be or not to be: History and Dilemma of Public Libraries in Contemporary Nigeria

Bappah Magaji Abubakar

### Abstract

**Purpose:** *This article traces the history and current status of public libraries in Nigeria. It examines the actual situation of public libraries in the country.*

**Design/Methodology:** *The content of the article is based on literature, personal observation, discussions and interactions with colleagues, as well as personal visitations to public libraries in Nigeria.*

**Findings:** *Public libraries in Nigeria are inundated by certain multiple and monumental challenges that have been triggered by the current economic recession. Almost all public libraries are in chaotic situation because of lack of proper awareness about their roles, poor funding, high rate of illiteracy, poor reading culture, inadequacy of information resources and services, and above all inadequacy of professionally trained personnel.*

**Research Implications:** *The discussion may provide or serve as a reference point for future planning and development public libraries in Nigeria. Additionally, the discussion would also assist public libraries to review their operations and services so as to take measures to improve on their present status. Other developing countries facing similar dilemma may benefit from the discussion as well.*

**Future Research:** *Future studies can be conducted through more in-depth quantitative or qualitative approaches to get further insights about public libraries situation in Nigeria.*

**Keyword:** *Public libraries; History; Dilemma, Contemporary Nigeria*

### Introduction

Public libraries are those libraries that provide services to the general public free of charge and without any discrimination. The importance of public libraries to societal development cannot be over emphasized. This is more so with the recent fundamental changes and transformations in all facets of public library activities which has been triggered by developments in Information and Communication Technologies (ICTs). According to **Shaffer (2014)**, libraries of every type and size face new challenges for survival and find new opportunities to redefine their roles in society at large or within a highly defined community due to the emergence of the Information Age which in turn gave rise to the Age of Intelligence.

For this reason, today's contemporary trends in library and information services in this electronic or digital age is deeply characterized with fundamental, dynamic and remarkable shift from traditional to virtual or digital libraries due to the influence of Internet technology on all aspects of human endeavors and on all aspects of library operations and services. However, it is worth noting that the pace of change in public libraries has

been varying in different parts of the globe i.e. there is a huge gap between the developed and the developing nations (**Abubakar, 2013**). Additionally, the fundamental philosophy of public library services can better be understood when one takes a critical look at the IFLA/UNESCO public library manifesto (1994) which states that the public library-the local gateway to knowledge, provides a basic condition for lifelong learning, independent decision-making and cultural development of the individual and social groups.

Therefore, public library according to **Henderson et al (2010)**, is an entity that is established under state enabling laws or regulations to serve a community, district, or region, and that which provides at least the following: (1) an organized collection of printed or other library materials, or a combination thereof; (2) paid staff; (3) an established schedule in which services of staff are available to the public; (4) the facilities necessary to support a collection, staff, and schedule; and (5) that is supported in whole or in part with public funds. Thus, public libraries are libraries that provide resources and services to the general public free of charge.

It is against this backdrop, this paper examines the history and dilemma of public libraries in Nigeria. It describes the real lingering situation bedeviling the public libraries in the country and offers solutions to such challenges.

### **History of public libraries in Nigeria**

Nigeria is a country that is geographically located on the coast of western Africa. It covers an area of about 924,000 km<sup>2</sup>; it is bordered on the north by Niger Republic, on the east by Chad and Cameroon, on the south by the Gulf of Guinea, and on the west by the Republic of Benin. Nigeria is characterized with unique features and great diversity in almost all its sectors. With a population of about 173 million people, Nigeria is the largest country in Africa and the largest black nation on earth. It accounts for 47 percent of West Africa's population (**World Bank, 2015**). Similarly, it is one of the foremost oil producing/exporting countries in the world. Oil provides approximately 90 percent of foreign exchange earnings and about 80 percent of government revenue, and also contributes significantly to the growth of the nation's GDP (**Baghebo and Atima, 2013**). However, agriculture remains the dominant sector in the rural areas of Nigeria.

The public library development in Nigeria started with the Tom Jones Library in 1910 in Lagos, which was initially established as a subscription library. Another library of its type was the Lagos Library that was set up in 1932, by the Chief Secretary of Nigeria, Sir Alan Burns (**Nwokocha, 1998**). It is interesting to note that the Lagos Library was established with

financial assistance from the Carnegie Corporation of New York. According to **Aguolu (1989)**, the library was established with USD6,000 grant from the Carnegie Corporation of New York. Moreover, according to him, most of the users of the library were then, Europeans resident in Lagos. **Harris (1970)** state the library was opened for the use of members precisely on 29 September, 1932 as a subscription library, just like the Tom Jones Library. However at a later time, precisely in 1946, the Tom Jones Library and the Lagos Library were merged together to form the Lagos Public Library, which was administered by the British Council and the Lagos Town Council (**Nwokocha, 1998**).

However, the major turning point in the history of public libraries in Nigeria came from the UNESCO Seminar on Public Library Development in Africa, which took place at the then University College (now University of Ibadan) Ibadan between 27<sup>th</sup> July and 21<sup>st</sup> August 1953. The seminar recommended, among others, the need for the establishment of public libraries in Africa (**Opara, 2008**).

Shortly after the seminar, precisely two years after, the first public library law in Nigeria was endorsed by the defunct Eastern Regional Government which gave birth to the Eastern Regional Library Board in 1955. Thereafter, the Western and Northern Regional Governments also followed suit through the enactment of legal deposit decrees in 1957 and 1964 correspondingly. Presently, there are a number of public libraries in Nigeria. Indeed, according to the report of the **Librarians' Registration Council of Nigeria (n.d.)** there are 316 public libraries in Nigeria. However, a state (Borno State) was excluded because of lack of full report. Thus, public library services are reasonably and widely scattered in the country with each state of the federation having an established library board with a number of branches.

### **The dilemma of public libraries in Nigeria**

Based on the preceding historical antecedent of public library services in Nigeria, it is regrettable to note that after several years of public library services, the state of public libraries in the country is still far from reality. In other words, public libraries seem not to be among the nation's top priorities which invariably serve as a stumbling block to their development.

Specifically, it is quite regrettable to know that even among the educated citizens in Nigeria, there is the general myopic, unfortunate and negative perception about libraries, public libraries in particular which results to low recognition, lack of proper awareness and low patronage. This is contrary to what is obtainable elsewhere, particularly in the advanced countries where the level of awareness and recognition about the role of public libraries in all spheres of life is always on the increase. For

example, in US, the **ALA (2015)** annual report indicates that more than 2,700 libraries in the United States are using Libraries Transform, ALA's new campaign program to increase public awareness about the value, impact and services provided by libraries and library professionals. But in the case of Nigeria the reverse is always the case, because public libraries are highly docile, inactive and always lagging behind in this important aspect.

Additionally, another amazing hallmark to public library growth in advanced countries is that of philanthropic support to public libraries. Philanthropic organizations established by wealthy individuals have always contributed enormously to the development of public libraries in such places. Recently, **Ochs (2014)** reported that the William Penn Foundation gave a three-year USD25 million grant that will cater for the renovation at the Central Library at the Benjamin Franklin Parkway, Philadelphia as well as five other library branches.

Even in Africa, such good gesture had been extended to public libraries development. From 1911-1961 for example, the Carnegie Corporation had given the sum of USD894,049 to British Africa, while the sum of USD603,035 was given to South Africa for libraries development (**Olden, 1995**). Apart from the USD6,000 grant to the Lagos Library, the Carnegie Corporation had also given the sum of USD15,000 for the Kenya (Carnegie) Circulating Libraries (**Olden, 1995**). Unfortunately, this is not happening in Nigeria where there are a lot of wealthy individuals and corporate organizations who can as well play the same role and complement the efforts of the government. Thus, it is therefore impossible for public libraries to develop to a certain level in such situation.

### **Major challenges**

The foregoing section of this article has signaled the obstacles confronting Nigerian public libraries. This portion will now be more specific on such challenges. Thus, it is essential to elucidate on each of the challenges and put them in proper limelight and perspective.

### **Poor funding**

Poor financial support appears to be the major obstacle confronting the Nigerian public library system which has been the foundation of all other problems. This challenge is further compounded by the current economic recession and shrinking budgets, coupled with massive and persistent corruption that has affected almost all sectors. It is worth reporting here that the country has entered its first economic recession in 25 years (**Ishiekwene, 2016**). It is equally important to note that corruption, which

is endemic, has become a major way of life which resulted in lack of fairness in resources allocation to public libraries.

Therefore considering its prevailing condition, in most instances, public libraries in Nigeria are receiving paltry budgetary allocations from their sponsoring authorities. To further buttress this point, the budgetary allocation of the Kaduna State Library Board for the year 2016 is worth reporting .The Library Board was given the sum of NGN 42,180,000 which was barely equivalent to USD211,959.80 as at that that time before the further crashing of the Nigerian Naira as against the U.S Dollar and other foreign currencies. Such amount was meant for both recurrent and capital expenditures. This means that after paying salaries and emoluments of its staff, the Library Board will definitely find it difficult to execute its planned programs. Likewise, the annual report of **Katsina State Library Board (2016)**; and the progress report of the **Bauchi State Library Board (2015)** indicate that two Library Boards have suffered from insufficient funding which hampered their operations. Thus, this circumstance is almost the same in other public libraries in the country. Therefore, the existence of poor/inadequate funding is very glaring in most public libraries in the country as one can easily see from the existence of tattered infrastructural condition of most public libraries.

Even though the issue of poor/declining funding of public libraries is not peculiar to Nigeria alone, in some advanced countries public libraries are also faced with similar situation. For instance, a report on the state of libraries in Germany by the **German Library Association (2015)** has indicated that due to continually reduced budgets, public libraries in the country do not have sufficient funding for essential services.

While in UK, according to the **Chattered Institute of Public Finance and Accountancy (2015)**, the total expenditure for the council-run libraries fell by GBP50m, from GBP0.99bn (2013-14) to GBP0.94bn (2014-15). However, from another side of the coin, in the United States, the scenario is entirely different. A report of the survey of public libraries in the United States conducted by the **Institute of Museum and Library Services (2016)** for fiscal year 2013 showed that “the public invested over USD11.5 billion in revenue to public libraries in FY 2013, which was unchanged from FY 2012 after adjusting from inflation. This represents an increase of 7.5 percent over 10 years.”

Indeed, to place the “Nigerian negative funding situation of public libraries” in the right context, it is important to note that public libraries are regarded as non-revenue generating agencies, as such less emphasis should be given to them. Aje (as cited in **Olden, 1985**) describe the situation in the following manner: “public libraries compete for public funds with other services whose benefits are easier to quantify. They do not bring in any money”. Of course, this view portrays the attitude

generally expressed about public libraries then, and even now, by the policy makers and the society in general.

**Figure 1 Oyo State Library Board, Ibadan, South-West, Nigeria.**



### **High Rate of illiteracy and Poor Reading Culture**

In the words of former U.S President, Bill Clinton (1994):

*“Literacy is not a luxury. It is a right and a responsibility. It is hard for most of us to imagine functioning in our society without the ability to complete a job application or balance a check book”.*

However, in the case of Nigeria, this is also another major challenge affecting the development of public libraries at present. Although public libraries are not only meant for the literate members of the society, high rate of illiteracy can have severe consequences on them. Available statistics shows that illiteracy rate is still very high and surging. Indeed, according to the report of UNESCO (as cited in **Bakare , 2015 and Ugwu , 2016**), 65 million Nigerian are still illiterate indicating that the illiteracy rate stands at over 50%. Similarly, the United Nations International Children's Emergency Fund (UNICEF) has ranked Nigeria as the number 10 worst country with out-of-school children (**Pulse, 2016; The Telegraph, 2016**). This is despite all the efforts made to improve the literacy situation in the country.

The truth is that there has not been any significant improvement in the last couple of years in terms of eradicating illiteracy in the country, because a similar situation was observed by **Olden (1985)** when he cited the findings of UNESCO which indicated then, that 66% of Nigeria's population aged fifteen and above were illiterates. In a similar manner, **Diso (2007)** observed that the literacy situation in Nigeria had declined from 57% in 1990 to 49% in 2001.

In terms of reading culture, it is sad to report that after 56 years of independence, the reading culture among Nigerians is still very poor and discouraging. It is even sadder to know that even among the educated citizens; the culture of reading is always going down and at its lowest ebb despite the readership promotion campaigns of the National Library of Nigeria and other similar agencies. A visit to any public library in Nigeria will reveal that extent. Most public libraries are always populated by senior secondary schools students who are mostly preparing for their public examinations and who habitually disappear after accomplishment of their missions. To further support this point, the annual report of the **Katsina State Library Board (2016)** shows that the service points of the library had encountered acute shortage of seating accommodation for readers during the time of public examinations in the year under review. The above scenario which is disturbing portrays a dark picture to the survival of public libraries in Nigeria in this information age. The severe consequences can be viewed from two-fold dimensions. Firstly, public library services will remain highly irrelevant in any society where there is high rate of illiteracy and poor reading culture. Secondly, hardly can any library service that is targeting users thrive under such a disappointing situation.

### **Inadequate Library and Information Resources, Services and Facilities**

Lack of proper information resources, services and facilities seems to be one of the most difficult of all the limitations retarding public libraries



growth in Nigeria. In the first instance, information resources development which is the backbone for all library services anywhere has become a dream rather than a reality to many public libraries. Secondly, where the information resources are even made available, the resources provided are not always current and hardly keep in touch with the realities of the changing period. According to **Abubakar (2013)** many public libraries in Nigeria have on their shelves archaic and old fashioned information resources. Additionally, most public libraries depend on donations.

***Fig. 3: Kano State Library Board, North-West, Nigeria.***



***Fig. 4: Bauchi State Library Board, North-East, Nigeria.***



A study conducted by **Saleh and Lasisi (2011)** which aimed at assessing public library services in North Eastern States of Nigeria found that 90% of the collections of the libraries studied were outdated and mostly were in form of monographs. This state of affairs is the same in other public libraries throughout the nation. In addition, most public libraries in the country are sited in urban areas thereby always serving the urban dwellers, while those in the rural areas are most often neglected. Moreover, the progress report of the **Bauchi State Library Board (2015)** shows that the two service points of the library in the state (i.e. Bauchi and Azare) had a total collection of only 20,464 volumes of books and 2,044 journals. However, what appears more striking from the report which is noteworthy here is the fact that apart from the inadequacy of the collections, new books were last purchased in the two libraries in 2001. It is a well known fact that libraries are expected to be dynamic not static. Unfortunately, this disappointing situation portrays the extent to which public libraries are neglected by their sponsoring authorities in the country. In a similar situation, while lamenting the setbacks confronting the Rivers State Library Board, the Deputy Governor of the State commented in the following manner “I am surprised that the State Library has deteriorated so much that current materials are not available for the reading public” (**The Gazette, 2015**).

**Fig. 5: Grounded Mobile Library Van of the Kano State Library Board, Kano State, Nigeria**



A further point to note is the state of modern infrastructural facilities in public libraries. At present, according to the report of the **Librarians' Registration Council of Nigeria (n.d.)** only 21 out of 37 State Library Boards have Internet connectivity; while only 3 out of 37 have been automated. Additionally, a recent visit to the Oyo state Library Board by

the present writer revealed that the ICT center of the library which was functioning very well had crumbled for over six months and has just been recently revived. Furthermore, one may even go a step further to compare the situation with that of other countries. For example, according to the report of **Public Libraries 2020 (2014)**, there were 5,353 libraries in Czech Republic with 91% of them offering Internet access. Similarly, the same report indicated that in Spain, there were 4,164 public libraries with 89% of them offering Internet access. Besides, the deplorable and disappointing state of mobile library services is worth reporting here. At present, this valuable service is not provided by most public libraries in the country. In the Kano State Library Board for instance, the mobile library/extension services that was started in September 1987 with a collection of 1,999 volumes (**Kano State Library Board Annual Report, 1989**) used to be one of the most important services of the library. But at present, the service is no longer provided due to the poor condition of the mobile library van.

#### **Insufficient and Unmotivated Workers**

For any successful library services, there must be adequate personnel in terms of quantity and quality. In other words, staffing is the nucleus of all library services provided anywhere. Accordingly, even the IFLA/UNESCO Guidelines for Public Library Services (**Gill, 2001**) has recommended the need for adequate staffing. However, in the present day Nigerian society, most public libraries are affected by inadequate number of staff especially professionally trained ones which in most instances can be described as abysmally poor. For example, this inadequacy can be seen glaringly when the total number of professional librarians in some state library boards is compared with the total population of their respective states (**Table 1**). For that reason, public library services are not properly rendered as expected.

Additionally, aside their inadequacies, most public libraries personnel in the country are not always motivated by their sponsoring authorities and, therefore, in most instances always looking highly dejected and unimpressed. Thus, it is lamentable to state that most public libraries are not able to achieve most of their objectives because of the inadequacy of staff which retard their development. Even in a situation where there is availability of staff, most public librarians are highly passive and non-innovative because of the insufficient support and attention given to them and their libraries. This is in addition to the very meager and discouraging salaries that hardly take them home, as well as the poor working conditions that are always accorded them which tend to kill their morale. It is important to put on record that most professionally trained librarians working in public libraries are always on transit waiting for any

available opportunity to offer itself so that they can scramble for greener pastures elsewhere.

**Table 1: Some Public Libraries and their Number of Professional Librarians in Nigeria**

Name of Public Library	Year of Establishment	Number of Librarians	Total Population of the States
Adamawa State Library Board	1991	15	3,178,950
Anambra State Library Board	1991	15	4,177,828
Bauchi State Library Board	1976	18	4,653,066
Benue State Library Board	1976	05	4,253,641
Gombe State Library Board	1996	10	2,365,040
Kaduna State Library Board	1967	14	6,113,503
Kano State Library Board	1967	29	9,401,288
Katsina State Library Board	1987	09	5,801,584
Kebbi State Library Board	1991	07	3,256,541
Kogi State Library Board	1991	05	3,314,043
Kwara State Library Board	1968	08	2,365,353
Plateau State Library Board	1976	05	3,206,531
Ogun State Library Board	1976	15	3,751,140
Oyo State Library Board	1978	10	5,580,894
Zamfara State Library Board	1996	09	3,278,873

*Sources: Telephone Calls; Available Annual Reports; National Bureau of Statistics, (2012)*

### The way forward

For public libraries in Nigeria to be in tandem with global requirements, they need to be satisfactorily and comprehensively supported by the policy makers and the society at large. Therefore, as a way out of the logjam, the following are suggested for urgent consideration:

- **Sufficient and sustained funding:** Adequate and sustained provision of funds by the policy makers in the country is highly desirable. The respective governments should fund the nation's public libraries very well so that they can go on board with their real business of service provision, delivery and awareness campaigns. In addition, this would help in addressing the infrastructural deficit.
- **Total restructuring and transformation of public libraries:** The government should restructure, and repositioned the nation's public library system through the actual implementation and review of relevant policies regarding public libraries on regular basis. If the government is serious, the recent campaign launched by the President in September, 2016, tagged as 'Change begins with me' should be the guiding principle. Thus, it is hoped that the change agenda at all levels will have absolute regard and respect to libraries.
- **Adequate staffing:** Provision of adequate staff and improved working condition for public librarians is extremely desirable. This

would help to address the capacity problem and constant migration of public librarians to other types of libraries and other sectors.

- **Professional associations:** The various professional library associations and regulatory bodies operating in the nation should wake up from their slumber and become proactive by putting heads together and develop a synergy with the policy makers which should aimed at educating them about the role of public libraries in every sphere of human endeavor.
- **Deliberate aggressive campaigns against illiteracy and poor reading culture:** A more purposeful, deliberate and aggressive approach should be jointly developed by the government, the public libraries and all other critical relevant stakeholders with the aim of curbing the high rate of illiteracy and poor reading culture. It is vital to note that no nation can attain development where there is high rate of illiteracy and poor reading culture.
- **Initiatives:** Public libraries should be innovative enough by developing strategies through lobbying, advocacy, and promotion campaigns aimed at attracting the attention and sympathy of wealthy individuals and corporate organizations so that they can get support from them just like their counterparts in the advanced countries. This is necessary because the government alone cannot effectively fund the public libraries. In addition, they should develop alternative means of generating revenue through initiatives and ventures as the case maybe in order to supplement what they are given.

## **Conclusion**

Public libraries growth and success can be stymied anywhere if there is no proper support and attention. In other words, lack of proper support to public libraries can make them weak and indolent. There is no gainsaying the fact that public libraries in Nigeria are in 'real dilemma' i.e. their major intent is still very far from being achieved. Additionally, there is a popular saying that goes this way: 'to whom much is given, much is expected.' However, in the case of Nigeria, one can equally and unequivocally say that 'to whom less is given, less is definitely expected.' Undeniably, whenever there is poor support, recognition and awareness it will be extremely difficult for any library to flourish and even survive. Thus, the existence of numerous and very glaring challenges confronting the Nigerian public library system which is pathetic is worth reporting and at the same time worth knowing by whoever cares to know.

The discourse above tried to explain the real lingering state of affairs in the Nigerian public library environment which in all ramifications appears to be highly not conducive enough. Therefore, all hands must be on deck

to ensure that public libraries in the country are adequately supported and fully integrated into all schemes of national development.

## References

- Abubakar, B.M. (2013). Poverty alleviation through strategic public library services in Nigeria in the 21<sup>st</sup> Century: a model. *IFLA Journal*, 39(1), 4-14
- Aguolu, C.C. (1989). *Libraries, knowledge and national development*. (A professorial inaugural lecture series no. 45). Maiduguri: University of Maiduguri Press.
- American Library Association (2015). *Annual report*. Retrieved from <http://www.ala.org/aboutala/annualreport>
- Baghebo, M. & Atima, T.O. (2013). The impact of petroleum on economic growth in Nigeria. *Global Business and Economic Research Journal*, 2(5), 102-115.
- Bakare, M. (2015). 65 million Nigerians are illiterates. *Vanguard*, Retrieved from <http://www.vanguardngr.com/2015/12/65-million-nigerians-are-illiterates-unesco>
- Bauchi State Library Board (2015). *Progress report from 29<sup>th</sup> May, 2015 to date*. Bauchi: Bauchi State Library Board.
- Chattered Institute of Public Finance and Accountancy UK (2015). *Library funding cut by £50m*. Retrieved from <http://www.cipfa.org/about-cipfa/press-office/archived-press-releases/2015-press-releases/library-funding-cut-by-%C2%A350m>
- Clinton, W.J. (1994). *Proclamation 6578-National literacy day, 1993 and 1994*.
- Diso, L.I. (2007). *Mobile service providers and m-learning in Nigeria: mobility in a contracting space*. A paper presented at the ICML Conference, 18-20 April, Amman, Jordan.
- German Library Association (2015). *2015/16 report on the state of libraries*. Retrieved from [http://www.bibliotheksverband.de/fileadmin/user\\_upload/DBV/publikationen/dbvBericht2015ENkorr.pdf](http://www.bibliotheksverband.de/fileadmin/user_upload/DBV/publikationen/dbvBericht2015ENkorr.pdf)
- Gill, P. (2001). *The public library service: IFLA/UNESCO Guidelines for Development*. IFLA publications 97. Munchen: K.G. Saur.
- Harris, J. (1970). *Libraries and librarianship in Nigeria at mid-century*. Ghana: University of Legon.
- Henderson, E., Miller, K., Craig, T., Dorinski, S., Freeman, M., Isaac, N., Keng, J., O'shea, P., & Schilling, P. (2010). *Public libraries survey: fiscal year 2008 (IMLS-2010-PLS-02)*. Washington DC: Institute of Museum and Library Services. Retrieved from [www.imls.gov/statistics](http://www.imls.gov/statistics)

- IFLA/UNESCO (1994). *Public library manifesto (English Version)*, Retrieved from <http://www.ifla.org>.
- Institute of Museum and Library Services (2016). *Public libraries in the United States survey: fiscal year 2013*. Washington DC: Institute of Museum and Library Services. Retrieved from <https://www.ims.gov/publications/public-libraries-united-states-survey-fiscal-year-2013>
- Ishiekwene, T, (2016). Worst economic crisis in 25 years: what Nigeria can do to get out of recession. *Sahara Reporters*, Retrieved from <http://saharareporters.com/2016/10/05/worst-economic-crisis-25-years-what-nigeria-can-do-get-out-recession-tony-ishiekwene>
- Issak, A. (2000). *Public libraries in Africa: a report and annotated bibliography*. Oxford: International Network for the Availability of Scientific Publications.
- Kano State Library Board. (1989). *Annual report*. Kano: Kano State Library Board.
- Katsina State Library Board. (2016). *Annual report*. Katsina: Katsina State Library Board.
- Librarians' Registration Council of Nigeria (n.d). *Report on the state of public libraries in Nigeria*. Retrieved from <http://www.lrcn.gov.ng/Report%20On%20The%20State%20Of%20Public%20Lib%20In%20Nig.pdf>
- Manyong, V.M., et al. (2005). *Agriculture in Nigeria: identifying opportunities for increased commercialization and investment*. Ibadan: International Institute of Tropical Agriculture.
- National Bureau of Statistics. (2012). *Annual abstract of statistics*. Retrieved from [http://www.nigerianstat.gov.ng/pdfuploads/annual\\_abstract\\_2012.pdf](http://www.nigerianstat.gov.ng/pdfuploads/annual_abstract_2012.pdf)
- Nigerian Gazette. (2015). *Rivers State Government to revamp public library*. Retrieved from <http://thenigeriangazette.com/rivers-state-governement-to-revamp-public-library/>
- Nwokocha, U. (1998). Public libraries in Nigeria: decades of persistent problems. *International Information and Library Review*, 30, 97-104.
- Ochs, A. (2014). Behind the New York Life Foundation's local library funding. *Inside philanthropy*, Retrieved from <https://www.insidephilanthropy.com/new-york/2014/11/15/behind-the-new-york-life-foundations-local-library-funding.html>
- Olden, A. (1985). Constraints on the development of public library services in Nigeria. *The Library Quarterly*, 55(4), 394-423.

- Olden, A. (1995). *Libraries in Africa: pioneers, policies, problems*. London: The Scarecrow Press, Inc.
- Opara, U.N. (2008). The public library in contemporary Nigeria: Challenges and the way forward *IFLA Journal*, 34(4), 349-358.
- Public Libraries 2020 (2014). *Country factsheets* Retrieved from <http://www.publiclibraries2020.eu/content/country-factsheets>
- Pulse News (2016). *UNICEF rankings: Nigeria is no 10 worst country for access to primary school, South Sudan is no 2*. Retrieved from <http://pulse.ng/world/unicef-ranking-nigeria-is-no-10-worst-country-for-access-to-primary-school-south-sudan-is-no-2-id5442950.html>
- Saleh, A.G. & Lasisi, F.I. (2011). An assessment of public library services in North Eastern Nigeria. *Library Philosophy and Practice*. Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1525&context=libphilprac>
- Shaffer, R. I. (2014). From inertia to innovation: Information-based organizations in the Age of Intelligence. *IFLA Journal*, 40(3), 145-149.
- The Telegraph (2016). *Liberia tops UNICEF ranking of 10 worst countries for access to primary school*. Retrieved from <http://www.telegraph.co.uk/news/2016/09/01/liberia-worst-country-in-the-world-for-access-to-primary-school/>
- Ugwu, O. (2016). Examining Nigeria's high illiteracy rate. *Today Nigeria*. Retrieved from <https://www.today.ng/opinion/116334/examining-nigerias-high-illiteracy-rate>
- World Bank (2015). *Nigeria: Overview*. Retrieved from <http://www.worldbank.org/en/country/nigeria/overview>

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## Relationship of Leadership and Learning Organizations: An empirical study in Select Academic Libraries of J&K

Umar Mufeed  
Ajaz Akbar Mir

### Abstract

**Purpose:** *The paper is aimed to study the relationship between transformational leadership and learning organization practices in academic libraries of select universities of J&K. The purpose of the study is to analyze the perception of university library staff towards the existing transformational leadership practices prevailing in the libraries. Moreover, the present study also aims to examine the perception of library staff towards the learning organization practices.*

**Methodology:** *The sample respondents in this study comprise of 166 library staff taken from the five universities of J&K. The selection of respondents was based on simple random sampling. The data collected were analyzed using descriptive and inferential statistics.*

**Findings:** *There is a positive and significant relationship between transformational leadership and learning organization practices in academic libraries. It is stressed that transformation leadership and learning organization practices in academic libraries need to be further strengthened which would lead in creating a competitive and quality work environment.*

**Research implications:** *The study suggests that steps aimed at building leadership behaviour and learning organization atmosphere must take the relationship between transformational leadership and learning organization into perspective for better performance and functioning of academic libraries.*

**Keywords:** *Academic libraries; Learning organization; Leadership; Transformational leadership*

**Paper type:** *Research*

### Introduction

In this 21<sup>st</sup> century the academic institutions and other organizations are facing tremendous challenges in making themselves more adaptive, effective and competent in facing complex and turbulent environment. The success and failure of institutions lie in how much they are proactive in managing and addressing the issues that confront them. The organizations need to adopt appropriate and adequate measures in order to cope with change. It calls for adopting features of learning organizations which focus on making organizations and institutions adaptive to changes in the environment. Learning organizations play a pivotal role in transforming itself and to continuously innovate and facilitate all of its members towards achieving individual as well as organizational goals (Pedler, Burgoyne & Boydell, 1991). Academic libraries are no exception to this, the dynamics and nature of academic library keeps on changing due to new trends in research and

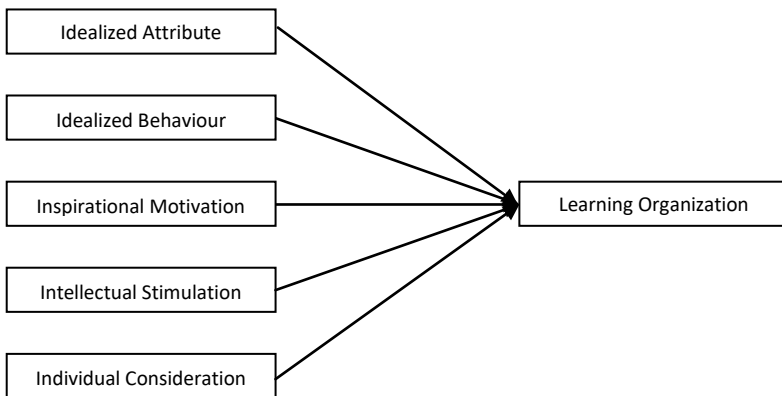
development, improvements in accessibility of information, new digital formats and communication of technologies, expectations of delivering quality library services, and growth of inter-disciplinary research (**Jurow, 1990; Renaud & Murray, 2003; Travica, 1999; Winston & Dunkley, 2002**). Academic libraries are expected to perform those functions and operations that yield better results and have wider applicability and acceptance among universities in general and stakeholders in particular. **Ferguson and Metz (2003)** point that it is very vital for academic libraries to undergo fundamental rethinking and redesign of their activities, library roles, services and operations which they render so as to keep with fast changing technological innovations. Academic libraries play a crucial role in dissemination of knowledge and information among students, faculty, researchers and other information seekers. Academic libraries are considered as an important pillar of institutional development and nation building. They are quite sensitive in sustaining and maintaining the institutional fabric of universities and other academic institutions. Academic librarians have an uphill task to strive hard to become learning organizations which meets expectations of academic community, copes up with fast changing environment, and continuously innovates to deliver performance to meets world library standards. The past literature on library and information science suggests that if academic libraries develop as learning organizations, they can innovate, excel and perform better and can cope with change very effectively (**Chen, 2006; Kim & Abbas, 2010; Neal, 2011**). It has been realized that the sole purpose of learning organizations is to abstain from using traditional practices of doing tasks and to keep on innovating and coping up with change so as to survive in this complex environment. It calls for library leadership to play a very active role and become change agents in transforming and shaping the academic libraries. The success factor of academic libraries lies in its leadership. **Iannuzzi (1992)** feels that it requires developing collaborations, supporting the services and maintaining infrastructure for performing operations that meets global standards. Library leadership is very critical to the functioning of library operations as it affects its effectiveness and role in the academic institution and its adaptability to new functions and initiatives. Library leadership need to develop strategies and devise mechanism and to articulate the vision and mission among the library staff so that each and every individual cherishes the same and collaborates with each other in order to sustain the excellence of academic libraries. Keeping this in view, the present study is an attempt aimed to examine the relationship of learning organization and leadership in academic libraries.

## Review of Literature

**Senge (1990)** was one of the pioneers to work in the area of learning organizations and has opined that learning organizations focus on creating organizations where people's aspirations are set free, where knowledge is shared, where individuals collectively work together and learn to produce desired results and where new and rational thinking and ideas are nurtured. **Garvin (1993)** opines that *"learning organization is skilled at creating, acquiring and transferring knowledge and at modifying its behavior to reflect new knowledge and insights"*. Past research studies point out that learning organizations have a positive relationship with academic libraries as they help in bringing out best in their staff by increasing their capability in identifying new opportunities, understanding new concepts and in strengthening their creativity to innovate and cope with change (**Chen, 2006; Hsiao & Chang, 2011; Neal, 2011**). In the past academic libraries used to maintain status quo and were reactive to environment changes, but now trends in library and information science have forced libraries to adopt pro-active strategy, be problem solvers and take appropriate measures and steps in order to sustain library professionalism (**Dixon, 2000; Goble 1997**). **Riggs (1997)** also is of the opinion that with the changes that are expected to take place in academic institutions, libraries will become more creative and innovative. **Lee (1993)** observes that if library leadership wants to enhance effectiveness, achieve excellence and to ensure survival then it must collaborate with its staff to cope with change. Library leadership must focus on developing learning organization where people can learn to express their views, where knowledge can be shared, where behavior is modified to understand new ideas and explore new opportunities. University librarian must be active and effective in providing support, direction and vision for the overall development and progress of library. He/she should ensure collective partnership from all his library staff and should be a guide and facilitator in anticipating change and in promoting sound learning culture. **Cargill and Webb (1988)** assert that library leadership must integrate and unite people from all departments and should inspire and encourage them to participate in the decision making and problem solving processes. It has been widely accepted by many researchers that library leadership is critical for the survival and success of libraries. **Mullins and Linehan (2005)** view that changes in technology, growing expectations of information seekers, increasing turbulence and information based society have forced to have vibrant and effective leadership for the success of libraries. A library as an institution needs a sound and dynamic leaders who can transform it to achieve new heights and can also navigate it to face change and uncertainty. **Shoaf (2004)** opine that due to the changes in the library environment, effective

leaders are needed with talents and capability as they can maneuver resources for the good of academic community instead of traditional leadership. It calls for role of transformational leaders who can make libraries adaptive to changes and complexities. Transformational leaders have the vision for the institution and can guide their followers to pursue common objective in pursuit of institutional goals. Previous studies on leadership and library and information science highlight that transformational leadership can play active role in managing crisis and can effectively cope with uncertainty (Düren, 2013; Hicks and Givens, 2013; Mavrinac, 2005). A learning organization can innovate, face uncertainty, transform, excel and thrive, provided it has the backing and support of transformational leaders who can overcome difficulties with maturity and competence.

**Fig 1: Theoretical framework of Transformational Leadership and Learning Organization**



### Research Objectives

- To examine the relationship between transformational leadership practices and learning organization
- To analyze the perception of library staff towards transformational leadership practices
- To study the perception of library staff towards learning organization practices prevailing in select academic libraries
- To suggest measures for improving the leadership practices and learning organization practices in academic libraries of sample select universities.

### Research Hypothesis

The following hypothesis has been formulated for the present study:

- H<sub>0</sub>: There is a positive and significant relationship between transformational leadership practices and learning organization

### Research Methodology

The population of the study consists of employees of academic libraries of five select universities of Jammu & Kashmir. i.e. *University of Jammu; University of Kashmir; Islamic University of Science and Technology (IUST); Baba Ghulam Shah Badshah University (BGBSU) and Shri Mata Vaishno Devi University (SMVDU)*. The sample respondents (166) comprised of library assistants and supporting staff. In the present study a questionnaire was used to collect data. The selection of universities was based on convenience sampling. To measure leadership, MLQ - 5X questionnaire developed by **Bass and Avalio (1995)** comprised 20 items of transformational leadership across five dimensions was used. For measuring learning organization practices, learning organization theory developed by **Senge (1990)** was used. Out of the total 166 sample respondents, only 137 respondents returned the questionnaire, with a response rate of 82.53%. Moreover, nine questionnaires returned were found outliers and not suitable for final analysis purpose. Thus, the final analysis was done on only 128 questionnaires. The reliability coefficient of the research instrument variables varied from 0.72 to 0.84. The questionnaire was divided into two sections; Section A, containing information of respondents and Section B comprising of items on transformational leadership and learning organization. The data collected were analyzed using SPSS 20.0. Version. Descriptive statistics was used to study the employee's perception with respect to transformational leadership and learning organization practices and also to explain the profile of respondents of present study. Inferential statistics such as *Pearson correlation* was employed for hypothesis testing.

### Data Analysis and Findings

#### Perception of library staff towards transformational leadership practices

Overall perception of library staff towards transformational leadership practices was found favourable with overall mean score and % mean score of 3.58 and 64.50%, respectively. Moreover, the highest perception among dimensions of transformational leadership was found in *inspirational motivation* with mean score of 3.64 and % mean score of 66.00%, i.e. employees show highest satisfaction with this dimension. It was followed by *idealized attribute* with mean score of 3.61 and % mean score of 65.25%; *intellectual stimulation* (3.59, 64.75%); *idealized*

behavior (3.54, 63.50%) while as the least satisfaction was found in *individual consideration* with mean score of 3.52 and % mean score of 63.00% (Table 1).

**Table 1: Perception of library staff towards transformational leadership practices (N=128)**

Dimension	Mean Score	Std. Deviation	%Mean Score
Idealized Attribute	3.61	0.82	65.25
Idealized Behaviour	3.54	0.86	63.50
Inspirational Motivation	3.64	0.73	66.00
Intellectual Stimulation	3.59	0.75	64.75
Individual Consideration	3.52	0.80	63.00
<b>Transformational Leadership</b>	<b>3.58</b>	<b>0.79</b>	<b>64.50</b>

### Perception of library staff towards learning organization practices

An overall perception of library staff towards learning organization practices was found favourable with overall mean score and % mean score of 3.71 and 67.75%, respectively. Moreover, the highest perception among dimensions of learning organization was found in *team learning* with mean score of 3.78 and % mean score of 69.75% i.e. employees show highest satisfaction with this dimension. It was followed by *systems thinking* with mean score of 3.75 and % mean score of 68.75%; *mental models* (3.72, 68.00%); *shared vision* (3.69, 67.25%) while as the least satisfaction was found towards *personal mastery* with mean score of 3.63 and % mean score of 65.75% (Table 2).

**Table 2: Perception of library staff towards learning organization practices (N=128)**

Dimension	Mean Score	Std. Deviation	% Mean Score
Personal Mastery	3.63	0.77	65.75
Mental Models	3.72	0.75	68.00
Shared Vision	3.69	0.79	67.25
Team Learning	3.78	0.81	69.50
Systems Thinking	3.75	0.72	68.75
<b>Learning Organization</b>	<b>3.71</b>	<b>0.76</b>	<b>67.75</b>

### Relationship between transformational leadership and learning organization

There is a positive and significant relationship between transformational leadership and learning organization in academic libraries. It depicts that the more we exhibit transformational leadership in academic libraries,

the more it will result in creating favorable learning organization. Therefore, our hypothesis is supported since correlation between transformational leadership practices and learning organization was found positive and statistically significant ( $r=.556, p=0.000$ ) (Table 3).

**Table 3: Relationship between transformational leadership and learning organization**

		Learning Organization
<b>Transformational Leadership</b>	Pearson Correlation	.556**
	Sig. (2-tailed)	.000
	N	166

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

### **Correlation between transformational leadership practices and learning organization**

Correlations were determined between transformational leadership practices and overall learning organization. All the dimensions of transformational leadership depict positive and significant relationship with respect to learning organization. The most positive relationship was found in case of *inspirational motivation* ( $r=.344, p=0.000$ ), *individual consideration* showed  $r=.344, p=0.000$ . It was followed by *idealized behavior* ( $r=.323, p=0.000$ ) and *idealized attribute* ( $r=.308, p=0.000$ ). The least positive and significant relation was found in *intellectual stimulation* ( $r=.297, p=0.000$ ). All the correlations were statistically significant (Table 4).

**Table 4: Correlation between transformational leadership practices and learning organization**

Transformational Leadership Practices		Learning Organization
Idealized Attribute	Pearson Correlation	.308**
	Sig. level	0.000
Idealized Behaviour	Pearson Correlation	.323**
	Sig. level	0.000
Inspirational Motivation	Pearson Correlation	.365**
	Sig. level	0.000
Intellectual Stimulation	Pearson Correlation	.297**
	Sig. level	0.000
Individual Consideration	Pearson Correlation	.344**
	Sig. level	0.000

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

### Demographic Profile of the Respondents

The number of male staff was 97 (58.43%) while the percentage of female staff was 69 amounting to 41.57%. Similarly, on the basis of experience, those who had less than 10 years of work experience comprised 28.32% of respondents and those who had more than 20 years of experience comprised 33.73% of respondents. With respect to age of respondents, those who had age up to 35 years comprised of 39 (23.50%) respondents, while as those in the age range of 35- 50 comprised of 69 respondents (41.56%) (Table 5).

**Table 5: Demographic Profile of the Respondents (N=166)**

Factor	Frequency	%Age
<b>Gender</b>		
Male	97	58.43
Female	69	41.57
<b>Experience</b>		
Upto 10 Years	47	28.32
10 Years to 20 Years	63	37.95
20 Years and Above	56	33.73
<b>Age</b>		
Upto 35 Years	39	23.50
35 Years above to 50 Years	58	34.94
50 Years and Above	69	41.56

### Conclusion and Suggestions

There exists a relationship between transformational leadership practices and learning organization. The results show that there exists a favourable perception of library staff towards transformational leadership practices. Moreover, employees show positive response with respect to learning organization approach. There is still a scope to strengthen transformational leadership of academic libraries for gaining popularity and relevance in the world academic institutions.

Transformational leadership plays a pivotal role in making institutions more competitive and capable in facing complex and turbulent environment. The 21<sup>st</sup> century demands institutions to transform knowledge and information which is accessible and result oriented to all the stakeholders. Academic libraries are at the forefront in creating environment which is favourable and yet competitive in facing global knowledge world. Due to the rapid changes in the present knowledge world and the professional environment of libraries the functioning of



academic library activities has been affected. In this scenario, learning organization is a very suitable approach in dealing with change and uncertainty. The concept of learning organization can only become effective and successful if leadership of academic libraries provides adequate facilities to their staff in implementing strategies and measures that yield better performance and results. A learning organization needs a leader who can inspire their followers to work and cooperate and make them adaptable in responding to change and in achieving desired goals and outcomes. It calls leadership of academic libraries to articulate a vision among its staff and exhibit a philosophy on which academic libraries stand so that competence of professional librarianship is attained and excellence of academic library is sustained.

### References

- Bass, B.M. & Avolio, B.J. (1995). *Multifactor Leadership Questionnaire*. USA: Mind Garden
- Cargill, J., & Webb, G. M. (1988). *Managing libraries in transition*. Phoenix: Oryx Press.
- Chen, K. (2006). Library evaluation and organizational learning: A questionnaire study. *Journal of Librarianship and Information Science*, 38, 93-104.
- Dixon, P. (2000). Il bibliotecario che riflette. *Biblioteche Oggi*, 18(8), 16-20.
- Düren, P. (2013). Leadership in libraries in times of change. *IFLA Journal*, 39(2), 134- 139.
- Ferguson, C., & Metz, T. (2003). Finding the third space: On leadership issues related to the integration of library and computing. In C. E. Regenstein & B. I. Dewey (Eds.), *Leadership, higher education, and the information age* (pp. 95-112). New York: Neal- Schuman Publishers, Inc.
- Garvin, D. A. (1993). Building a learning organization. *Harvard Business Review*, July-August, 78-91
- Goble, D. S. (1997). Managing in a change environment: From coping to comfort. *Library Administration & Management*, 11(3), 151-156.
- Hicks, D., & Given, L. M. (2013). *Principled, transformational leadership: Analyzing the discourse of leadership in the development of librarianship's core competences*.
- Hsiao, H. C., & Chang, J. C. (2011). The role of organizational learning in transformational leadership and organizational innovation. *Asia Pacific Edu. Review*, 12, 621-631.
- Iannuzzi, P. (1992). Leadership development and organizational maturity. *Journal of Library Administration*, 17, 19-36.

- Jurow, S. (1990). Preparing for library leadership. *Journal of Library Administration*, 12(2), 66-71.
- Kim, Y., & Abbas, J. (2010). Adoption of Library 2.0 functionalities by academic libraries and users: A knowledge management perspective. *The Journal of Academic Librarianship*, 36(3).
- Lee, S. A. (1993). Organizational change in research libraries. *Journal of Library Administration*, 18(3-4), 129-143.
- Mavrinac, M. (2005). Transformational leadership: Peer mentoring as a values-based learning process. *Portal: Libraries and the Academy*, 5(3), 391-404.
- Mullins, J., & Linehan, M. (2005). The central role of leaders. *Library Management*, 26(6/7), 386-396.
- Neal, J. G. (2011). The entrepreneurial imperative: Advancing from incremental to radical change in the academic library. *Portal: Libraries and the Academy*, 1(1), 1-13.
- Pedler, M., Burgoyne, J., & Boydell, T. (1991). *The Learning Company*. Maidenhead: McGraw-Hill.
- Renaud, R., & Murray, A. (2003). Organizing for leadership: How university libraries can meet the leadership challenge in higher education. In C. E. Regenstein & B. I. Dewey (Eds.), *Leadership, higher education, and the information age* (pp. 163- 180). New York: Neal-Schuman.
- Riggs, D. E. (1997). What's in store for academic libraries? Leadership and Management Issues. *The Journal of Academic Librarianship*, 23(1), 3-8.
- Senge, P. M. (1990). *The Fifth Discipline: the art and practice of the learning organization*. New York: Doubleday.
- Shoaf, E. C. (2004). New leadership for libraries: Who has the right stuff? *College & Research Libraries News*, 67(7), 363-375.
- Travica, B. (1999). Organizational aspects of the virtual library: A survey of academic libraries. *Library & Information Science Research*, 21(2), 173-203.
- Winston, M. D., & Dunkley, L. (2002). Leadership competencies for academic librarians: The importance of development and fundraising. *College & Research Libraries*, 63(2), 171-182.

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## **Transformational Leadership of University Librarians: A case study of University of Kashmir and University of Jammu**

**Mubashir Majid Baba**

### **Abstract**

**Purpose:** *The study examines the level of transformational leadership and its elements among university librarians as perceived by the library staff.*

**Design/methodology/approach:** *The study follows survey method employing structured questionnaire. Moreover, a multitude of sources like books, journals, databases, and website of university of Kashmir and university of Jammu were consulted to get additional insights.*

**Findings:** *There is an above average level of transformational leadership style perceived for the university librarians with most positive perception for the University of Kashmir. Among the five dimensions of transformational leadership, university librarians are perceived to possess higher level of individual consideration followed by inspirational motivation, intellectual stimulation, idealized behaviour and idealized attributes respectively.*

**Research Implications/Value:** *The study shows the transformation leadership style demonstrated by the university librarians and will be helpful in framing the leadership programs for the university libraries.*

**Keywords:** *Leadership; Transformational leadership; Effective leadership; Librarians; University libraries*

**Paper type:** *Research*

### **Introduction**

**E**ffective leadership is an essential ingredient for an organization's success, and therefore, the ability to identify and define effective leadership is crucial. Technical expertise, superior performance, and established experience are no longer only criterion of effective leadership. Effective leaders inspire, motivate, promote a positive work environment, understand and manage emotions, build bonds, so on and so forth.

Transformational leadership style is being considered as the most effective leadership style among all the styles. This leadership changes and transforms people in various ways and is concerned with ethics, values, emotions, standards, and long term goals. It includes assessing followers' motives, satisfying their needs, and treating them as full human beings. Transformational leadership involves an exceptional form of influence that moves followers to accomplish more than what is usually expected of them. It has been the focus of many research studies, since early 1980s and is now a part of the "New Leadership" paradigm (Bryman, 1992), which gives more attention to the charismatic and

ffective elements of leadership. **Lowe and Gardner (2001)** observe that one third of the research was about transformational or charismatic leadership and its popularity is attributed to emphasis on intrinsic motivation and follower development, which fits the needs of today's work groups, who want to be inspired and empowered to succeed in times of uncertainty (**Bass & Riggio, 2006**).

The term transformational leadership was first coined by **Downtown (1973)**. Its emergence as an important approach to leadership began with a classic work titled "*Leadership*" by political sociologist **James Mac Gregor Burns (1978)**. In his work, Burns attempted to link the roles of leadership and followership. He wrote of leaders as people who tap the motives of followers in order to better reach the goals of leaders and followers.

Transformational leadership with its focus on change and developing new leaders is needed in today's university libraries. In this light, the present study investigates the perception of library staff about the use of transformational leadership by the librarians in the university libraries of J&K.

### **Review of literature**

Transformational leaders have the ability to stimulate other leaders, colleagues, and followers to embrace new organizational perspectives, support the vision of the organization, achieve higher level of performance, and adopt higher levels of moral and ethical standards. Transformational leaders enhance follower satisfaction and performance by demonstrating Idealized leadership, Inspirational motivation, Intellectual stimulation, and Individualized consideration, referred to as Four I's (**Bass & Avolio, 1994, 2004**).

- **Idealized leadership:** Leaders who demonstrate self-confidence and power by acting as role models for their followers. Idealized leadership is displayed in two forms:
  - **Idealized attributes:** Such leaders are admired, respected, and trusted by their colleagues and followers, because they perform in ways that are beneficial to followers, teams, and the organizations.
  - **Idealized behaviour:** Leaders seek to obtain follower buy-in, share risks, and consistently handle issues related to conduct, ethics, standards, and values.
- **Inspirational motivation:** It involves motivating and inspiring the followers by providing meaning and understanding to the objectives and work environment. The leaders use effective communication to create a team atmosphere with a shared vision for the future.

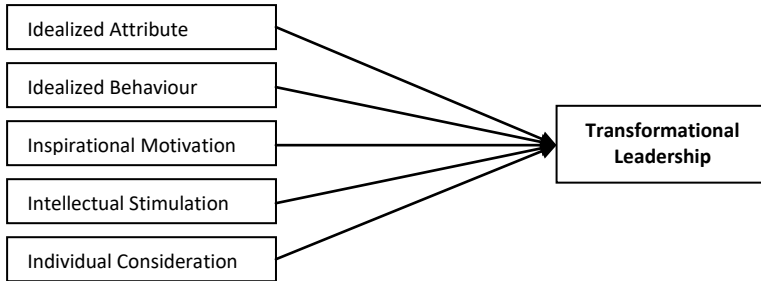
- **Intellectual stimulation:** Leaders stimulate their followers to use innovation and creativity to develop new ways of accomplishing goals and objectives. The leaders encourage critical thinking and problem solving attitude to improve performance.
- **Individual consideration:** Transformational leaders are attentive to the needs of their followers to help them to reach a higher level of performance. The leaders focus on employee development through mentoring and coaching.

Emotional intelligence appears to be an antecedent for effective transformational leadership. **Esfahani and Soflu (2011)** investigate the relationship between emotional intelligence and transformational leadership in physical education managers of Golestan state including presidents and deputies of provinces and districts physical education offices and general department of Golestan state physical education. It is found that emotional intelligence and transformational leadership has a significant relationship. The results also reveal that personal consideration is the strongest predictive variable in transformational leadership and empathy as strongest variable in emotional intelligence. The highest mean score in transformational leadership is found for individualized consideration and least for intellectual stimulation. Similarly for emotional intelligence, the highest is for social skills and least for individual properties. **Ayiro (2014)** determine the relationship between emotional intelligence and transformational leadership and also analyses whether transformational leadership is positively related to leader effectiveness, team effectiveness and school climate. The study reveals that emotional intelligence is positively related with transformational leadership style, which is in turn is positively associated with leader effectiveness and service climate, but not with team effectiveness. One of the four dimensions of emotional intelligence i.e. Regulation of Emotion (ROE) is found to be highly co-related with the dimensions of transformational leadership.

**Rowold and Heinitz (2007)** found that transformational leadership increases the impact of transactional leadership on employees' performance and company profit. In addition, they found that transformational leadership and charismatic leadership are overlapping. Similarly, **Nemanich and Keller (2007)** examined the impact of transformational leadership with the observation that transformational leadership behaviours such as idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation are positively related to acquisition acceptance, job satisfaction, and performance. Likewise, **Tims, Bakker and Xanthopoulou (2011)** observe the relationship between transformational leadership and work engagement for 42 employees and their supervisors in two different

organizations and notice that employees became more engaged in their work when their supervisors are able to boost subordinate's optimism through a transformational leadership style.

**Fig. 1 Elements of transformational leadership (Bass & Avolio, 1995)**



### Significance of the study

The study is significant in the field of leadership and is expected to add new knowledge to the transformational leadership concept. The study will assist in design and development of leadership programs particularly in the university libraries of J&K.

### Objectives of the study

- Examine the level of overall transformational leadership of University Librarians as perceived by the library staff members.
- Ascertain the level of transformational leadership elements of University Librarians.
- To learn whether the differences in perception between the university of Kashmir and university of Jammu are statistically significant or not.

### Methodology

Descriptive research design was used for the study based on the survey method. The type of sampling employed in the study was stratified sampling. In total 100 questionnaires were distributed, of which 73 were received back. Out of 73, six questionnaires were not considered, because of incomplete information provided by the respondents. Hence, the final analysis was limited to a sample of 67 respondents. The data was collected through structured questionnaire designed for the transformational leadership by **Bass & Avolio (1995)**. The scale was modified keeping in view the context of the study. The data was analyzed using descriptive statistics and independent sample tests.

## Results

The perception of library staff towards their university librarian's transformational leadership and its dimensions is given in Table 1. A mean score of 3.75 and percentage score of 75% indicate that an above average level of transformational leadership is perceived by library staff for their university librarians. The standard deviation of 0.641 also support the results are reasonably trustworthy. The perception of library staff about the dimensions of transformational leadership also appears to be at above average level with mean scores of 3.56, 3.62, 3.88, 3.73, and 3.96 for idealized attribute, idealized behaviour, inspirational motivation, intellectual stimulation, and individual consideration respectively.

**Table 1: Transformational leadership of university librarians as perceived by library staff**

Dimension	Mean score	% of Mean score	Standard Deviation	Ranking
IA	3.56	71.2	.715	5 <sup>th</sup>
IB	3.62	72.4	.697	4 <sup>th</sup>
IM	3.88	77.6	.714	2 <sup>nd</sup>
IS	3.73	74.6	.683	3 <sup>rd</sup>
IC	3.96	79.2	.649	1 <sup>st</sup>
<b>Overall TL</b>	<b>3.75</b>	<b>75.0</b>	<b>.641</b>	

Note: IA=Idealized Attribute; IB=Idealized Behaviour; IM=Inspirational Motivation; IS=Intellectual Stimulation; IC=Individual Consideration; TL=Transformational Leadership

Among the five dimensions of transformational leadership, respondents report highest score for individual consideration followed by inspirational motivation, intellectual stimulation, idealized behaviour and idealized attributes respectively (**Fig 2**).

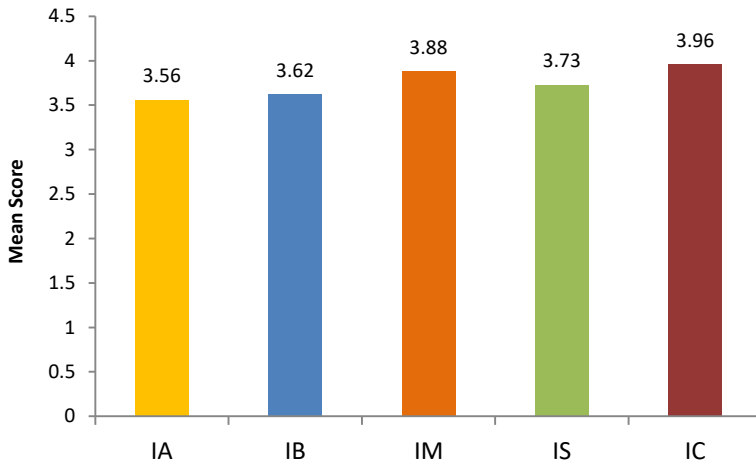
### Transformational leadership across universities and its comparison

An attempt is also made to analyze and compare the perception of library staff regarding transformational leadership of their university librarians. From a comparative view point, University of Kashmir report the most favourable perception regarding the transformational leadership of their university librarian, with a mean score of 3.83 and percentage score of 76.6 percent (**Table 2**).

However, *z test* was employed to examine whether the differences between the university of Kashmir and university of Jammu are statistically significant or not. The results reveal that the difference is merely an outcome of chance factor and are not statistically significant (*z* value = .843; *p* value = 0.097).



**Fig. 2: Dimensions of Transformational Leadership**



*Note: IA=Idealized Attribute; IB=Idealized Behaviour; IM=Inspirational Motivation; IS=Intellectual Stimulation; IC=Individual Consideration; TL=Transformational Leadership*

**Table 2: Transformational leadership across universities and its comparison**

	Mean Score	% of Mean Score	Z Value	Sig.*
University of Kashmir	3.83	76.6	.843	0.097 <sup>ns</sup>
University of Jammu	3.67	73.4		

*Note: \*p>.05; ns = not significant*

**Conclusion**

The study indicates above average level of transformational leadership is perceived for the university librarians. However, the overall perceptions specify that the university librarians need to improve the use of the transformational components to make the libraries open to change. Among the five dimensions of transformational leadership, the respondents report highest for individual consideration followed by inspirational motivation, intellectual stimulation, idealized behaviour and idealized attributes respectively. The librarians are attentive to the needs of followers, helping them to reach a higher level of performance and also motivate and inspire library staff by providing meaning and understanding towards the objectives of libraries, thereby improving working environment. They stimulate staff members to use innovation and creativity to develop new ways of accomplishing goals and objectives.

Without strong, effective leadership, university libraries and the profession of librarianship cannot flourish. Transformational leaders and the use of the Four “is” will help to facilitate a successful change.

### Limitations and future direction for research

- Results can't be generalized due to small sample size. More institutions can be included for generalizing the results.
- The Primary data used in the study has been collected only once. In the future, longitudinal approach should be adopted by collecting response from the respondents at different periods of time.

### References

- Ayiro, L. P. (2014). Transformational leadership and school outcomes in Kenya: Does emotional intelligence matter?. In *FIRE: Forum for International Research in Education*, 1(1), 26-49. Retrieved from <http://preserve.lehigh.edu/fire/vol1/iss1/4>
- Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness: Through transformational leadership*. California, USA: SAGE.
- Bass, B. M., & Avolio, B. J. (1995). *MLQ: Multifactor leadership questionnaire for research: Permission set*. California, USA: Mind Garden.
- Bass, B. M., & Avolio, B. J. (2004). *Multifactor leadership questionnaire (3rd Ed.)*. California, USA: Mind Garden.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. New York, USA: Psychology Press.
- Bryman, A. (1992). *Charisma and leadership in organizations*. London: Sage.
- Burns, J. M. G. (1978). *Leadership*. New York: Harper & Row.
- Downtown, J. V. (1973). *Rebel leadership: Commitment and charisma in the revolutionary process*. New York: Free Press.
- Esfahani, N., & Soflu, H. G. (2011). Relationship between emotional intelligence and transformational leadership in physical education managers. *Procedia-Social and Behavioral Sciences*, 30, 2384-2393. doi: 10.1016/j.sbspro.2011.10.465
- Lowe, K. B., & Gardner, W. L. (2001). Ten years of the leadership quarterly: Contributions and challenges for the future. *The Leadership Quarterly*, 11(4), 459-514. doi: 10.1016/S1048-9843(00)00059-x
- Nemanich, L. A., & Keller, R. T. (2007). Transformational leadership in an acquisition: A field study of employees. *The Leadership Quarterly*, 18(1), 49-68. doi: 10.1016/j.leaqua.2006.11.003
- Rowold, J., & Heinitz, K. (2007). Transformational and charismatic leadership: Assessing the convergent, divergent and criterion

validity of the MLQ and the CKS. *The Leadership Quarterly*, 18(2), 121-133. doi: 10.1016/j.leaqua.2007.01.003

Tims, M., Bakker, A. B., & Xanthopoulou, D. (2011). Do transformational leaders enhance their followers' daily work engagement?. *The Leadership Quarterly*, 22(1), 121-131. doi: 10.1016/j.leaqua.2010.12.011

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## Research Output, Ranking, and Performance of the University of Kashmir vis a vis Global Research: Where it stands?

Samir N. Hamade  
Sheikh Shueb  
Rabia Shah  
Aabid Hussain  
Huma Shafiq

### Abstract

**Purpose:** The main aim of the study is to showcase the productivity and relative impact of research from the University of Kashmir in comparison to the rest of the world.

**Methodology:** The study is based on the application of various InCites indicators for the purpose of analysis.

**Findings:** Research output of the University of Kashmir has shown promising growth except with a negative impact for some years which can be attributed to the political instability in the Valley of Kashmir. The number of papers published from the University of Kashmir are less for the initial years with a promising growth over the later years. Even the citation graph including the ones cited in international sources has also improved over the years. The relative impact of documents has also shown promising growth. Chemistry; Plant and Animal Sciences; Physics; Mathematics; Clinical Medicine and Environment/Ecology are the subjects having highest growth. The subject of Physics witnesses a majority of works published in international sources. The disciplines Chemistry; Plant & Animal Science; and Clinical Medicine receive higher citations. Relative impact in terms of subject area in total indicates that it is high for Engineering; Computer Science; Mathematics; Plant & Animal Science; and Clinical Medicine with Plant & Animal Science; Clinical Medicine; Space Science; and Social Sciences, General in lead in terms of relative impact to the subject area in international sources.

**Research implications:** The study is limited to the data available through InCites.

**Future research:** The study is first of its kind deciphering the research output and performance from a politically unstable region, Kashmir. The use of InCites as a comparison tool is also first of its kind.

**Keywords:** Research output; Research performance; Research performance; Incites; Performance indicators; University of Kashmir

**Paper type:** Research

### Introduction

The quality of research that takes in to consideration various parameters is evaluated from various dimensions. Since the inclusion of various metrics and indicators, the quality as well as quantity of research has always been measured though with some limitations (Sahel, 2011). "Research output is increasingly evaluated and

monitored at different levels and for different purposes” (Gonzalez-Brambilaa & Velosob, 2007). Contributing research and academic institutions all over the globe need to be testified in order to ascertain their actual position in comparison to rest of the world. Where they stand and what they contribute, is an important aspect to be studied. The concern in the positioning of universities stems from the need to appraise research output using some kind of objective metrics. For example, it may direct student choice of a university to pursue a degree (Dridi et al. 2010). Even the funding bodies can make use of this evaluation for the allocation of funds without any partial and unfair assessment (Billaut et al, 2010). This will not only improve the research activities of the institutions studied but will also help in eradicating the underlying problems associated with various academic and research institutions. The increasing impact of research output determines the quality of individual institutions as well as researchers. The evaluation parameters these days have gone beyond simple bibliometric analyses and the complex evaluation indicators are evolving day by day. “Each metric has certain advantages and might compensate for the disadvantages of another” (Sahel 2011). Even bibliometric methods are considered fatal in ranking of universities (van Raan, 2005). To highlight the repute of an institution it is important that it should pass the tests of various quality indicators. The “life work” (Nederhof, 1985) phenomenon has often been used as an evaluative parameter of the research output of target units such as persons or institutions. In order to ascertain the level of productivity, scientific impact, and research quality evaluation of academic institutions is necessary.

A multidimensional way of evaluating the research output of an institution will satisfy various properties by which the prestige scores of a particular institution or a set of institutions can be measured.

In this pursuit it is crucial to analyze the research output and performance of University of Kashmir, so that the actual stand of University of Kashmir in comparison to the rest of the world can be assessed from diverse set of parameters. Since University of Kashmir belongs to the developing world and it is being a leading institution from a conflict zone, Kashmir, it is important to study the productivity and relative impact of research from University of Kashmir in comparison to the rest of the world. Today the evaluation studies go beyond merely giving the number of publications and citations for a researcher; numerous bibliometric indicators are also used (Grupp & Moge, 2004), allowing the multi-dimensional nature of scientific achievement to be captured in its complexity (Froghi, Ahmed, Finch, Fitzpatrick, Khan & Dasgupta, 2012; Haslam & Laham 2010).

### **About University of Kashmir**

“University of Jammu and Kashmir was established in the year 1948. In the year 1969 it was split into two full-fledged Universities: University of Kashmir at Srinagar and University of Jammu at Jammu. The University of Kashmir is positioned at Hazratbal in Srinagar district of Kashmir. The Main Campus of the University spread over 247 acres of land is divided into three parts – Hazratbal Campus, Naseem Bagh Campus and Mirza Bagh Campus (serving residential purpose). Additional land has been acquired at Zakura near the main campus for further expansion of the University. The serene atmosphere of the Campus provides the right kind of atmosphere for serious study and research. The real beauty of Kashmir can be witnessed in the Campus.

Over the years, University of Kashmir has expanded to a large extent. It has established satellite campuses to make higher education more reachable to people living in far-flung regions of the Valley of Kashmir” **(About University of Kashmir, 2013).**

### **Purpose of the Study**

Universities and higher educational institutions strive to excel in research and teaching. The research output of any university is an indication of its success, status, and ranking among other institutions. The main objective of this paper is to study the impact and performance of the research produced by the University of Kashmir in comparison to the impact of research to that of the world. The study tries to explore various determinants of research output of University of Kashmir and its scientific impact using one of the comprehensive citation-based research evaluation tool - *InCites*.

### **Review of Literature**

Comparing the research output among universities has been studied by some researchers **(Liu and Cheng 2005; Buela-Casal et al. 2007; Aguillo et al. 2010; Torres-Salinas et al. 2011; Shin et al. 2011).**

**Astin (1991); Brennan and Shah (2000); and Brewer, Gates and Goldman (2002)** have also tried to assess the excellence parameters in higher education. Some important guidelines for academic quality rankings and excellence have been studied by **Clarke (2002). Connor, Burton, Pearson, Pollard and Regan (1999)** present different parameters by which students can make a choice of universities and colleges. **Eccles (2002)** has been able to justify the use of university rankings in the United Kingdom. The interest in ranking the research output of the universities on the basis of the multidimensional prestige of influential fields has been studied by **García, Rodríguez-Sánchez, Fdez-Valdivia, Torres-Salinas and Herrera (2012).** Comparison of university rankings has also been studied

by **Aguillo, Bar-Ilan, Levene & Priego (2010)**. **Aguillo, Granadino, Ortega and Prieto (2006)** have also tried to showcase scientific research activity and communication measured with cyber metrics indicators. **Dill and Soo (2005)** conducted a cross-national analysis of university ranking systems. The academic ranking of world universities and the methodologies and problems associated with it are also highlighted by **Liu and Cheng (2005)**. **Liu and Cheng (2008)** have also discussed the major rankings according to the Berlin principles. The impact of global rankings in higher education has also been studied by **Marginson and van der Wende (2007)**. A benevolent ranking of universities as an alternate method to rank universities keeping in view the major drawbacks of the current ranking has been researched by **Witte and Hudrlikova (2013)**. **Ding, Ge, Wu & Zheng (2013)** have also evaluated the China's research performance in the field of pharmacology/pharmacy through *InCites* analysis. **Adams, Gurney, Hook & Leydesdorff (2013)** carried out collaboration analyses research performance profiles data in *InCites*. Bibliometric characteristics of highly cited papers from Taiwan, 2000–2009 has also been studied by **Miyairi and Chang (2012)** using *InCites* analytical tool. Analysis of scientific fields or disciplines in comparison to global rankings has also been researched (**Porter and Rafols 2009; Lillquist and Green 2010; Herrera et al. 2010; Lo'pez-Illescas et al. 2011**). Evaluation of Social Science research has been carried by **Black (1994)**.

### Data Source and Methodology

*InCites* a customized, citation-based research evaluation tool on the Web was used for the analysis of institutional productivity and benchmarking the output of University of Kashmir for the period of 1981-2013. The "institutional comparison" service of *InCites*'s, "global comparisons" was made use of with "Essential Science Indicators: 22 Subject Areas" as a subject area schema to be compared. The data was retrieved against various combinations made on "comparison"; "institution" and "subject area". Furthermore, the data was tabulated on the three main reports generated from *InCites*:

- 1) All documents
- 2) All documents and documents with international collaboration
- 3) Documents with international collaboration only

The research output distribution of University of Kashmir was studied keeping in view the following indicators:

- Aggregator performance indicator
- Web of Science documents (Total & International)
- Times cited (Total & International)
- Percentage of documents cited (Total & International)
- Relative impact to world (Total & International)

- Percentage of documents in World (Total & International)
- Percentage of documents cited relative to World (Total & International)

### About InCites

"*InCites™* based on the platform of WoS in ISI Web of Knowledge is a customized, web-based research evaluation tool used to analyze institutional productivity and benchmark the output against peers worldwide. With customized citation data, global metrics, and multidimensional profiles on the leading research institutions, *InCites* gives the comprehensive insight into one's institution's performance. *InCites* is a single environment for research and bibliometric assessment and evaluation to better support long-term vision and keep the policymakers, administrators, analysts and information specialists in government agencies, universities, corporations, private laboratories, publishing companies, and foundations, as well as members of the scientific press and recruiters informed of the latest trends with a multifaceted analytics view" (Thomson Reuters, 2014).

### Results, analysis and interpretation

A total of 931 documents represent *University of Kashmir* research output receiving 3,317 citations with 3.56 citations per document (61.87%). *University of Kashmir* holds a *relative impact* of 0.20 to that of world with 0.76% of the documents cited in relation to global research production. The aggregate performance indicator for the *University of Kashmir* scores 0.40.

Out of 931 documents, 128 (13.75%) were from international sources. However, of 3,317 citations that the 931 documents were received, 815 (24.57%) were cited in *international* sources with 6.37 citations per document in international sources against 3.56 citations per document in total. 61.87% documents from the *University of Kashmir* are cited in total with 73.44% of the documents cited in international sources. The total relative impact of the *University of Kashmir* in comparison to world is low (0.20) in comparison to international relative impact (0.35). The percentage of documents cited in relation to the world is also low (0.76) in totality in comparison to the international platforms (0.90 %). The aggregate performance indicator for the *University of Kashmir* scores 0.40.

### Annual citation pattern and research output trend

Research output from *University of Kashmir* is showing a promising growth except for some years (1989-2003) with a steep growth from 2008 onwards and the highest score in 2013 (*Mean*=28.21; *St.Dev*=31.45;



*Med=21; Min=2; Max=140*). However, the international document scores are very low for the initial years but an abrupt increase is evident from the year 2011 (*Mean=3.88; St. Dev=6.27; Med=1; Min=0; Max=24*).

Though the citation reception is promising for University of Kashmir documents in total across all the years (*Mean=100.52; St. Dev=84; Med=82; Min=13; Max=351*) but the international citation graph (works cited in international sources) has improved over the later years (*Mean=24.70; St.Dev=29.35; Median=12; Min=0; Max=92*).

*"The average number of citations per paper (CPP) is an indicator that is often used to compare scientific impacts of publications among countries, institutions, and journals. CPP is defined as the number of citations divided by the number of publications" (Fu et al. 2012).* The cites per document in total are highest for the year 1995 (*Mean=5.44; St. Dev=4.58; Median=4.28; Min=0.25; Max=25*) with 1987, 2002, 1997 and 2006 receiving the highest number of cites per document in international sources (*Mean=12.29; St. Dev=16.65; Median=7; Min=0; Max=82*).

*"Percentage of documents cited is commonly used for assessing the impact of individual authors, institutions, and journals on the scientific community" (Larcombe & Voss, 2011).* The year 1991 turns to be a top scorer in terms of percentage of documents cited both in total (*Mean=68.56; St. Dev=18.66; Median=74.60; Min=20; Max=100*) and international sources (*Mean=86.71; St. Dev=25.44; median=100; Min=0; Max=100*). However, the years 1988, 1995, 2004, and 2006 also score well in terms of total percentage of documents cited with the years 1985, 1987, 1989, 1991, 1993, 1994, 1996, 1997, 2002, 2004, 2005, 2006, 2007 and 2010 among the ones where 100% documents are cited in international sources (**Table 1**).

### **Annual relative global impact**

The relative impact of the documents of University of Kashmir to that of the world both in terms of total count (*Mean=0.30; St. Dev=0.19; Median=0.24; Min=0.08; Max=0.99*) and internationality (*Mean=0.67; St. Dev=0.72; Median=0.55; Min=0; Max=3.69*) has improved over the years but the percentage of documents of University Kashmir to that of World in terms of relative impact is zero in international sources with no promising scores in totality also. The relative impact of the documents from University of Kashmir shows a significant increase except for some years both in terms of totality and internationality.

However, the percentage of *documents cited in relation to The world* is somewhat promising both in terms of total documents (*Mean=0.82; St. Dev=0.18; Median=0.83; Min=0.37; Max=1.15*) as well as international sources (*Mean=1.05; St. Dev=0.25; Median=1.11; Min=0; Max=1.22*) (**Table 2**).

**Table 1: Annual citation pattern and research output trends**

Years	Web of Science Documents			Frequency of Citations			Citations per Document (Impact)		% Documents Cited	
	Total	Intl Only	% Intl	Total	Intl Only	% Intl	Total	Intl	Total	Intl
1981	37	0.00	0.00	61	0.00	0.00	1.65	0.00	40.54	0.00
1982	23	0.00	0.00	94	0.00	0.00	4.09	0.00	52.17	0.00
1983	23	0.00	0.00	112	0.00	0.00	4.87	0.00	65.22	0.00
1984	31	0.00	0.00	97	0.00	0.00	3.13	0.00	54.84	0.00
1985	22	1	4.55	97	5	5.15	4.41	5.00	77.27	100
1986	20	0.00	0.00	82	0.00	0.00	4.10	0.00	65.00	0.00
1987	22	1	4.55	130	82	63.08	5.91	82.00	59.09	100
1988	31	6	19.35	205	87	42.44	6.61	14.50	87.10	83.33
1989	22	1	4.55	60	5	8.33	2.73	5.00	50.00	100
1990	20	4	20.00	61	23	37.70	3.05	5.75	70.00	75.00
1991	5	2	40.00	16	14	87.50	3.20	7.00	60.00	100
1992	9	6	66.67	95	83	87.37	10.56	13.83	66.67	83.33
1993	4	2	50.00	27	17	62.96	6.75	8.50	100	100
1994	6	2	33.33	15	12	80.00	2.50	6.00	66.67	100
1995	2	0.00	0.00	50	0.00	0.00	25.00	0.00	100	0.00
1996	10	1	10.00	27	16	59.26	2.70	16.00	60	100
1997	10	2	20.00	84	39	46.43	8.40	19.50	80	100

Years	Web of Science Documents			Frequency of Citations			Citations per Document (Impact)		% Documents Cited	
	Total	Intl Only	% Intl	Total	Intl Only	% Intl	Total	Intl	Total	Intl
1998	8	1	12.50	27	0.00	0.00	3.38	0.00	75.00	0.00
1999	5	0.00	0.00	13	0.00	0.00	2.60	0.00	40.00	0.00
2000	4	0.00	0.00	18	0.00	0.00	4.50	0.00	75.00	0.00
2001	3	0.00	0.00	42	0.00	0.00	14.00	0.00	33.33	0.00
2002	6	1	16.67	33	26	78.79	5.50	26.00	83.33	100
2003	8	0.00	0.00	35	0.00	0.00	4.38	0.00	75.00	0.00
2004	18	2	11.11	79	6	7.59	4.39	3.00	88.89	100
2005	21	1	4.76	111	11	9.91	5.29	11.00	76.19	100
2006	26	5	19.23	254	92	36.22	9.77	18.40	88.46	100
2007	34	3	8.82	351	51	14.53	10.32	17.00	82.35	100
2008	53	7	13.21	227	39	17.18	4.28	5.57	83.02	85.71
2009	63	9	14.29	230	46	20.00	3.65	5.11	74.60	88.89
2010	51	6	11.76	200	47	23.50	3.92	7.83	84.31	100
2011	84	17	20.24	217	52	23.96	2.58	3.06	78.57	82.35
2012	110	24	21.82	132	55	41.67	1.20	2.29	50.00	70.83
2013	140	24	17.14	35	7	20.00	0.25	0.29	20.00	25.00

INTL=International

**Table 2: Annual Global Impacts**

Years	Impact Relative to World		% Documents in World		% Documents Cited Relative to World	
	Total	Intl	Total	Intl	Total	Intl
1981	0.08	0.00	0.01	0.00	0.51	0.00
1982	0.20	0.00	0.00	0.00	0.65	0.00
1983	0.24	0.00	0.00	0.00	0.81	0.00
1984	0.15	0.00	0.01	0.00	0.68	0.00
1985	0.21	0.24	0.00	0.00	0.95	1.22
1986	0.19	0.00	0.00	0.00	0.79	0.00
1987	0.27	3.69	0.00	0.00	0.71	1.21
1988	0.29	0.65	0.01	0.00	1.05	1.01
1989	0.12	0.22	0.00	0.00	0.60	1.20
1990	0.13	0.24	0.00	0.00	0.83	0.89
1991	0.13	0.29	0.00	0.00	0.71	1.18
1992	0.43	0.56	0.00	0.00	0.77	0.97
1993	0.27	0.33	0.00	0.00	1.15	1.15
1994	0.10	0.24	0.00	0.00	0.76	1.15
1995	0.99	0.00	0.00	0.00	1.14	0.00
1996	0.11	0.63	0.00	0.00	0.68	1.14
1997	0.33	0.76	0.00	0.00	0.90	1.13
1998	0.13	0.00	0.00	0.00	0.85	0.00
1999	0.10	0.00	0.00	0.00	0.45	0.00
2000	0.17	0.00	0.00	0.00	0.84	0.00
2001	0.55	0.00	0.00	0.00	0.37	0.00
2002	0.22	1.04	0.00	0.00	0.92	1.11
2003	0.18	0.00	0.00	0.00	0.83	0.00
2004	0.20	0.13	0.00	0.00	0.99	1.11
2005	0.26	0.54	0.00	0.00	0.84	1.11
2006	0.54	1.01	0.00	0.00	0.98	1.11
2007	0.65	1.06	0.00	0.00	0.92	1.12
2008	0.32	0.42	0.00	0.00	0.95	0.98
2009	0.33	0.47	0.01	0.00	0.87	1.03
2010	0.48	0.95	0.00	0.00	1.01	1.20
2011	0.48	0.57	0.01	0.00	1.01	1.06
2012	0.45	0.86	0.01	0.00	0.78	1.11
2013	0.47	0.55	0.01	0.00	0.77	0.96

*Intl=International*

It is also important to ascertain the percentage of documents contributed by the University of Kashmir to that of the total subjective scores all across the globe. Scores in total are very low in percentage with 0.01 %

for only 10 subjects out of 22 in total and 0% for all subjects in terms of internationality.

"Chemistry" tops the list in terms of total % documents in comparison to the University of Kashmir followed by "Plant & Animal Science"; and "Physics." In comparison, the percentage of documents from the University of Kashmir compared internationally indicates that "Physics"; "Clinical Medicine"; "Plant & Animal Science"; and "Mathematics" are in the lead.

"Economics & Business" scores high in terms of total %age of documents cited in relation to particular subject area with "Computer Science" at the forefront in terms international subject relativeness.

"Economics & Business" again tops the list in terms of total %age of documents cited in relation to the University of Kashmir with "Computer Science"; "Space Science"; "Molecular Biology & Genetics"; "Neuroscience & Behavior"; "Microbiology"; "Multidisciplinary"; and "Social Sciences, General" ahead with 1.62% each at the lead place in terms of international institutional relativeness (Table3; Table 4).

## Discussion

Research output from University of Kashmir, though promising shows a slow growth for the years 1989-2003. This can be attributed to the onset of political disturbance in the year 1989 in the beautiful and peaceful valley of Kashmir. Though prior to 1989 there were some sparks of political instability but the onset of armed struggle from 1989 devastated every segment of Kashmiri society especially the educational one. In 1990 Kashmir witnessed the highest number of curfew impositions which stimulated the educational instability to a greater extent. "The things got only worst after 1990" (Quraishi, 2004). The valley of Kashmir turned to the city of bunkers and with helmeted and gun-totted security personnel far outnumbering the happy people of Kashmir (Quraishi, 2004 a). The whole valley was militated against the domestic and indigenous stability. Even Amin (2003) comments that peace in South Asia remains a hostage of the Kashmir dispute. The study clearly signifies the effect of political dispute on the research productivity and performance of University of Kashmir. Gul and Shah (2012); Gul, Nabi, Mushtaq, Shah and Ahmad (2013); Gul, Shah, and Ahmad (2014) also correlate political disturbance with the defoliation of educational systems in Kashmir. The political instability has always a damaging influence on the educational system in Kashmir.

**Table 3: Subject ranking by citations**

Subject Area	Web of Science Documents			Frequency of Citations			Citations per Document (Impact)		% Documents Cited	
	Total	Intl Only	Intl %	Total	Intl Only	Intl %	Total	Intl	Total	Intl
<b>Chemistry</b>	162	6	3.70	738	2	0.27	4.56	0.33	65.43	33.33
<b>Plant &amp; Animal Science</b>	115	16	13.91	537	184	34.26	4.67	11.50	69.57	93.75
<b>Clinical Medicine</b>	54	17	31.48	342	270	78.95	6.33	15.88	75.93	88.24
<b>Engineering</b>	47	2	4.26	274	0	0.00	5.83	0.00	61.70	0.00
<b>Physics</b>	91	25	27.47	241	114	47.30	2.65	4.56	60.44	84.00
<b>Mathematics</b>	84	16	19.05	240	32	13.33	2.86	2.00	63.10	62.50
<b>Environment/Ecology</b>	54	8	14.81	179	15	8.38	3.31	1.88	62.96	50.00
<b>Biology &amp; Biochemistry</b>	39	6	15.38	131	48	36.64	3.36	8.00	53.85	83.33
<b>Geosciences</b>	37	9	24.32	116	44	37.93	3.14	4.89	51.35	55.56
<b>Pharmacology &amp; Toxicology</b>	50	7	14.00	111	20	18.02	2.22	2.86	54.00	57.14
<b>Agricultural Sciences</b>	39	2	5.13	75	1	1.33	1.92	0.50	51.28	50.00
<b>Space Science</b>	18	3	16.67	73	44	60.27	4.06	14.67	72.22	100.00
<b>Molecular Bio. &amp; Genetics</b>	30	1	3.33	66	1	1.52	2.20	1.00	66.67	100.00

Subject Area	Web of Science Documents			Frequency of Citations			Citations per Document (Impact)		% Documents Cited	
	Total	Intl Only	Intl %	Total	Intl Only	Intl %	Total	Intl	Total	Intl
Microbiology	18	2	11.11	50	20	40.00	2.78	10.00	55.56	100.00
Computer Science	6	1	16.67	25	1	4.00	4.17	1.00	83.33	100.00
Materials Science	8	2	25.00	22	2	9.09	2.75	1.00	75.00	50.00
Immunology	3	0	0.00	14	0	0.00	4.67	0.00	66.67	0.00
Social Sciences, General	17	1	5.88	13	5	38.46	0.76	5.00	35.29	100.00
Multidisciplinary	12	1	8.33	8	4	50.00	0.67	4.00	41.67	100.00
Neuroscience & Behavior	6	1	16.67	5	1	20.00	0.83	1.00	66.67	100.00
Economics & Business	1	0	0.00	4	0	0.00	4.00	0.00	100.00	0.00
Psychiatry/Psychology	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00

*Intl=International*

The number of papers published in international sources scores low in the initial years but an increase has been witnessed over the years. The debut of internet technology in the University of Kashmir was a bit late, which deprived the researchers at the University from having an online access to international sources. The introduction of *"Infonet digital library consortium"* (an initiative of UGC INFLIBNET) at the University in December 2003 sensitized the majority of the researchers but the familiarity with the international sources improved after 2003 which is evident from the increasing number of international sources as the authoring choice from University of Kashmir.

The citation reception is promising for University of Kashmir documents in total across all the years but the international citation graph (works cited in international sources) has improved over the later years since authors from the university have shifted their works to various dissemination platforms via World Wide Web after 2003 which has resulted in an improved citation score graphs. Furthermore, deviance and priority of authors to publish their works in online publications has also catalyzed the citation graph of the authors from University of Kashmir.

Variations occur both in terms of cites per document as well as a percentage of documents cited since one witnesses an increase/decrease phenomenon over the years.

The relative impact of documents authored by researchers at the University of Kashmir has improved especially in the later years. The inclusion of internet technology in the campus and the access to various electronic resources have helped authors to a greater extent to publish their work via various online platforms. The online visibility of the works of the authors at the University of Kashmir has helped them to improve the relative impact of documents published.

*"Chemistry"; "Plant & Animal Sciences"; "Physics"; "Mathematics"; "Clinical Medicine" and "Environment/Ecology"* lead the list of subjects in terms of document production since all of them are the oldest departments in the university campus, resulting in a higher production on their sides.

*"Physics"* witnesses majority of works published in international sources as the majority of the faculty from the Department of Physics are affiliated with international universities and international projects resulting in more publications which are international in flavour.

The disciplines *"Chemistry"; "Plant & Animal Science"; and "Clinical Medicine"* receive higher citations since they are among the top producers of research works. Studies have shown a positive relation between research productivity and citation reception **(Tsay & Ma, 2003)**



**Table 4: Subject Impacts by Citations**

Subject Area	Impact Relative to Subject Area		Impact Relative to Institution		% Documents in Subject Area		% Documents in Institution		% Documents Cited Relative to Subject Area		% Documents Cited Relative to Institution	
	Total	Intl	Total	Intl	Total	Intl	Total	Intl	Total	Intl	Total	Intl
<b>Chemistry</b>	0.28	0.02	1.28	0.09	0.01	0.00	17.40	0.64	0.77	0.39	1.06	0.54
<b>Plant &amp; Animal Science</b>	0.32	0.80	1.31	3.23	0.01	0.00	12.35	1.72	0.82	1.11	1.12	1.52
<b>Clinical Medicine</b>	0.32	0.80	1.78	4.46	0.00	0.00	5.80	1.83	0.90	1.04	1.23	1.43
<b>Engineering</b>	0.61	0.00	1.64	0.00	0.00	0.00	5.05	0.21	0.84	0.00	1.00	0.00
<b>Physics</b>	0.15	0.26	0.74	1.28	0.00	0.00	9.77	2.69	0.72	1.00	0.98	1.36
<b>Mathematics</b>	0.38	0.27	0.80	0.56	0.01	0.00	9.02	1.72	0.88	0.87	1.02	1.01
<b>Environment/Ecology</b>	0.17	0.10	0.93	0.53	0.01	0.00	5.80	0.86	0.73	0.58	1.02	0.81
<b>Biology &amp; Biochemistry</b>	0.12	0.27	0.94	2.25	0.00	0.00	4.19	0.64	0.59	0.92	0.87	1.35
<b>Geosciences</b>	0.16	0.26	0.88	1.37	0.01	0.00	3.97	0.97	0.61	0.66	0.83	0.90
<b>Pharmacology &amp; Toxicology</b>	0.12	0.16	0.62	0.80	0.01	0.00	5.37	0.75	0.61	0.65	0.87	0.92
<b>Agricultural Sciences</b>	0.16	0.04	0.54	0.14	0.01	0.00	4.19	0.21	0.65	0.64	0.83	0.81
<b>Space Science</b>	0.15	0.56	1.14	4.12	0.01	0.00	1.93	0.32	0.82	1.14	1.17	1.62

Subject Area	Impact Relative to Subject Area		Impact Relative to Institution		% Documents in Subject Area		% Documents in Institution		% Documents Cited Relative to Subject Area		% Documents Cited Relative to Institution	
	Total	Intl	Total	Intl	Total	Intl	Total	Intl	Total	Intl	Total	Intl
<b>Molecular Bio &amp; Genetics</b>	0.05	0.02	0.62	0.28	0.00	0.00	3.22	0.11	0.73	1.09	1.08	1.62
<b>Microbiology</b>	0.11	0.39	0.78	2.81	0.01	0.00	1.93	0.21	0.61	1.10	0.90	1.62
<b>Computer Science</b>	0.41	0.10	1.17	0.28	0.00	0.00	0.64	0.11	1.19	1.43	1.35	1.62
<b>Materials Science</b>	0.24	0.09	0.77	0.28	0.00	0.00	0.86	0.21	0.98	0.65	1.21	0.81
<b>Immunology</b>	0.14	0.00	1.31	0.00	0.00	0.00	0.32	0.00	0.73	0.00	1.08	0.00
<b>Social Sciences, General</b>	0.07	0.49	0.21	1.40	0.00	0.00	1.83	0.11	0.48	1.36	0.57	1.62
<b>Multidisciplinary</b>	0.01	0.07	0.19	1.12	0.01	0.00	1.29	0.11	0.59	1.42	0.67	1.62
<b>Neuroscience &amp; Behavior</b>	0.03	0.03	0.23	0.28	0.00	0.00	0.64	0.11	0.73	1.10	1.08	1.62
<b>Economics &amp; Business</b>	0.26	0.00	1.12	0.00	0.00	0.00	0.11	0.00	1.32	0.00	1.62	0.00
<b>Psychiatry/Psychology</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Relative impact in various subject areas indicates that it is high for *Engineering; Computer Science; Mathematics; Plant & Animal Science; and Clinical Medicine* with *Plant & Animal Science; Clinical Medicine; Space Science; and Social Sciences, General* in the lead in terms of relative impact to the subject area in international sources.

### Conclusion

Studying the research performances at institutional levels "is an important measure to evaluate the development of scientific progress in certain time framework. Data obtained from such analysis are very helpful for judging the developmental level and trend and then can be used as indicators and evidence for better design and program of developing plans via various kinds of investment strategies" (Ding, Ge, Wu & Zheng, 2013 a). Having an attention towards the research performances, one can easily try to have a relative framework in the research world both at an institutional as well as subjective level. Since the quality in higher education institutions is the subject of several debates with no justifiable answer, quantifying and qualifying the research output can be the significant and effective way of academic ranking. Institutes need to raise the level of awareness among their researchers to elevate research both quantitatively as well as qualitatively that will surely help in a better knowledge creation and diffusion. Publishing in platforms with a promising impact should be the priority as this will collectively have a positive effect on the research and productivity which in turn will lead to a better influence on the performance of an institution. *InCites* can be used as a tool to measure the ranks of various academic institutions and where they stand in terms of research productivity. It can prove a highly viable way of assessing the research performance of higher education institutions even in a broader context since rankings have become an increasingly popular way to compare higher education performance and productivity (Hazelkorn, 2013). *InCites* not only showcases the ranking list of an institution but simultaneously research productivity, citation impact, and performance also.

### References

- About University of Kashmir. (2013). Retrieved from <http://www.kashmiruniversity.net/aboutuok.aspx>
- Adams, J., Gurney, K., Hook, D., & Leydesdorff, L. (2013). International collaboration clusters in Africa. *Scientometrics*, 98 (1), 547–556. DOI 10.1007/s11192-013-1060-2
- Aguillo, I. F., Granadino, B., Ortega, J. L. and Prieto, J. A. (2006), Scientific research activity and communication measured with

- cybermetrics indicators. *Journal of the American Society for Information Science and Technology*, 57 (10), 1296–1302. DOI: 10.1002/asi.20433
- Aguillo, I. F., Bar-Ilan, J., Levene, M., & Priego, J. L. O. (2010). Comparing university rankings. *Scientometrics*, 85 (1), 243–256. DOI: 10.1007/s11192-012-0740-7
- Amin, S.M. (2003). A Re-evaluation of the Kashmir Dispute. *Pakistan Horizon*, 56 (2), 37-51. Retrieved from <http://www.jstor.org/stable/41394022>
- Astin, A.W. (1985). *Achieving Educational Excellence: A Critical Assessment of Priorities and Practices in Higher Education*. San Francisco, London: Jossey-Bass Publishers.
- Billaut, J. C., Bouyssou, D., & Vincke, P. (2010) Should you believe in the Shanghai ranking?: An MCDM view. *Scientometrics*, 84 (1), 237–263.
- Black, T. R. (1994). *Evaluating social science research: An introduction*. London: Sage.
- Brennan, J., Shah, T. (2000). *Managing Quality in Higher Education: An International Perspective on Institutional Assessment and Change*. Buckingham UK: OECD, SRHE & Open University Press.
- Brewer, D., Gates, S.M., Goldman, C.A. (2002). In *Pursuit of Prestige: Strategy and Competition in US Higher Education*. New Brunswick, NJ: Transaction Press.
- Buela-Casal, G., Gutierrez-Martinez, O., Bermudez-Sanchez, M. P., & Vadillo-Muñoz, O. (2007). Comparative study of international academic rankings of universities. *Scientometrics*, 71 (3), 349–365.
- Clarke, M. (2002). Some guidelines for academic quality rankings. *Higher Education in Europe*. 27 (4), 443-459. DOI:10.1080/0379772022000071922
- Connor, H., Burton, R., Pearson, R., Pollard, E., & Regan, J. (1999). *Making the Right Choice: How Students Choose Universities and Colleges*. London: CVCP
- Dill, D. D., & Soo, M. (2005). Academic quality, league tables and public policy: A cross national analysis of university ranking systems. *Higher Education*, 49 (4), 499–533
- Ding, Z- Q., Ge, J-P., Wu, X-M., & Zheng, X-N. (2013). Bibliometrics evaluation of research performance in pharmacology/pharmacy: China relative to ten representative countries. *Scientometrics*, 96 (3), 829–844. DOI 10.1007/s11192-013-0968-x
- Ding, Z. Q., Ge, J. P., Wu, X. M., & Zheng, X. N. (2013 a). Bibliometrics evaluation of research performance in pharmacology/pharmacy:

- China relative to ten representative countries. *Scientometrics*, 96 (3), 840.
- Dridi, C., Adamowicz, W. L., & Weersink, A. (2010). Ranking of research output of agricultural economics departments in Canada and selected US universities. *Canadian Journal of Agricultural Economics*, 58 (3), 273–282. DOI: 10.1111/j.1744-7976.2010.01188.x
- Eccles, C. (2002). The use of university rankings in the United Kingdom. *Higher Education in Europe*. 27 (4), 423-432. DOI:10.1080/0379772022000071904
- Froghi, S., Ahmed, K., Finch, A., Fitzpatrick, J. M., Khan, M. S., & Dasgupta, P. (2012). Indicators for research performance evaluation: An overview. *BJU International*, 109 (3), 321–324. DOI:10.1111/j.1464-410X.2011.10856.x.
- Fu, J. Y., Zhang, X., Zhao, Y. H., Tong, H. F., Chen, D. Z., & Huang, M. H. (2012). Scientific production and citation impact: a bibliometric analysis in acupuncture over three decades. *Scientometrics*, 93 (3), 1061–1079. DOI: 10.1007/s11192-012-0737-2
- Gonzalez-Brambila, C., & Velosob, F. M. (2007). The determinants of research output and impact: A study of Mexican researchers. *Research Policy*, 36 (7), 1035–1051. DOI: 10.1016/j.respol.2007.03.005
- García, J. A., Rodriguez-Sánchez, R., Fdez-Valdivia, J., Torres-Salinas, D., & Herrera, F. (2012). Ranking of research output of universities on the basis of the multidimensional prestige of influential fields: Spanish universities as a case of study. *Scientometrics*, 93 (3), 1081-1099. DOI: 10.1007/s11192-012-0740-7
- Grupp, H., Mogege, M.E. (2004). Indicators for natural science and technology policy: Their development, use, and possible misuse. In H. F. Moed, W. Glaˆnzl, & U. Schmoch (Eds.), *Handbook of quantitative science and technology research. The use of publication and patent statistics in studies of S&T systems* (pp. 75–94). Dordrecht: Kluwer Academic Publishers.
- Gul, S., & Shah, T.A. (2012). Intellectual Educational Resources: Managing the future in a conflict zone, Kashmir. *Library Philosophy and Practice*. Paper 771. Retrieved from <http://digitalcommons.unl.edu/libphilprac/771>
- Gul, S., Nabi, S., Mushtaq, S., Shah., T.A., & Ahmad, S. (2013). Political Unrest and Educational Electronic Resource Usage in a Conflict Zone, Kashmir (Indian Administered Kashmir): Log Analysis as Politico Analytical Tool. *Bilgi Dnyasi*, 14 (2), 388-399. Retrieved from [http://bd.org.tr/index.php/bd/article/view/378/pdf\\_126](http://bd.org.tr/index.php/bd/article/view/378/pdf_126)

- Gul, S., Shah, T.A., & Ahmad, S. (2014). Digital user behaviour of academicians in a conflict zone, Kashmir: Comparing log analysis of electronic resources in the times of conflict and peace. *Program: electronic library and information systems*, 48 (2), 127 – 139. DOI: 10.1108/PROG-06-2013-0026
- Haslam, N., & Laham, S. M. (2010). Quality, quantity, and impact in academic publication. *European Journal of Social Psychology*, 40 (2), 216–220. DOI:10.1002/ejsp.727.
- Hazelkorn, E. (2013). Reflections on a decade of global rankings: What we've learned and outstanding issues, *Beiträge zur Hochschulforschung*, 35 (2) 8–33.
- Herrera, M., Roberts, D. C., & Gulbahce, N. (2010). Mapping the evolution of scientific fields. *PLoS One*, 5:5, e10355.
- Larcombe, A. N., & Voss, S. C. (2011). Self-citation: comparison between radiology, European radiology and radiology for 1997–1998. *Scientometrics*, 87 (2), 347–356. DOI: 10.1007/s11192-010-0328-z
- Lillquist, E., & Green, S. (2010). The discipline dependence of citation statistics. *Scientometrics*, 84 (3), 749–762. DOI:10.1007/s11192-010-0162-3
- Liu, N. C., & Cheng, Y. (2005). Academic ranking of world universities: Methodologies and problems. *Higher Education in Europe*, 30 (2), 127–136. DOI:10.1080/03797720500260116
- Liu, N. C., & Cheng, Y. (2008). Examining major rankings according to the Berlin principles. *Higher Education in Europe*, 33 (2/3), 201–208.
- Lo'pez-Illescas, C., Moya-Anegó'n, F., & Moed, H. F. (2011). A ranking of universities should account for differences in their disciplinary specialization. *Scientometrics*, 88 (2), 563–574.
- Marginson, S., & van der Wende, M. (2007). To rank or to be ranked: The impact of global rankings in higher education. *Journal of Studies in International Education*, 11 (3/4), 306–329. DOI: 10.1177/1028315307303544
- Miyairi, N., & Chang, H-W. (2012). Bibliometric characteristics of highly cited papers from Taiwan, 2000–2009. *Scientometrics*, 92 (1), 197–205. DOI: 10.1007/s11192-012-0722-9
- Nederhof, A. J. (1985). Evaluating research output through life work citation counts. *Scientometrics*, 7 (1-2), 23–28. DOI: 10.1007/BF02020138
- Porter, A. L., & Rafols, I. (2009). Is science becoming more interdisciplinary? Measuring and mapping six research fields over time. *Scientometrics*, 81 (3), 719–745.
- Quraishi, H. (2004). Author note. *Kashmir, the untold story (p.ix)*. New Delhi: Penguin Books.

- Quraishi, H. (2004 a). Author note. *Kashmir, the untold story (p.4)*. New Delhi: Penguin Books.
- Sahel, J. A. (2011). Quality versus quantity: Assessing individual research performance. *Science Translational Medicine*, 3 (84), 84cm13. DOI:10.1126/scitranslmed.3002249.
- Shin, J. C., Toutkoushian, R. K., & Teichler, U. (Eds.). (2011). University rankings: Theoretical basis, methodology and impacts on global higher education (The Changing Academy—The Changing Academic Profession in International Comparative Perspective). Dordrecht: Springer.
- Thomson Reuters. (2014). Research evaluation and objective analysis of your people, programs and peers. *Research analytics*. Retrieved from <http://researchanalytics.thomsonreuters.com/incites/>
- Torres-Salinas, D., Moreno-Torres, J. G., Delgado-Lo'pez-Co'zar, E., & Herrera, F. (2011a). A methodology for institution-field ranking based on a bidimensional analysis: The IFQ2A index. *Scientometrics*, 88 (3), 771–786. DOI: 10.1007/s11192-011-0418-6.
- Tsay, M. Y., & Ma, S. S. (2003). The nature and relationship between the productivity of journals and their citations in semiconductor literature. *Scientometrics*, 56 (2), 201-222. DOI: 10.1023/A:1021915127459
- van Raan, A. F. J. (2005). Fatal attraction—conceptual and methodological problems in the ranking of universities by bibliometric methods. *Scientometrics*, 62 (1), 133–143. DOI: 10.1007/s11192-005-0008-6
- Witte, K. D., & Hudrikova, L. (2013). What about excellence in teaching? A benevolent ranking of universities. *Scientometrics*, 96 (1), 337-364. DOI: 10.1007/s11192-013-0971-2

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## How Post Graduate Students Use and Access Electronic Resources in the Universities of Jammu and Kashmir

Mudasir Khazer Rather  
Shabir Ahmad Ganaie

### Abstract

**Purpose:** Easy availability and accessibility of information in multi-formats, advancement in tech savvy tools and improvement in information organization have led to the heavy use of electronic sources of information. Same is expected about the students pursuing various courses in different universities of Jammu and Kashmir. The paper explores, analyses and discusses the use of electronic sources of information by the students pursuing various courses in the universities of Jammu & Kashmir.

**Design/methodology/approach:** To explore the use of electronic sources of information, a total of 927 students using stratified random sampling were selected from four universities of Jammu & Kashmir. Sample was taken in accordance to the population ratio from each of the select universities. A well-drafted questionnaire was used as a data gathering tool and was personally distributed among all the students. Data was analyzed using SPSS software.

**Findings:** The use of electronic sources of information has increased among the university students by the introduction of Information Technology. There is a transformation from the traditional way of seeking information towards the tech savvy mode. Students mainly use laptops for seeking their desired information. Internet and Newspapers are mostly used to stay updated. The awareness and assistance regarding the use of electronic sources of information is mostly given by friends and teachers rather than library staff. The study also reveals that students face a number of physical problems including strain in eyes and neck while accessing electronic sources of information.

**Practical implications:** The paper is highly applicable to the administrators and managers of university setups to understand the use and impact of electronic sources on the university students in the digital environment. It will further help the university libraries to subscribe qualitative electronic resources and launch awareness as well as assistance programs among the users to enhance their information literacy skills.

**Originality/value:** No such survey has been conducted in the Universities of Kashmir till date.

**Keywords:** Electronic resources; Information literacy; Information seeking behavior; Universities of Jammu and Kashmir, University of Kashmir.

**Paper type:** Research Paper

## **Introduction**

**U**niversity libraries act as a knowledge hub which provides a foundation for scholarly communication, teaching as well as learning processes. Qualitative research and standard education is not possible without the use of plethora of qualitative information sources. With the advancement in technology, there is a constant increase in the creation as well as use of electronic sources of information globally and the same is being witnessed among the users of libraries in the universities of Jammu and Kashmir.

Electronic resources (e-resources) have made information timely available, organize information more effectively and provide means to remove barriers that hinder access to information. These resources help to meet the information needs of users in more satisfactory and systematic manner. These resources have round the clock availability to the users on the web and provide up-to-date and latest information. Electronic resources take very less space and facilitate user friendly search interface that too at least cost. These resources have furnished various researches as well as social networking tools which lead to instant scholarly communication and professional interaction. Electronic resources provide access to information that might be restricted to the user because of political, social or geographical barriers. These resources are constantly updated and are accessed by means of various search techniques as well as search tools. Electronic resources provide extensive web links to discover additional resources that fulfill the user needs more systematically. Besides, these resources are convenient to use since users are able to access information from various access locations like library, internet café, departments offices or at times from the comfort of their homes at any time of the day (**Gakibayo, 2013**). It is because of these benefits and features of electronic sources that users of libraries from all over the world take good interest to use electronic sources for satisfying their information needs. The paper explores and analyses the use of electronic resources by the students pursuing various courses in the select universities of Jammu and Kashmir.

## **Review of Literature**

**Moly (2014)** found that the main purpose of students to visit library is writing assignments/research and study. **Thanuskodi (2012)** also researched that most of the respondents access information for writing papers while as some also use it these for research work. Students search information for various reasons from print as well as electronic sources. While browsing desired information, they come across a number of problems. According to **Baro, Endouware and Ubogu (2011)** the problems that students face while searching information include lack of

time, inadequate information literacy, and poor searching skills. **Thanuskodi (2012)** also investigated information needs and information seeking behavior of users and found that the respondents use a variety of information sources like *books, law reports and statutes* for teaching and research purposes. According to **Ernest, Level and Culbertson (2005)**, students prefer to use a wide range of information sources while seeking information and they become aware about these sources by consulting friends, family, and relatives. **Moly (2014)** also found that students use sources like *books, journals, internet* etc to meet their information needs. **George et al. (2006)**, while analyzing the information seeking behavior of graduate students found that students heavily depend upon on *Internet* and various other sources like *books, journals and research papers*. **Online Computer Library Center (2006)** report that majority of students typically use *search engine* especially *Google* and a good number of them also use *library websites* to access *e-zenes, e-journals and online data bases*. **Medeiros (2009)** also reports that the use of *library-supplied databases* is increasing. Moreover, apart from web sites, web-based lecture notes are also being used to a good extent. The adoption of Information Technology in the academic institutions has led to the creation of electronic sources and services. Students and research scholars make use of these sources besides the traditional or print sources. **Dhanavandan, Esmailand Nagarajan (2012)** state that *electronic sources* usually consist of *e-books, e-Journals, articles, newspaper, thesis, dissertation, databases and CD-ROMs*, which are likely to be the alternative to the *print media*. **Thanuskodi (2012)** found that most of users access only electronic version of information with less number accessing only the printed version of information and a meager score prefer to use both electronic and printed information. **Ganaie and Rather (2015)** also concluded that though the print sources of information are highly significant but electronic sources are more popular among students. **Catalano (2013)** finds in his study that students prefer to use electronic sources as well as web sources like internet while seeking information related to their research. **Sheeja (2010)** divulges that *Social Science and Science* researchers prefer to access electronic resources like e-journals and e-databases more than the print forms of these resources which are very relevant to their research purposes. Easy availability and accessibility of information that too in multi-formats, advancement in tech savvy tools and improvement in information organization have resulted in modifying the information seeking behavior of students to a greater extent (**Shrivastava & Mahajan, 2016**). **Dhanavandan, Esmail and Nagarajan (2012)** state that *web electronic sources* are one of the most significant resources in libraries. **Tenopir (2009)** reports that the information seeking and reading patterns of users have changed with the

growth of *electronic journals*. **Timmers and Cees (2010)** are of the opinion that, to find more precise and qualitative information from the web, it is necessary to have awareness of *various search strategies*. **Navalur, Balasubramani and Kumar (2012)** reveal that *key word search, field search, phrase search, search with Boolean operators, wild cards and truncations are commonly known search strategies* which are used by most of the research scholars while searching the web.

### **Objectives**

- To know the means of awareness adopted by students regarding electronic resources.
- To identify the gadgets/devices used to access electronic sources of information.
- To examine the use of electronic information sources
- To identify the problems faced while accessing information

### **Methodology**

Survey method was employed and a total of 927 students were selected by using stratified random sampling. Sample was taken in accordance to the population ratio from each of the universities. A well-drafted questionnaire was used as a data gathering tool and was personally distributed among all the students. Data was analyzed using SPSS software.

The scope of the study was limited to four select universities of Jammu & Kashmir state, i.e.

- 1) University of Kashmir, Srinagar
- 2) University of Jammu, Jammu
- 3) Islamic University of Science and Technology, Pulwama
- 4) Mata Vaishno Devi University, Katra

### **Data Analysis**

#### **Devices used to access electronic information**

Mobile phones rank 1<sup>st</sup> as majority of the respondents (47.41%) prefer to access information through the same; while as a good proportion of respondents (45.41%) use laptops (rank 2<sup>nd</sup>) for searching the desired information. Only 8.95% of respondents prefer desktop. Moreover, 27.61% of respondents use all these devices to browse the desired information (**Table 1**).

#### **Reasons to use electronic sources of information**

Easy accessibility of electronic sources of information surfaced out as the dominant feature that attract majority of respondents (63.86%) to use these sources. Online availability ranks 2<sup>nd</sup> as 44.76% of the respondents

prefer electronic sources followed by 36.56% who believe that these sources have quick search mechanism. Around 26% prefer to access these sources as they facilitate use of multi search techniques and easy storage. Further, 28.80% of respondents feel that these are more up-to-date and a least proportion (25.56%) is of the opinion that the feature that tempts them to use electronic information sources is easy information extraction (**Table 2**).

**Table 1: Devices used  
(N=927)**

Device	No. of Respondents*	Rank
Mobile Phones	437 (47.14%)	1
Laptop	421 (45.41%)	2
Desktop	83 (8.95%)	4
All devices	256 (27.61%)	3

*\*Cumulative sum of responses exceeds total respondent count since they were permitted to give multiple responses.*

**Table 2: Reasons to use electronic resource  
(N=927)**

Features	No. of Respondents	Rank
Easy accessibility	592 (63.86%)	1
Online availability	415 (44.76%)	2
Quick search	339 (36.56%)	3
Up-to-date	267 (28.80%)	4
Multi search techniques	245 (26.42%)	5
Easy storage	244 (26.32%)	6
Easy information extraction	237 (25.56%)	7

*\*Cumulative sum of responses exceeds total respondent count since they were permitted to give multiple responses*

### Sources consulted to keep updated with the latest Information

Majority of respondents (83.60%) use Internet to keep themselves abreast with the latest information which is also supported by **Mostofa (2013)** who is also of the view that Internet is mostly preferred by the students in universities to keep themselves updated with the latest information. It is followed by a good proportion of respondents (53.29%) who use newspapers. 43.36% and 33.00% of the respondents prefer to remain updated by SNS and television respectively while as only 17.04% of prefer to use current issues of journals. Furthermore, least proportion of respondents (6.14%) use other sources to keep themselves updated with latest information (**Table 3**).

**Table 3: Sources to keep abreast with latest information (N=927)**

Sources	No. of respondents*	Rank
Internet	775 (83.60%)	1
Newspapers	494 (53.29%)	2
Social Networking Sites (SNS)	402 (43.36%)	3
Television	306 (33.00%)	4
Personal communication	276 (29.77%)	5
Seminars/ conferences	204 (22.00%)	6
Current issues of journals	158 (17.04%)	7
Others	57 (6.14%)	8

*\*Cumulative sum of responses exceeds total respondent count since they were permitted to give multiple responses.*

### **Awareness about the Use of Electronic Resources**

**Al-Muomen, Morris and Maynard (2012)** are of the opinion that awareness about using electronic sources plays significant role in influencing the information seeking behavior of students. Respondents get awareness about using the electronic sources through various means and sources. Majority of respondents (58.68%) are aware about the use of electronic resources through their self-interest, followed by 53.61% whose source of awareness are their friends. Teachers also play a significant role in making respondents familiar about the use of electronic sources of information as 29.88% tag them as source of information which is in tune with the findings of **Ernest, Level and Culbertson (2005)** who found that a good proportion of the users consult teachers to stay aware about the use of electronic sources. Library staff and library websites together amount to 12% as a source by which the respondents stay aware of the electronic sources. Further, it is also observed that least proportion of respondents (2.5%) are not aware of electronic sources of information which is in relation to the study of **Hamade and Al-Yousef (2010)** who highlighted that some students in Kuwait University are not aware about the use of electronic sources (**Table 4**).

### **Assistance in using electronic resources**

Majority of the respondents (62.02%) seek assistance from their friends followed by 33.87% who take help from their classmates for accessing the electronic resources while as 28.91% seek guidance from their teachers and only 19.30% from library staff. However, 13.16% of the respondents get assistance to use electronic resources through some other means (**Table 5**).

**Table 4: Awareness about electronic resources  
(N=927)**

Awareness sources	No. of respondents*	Rank
Self interest	544 (58.68%)	1
Friends	497 (53.61%)	2
Teachers	277 (29.88%)	3
Library staff	61 (6.58%)	4
Library website	52 (5.60%)	5
I am not aware at all	24 (2.58%)	6

\*Cumulative sum of responses exceeds total respondent count since they were permitted to give multiple responses.

**Table 5: Assistance to use electronic resources  
(N=927)**

Assistance	No. of Respondents*	Rank
Friends	575 (62.02%)	1
Classmates	314 (33.87%)	2
Teachers	268 (28.91%)	3
Library staff	179 (19.30%)	4
Others	122 (13.16%)	5

\*Cumulative sum of responses exceeds total respondent count since they were permitted to give multiple responses.

### Search tools used while browsing online resources

Majority of respondents (66.23%) use search engines for browsing information from online electronic resources which is in line with the findings of **He, Yue, Vo, Wu, and Fu (2012)** who also found that majority of students in higher academic institutions prefer to browse information using search engines. However, 36.56% prefer to use online databases for the same. University library websites are accessed by only 22.11% which is in contradiction with the findings of **Dubicki (2010)** who found that most of the students prefer to search information using university library website. It is further revealed that meta search engines are used by 10.57% of respondents for searching desired information. Portals on the other side are used by only 7.98% while as least number of respondents (3.77%) are not aware about these tools at all (**Table 6**).

### Use of electronic sources

e-books are used by majority of the respondents (63.96%), followed by e-newspapers (41.10%). E-journals are being used by 35.59% which is also supported by the findings of **O' Farrelland Bates (2009)** who found that a

good proportion of respondents prefer to use e-journals. Further, it is also similar to the opinion of **Sheeja (2010)** who views that among all the electronic resources, students in universities use e-journals mostly. Furthermore, ETDs are used by 24.27% while as e-zines and e-conference proceedings are used by 13.48% and 10.35% of respondents respectively. Although, most of the respondents' access variety of electronic information resources, but still 11.54% of them are not aware of these sources which is in tune with the findings of the study of **Hamade and Al-Yousef, (2010)** who found that a good number of students do not use electronic sources due to lack of awareness (**Table 7**).

**Table 6: Search tools used  
(N=927)**

Search Tool	No. of Respondents*	Rank
Search Engine	614 (66.23%)	1
Online Databases	339 (36.56%)	2
University Library Website	205 (22.11%)	3
Meta Search Engine	98 (10.7%)	4
Portals	74 (7.98%)	5
I am not aware at all	35 (3.77%)	6

*\*Cumulative sum of responses exceeds total respondent count since they were permitted to give multiple responses.*

**Table 7: Use of electronic sources  
(N=927)**

Electronic Resources	No. of Respondents*	Rank
e-Books	593 (63.96%)	1
e-Newspapers	381 (41.10%)	2
e-Journals	330 (35.59%)	3
e-Theses & Dissertations (ETDs)	225 (24.27%)	4
e-Zines (e-magazines)	125 (13.48%)	5
e-Conference Proceedings	96 (10.35%)	7
Not aware about the resources	107 (11.54%)	6

*\*Cumulative sum of responses exceeds total respondent count since they were permitted to give multiple responses.*

### **Problems faced while using electronic resources**

Majority of the respondents (70.44%) suffer from eye strain while accessing electronic resources and 28.04% of them face strain in their neck. However, a low proportion of the respondents (14.23%) face difficulty in accessing electronic resources. Moreover, least proportion



(10.35%) of respondents believes that they lack a reading aid to access electronic information resources (**Table 8**).

**Table 8: Problems in using electronic resource (N=927)**

Problem	No. of Respondents*
Straining of eyes	653 (70.44%)
Straining of neck	260 (28.04%)
Difficult to access	132 (14.23%)
Need a reading aid	96 (10.35%)

*\*Cumulative sum of responses exceeds total respondent count since they were permitted to give multiple responses.*

### Findings

The introduction of information technology has enhanced the creation and use of electronic resources. Users in university libraries access electronic information sources using various electronic gadgets. It is found that mobile phones and laptops are being predominantly used by the students under study. The most prominent reasons for accessing electronic sources are found to be the easy accessibility and online availability. Findings also reveal that users keep themselves updated with the latest information by means of Internet and newspapers mostly. The awareness and assistance regarding the use of electronic sources of information is mostly given by friends and teachers. It is interesting to know that the self-interest of students to seek information from the electronic resources also make them aware about new electronic resources. Among all the electronic sources, users mostly use e- journals, e-books and e-newspapers. Search engines are used by majority of the respondents for browsing information. It is also found that users face various physical problems while accessing electronic resources and majority of them suffer from strain in eyes and neck.

### Conclusion

The use of electronic resources in the university set-ups is increasing as a result of advancement in technology and the same is witnessed among the students pursuing various courses in the universities of Jammu and Kashmir. Students rely on a plethora of electronic information sources to seek their desired information and to fulfill their information needs timely and systematically. Teachers and friends play an active role in making students aware and assist them to use electronic sources in the select universities. However, students do not get enough assistance from library staff which is a matter of concern. The library administration needs to take adequate steps to launch awareness as well as assistance

programs to ensure maximum electronic resource usage among the students. Although, electronic resources provide a number of benefits to their users but at the same time the users suffer from various physical problems like strain in neck, strain in eyes etc.

## References

- Al-Muomen, N., Morris, A., & Maynard, S. (2012). Modelling information-seeking behavior of graduate students at Kuwait University. *Journal of Documentation*, 68(4), 430–459. DOI:10.1108/00220411211239057
- Baro, E. E., Endouware, B. C., & Ubogu, J. O. (2011). Information literacy among medical students in the College of Health Sciences in Niger Delta University, Nigeria. *Program Electronic Library and Information Systems*, 45 (1), 107-120. DOI: 10.1108/00330331111107439
- Catalano, A. (2013). Patterns of graduate students' information seeking behavior: a meta-synthesis of the literature. *Journal of Documentation*, 69 (2), 243-274. DOI: 10.1108/00220411311300066
- Dhanavandan, S., Esmail, S. M., & Nagarajan, M. (2012). Use of Electronic Resources at Krishnasamy College of Engineering & Technology Library, Cuddalore. *Library Philosophy and Practice*. Retrieved from <http://www.webpages.uidaho.edu/~mbolin/dhanavandanesmailnagarajan3.html>
- Dubicki, E. (2010). Research behavior patterns of business students. *Reference Services Review*, 38 (3), 360 – 384. DOI: 10.1108/00907321011070874
- Ernest, D. J., Level, A. V., & Culbertson, M. (2005). Information-seeking behavior for recreational activities and its implications for libraries. *Reference Services Review*, 33 (1), 88-103. DOI: 10.1108/00907320510581405
- Gakibayo, A., Ikoja-Odongo, J. R., & Okello-Obura, C. (2013). Electronic information resources utilization by students in Mbarara University Library.
- Ganaie S. A., & Rather, M. (2015). Diversity of information sources in the digital age an overview. *Journal of Advancements in Library Sciences*, 2(2), 53–61.
- George, C., Bright, A., Hurlbert, T., Linke, E. C., Clair, G. S., & Stein, J. (2006). Scholarly Use of Information Graduate Students Information Seeking Behavior Graduate students. *Information Research*, 11(4) , 272. Retrieved from <http://InformationR.net/ir/11-4/paper272.html>

- Hamade, S. N., & Al-Yousef, S. (2010). The use of information resources by LIS graduate students in Kuwait. *Library Review*, 59 (5). DOI: 10.1108/00242531011047055
- He, D., Yue, Z., Vo, K. T., Wu, D., & Fu, A. (2012). Undergraduate students' interaction with online information resources in their academic tasks A comparative study. *Aslib Proceedings: New Information Perspectives*, 64 (6), 615-640. DOI: 10.1108/00012531211281715
- Medeiros, N. (2009). Researching the research process Information-seeking behavior, Summon, and Google Books. *OCLC Systems & Services*, 25 (3), 153-155. DOI: 10.1108/10650750910982520
- Moly. T. (2014). Information Need and Information Seeking Behavior of Information Science Students in Haramaya University, Ethiopia. *Journal of Library & Information Science*, 4(2).
- Mostofa, Sk. M.(2013). A Study of Information Needs and Seeking Behavior of Faculty Members of Darullhsan University in Bangladesh. *Library Philosophy and Practice (e-journal)*.Paper 983. Retrieved from <http://digitalcommons.unl.edu/libphilprac/983>
- Navalur.S., Balasubramani. R., & Kumar, P. (2012). Use of e-resources by faculty, research scholar and P.G students at Bharatidhasan University: A case study. *Journal of advance in library and information Science*. 1(4), 165-172. Retrieved from <http://www.jalis.in/pdf/pdf4/5-Balasubramani.pdf>
- Online Computer Library Center.(2006). *College Students' Perceptions of Libraries and Information Resources a report to the OCLC Membership*. Retrieved from <http://www.oclc.org/reports/pdfs/studentperceptions.pdf>
- O'Farrell, M., & Bates, J. (2009). Student information behaviors during group projects A study of LIS students in University College Dublin, Ireland. *Aslib Proceedings*, 61(3), 302-315. DOI: 10.1108/00012530910959835
- Sheeja, N. K. (2010). Science vs social Science: A study of information-seeking behavior and user perceptions of academic researchers. *Library Review*, 59 (7), 522-531. DOI: 10.1108/00242531011065118
- Shrivastava, R., & Mahajan, M. (2016). Relationship between citation counts and Mendeley readership metrics a case of top 100 cited papers in physics. *New Library World*, 117 (3/4), 1-24. DOI: 10.1108/NLW-11-2015-0089.
- Tenopir. C. (2009). Electronic journals and changes in scholarly article seeking and reading patterns. *Aslib Proceedings: New*

*Information Perspectives*, 61 (I), 5-32. DOI:  
10.1108/00012530910932267

Thanuskodi, S. (2012). The Information Needs and Seeking Behavior of the Tamil Nadu Dr. Ambedkar Law University Faculty Members. *International Journal of Information Science*, 2 (4), 42-46

Timmers, C. F., & Cees, A.W. (2010). Developing Scales for Information Seeking Behaviour. *Journal of Documentation*, 66 (1), 46-69. DOI: 10.1108/00220411011016362.

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## ICT for Improving Competitive Performance of Small and Medium-Sized Enterprises (SME's) through Information & Knowledge Management: An explorative study

Abid Sultan

### Abstract

**Purpose:** The study focuses on describing competitive performance of the selected agro-food processing firms of J&K and influence of the information & communication technology (ICT) in improving competitive levels of processing firms of an agriculture & horticulture rich state of Jammu and Kashmir.

**Design/methodology/approach:** The present study is based upon exploratory research design where in primary data has been collected through a well-structured questionnaire. The questionnaire has been administered on 82 firms, out of which data from 61 firms has been found to be valid and complete. The data has been statistically analyzed for reliability and two composite indexes i.e. Total Competitive Performance Index and ICT Competence Index. The two constructed indexes have been regressed for determining the relationship between Total Competitive Performance Index and ICT Competence Index.

**Findings:** Positive relationship has been revealed between Total Competitive Performance Index & ICT Competence Index and supports importance of the ICT Competence Index in improving competitive performance of the agro-food processing firms of J&K.

**Originality/value:** The study can be beneficial to the agro-food processing entrepreneurs in evaluating their present status of ICT implementation in their firms and also in defining their future competitive position as well as improving their competitiveness. The study can also be helpful in drafting specific industrial policies for the agro-food processing industry of J&K and also designing specific policy initiatives for increasing the information and knowledge management in micro, small and medium-sized enterprises (SMEs) of J&K.

**Keywords:** ICT, Competitive Performance, Competitiveness, Firm Level Competitiveness.

### Introduction

**M**icro, Small And Medium-Sized Enterprises (SMEs) are the growth engines of an economy, especially developing economies such as India. The significance of SMEs lies in their contribution to large industrial establishments and meeting the local & regional market demands. These enterprises are also significant in terms of their employment and revenue generation capacity, particularly at the regional level. India opened its economy to the global competition and investment in 1991. Reforms of 1991 were aimed at exposing Indian industrial establishments to the global competition and improve their competitive performance by using new advancements in the fields of technology, information management and knowledge management. With

the introduction of new business policies and reforms, landscape of business competition changed in India and made it inevitable for manufacturing firms to focus on improving competitive performance, specifically of Micro, Small And Medium-Sized Enterprises (SMEs). The reforms also enthused researchers and academicians on exploring the strategic areas which can increase the competing capabilities and competitive performance of Indian firms.

The operational activities of a firm are very much crucial for generating revenues and employment, which are important elements for improving competitiveness of a nation (**Koc, 2009; Laurentiu, 2009**). Competitive performance of a firm sets base for the competitiveness level of a nation and also ensures the growth of firms, industries and nations (**Joshi et al., 2011**). Among various level of competitiveness, firm level competitiveness is considered to be very much significant. Firm level competitiveness is largely described through competitive performance of a firm and is improved by the internal factors of a firm such as Technology, ICT, Marketing, Human Resource Management etc. Technology & ICT has been held as an important and essential elements for improving the competitive performance of a firm and thus for firm level competitiveness. Firms based upon the competition structure and market base position through superior economic and financial performance compete at the market place through their distinct competencies which also refer to the dynamic capabilities (**Chaudhuri & Ray, 1997; Teece et al., 1997; Veliyath & Zahra, 2000**). Over the period, competitiveness of the firms is given an importance in terms of survival and success of the firms in competitive market places (**Ambastha & Momaya, 2004**). The significance of Technology and ICT in improving the competitive performance and firm level competitiveness among SME's is still at its infancy stage in the developing countries, particularly at the regional levels.

Firm level competitiveness of agro-food processing industry in India, particularly in J&K, is a potential industry with multiple opportunities for investment. The industry is in need of interventions in various areas for the strategic growth and development of this industry in India and J&K. With India witnessing increasing consumer consumption of processed & convenience foods, the demand for processed foods is increasing day-by-day. The states like Jammu and Kashmir have a comparative advantage in terms of availability of raw material and availability of labour. In this background, the present study aims at evaluating the competitive performance of the agro-food processing firms of J&K and explores influence of the ICT competence on the competitive performance. The paper is based upon premise that the information & knowledge management through usage of ICT is very much essential in improving

competitive performance of the SME's at the regional levels and conflict driven areas such as J&K. The paper ahead discusses literature pertaining to the firm level competitiveness & ICT and the status of ICT competence & competitive performance of agro-food processing SME's of J&K.

### **Review of related literature**

Competitiveness is a well-researched concept and is multi-dimensional in nature. It has been studied by the researchers & academicians with different educational credentials and research objectives, which lead to the complexity in its understanding (**Latruffe, 2010; Siggel, 2006**). Literature review suggests three levels of competitiveness - macroeconomic level (International level), mesoeconomic level (Industry level) and microeconomic level (firm level) (**Chaudhuri & Ray, 1997**). Among these three levels of competitiveness, firm level competitiveness has attracted the significant attention of the researchers & academicians because of the fact that for a successful nation/industry, firm level competitiveness is very much essential element (**Koc, 2009; Laurentiu, 2009**). Competitive firms are significant sources of high revenue and employment generation in an economy. Thus, firms with high competitive levels boost progress of a nation and its people (**Buckley et al., 1988; Voulgaris & Lemonakis, 2014**). Firm level competitiveness consider firm as an object of investigation and consider internal elements of a firm, both tangible and intangibles resources of firm like technology, ICT, marketing capabilities, human resource, innovation capabilities etc. as an essential sources for improving the firm level competitiveness (**Ambastha & Momaya, 2004; Chaudhuri & Ray, 1997; Nelson, 1992; Porter, 1990; Prahalad & Hamel, 1990; Shan & Hamilton, 1991**). Due to the qualitative nature of these dimensions and availability of the data regarding these dimensions firm level competitiveness has remained unmapped in the literature, particularly at the regional levels and in SME's. However, there is an increasing consensus among the academicians and researchers on using competence approach for analyzing the firm level competitiveness (**Chaudhuri & Ray, 1997**).

Competence approach emphasizes on the competencies, which are an outcome of firm's internal resources such as technology, ICT, marketing etc. and stresses on raising competencies for building, maintaining & sustaining firm level competitiveness. Literature review reveals that the competitiveness has been studied by interdisciplinary areas of research such as economics, operations as well as strategy (**Ambastha & Momaya, 2004**). The field of strategy defines the competitiveness through performance metrics. Resource based view of firm discusses competitiveness of a firms by analyzing the heterogeneous and imperfect mobile resources that may be tangible or intangible (**Barney,1991; Grant,**

**1991; Rumelt, 1984; Wernerfelt, 1984**). The resource based theory views firms as efficiency seekers by using various competencies.

Information & communication technology (ICT) may be defined as computer aided technology for processing, storing, and communication of information (**Molloy & Schwenk, 1995**). The review of literature stresses on the implementation of the ICT in a firm due to its multiple benefits (**Lee et al., 2000; McAfee & Brynjolfsson, 2008; Montoya et al., 2009**). ICT offers more opportunities to customize products and services, constitute embedded business processes and investments in the hardware, software, data and people (**Reddy, 2006**). ICT has improved the access to market information, changing customer preferences & taste and helps in managing & understanding competition through electronic data interchange (**Boudreau et al., 1998; Njelekela & Sanga, 2015; Reddy, 2006**). It has shortened the reaction time, response to the threats and challenges and also lowers the intensity of the impact (**Ansoff, 1975**). ICT also facilitates quick and information based decision making (**O'Reilly, 1978; Molloy & Schwenk, 1995**). ICT allows firms to store both qualitative and quantitative data which improves the effectiveness and efficiency of decision making. The implementation of ICT in a firm provides bases for the information and knowledge management.

The review of literature on competitiveness highlights that the firm level competitiveness is a prospective research area, particularly in developing and regional economies. Resource based view of firms & competence approach offers an understanding in analyzing firm level competitiveness. With increasing availability of ICT as well as its adoption, the strategic importance of ICT is becoming significant for improving information and knowledge management. However, there is a gap in literature in measuring the ICT competence of the SME's at the regional level, particularly in the conflict driven economies such as Jammu and Kashmir, which are to be bridged in.

### **Research methodology**

The present study is based upon the exploratory research design with primary objective of evaluating the relationship between ICT competence & firm level competitiveness in SME's and to measure the influence of ICT competence on the competitive performance of a firm. Firm level competitiveness has been defined through total competitive performance index. The recent stream of literature holds firm level competitiveness as an outcome of resources possessed by a firm for developing competencies (**Barney, 1991; Peteraf, 1993; Porter, 1990; Prahalad & Hamel, 1990**). The recent literature also reveals that the firm level competitiveness based on the competence approach has received a significant importance (**Chaudhuri & Ray, 1997**).



The main emphasis of the competitiveness is the competitive performance of the firm, thus competitive performance is equivalent to firm's competitiveness level (Singh et al., 2007). Performance analysis is a strategic tool for measuring competitiveness (Chenhall, 2005; De Toni et al., 1997). The use of financial and non-financial parameters represents the accurate system for measuring the performance of a firm (Sanchez et al., 2012). Multiple variables show a holistic and broad picture of the competitive performance of a firm (Sousa, 2004). The review of the literature reveals the significance of competitive performance of a business firm is described by aggregation of measures of manufacturing, marketing and financial performance (Cleveland et al., 1989). Manufacturing measures include cost, quality, dependability/delivery and flexibility (Boyer & Lewis, 2002; Hung et al., 2015; Kim & Arnold, 1992; Kumar et al., 1999; Prester, 2013; Shahnawaz, 2015; Ward et al., 1998). Marketing performance has been measured through sales performance (Lau, 2002; Moorman & Rust, 1999; Peter & Veronica, 1998; Sharma & Fisher, 1997) and financial performance has been measured through profit after tax (Buckley et al., 1988; Fischer & Schornberg, 2007; Moorman & Rust, 1999). Keeping in view the discourse of the literature the present study incorporates these six variables for defining the competitive performance of the agro-food based manufacturing units in J&K. The proposition related to technology factor and competitive performance is

$P_{01}$ : *ICT competence does not influence competitive performance*

$P_{01A}$ : *ICT competence does influence competitive performance*

$P_{01}$  represents a proposition which is compared with the alternate proposition  $P_{01A}$ . For testing the proposition, regression analysis is performed at 5 per cent level of significance. The study is largely based upon the primary data collected through a well-structured questionnaire. The questionnaire was administered on 82 firms, out of which data from 61 firms was found to be valid and complete. Collected primary data is analyzed statistically for reliability and correlation as well.

## Results and discussion

Competitiveness of a firm is described through the tactical decisions of an industry and technology adoption. The competition based upon the technology and economics of performance are deep rooted characters for firm level as well as industry level competitiveness (Porter, 1985). The influence of investments in technology, both production and information technology like ICT, on the firm level competitiveness is still an unexplored area of research in the agro-food processing industry in India, especially in the state of Jammu and Kashmir.

The present study has been drafted upon the performance indicators for the evaluation of firm level competitiveness of the identified agro-food processing units in Jammu and Kashmir. As advocated by the **Sanchez-Gutierrez et al. (2012)**, the combination of the financial and non-financial factors forms an adequate system for measurement of the competitive performance of a firm. Within this background, the present study has incorporated both financial and non-financial factors for evaluating the competitive performance of the targeted firms. The main emphasis of competitiveness is the competitive performance and thus competitive performance has been taken as proxy for competitiveness (**Singh et al., 2007**). Measures of manufacturing, marketing and finance have been combined for describing the total competitive performance of targeted firms (**Cleveland et al., 1989**). In totality, six dimensions i.e. cost, quality, dependability, flexibility, sales and profit after tax, pertaining to the measures of manufacturing, marketing and financial have been combined to estimate total competitive performance index (TCPI) of the small medium enterprises involved in agro-food processing in J&K state. The targeted firms were entreated to evaluate the six dimensions in contrast to their nearest competitors and report evaluation on five point likert scale measuring 1 as poor, 2 as satisfactory, 3 as average, 4 as good and 5 as excellent. The likert scale has been preferred as the agro-food processing unit holders were reluctant in sharing core information. Therefore, five point likert scale has been used as it enables to capture significant scale of responses. The responses collected on cost, quality, dependability, sales and profit after performance has been standardized & aggregated for constructing the Total Competitive Performance Index (TCPI).

ICT competence in the present study has been described through following statements – Usage of internet based information systems for forecasting & distribution management in the firm, Usage of computers in the firm for file management, Usage of internet based information system for the procurement of raw material in the firm, Improvement in firm performance due to the investment in ICT on an average period of last five years and Investments in ICT/ICT up-gradation with future perspective. The Cronbach's coefficient alpha for reliability measurement has been found to be 0.808, which reflects the scale used in the present study is reliable.

To measure the relationship between ICT competence and TCPI, regression analysis technique has been used at 5 per cent level of significance. The regression reveals a significant relationship exists between exogenous variables and endogenous variable at 5 per cent level of significance. The value of the "R" has been reported as 0.630 indicating that high level of correlation between the exogenous variables

and endogenous variable. The value of  $R^2$  has been found to be 0.396 significant at 5 per cent level of significance. The model explains nearly fifty three per cent of variable. The model thus in the case of measure of competitiveness is fit to be explained as

$$Y = c + aX_1 + e$$

Where, Y= TCPI as a proxy for competitiveness.

$X_1$  = ICT competence

a = coefficient of ICT competence

c = constant

e = error term

Thus the relation is explained as

$$TCPI = 1.093 + 4.428 (ICTCI) \\ (0.109)^* (0.712)^*$$

*Note: Figures in parantheses represents standard error;*

*\* represents statistically significant at 5 per cent level*

To test the validity of model, the study incorporated ANOVA or F test. It has been revealed from statistics that the corresponding F value appears to be 38.72, which further seems to be statistically significant at 5 per cent level of significance. Thus the test statistics conclude the overall goodness of fit of the model.

With reference to the finding, proposition  $P_{01}$  stands to be rejected in terms of the influence of ICT over the firm level competitiveness and  $P_{01A}$  stands accepted i.e. ICT competence does influence competitive performance. The ICT competence holds a positive relationship with TCPI, with one per cent change in investment in ICT the TCPI has an increase by 44 per cent and thus depicts more competitiveness for the firm in long run.

The results reveal the significance of ICT in building & improving the firm level competitiveness of agro-food based manufacturing units of J&K state. The results hold ICT as an essential factor for enhancing competitiveness of agro-food processing firms. ICT competence improves flexibility in operations and manufacturing processes of the small medium firm as well as helps them in producing better quality products (Vinas et al., 2001). ICT infrastructure has multiple influences on the performance of small medium enterprises. It also helps small sized firms to improve their innovative capabilities, respond to market & customer needs at a faster speed, customization & variety etc. (Meredith, 1987). Information & communication technology (ICT) improves access to the market information, changing customer preferences & taste and helps in tackling the changing business competition through use of electronic data interchange (Boudreau et al., 1998; Njelekela & Sanga, 2015; Reddy, 2006). It also has reduced the reaction time, response to threats &

challenges and also lowering of intensity of the impact (**Ansoff, 1975**). ICT also facilitates quick and information based decision making (**Molloy & Schwenk, 1995; O'Reilly, 1978**). Thus, ICT improves the competitive performance of the SME's and thus act as crucial element for improving firm level competitiveness.

During the primary survey of agro-food processing units of J&K, it has been witnessed that the SME's of agro-food processing industry have started realizing the significance of ICT competence for firm level competitiveness and thus have started investing in it. However, during survey it was also observed that the ICT adoption is being carried out without any proper planning and need evaluation. The present study observes that the ICT competence holds potential in defining the competitive performance of the SME's and can also lead to the growth. However, there may be certain challenges involved in building the ICT competence among SME's. Most of the SME's are family and traditional oriented business with low orientation towards technology advancements, especially ICT. Besides, financial implication associated with building ICT infrastructure & upgradation also act as main hurdle to the ICT competence. Also some SME's are in transition from first generation to the second generation, which sometimes create conflict of opinion. These factors in SME's need to be resolved amicably and efforts should be directed towards leveraging upon investment in ICT infrastructure.

### **Conclusion**

The present study is an effort towards understanding the significance of ICT in the competitive performance of a firm. The study also focused on sensitizing agro-food processing entrepreneurs of J&K about the ICT competence & its significance and thus favors facilitating the information and knowledge management in SME's of J&K, especially in agro-food processing units. The results of present study reveal positive relationship between firm level competitiveness and ICT competence, which reflects that agro-food processing units can improve their competitive performance by building their ICT competence. Investment in ICT acts as a strategic investment towards growth and development of the SME's in the conflict driven Jammu & Kashmir State. The present study is an exploratory study with certain limitations in terms of availability of absolute data about ICT, as small and medium firms do not maintain any proper database about various qualitative based dimensions of a firm and orientation of the SME's towards research is also very much restricted. Despite of all the limitations, the present study made an effort towards highlighting the role of ICT in firm level competitiveness among SME's. The results can be advantageous to the entrepreneurs in understanding

linkage between ICT & competitiveness and can also be strategic to the policy makers in framing policies for the SME's.

## References

- Ambastha, A., & Momaya, K. K. (2004). Competitiveness of Firms: Review of theory, frameworks & models. *Singapore Management Review*, 26(1), 45-61.
- Ansoff, H. (1975). Managing Strategic Surprise by Response to Weak Signals. *California Management Review*, 18(2), 21-33.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120.
- Boudreau, M.C., Loch, K., Robey, D., & Straud, D. (1998). Going Global: Using Information Technology to Advance the Competitiveness of the Virtual Transnational Organization. *Academy of Management Executive*, 12(4), 120-128.
- Boyer, K., & Lewis, M. (2002). Competitive Priorities: Investigating the Need for Trade-offs in Operations Strategy. *Production and operations Management*, 11(1), 9-20.
- Buckley, P. J., Pass, C. L., & Prescott, K. (1988). Measures of International Competitiveness: A Critical Survey. *Journal of Management*, 4(2), 175-200.
- Chaudhuri, S., & Ray, S. (1997). The Competitiveness Conundrum: Literature Review and Reflections. *Economic and Political Weekly*, 32(48), M83-M91.
- Chenhall, R. (2005). Integrative Strategic Performance Measurement Systems, Strategic Alignment of Manufacturing, Learning and Strategic Outcomes: An Exploratory Study. *Accounting, Organizations and Society*, 30(5), 395-422.
- Cleveland, G., Schroeder, R. G., & Anderson, J. C. (1989). A Theory of Production Competence. *Decision Sciences*, 20(4), 655-668.
- De Toni, A., Nassimbeni, G., & Tonchia, S. (1997). An Integrated Production Performance Measurement System. *Industrial Management and Data Systems*, 97(5), 180-186.
- Fischer, C., & Schornberg, S. (2007). The Competitiveness Situation of the EU Meat Processing and Beverage Manufacturing Sectors. *Food Economics - Acta Agriculturae Scandinavica Section C*, 4(3), 148-158.
- Grant, R. M. (1991). The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation. *California Management Review*, 33(3), 114-135.
- Hamel, G., & Prahalad, C. (1994). Competing for the Future. *Harvard Business Review*, July-August, 122-128.

- Hamel, G., & Prahalad, C. (1989). Strategic Intent. *Harvard Business Review*, May-June, 63-76.
- Heene, A., & Sanchez, R. (1996). *Competence Based Strategic Management*. New-York: John Wiley.
- Hung, S.C., Hung, S.W., & Lin, M.J. (2015). Are Alliances a Panacea for SMEs? The Achievement of Competitive Priorities and Firm Performance. *Total Quality Management & Business Excellence*, 26(1/2), 190-202.
- Hunt, S. D. (2000). *A General Theory of Competition*. Sage Publications, Inc.
- Joshi, D., Rathore, A. P., Sharma, D., & Nepal, B. (2011). Determinants of Competitiveness and their Relative Importance. *International Journal of services & Operations Management*, 10(4), 426-448.
- Kennedy, P., Harrison, R., & Piedra, M. (1998). Analyzing Agribusiness Competitiveness: The Case of the United States Sugar Industry. *International Food and Agribusiness Management Review*, 1(2), 245-257.
- Kim, J., & Arnold, P. (1992). Manufacturing Competence and Business Performance: A Framework and Empirical Analysis. *International Journal Operation Production*, 13(10), 4-26.
- Koc, E. (2009). A Review of Country Tourism Competitiveness, Research Performance and Overall Country Competitiveness. *Competitiveness Review*, 19(2), 119-133.
- Kumar, A., Jaideep, M., Ceasar, D., & Narayan, D. (1999). A Quality Competitiveness Index for Benchmarking. *Benchmarking: An International Journal*, 6(1), 12-21.
- Latruffe, L. (2010). Competitiveness, Productivity and Efficiency in the Agriculture and Agri-Food Sectors, OECD Food, Agriculture and Fisheries paper, No 30. OECD. Rennes, France: OECD Publishing. DOI: 10.1787/5km91nkdt6d6-en.
- Lau, R. (2002). Competitive Factors and their Relative Importance in the US Electronics and Computer Industries. *International Journal of Operatiosn and Production Management*, 22(1), 125-135.
- Laurentiu, D. (2009). Evolutions in the World Competitiveness Classification - The Case of Romania. *Young Economists Journal / Revista Tinerilor Economisti*, 7(13), 75-80.
- Lee, H., So, K., & Tang, C. (2000). The Value of Information Sharing in a Two-Level Supply Chain. *Management Science*, 46(5), 626-643.
- Markland, A., Vickery, S., & Davis, R. (1995). *Operations Management: Concepts in Manufacturing and Services*. Minneapolis MN: West Publishing.
- Mason, E. (1939). Price and Production Policies of Large Scale Enterprises. *American Economic Review*, 29, 61-74.

- McAfee, A., & Brynjolfsson, E. (2008). Investing in the IT That Makes a Competitive Difference. *Harvard Business Review*, 86(7/8), 98-107.
- McCarthy, E. J. (1960). *Basic Marketing: A Managerial Approach*. Homewood, IL: Richard D Irwin.
- Meredith, J. (1987). The Strategic Advantages of New Manufacturing Technologies for Small Firms. *Strategic Management Journal*, 8(3), 249-258.
- Molloy, S., & Schwenk, C. (1995). The Effects of Information Technology on Strategic Decision Making. *Journal of Management*, 32(3), 283-311.
- Montoya, M., Massey, A., Hung, Y.-T., & Crisp, C. (2009). Can You Hear Me Now? Communication in Virtual Product Development Teams. *Journal of Product Innovation Management*, 26(2), 139-155.
- Moorman, C., & Rust, R. (1999). The Role of Marketing. *Journal of Marketing*, 64(3), 180-197.
- Myers, J. H. (1996). *Segmentation and Positioning Strategies for Marketing Decisions*. Chicago: American Marketing Association.
- Nelson, R. (1992). Recent Writings on Competitiveness: Boxing the Compass. *California Management Review*, 34(2), 127-137.
- Njelekela, C., & Sanga, C. (2015). Contribution of Information and Communication Technology in Improving Access to Market Information. *International Journal of Management Science & Technology Information*, 17(17), 56-71.
- O'Reilly, C. (1978). The Intentional Distortion of Information in Organizational Communication: A Laboratory and Field Investigation. *Human Relations*, 31(2), 172-193.
- Pacheco-Ornelas, M. C., Cuevas-Rodríguez, E., & Rodríguez-Pacheco, R. (2012). Organizational Competences and Competitiveness: The Effect Of Business Strategies. *Advances in Competitiveness Research*, 20(3&4), 16-31.
- Peter, D., & Veronica, W. (1998). Marketing and Competitive Performance: An Empirical Study. *European Journal of Marketing*, 32(5/6), 514 - 535.
- Peteraf, M. (1993). The Cornerstones of Competitive Advantage: A Resource Based View. *Strategic Management Journal*, 14, 179 – 191.
- Porter, M. E. (1980). *Competitive Advantage*. New York: Free Press.
- Porter, M. E. (1985). *Competitive Strategy*. New York: Free Press.
- Porter, M.E. (1990). *The Competitive Advantage of Nations*. London: MacMillan.

- Prahalad, C. K., & Hamel, G. (1990). The Core Competence of the Corporation. *Harvard Business Review*, 74(4), 79-90.
- Prahalad, C., & Hamel, G. (1993). Strategy as Stretch and Leverage. *Harvard Business Review*, March-April, 63-76.
- Prester, J. (2013). Competitive Priorities, Capabilities and Practices of Best Performers: Evidence from GMRG 4 data. *Total Quality Management & Business Excellence*, 24(1/2), 138-157.
- Reddy, S. (2006). Strategic Flexibility and Information Technology Properties: Competitive Advantage and Asset Specificity. *Advances in Competitiveness Research*, 14(1), 16-43.
- Rumelt, R. (1984). Towards a Strategic Theory of the Firm. In *Competitive Strategic Management* (pp. 556-570). Englewood Cliffs, NJ: Prentice Hall.
- Sanchez, R., Heene, A., & Thomas, H. (1996). *Dynamics of Competence-Based Competition*. New York: Elsevier Science.
- Sanchez-Gutierrez, J., Gonzalez-Urbe, E. G., Gutierrez-Govea, A., & Garcia-Jimenez, E. F. (2012). The Effects of Intellectual Capital and Innovation on Competitiveness: An Analysis of the Restaurant Industry in Guadalajara, Mexico. *Advances in Competitiveness Research*, 20(3&4), 32-46.
- Shahnawaz, Adil, M. (2015). Strategic and Competitive Priorities of the Manufacturing Performance in Karachi. *Global Journal of Flexible Systems Management*, 16(1), 37-61.
- Shan, W., & Hamilton, W. (1991). Country- Specific Advantage & International Cooperation. *Strategic Management Journal*, 12(6), 419-432.
- Sharma, B., & Fisher, T. (1997). Functional Strategies and Competitiveness: An Empirical Analysis using Data from Australian Manufacturing. *Benchmarking for Quality Management and Technology*, 4(4), 286-294.
- Siggel, E. (2006). International Competitiveness and Comparative Advantage: A Survey and a Proposal for Measurement. *Journal of Industry, Competition & Trade*, 6(2), 137-159.
- Singh, R. K., Garg, S. K., & Deshmukh, S. (2007). Comparative Study on Strategies of Indian Small, Medium and Large Scale Organisations. *South Asian Journal of Management*, 14(3), 44-65.
- Sousa, C. (2004). Export Performance Measurement: An Evaluation of the Empirical Research in the Literature. *Academy of Marketing Science Review*, 8(9), 1-22.



- Teece, D., Pisano, G., & Shuen, A. (1997). Dynamics Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509-533.
- Veliyath, R., & Zahra, S. (2000). Competitiveness in the 21st century: Reflections on the Growing Debate about Globalization. *Advances in Competitiveness Research*, 8(1), 14-33.
- Vinas, B., Bessant, J., Perez, G., & Gonzales, A. (2001). A Conceptual Model for the Development of Technological Manufacturing Processes in Manufacturing Companies in Developing Countries. *Technovation*, 21(6), 345-352.
- Voulgaris, F., & Iemonakis, C. (2014). Competitiveness and Profitability: The case of Chemicals, Pharmaceuticals and Plastics. *The Journal of Economic Asymmetries*, 11, 46-57.
- Ward, P., McCreery, T., Ritzman, L., & Sharma, D. (1998). Competitive Priorities in Operations Management. *Decision Sciences*, 29(4), 1035-1046.
- Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*, 5(2), 171-180.

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## Antiquity into Digital: A case study of Urdu literary magazine 'Nuqoosh' Research Center (NRC) and Digitization Project

Saima Qutab  
Farasat Shafi Ullah  
Faiza Saqib

### Abstract

**Purpose:** The study reports the development of Urdu literary magazine "Nuqoosh" based on a unique collection of Urdu literary letters and original literary scripts submitted to editors of 'Nuqoosh'. It also brings into light the initiative for collecting the intellectual memory of literary works, its management and technical handling.

**Design/methodology/approach:** The study employs qualitative research method involving document review, interviews, and personal observation of the Government College University (GCU), Lahore library and "Nuqoosh" the Urdu literary magazine's digitization project.

**Findings:** The "Nuqoosh Research Center" (NRC) and museum collection is a unique experience for Urdu researchers across the globe to support evidence-based research opportunities. "Nuqoosh", a literary magazine and the digitization project set an example for the alike language experts, to respond the need of preserving and disseminating the original documents for the collective memory of the world.

**Research Implications/Value:** The study throws light on the journey of literary magazine "Nuqoosh", which represents a valuable era of the modern Urdu.

**Keywords:** Nuqoosh Research Center (NRC); Literary letters; Literary works; Manuscripts; Museum; Digitization

**Paper type:** Case study

### History of 'Urdu'

**T**he Urdu and Hindi language belongs to the Indo-Iranian and Indo-Aryan branches of the Indo-European family of languages, commonly known as the Hindustani dialect (BBC, 2007; Encyclopedia Britannica, 2016). Urdu is a Turkish word which means 'an army, a market or a camp'. Urdu in its less formalized register is referred to as a Rekhta, meaning 'rough mixture'. The language evolved through a commingling of local dialects Sanskrit, Hindko, Pashto, Pali, Prakrit etc. into the Arabic, Persian, and Turkish during the Mughal period of Indian history (BBC, 2007; Kachru, 2008; Masica, 1993). Its ability to absorb words from other languages also reflects its meaning as 'an army'. However, there seems to be many different opinions about the exact origin of the Urdu language and cannot be ascertained when the Muslims of this region especially its elite started speaking Urdu, or rather its

predecessor which is often called *Handi*, *Handavi/Handui*, *Zaban-e-Hind*, *Zaban-e-Delhi*, *Rekhta*, *Gujari*, *Dakkhani*, *Zaban-e-Urdu-e-Mualla*, *Zaban-e-Urdu*, or just *Urdu* (**Encyclopedia Britannica, 2009; Rahman, 2002**). Some trace back its invention to the arrival of Muslims in the 8th century in Sindh, while others consider its roots in the 14th century with the arrival of Mahmood Ghaznavi (**Matthews, Shackle & Husain, 1985**). Urdu started to flourish in its true sense during the Mughal period in Delhi and Agra durbars by the Indian scholars using Persian and Persian scholars using Hindi in their communication and literary expressions. Eventually, it became the intellectual identity, medium of education, literary, and political expression of Muslims in the Indian subcontinent.

Urdu marks an abundance of literature and expression produced as original, translated and adaptations in many dailies, magazines, and publications in the 19th and 20th century. Later, the language also become one of the founding reasons for the 'two nation theory' causing the partition of the Indian subcontinent in 1947 (**Encyclopedia Britannica, 2016; Rahman, 2002**), and Pakistani leaders emphasized Urdu's centrality to the nation and in 1948 it was declared as the official language of Pakistan parallel with English to index Muslim identity (**Ayres, 2009; Kachru, 2008**). **Rahman (2002)** states that although Urdu is Pakistan's 'official' language, it has also been perceived as an imported language that is or was native to only a few people in the region before independence from Britain in 1947, and, in fact, most people claim Urdu as a native language in India 'where its developing roots lie'. Urdu is one of the official languages of the six states of Northern India and is well spoken and understood in other countries i.e. Nepal, Bangladesh, and the Middle East (**Ethnologue: Languages of the World, 2017; Fatih, 2003; Matthews, Shackle & Husain, 1985**). It's prominence as a language of administration, judiciary, business, formal literacy, media communication, religious sermons and more particularly as a language of intellectual activity, establishes it as a representative of religious, cultural and social heritage of the country (**Ayres, 2009; Zia, 1999**). Urdu is spoken by nearly hundred million people around the world (**BBC, 2007; Encyclopedia Britannica, 2009, 2016**) and is written from right-to-left in Nasta'liq script, derived from the Persian Arabic script (**Kachru, 2008**).

### **Government College University (GCU), Lahore**

Government College (GC), established in 1864, is one of the oldest educational institutions in Pakistan and was granted a university status in 2002. In its history of about 150 years, the institution takes pride in producing many great poets, writers, philosophers, actors, musicians, journalists, sportspeople, judiciary & civil servants, politicians, nuclear

scientists, doctors, engineers, and many other prominent figures in and outside Pakistan.

### **The GCU Libraries**

There are several state-of-the-art libraries in GCU: Fazal-i-Hussain Library (central library), Postgraduate library, life sciences library and other seven departmental libraries. All libraries contribute to establish the support for the bright students and alumni of the GCU. The libraries provide conventional and advanced services to users e.g. circulation, reference services, multimedia facilities, library orientation programs, inter-library loan programs, newspaper indexes, OPAC, HEC digital library access, GCU virtual library and the library society. GCU libraries house approximately 300 thousand books, thousands of serial publications, manuscripts, and archival collections. The GCU virtual library is a project of digitizing thesis, The Ravi (university magazine), Nuqoosh literary letters and manuscripts held at the GCU library.

### **'Nuqoosh' the Magazine**

'Nuqoosh' is a prominent magazine of Urdu literature devoted to the progress of language and its literary aspects in Pakistan and to the residents and immigrants from various cultural and lingual backgrounds. The first issue of the magazine appeared under the editorship of two eminent Urdu writers: Ahmad Nadeem Qasmi and Khadija Mastoor in March 1948, just a few months after the independence of Pakistan. It successfully establishes the foundations of modern Urdu prose and poetry as well as Urdu literary journalism (**Rahman, 1983**). During, April 1951, Muhammad Taufil joined as the editor and gave an exciting spin to the Urdu literary magazine publication style by adding qualitative research, historical investigations, evidence and documentary research, interviews etc. Considering Taufil's successful efforts, he is affectionately known as '*Muhammad Nuqoosh*' by contemporary Urdu literary personalities (**Anjum, 1989; Rahman, 1983**). Since beginning, the magazine maintained the state of bestseller and a high-brow among highly literate Urdu readers. The special issues for 'Nuqoosh' established as authentic and primary sources of information on various literary figures, literary elements, religious, cultural, and social events.

The collection of NRC is significant as it throws light on the writing style of many Urdu writers and depicts the literary, political, social, and cultural inclination and influences of more than a century (**Ruaf, 2007**). It consist original letters of authors submitting their works, criticism and debates on literary aspects. These letters not only provide information about the author's style of writing and conversation, but also witness the development of the Urdu language and script. The collection

development of the ‘Nuqoosh’ has been appreciated by the Urdu critics and literary circles (**“Urdu literature centre”, 2012; Warrich, 2007**).

### **‘Nuqoosh’ Research Center (NRC) and Museum**

The historical record of handwritten scripts of famous writers and correspondence with editors on Urdu literary aspects was donated to GCU by Javaid Tufail son of Muhammad Tufail, the then editor of Nuqoosh, Dr. Waheed Qureshi and Basir Mojed in 2006. Although many renowned institutions around the world including French museum were willing to acquire these collection of letters and pay a hefty sum, but GCU was preferred due to its legacy and affiliates (**Rauf, 2007**). Nuqoosh museum was set up at the GCU postgraduate library considering the importance of the collection and its’ future usage.

The collection of NRC and museum started gradually with the first installment of 4000 letters by 386 famous Urdu authors during 1948 to 1985. In later installments, GCU received another 10,000 letters and scripts. Currently, ‘Nuqoosh’ museum has more than 14,000 letters of 1933 literary figures of Urdu language and literature, a collection of 400 original scripts and positives of articles published in the magazine; a collection of thousands of books used by the editors for the magazines’ special issues; copies of all the Nuqoosh issues from 1948-2005 and some personal belongings of Urdu writers e.g. famous typewriter of Saadat Hassan Manto etc. (**GCU, 2017; Qutab, Bhatti & Ullah, 2014; Rauf, 2007; “Urdu literature centre”, 2012; Warrich, 2007**). In May 2012, the Nuqoosh museum was extended as NRC to facilitate and promote the interest of students and researchers in Urdu literature. The research center is equipped with an Urdu library, a state-of-the-art reading room, computer center and the Nuqoosh museum.

Some of the letter’s positives, original letters and literary work scripts preserved in the collection are more than a century old. There are about 350 letter’s positives including 122 of Sir Sayed Ahmed Khan (dated 1856-96); original literary scripts of 300 authors and correspondences by about 1100 authors from Pakistan, India, and Bangladesh. Some of the noteworthy letter collections (**see images 1 - 6**) are of Intizar Hussain (8), Balwant Singh (30), Jagan Nath Azad (64), Josh Malihabadi (26), Jeelani Bano (72), Ismat Chughtai (22), Krishan Chander (80), Shahid Ahmad Dehlvi (98), Daagh Dehlvi (68 including Ghazals), Jagan Nath Azad (64), Qurratulain Hyder (82), Mumtaz Mufti (62), Mahendranath Gupta (74), Naseeruddin Hashmi (68), Niaz Fatehpuri (80), Hajra Masroor (48), Ahmad Nadeem Qasmi (100) and many more (**GCU, 2017**).

Image 1: Letter of Daagh Dehlvi

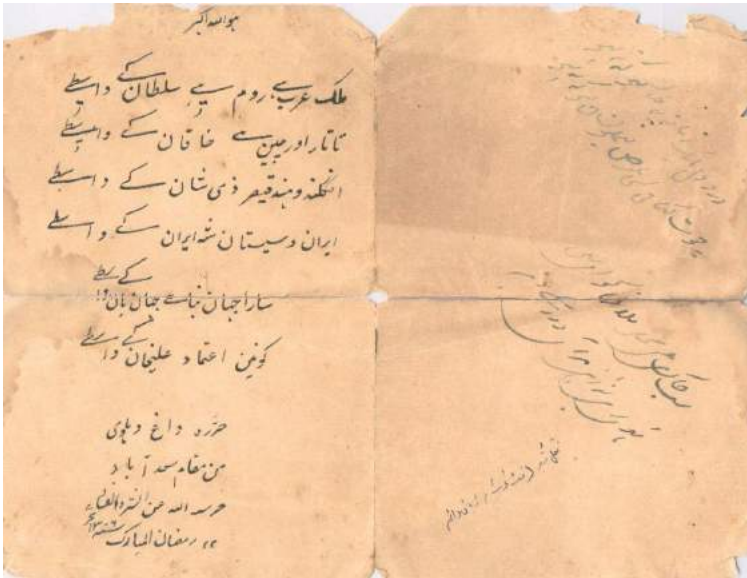


Image 2: Letter of Khadija Mastoor (dated 1946)

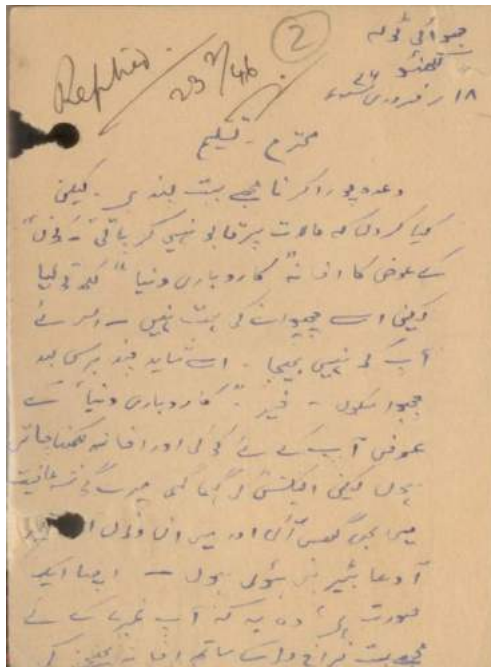


Image 3: Letter of Khadija Mastoor (dated 1959)

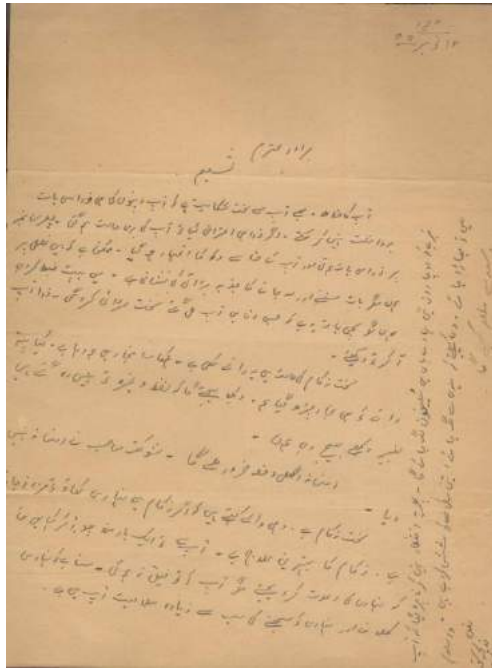


Image 4: Letter of Shibli Numani

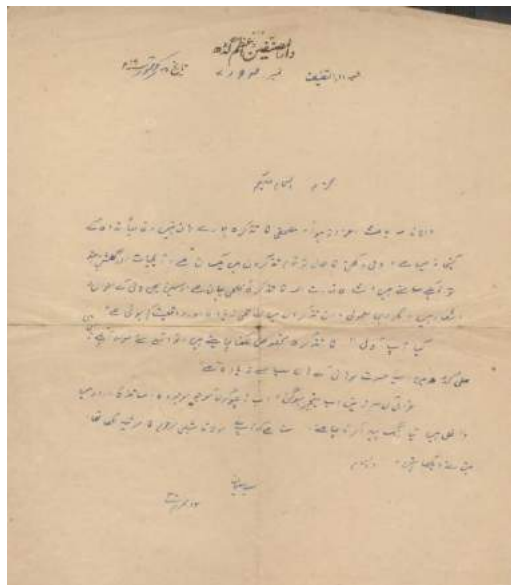


Image 5: Letter of Shibli Numani (dated 1919)

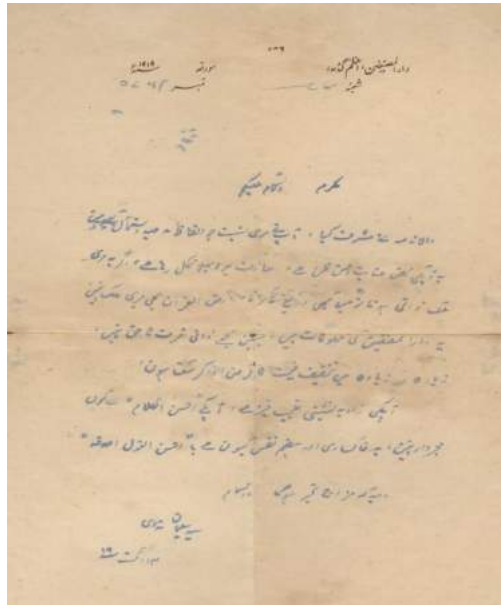
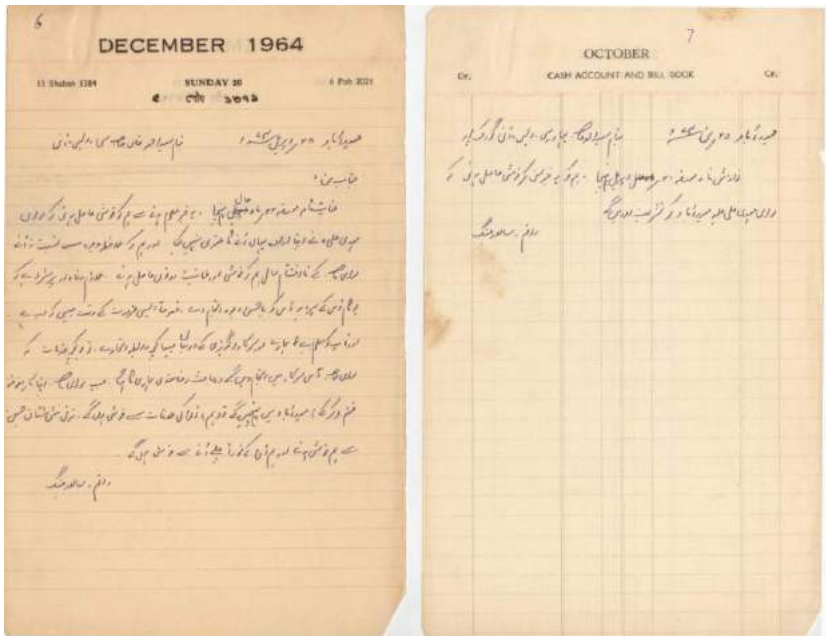


Image 6: letter of Salar Jang (dated 1964)





### Technical processing

The collection's managerial and technical handling was planned by the then chief librarian, Abdul Waheed. It includes classification and arrangement; conservation and digitalization; access and marketing.

**1) Classification and arrangement:** Nuqoosh letters are classified according to authors and further assigned with codes and date of writing. Accordingly, separate file folders are prepared for the letters and these folders are arranged according to their codes. Self-devised classification and arrangement is:

Letter classification = Author > File > Number >LtrQty (letter quantities)

Folders arrangement = Author Alphabetical > File > Number >LtrQty

**2) Conservation:** There are four major factors of the deterioration of any artifact i.e. environmental, biological, human, and natural factors (**Prytherch, 2005**). The library received the collection over half century-year-old boxes. The collection is well-kept by the magazine editors and mostly documents are in good condition. To extend their physical life, the library ensures conservation and a proper environment. All letters are carefully fumigated before any sort of physical handling in the museum. The process reduces the chances of deterioration by insects and worms as well as prevents other threats to the paper (**Qutab, Bhatti & Ullah, 2014**). Also, each letter is placed in plastic cover and into a folder to prevent direct human touch yet ensuring the readability.

**3) Digitization:** Physical conservation of original artifacts is undoubtedly valuable to preserve the intellectual content and artistic formats (**Li & Niu, 2010**). Facsimiles, microfilming and now digitization is in practice for the content preservation. The advanced and emerging technologies have made the preservation of contents possible even with less financial and human resources. Digitization provides safety to the original documents and swift access to content around the world.

**Digitization project:** A digitalization project was initiated in 2009, to provide researchers easy access, while preserving the original documents. Currently, more than 4700 digitized letters are available through LAN and CD/DVD, while scanning of remaining letters is in the process.

- **Equipment:** The GCU Library received a grant from Higher Education Commission (HEC) of Pakistan to set a digitization lab to digitize the GCU thesis repository and the 'Ravi' library (University's official magazine).
- **Human Resource:** The human resource working on the digitization project consists of an IT professional, an assistant librarian and two computer operators.
- **Imaging:** The library uses a Kodak scanner i1320 with a speed of scanning 60 pages per minute. Digital cameras are also used for the delicate letters and materials following imaging standards as

recommended by the World Digital Library (WDL). Scanning of images is done at 300 dpi and files are saved in TIFF format at 8-bit greyscale for black and white and 24-bit for pages with color images. The images are stored in the original size as a master copy and later converted to PDF files.

- **Digital Library:** The PDF files of the letters are preserved in the greenstone software. This library is accessible for the users within GCU through the LAN network.
- **Preservation & Distribution:** The CD/DVD is available free of cost on request from the chief librarian.

**4) Access, services, and marketing:** The GCU library ensures easy access to resources for the researchers/scholars through many conventional and modern marketing techniques. Local and international students, researchers, alumni and writers regularly visit the library to benefit from the evidence-based research and reference. A complete list of authors, letters, scripts, positives, and books at the NRC is placed on the GCU website.

Library administration effectively uses print media and social networking tools to promote the collection. There are various guest articles, national newspaper editorials, letters to editors, magazine columns, library society reports, social media feeds, videos on YouTube, TV talk shows and radio programs conducted time to time to spread the information (**Hayat, 2011; Jaffery, 2011**). The establishment of Nuqoosh museum, collaboration with the WDL, launch of NRC and many other events were covered in all popular national dailies and television channels to increase awareness among the public and researchers at the national and international level.

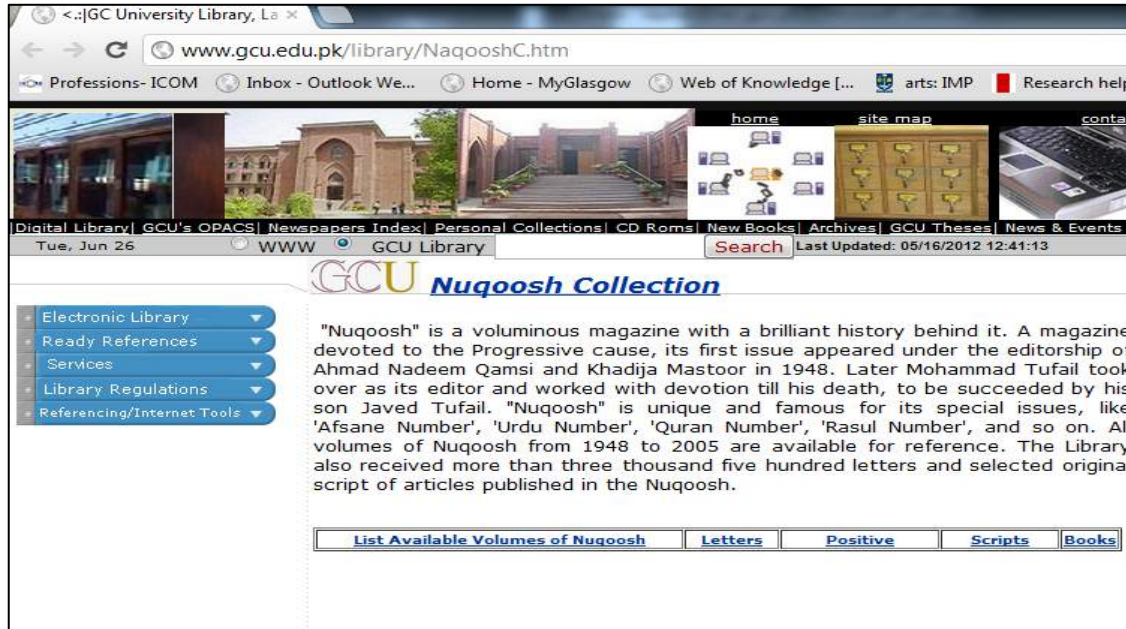
## Conclusion

The Nuqoosh magazine is considered a valuable era of the modern Urdu journey. The work published in the literary magazine are not only from the authors of Pakistan, but also from India, Bangladesh and worldwide. The Naqoosh museum and research center combines the literary legacy of more than a hundred million Urdu speaking people around the world. It is a unique capture of a literary magazine's journey over a half century for the people of literary taste in general and researchers in particular.

Image 7: The Greenstone Digital Library of Naqoosh



Image 8: GCU Library Website, Nuqoosh Collection



## References

- Anjum, N. (1989). *Ghalibiat: Collection in Nuqoosh magazine*. Lahore: Altaufil.
- Ayres, A. (2009). *Speaking like a state: Language and nationalism in Pakistan*. Cambridge, UK: Cambridge University Press.
- BBC. (2007). *A Guide to Urdu - 10 facts about the Urdu language*. Retrieved from <http://www.bbc.co.uk/languages/other/urdu/guide/facts.shtml>
- Encyclopedia Britannica. (2009). *Urdu language*. Retrieved from <https://www.britannica.com/topic/Urdu-language>
- Encyclopedia Britannica.(2016). *Hindustani language*. Retrieved from <https://www.britannica.com/topic/Hindustani-language>
- Ethnologue: Languages of the World (2017). *Urdu*. Retrieved from <http://www.ethnologue.com/language/urd>
- Fatihi, A. R. (2003). *Language in India*. 3(2). Retrieved from <http://www.languageinindia.com/feb2003/urduinbihar.html>
- GCU. (2017).*Nuqoosh Collection*. Retrieved from: <http://library.gcu.edu.pk/NaqooshC.htm>
- Hayat. A. (2011, June 4).*GCU Nuqoosh Research Centre Inaugurate Pkg* [Video]. Retrieved from [http://www.youtube.com/watch?v=9fWt\\_xsPj00](http://www.youtube.com/watch?v=9fWt_xsPj00)
- Jaffery, S. (2011). *GCU-Library*. [Video]. Retrieved from <http://www.youtube.com/watch?v=IPeEwk4QCO0>
- Kachru, Y. (2008).Hindi-Urdu-Hindustani. In B. B. Kachru, Y. Kachru, & S. N. Sridhar (Eds.), *Language in South Asia*(pp. 81–112).Cambridge, UK: Cambridge University Press
- Li, M., &Niu, J. (2010).A preservation framework for Chinese ancient books.*Journal of Documentation*, 66(2), 259-278.doi:10.1108/00220411011023652
- Masica, C. P. (1993).*The Indo-Aryan languages*.Cambridge, UK: Cambridge University Press.
- Matthews, D. J., Shackle, C. &Husain, S. (1985). *Urdu Literature*.London: Urdu Markaz.
- Prytherch, R. J. (2005). *Harrod's librarians' glossary and reference book: a directory of over 10,200 terms, organizations, projects and acronyms in the areas of information management, library science, publishing and archive management*. (10<sup>th</sup> Ed.). London: Ashgate Publishing.
- Qutab, S., Bhatti, R., & Ullah, F. S. (2014). An investigation of conservation & preservation practices of intellectual heritage in Pakistan. In *IFLA-PAC Satellite meeting, Geneva, August 13-14, 2014*.
- Rahman, M. M. U. (1983). *Muhammad Nuqoosh*. Lahore: Karwan-e-Adab
- Rahman, T. (2002).*Language, ideology, and power: language-learning*

among the Muslims of Pakistan and North India. Karachi, Pakistan: Oxford university press.

Ruaf, Z. (2007). Precious letters of great literary persons. *Daily Jang*. Urdu literature center inaugurated at GCU. (2012, May 26). *The Daily Nations*. Retrieved from <http://nation.com.pk/lahore/26-May-2012/urdu-literature-centre-inaugurated-at-gcu>

Warrich, A. A. K. (2007). Transfer of Muhammad Nuqoosh's literary heritage to GCU. *Daily Nawa-e-Waqat*.

Zia, K. (1999). *A Survey of Standardization in Urdu*. Retrieved from <http://www.cicc.or.jp/english/hyoujyunka/mlit4/7-10Pakistan/Pakistan2.html>

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## Understanding the Linkages between ICT and Empowerment: A Gendered Perspective

Shazia Manzoor  
Tania Farooq

### Abstract

**Purpose:** *The paper examines the role of Information and Communication Technology (ICT) in promoting gender equality in India.*

**Design/Methodology:** *The present work is based on secondary sources of data, therefore related literature is consulted in order to understand the linkages between ICT and women empowerment.*

**Findings:** *Gender inequality remains the basis for disempowerment of women and how the effective usage of ICT could lead to their empowerment. It takes into account the successful examples used worldwide, which could be adapted in the Indian context. It also puts forth how Sustainable Development Goal 5 (SDG 5), which directly focuses on gender equality, can be achieved by using ICT effectively.*

**Research Limitations/Implications:** *The study is only confined to the role of ICT on empowering women.*

**Originality/Value:** *The present theme of study is an under researched area, therefore it will add to the already existing literature of ICT and its linkage with the empowerment of women.*

**Keywords:** *Gender equality, ICT, SDG, Empowerment, Development.*

### Introduction

Gender refers to the socially constructed roles, behaviors, activities, and attributes that a given society considers appropriate for men and women (**World Health Organization, 2017**). These roles and responsibilities are different for males and females and are often defined by certain cultural norms, practices, social structures, and a patriarchal society. Males predominantly hold power and are involved in decision-making and females have a less say in all the affairs. This forms the basis of gender inequality whereby women face discrimination. The concept of gender inequality forms its basis over the patriarchy, as it sets the standards for gender equality. It is not only to be conceptualized as a discrimination between men and women but a core of hierarchal social organizations as it has a hold on almost all social institutions and cultural practices of a society. Patriarchy is a germinal ideology, and the global gender order is its organizational form (**Reardon as cited in Hans, 2015**). In India, gender inequality permeates in all the phases of a woman's life. Eventually it becomes a vicious circle, which starts even before her birth and ends with her life. **Ghani, Kerr and O'Connell (2012)** cite that "The UN Gender Equality Index has ranked India below several Sub-Saharan African countries. Gender disparities are even more pronounced in economic participation and women's business

condition in India". Gender inequalities form a major barrier for women to access their rights and as such limits the scope of progress for them. Hence, gender equality has been echoed in various policy documents as this lays the foundation for development of any nation. Gender equality means more decision making power for women, more opportunities for growth, employment and development. Gender equality, therefore, is the current subject of concern among the policy makers of the world because of enhancing economic growth and maintaining continuity of the development process as well (**Khatun, 2002**). Gender inequality remains a major barrier to the development, particularly human development of any nation. The work of **United Nations Development Programme in India (2017)** "About India: Challenges" states that the "Disparity in India is not likely to be eliminated soon. India's poor performance on women's empowerment and gender inequality is reflected in many indicators". Gender inequality in India is clearly reflected in the low rank in United Nations Development Programme's Gender Inequality Index.

Towards this end, thorough discussions and debates are being done. Many authors have pointed towards the role of empowerment in bringing women at par with men and thus achieving gender equality in real terms. Empowerment of women can be pivotal tool in reaching towards the goal of gender equality, which can be achieved to effective usage of technology.

### **Literature Review**

In order to understand and gain insights into various dimensions of women and their relationship with technology, it is important to understand the linkage between gender inequalities and usage of ICT by women. Gender inequalities are deeply embedded in the social fabric of a patriarchal society. It forms the basis of discrimination in every sphere of women's life. Many studies have illustrated the importance of viewing technology through the social perspective as **Wajcman (2004)** points that "Technology must be understood as a part of social fabric that holds society together; it is never merely technical or social. Rather a technology is always a socio-material product, a seamless web or network combination artifacts, people, organizations, cultural meanings and knowledge". Society, social relationship, social institutions and the social fabric always remain an important factor of women empowerment and their relation with important empowerment tools like ICT. One of the important perspectives of social relationships and ICT has been stressed in the Domestication Theory. This theory points out an important perspective of "how individual's social relationships impact usage." It also emphasizes the importance of not only understanding why or why not



ICT is adopted, but also how people adopt (or tinker) with ICT and how this “tinkering” affects the ICT use (**Lie & Sorenson, 1996**).

Many studies show that ICT has a significant role to play in empowering women and promoting gender equality. In the report of UN Division for advancement of women on ‘gender equality and empowerment of women through ICT’, **Sandys (2005)** points out that ‘ICTs can be powerful catalysts for political and social empowerment of women and promotion of gender equality’. However, due to the persistent gender inequalities in India, women have to face certain challenges which make access of ICT difficult for them. These challenges are rooted not only in economic but also in social and cultural factors, leading to obstacles that limit women to benefit from the ICT revolution, and thus creating a gender digital divide (**Daly, 2003; Hafkin & Tagart, 2001; Huyer & Mitter, 2003; Huyer & Sikoska, 2003**).

The concept of gender digital divide is not merely based on the concept of access and availability of services. The divide forms its foundation on a web of socially constructed factors that limits the usage of these services. The usage and access of these services by women must be understood from a different perspective. Since other areas of an individual’s life bleed into their home lives, it is important even for studies that concentrate on the home environment to consider ICT usage in other contexts (**Haddon, 2007**). Although technology and gender are both socially constructed and socially pervasive, we can never fully understand one without understanding the other (**Lohan & Faulkner, 2004**). Historically, technology has been defined exclusively as male activities in such a way that many tasks women have traditionally performed (such as knitting) are not defined as technical, despite involving a high degree of manual dexterity and computation (**Cockburn as cited in Henwood, 1994**). Women’s alienation from technology is accounted for in terms of the historical and cultural construction of technology as masculine (**Wajcman, 1991**). Another important aspect of women’s exclusion from technology is based on cultural constructions of a society. As **Henwood (1994)** says:

*“Our theorizing of the gender and information technology relationship should not be reduced to the simple ‘man equals technology literate, women equals technology illiterate’ formulation. Technological meanings are not ‘given’; they are made. Our task trying to transform the gendered relations of technology should not be focused on gaining access to the knowledge as it is but with creating that knowledge. By this I mean to be involved at the level of definition, of making meanings and in creating technological culture”.*

## Methodology

The present work is primarily based on secondary sources of data, therefore it analyses the work of various authors, publications from institutions like World Bank and United Nations. A considerable portion of work has been drawn from the Sustainable Development Goals, particularly Goal 5.

## Women and their Empowerment

Women constitute 48.5% of the population i.e. almost half population of India. They account for 23-24% of the total labor force and generate 17% of the share of gross domestic product (GDP) (Woetzel et al., 2015). They can be better players in the economy if their potential is tapped in a positive manner and they are empowered. According to a study by Woetzel et al. (2015), "India can increase its 2025 GDP, estimated at USD4.83 trillion, by between 16% and 60% simply by enabling women to participate in the economy at par with men". Empowerment of women remains a main area of concern. It has been viewed as a process through which women can gain power over men or as a process that enables women to gain access to decision-making processes and instances of power (Oxaal & Baden, 1997). Empowerment indicates that women have enhanced capacities and capabilities so that they are able to take decisions, have freedom and access to resources and opportunities. It directly means challenging the social systems, cultural norms and patriarchy because they form the basis of gender inequality. According to the United Nations Population Information Network [POPIN] (n.d.), 'women's empowerment have five components: *"women's sense of self worth; their right to have and to determine choices; their right to have access to opportunities and resources; their right to have the power to control their own lives, both within and outside the home; and their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally"*. Certain empowerment models for women show how empowerment can lead to gender equality. One of the widely accepted models is the Longwe model (Longwe, 1990). This model discusses five levels of gender equality as: Welfare, Access, Conscientization, Participation, and Control. In her model, Longwe states that higher the levels of equality, higher are the chances of women's development and empowerment. Thus, empowerment remains a central concept for gender equality and ICT can be a key player in empowerment.

## Women and Technology

The World Bank Group defines ICT to consist of hardware, software, networks, and media for collection, storage, processing transmission, and

presentation of information in the form of voice, data, text, and images. These range from telephone, radio and television to the internet (**Hafkin, Bhatnagar, Bhatnagar, Huyer & Tandon, 2003**). In contemporary times, ICT has gained momentum and has been viewed as an effective tool of change. The effect of ICT has permeated in all spheres of life and has opened up new opportunities of economic growth and development. It has brought a positive change and is considered as strong and pivotal tool of empowerment for women. As ICT began to unveil its positive role, the necessity of its incorporation within the gamete of women's life was held. However, a fact here remains that for women, gender disparity is present in this arena also and it eventually constitutes the term "gender digital divide". Here it becomes important to explore the relationship between women and digital divide. Is this divide based only on the variable of sex (biological identification of men and women)? Or it is to be conceptualized through the core of gender inequalities present throughout women's life. Past literature suggests that women were not the first to adapt the technology and enter the digital era (e.g. **Dholakia, Dholakia & Pedersen, 1994; National Telecommunications and Information Administration [NTIA], 1999**). Women undervalued their usage skills, which lead to lower self-efficacy to the usage of ICT (**Busch, 1995; Hargittai & Shafer, 2006; Joiner, Messer, Littleton & Light, 1996**), as well as in their general outlook towards technology and computers (**Shashaani, 1994**). As a result, the widespread belief was that "men are more interested in technology than women, and they are also more tech savvy" (**Fallows, 2005**) and thus ICT began to be considered as "toy for the boys" (**Faulkner, 2001**).

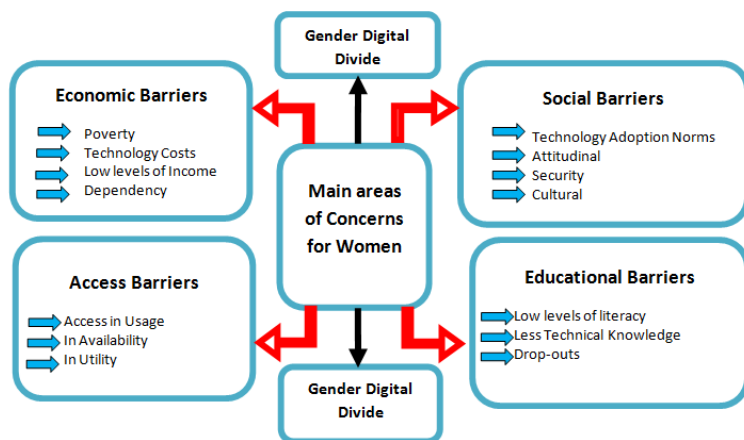
Gender inequalities play a vital role in steering away women from the technology. In India the concept of gender inequality is deeply rooted, and the trend for digital divide starts early. The **United Nations Development Programme's (1999)** "Human Rights Report 1999" shows that in the United States, boys are five times more likely than girls to use home computers and parents spend twice as much on ICT products for their sons as they do for their daughters. Likewise, girls in India are not encouraged to use technology even if it turns out to have a positive impact for them. It is because of a host of social, economic and attitudinal barriers. These barriers are based on the social set up of a society, and have a direct linkage with concepts like cultural norms, patriarchy and social institutions. Some of these are illustrated below in Fig. 1.

### **Sustainable Development Goals and Gender Equality**

Earlier Millennium Development Goals (MDG) and now Sustainable Development Goals (SDG) have been formulated as a response to

problems in some of the important areas like health, sanitation, poverty and promoting gender equality. Gender equality is an important goal of the total seventeen goals made for achieving sustainable development and a prosperous world. SDG 5 has been drafted with an aim to achieve gender equality and promote empowerment of women and girls. Promoting gender equality has a direct effect on other development areas. The targets under this goal have been made to permeate in all spheres of her life. These start from ending discrimination of all forms with a focus on ending sexual violence, trafficking, access to reproductive health services, and equal opportunities for decision making. Several targets of other goals also address gender equality and can have a positive impact on promoting gender equality. The targets of goal 5 and other goals related to gender equality are depicted below in Fig 2.

Fig 1: Main areas of concern for women, which leads to Gender Digital Divide.

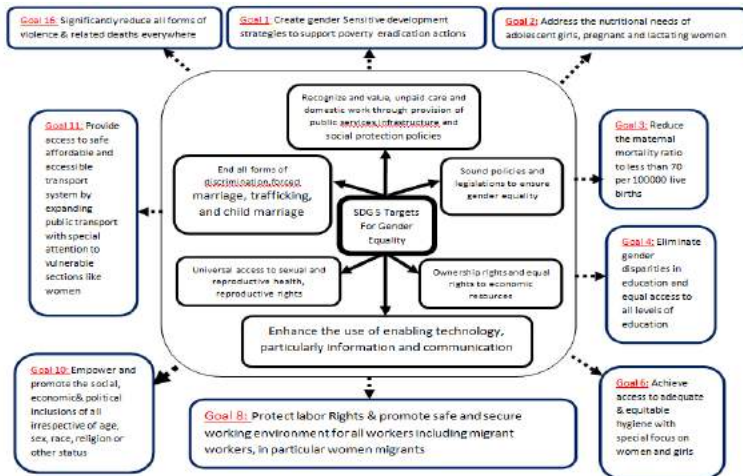


**ICT and SDG5: Can they empower women and promote gender equality?**

ICT has the capacity to completely redefine traditional gender roles, especially for women who have limited skills or who do not have the resources to invest in higher education (Kelkar & Nathan, 2002). It enables meaningful participation and make female voices heard, as has been proved by the role of digital networks in feminist movements (Harcourt, 1999). One of the targets of SDG5 is to “Enhance the use of enabling technology, in particular information and communication technology, to promote the empowerment of women”. ICT can play a crucial role in the empowerment of women, thereby eventually transforming their lives, given their capacity to permeate in every sphere of life. Goal No. 5 of SDG and several targets of other goals which can

lead to gender equality can be achieved by proper usage of ICT, as these have been viewed as powerful and revolutionary tools that can be used for sustainable development of developing countries (Daly, 2003; Huyer & Mitter, 2003). But where actually can ICT work? The point of discussion here remains that where can ICT be used to promote the concept of gender equality. The targets can be many areas which will help in the empowerment of women and girls and thus creating the ground for sustainable development. Prior to realizing the goal of women empowerment, it is necessary to understand what leads to empowerment and gender equality. Keeping the already discussed models and definitions of empowerment in view, it can be assumed that; more opportunities of growth, increased sources of income, high levels of literacy, access to good health services, decision-making power and awareness about rights can help achieve some of the targets of SDG for promoting gender equality.

Fig 2: Targets of SDG's for gender equality.



### ICT in enabling more Livelihood Opportunities

The usage of ICT can enable working women to gain more economic benefits as they can get a direct linkage to market and surpass the male-dominated market structures. These can provide women entrepreneurs with access to worldwide e-business channels, which can be operated anytime from home (Brodman & Berazneva, 2007; Morgan, Heeks & Arun, 2004). Many authors have pointed out that the use of ICT can increase economic productivity (Jorgenson & Stiroh, 2000; Oliner & Sichel, 2000; Pilat & Lee, 2001; Schreyer, 2000; Whelan, 2000). The main

advantage of using ICT is the flow of information and knowledge that can be passed on, without the consideration of geographical limits. Geographical boundaries can be a great barrier which limits the participation of women in various activities. Overcoming these barriers is a great concern for women in India, and in such cases, telephones, computers and the Internet allow women to telecommute, and hence work and interact with men without face-to-face contact, and even without being in the same place (**Daly, 2003**). They can easily share information, without meeting various costs. Hence, with the incorporation of technology and internet, women can be directly linked to the international buyers. There are various examples of how self-employed women in Cambodia, India and Peru have exploited various economic opportunities offered by e-commerce (**The World Bank, 2003**).

<b>Some Facts About Women and Livelihood</b>
If women farmers had the same access to resources as men, the number of hungry in the world could be reduced by up to 150 million.
Four billion people do not use the Internet, and 90 per cent of them are from the developing world.
In developing countries, barely 30 per cent of agricultural production undergoes industrial processing. In high-income countries, 98 per cent is processed. This suggests that there are great opportunities for developing countries in agribusiness

*Source: (United Nations Development Programme [UNDP], 2015).*

Several projects have been started in various countries which can be replicated in the context fit for India to help women gain more profits from their ventures. PRODEMU, an NGO in Catamarca, Argentina have trained rural women to use ICT to improve the design and marketing of their goods. They were also encouraged to develop a webpage and improving the packaging, which increased their sales considerably (**Adam & Loregnard-Kasmally, 2002**).

Another example is of “knitting together nations”, a project jointly started by UNESCO, World Bank and United Nations High Commissioner for Refugees (UNHCR). Its aim is to create employment opportunities by providing craftswomen access to global market. Displaced women of Bosnia- Herzegovina sell their products globally through e-commerce (**Global Knowledge Partnership, 2003**).

### **ICT for better Health**

ICT can be used to create better health opportunities and initiatives for women. Information dissemination becomes quite easy with the help of technology. Providing better health care and services to everyone has been a target and aim of SDG with special focus on improving the reproductive, sexual health and creating awareness about reproductive

rights. The aim is also to reduce the maternal mortality and the spread of diseases like Tuberculosis, HIV/ AIDS, etc. With the integration of ICT into health care services, these targets can be achieved. There are various examples which have been started in places like Kenya, Africa, and Uganda wherein the integration of technology in the health care system has led to positive changes for women. A proper integration of technologies can directly address women's health concerns. These can be utilized in the better management and delivery of services at the institutional level, like maintaining of proper records which can directly benefit women. These are also used to aware women regarding health issues particularly related to their reproductive and sexual health. Radios have been used as a medium to disseminate information which can be of great help especially for pregnant women.

<b>Some Facts About women and Their Health</b>
Maternal mortality ratio – the proportion of mothers that do not survive childbirth compared to those who do – in developing regions is still 14 times higher than in the developed regions
Only half of women in developing regions receive the recommended amount of health care they need
The need for family planning is slowly being met for more women, but demand is increasing at a rapid pace
Globally, adolescent girls and young women face gender-based inequalities, exclusion, discrimination and violence, which put them at increased risk of acquiring HIV
HIV is the leading cause of death for women of reproductive age worldwide
In many settings, adolescent girls' right to privacy and bodily autonomy is not respected, as many report that their first sexual experience was forced

*Source: (UNDP, 2015)*

Various examples of improved access to health care services are proved by incorporation of technology into health sector. Recently Kenya has started a mobile wallet called as "*M-Tiba*" to make health care more accessible to people. A joint venture of *Safaricom*, *Carepay* and *Pharma access* has tapped the potential of a mobile phone to provide better health care. *M-Tiba* allows people to save, borrow, and share money for healthcare at very low costs. It also brings transparency and accountability to healthcare financing (for donors, government, insurers and corporate) and thus increases trust throughout the system (**Mobile Health Wallet, n.d.**).

In Uganda, a project called RESCUER has been started by United Nations Population Fund (UNFPA), in collaboration with Uganda's Ministry of Health and Population Secretariat and Uganda district authorities, to reduce Uganda's high maternal mortality rate (506 per 100,000) by improving local care and referral systems. The project used means of communication like walkie-talkies. Also, high frequency radios were

installed at referral units, health units, ambulances which improved the quality of health care provided to a considerable level (**Sandys, 2005**).

### **ICT in better Education Services**

Gender disparity always leads to low literacy levels for females and high drop-out rates for girls. Continuing cultural and attitudinal challenges, domestic responsibilities and some socio-cultural practices steer away females from getting education. Cultural and attitudinal challenges are responsible for lack of family support to educate girls and perceptions on the role of women in society (**Huyer & Mitter, 2003**). In some instances, mobility needs, can become a barrier for females. The flexibility related to access, study times and the potential to reach women in rural and far flung areas or to those women who face social barriers that may limit their access to schools, makes distance learning via ICT a promising educational approach for women (**Chen, 2004**). A proper integration of technologies can be pivotal in addressing the education concerns of females. ICT can provide the content at the door step with the availability of technologies like internet, online classrooms, computers and e-learning centers. This can highly promote the education of girls. ICT can be strategically used to influence public opinion to change the prevalent cultural and attitudinal bias towards female education. Various examples have been put forth by many countries by using ICT for better education of girls.

An NGO *Tostan* in collaboration with UNICEF in 2009 started the *Tostan* and *Jokko* initiative in several African countries in which mobile phones were used as a tool to support literacy skills. Initially it was realized that the ability to communicate by text message was a motivating factor in encouraging literacy among people. The facilitators taught participants the uses of standard mobile phone functions and how SMS texting can be used as a tool to practice their literacy skills.

<b>Some Facts About Education and Women</b>
Children of educated mothers—even mothers with only primary schooling—are more likely to survive than children of mothers with no education.
103 million youth worldwide lack basic literacy skills, and more than 60 per cent of them are women
More than half of children that have not enrolled in school live in sub-Saharan Africa
Enrolment in primary education in developing countries has reached 91 per cent but 57 million children remain out of school
In sub-Saharan Africa, Oceania and Western Asia, girls still face barriers to entering both primary and secondary school.

Source: (UNDP, 2015)



### **ICT for creating Awareness**

Currently there is a shift from the *Need Based Approach* to the *Rights Based Approach*. This approach shifts the paradigm from merely fulfilling the needs to recognize people as subjects of rights. Using a rights based approach can be an important tool for empowering women and promoting gender equality. The key player in achieving this goal remains the awareness about rights. Awareness about rights can lay foundation for empowerment of women and thereby achieving the goal of gender equality. Women cannot claim their rights if they are not aware about them. Right information at right time is pivotal in empowering women. ICT tools such as radio, television, mobile phone and internet can be used to create awareness regarding their rights and laws concerning them. ICT can be used to create awareness and disseminate information at two levels. At primary level, women can be made aware about their inherent human rights and the rights they have as state subjects. The information disseminated through the medium of radios, televisions or print media can have a long lasting impact on them. This can lead to increased chances of decision making that can shape their lives in a positive manner. The second level can be achieved by creating awareness at mass level. Raising awareness is necessary to change the perceptions and change the deep rooted bias prevalent in the society. An increased awareness of issues related to gender equality can be a positive tool to change the perceptions and attitudes of people towards women. Many countries have utilized the services of ICT tools to promote awareness among women as in Uganda, the Uganda Media Women's Association established a radio programme called *Mama FM*, where women can actively participate and learn about development issues such as human rights, child right, governance, nutrition, health, among others.

### **Conclusion**

Following the line of discussion in this paper, it can be argued that gender equality forms the basis of sustainable development of any nation. Gender inequality has been viewed as a contemporary issue and has been echoed in various policy documents. The fifth goal of the SDG focuses directly on gender equality and empowerment of women. Empowered women and girls contribute to the growth and development of a nation, and create a positive effect that benefits everyone in a family and a community. Women Empowerment is an important means to promote the concept of gender equality and ICT is the key tool in achieving it. As discussed in the literature review, gender inequalities throw shadow on the usage of ICT for women, and eventually create a gender digital divide. This divide prevents women from using ICT tools, but once these services are made accessible, then these can be used to

promote gender equality. ICT has the potential to provide women with the opportunity to unlock their capabilities and pull themselves out from unfavorable conditions. It has the capacity to permeate into every aspect of life, and has been recognized as tool to enhance the quality of a woman's life. Improving the access to ICT can initiate a positive cycle of growth and development for women.

## References

- Adam, A., & Loregnard-Kasmally, A. (2002). *Participation and access of women to the media, and its impact on and use as an instrument for the advancement and empowerment of women*. Retrieved from <http://www.un.org/womenwatch/daw/egm/media2002/aidemoire.PDF>
- Brodman, J., & Berazneva, J. (2007). Transforming Opportunities for Women Entrepreneurs. *Information Technologies and International Development*, 4(2), 3-10.
- Busch, T. (1995). Gender differences in self-efficacy and attitudes toward computers. *Journal of Educational Computing Research*, 12(2), 147-158.
- Chen, D. H. C. (2004) *Gender equality and economic development: The role for information and communication technologies*, Policy Research Working Paper, 1(1). World Bank, Washington, D. C. Retrieved from <https://openknowledge.worldbank.org/handle/10986/14306>
- Daly, J. A. (2003). *ICT, Gender Equality and Empowering Women*. Retrieved from [http://www.tanzaniagateway.org/docs/ICT\\_Gender\\_Equality\\_and\\_Empowering\\_Women.pdf](http://www.tanzaniagateway.org/docs/ICT_Gender_Equality_and_Empowering_Women.pdf)
- Dholakia, R. R., Dholakia, N., & Pedersen, B. (1994). Putting a byte in the gender gap. *American Demographics*, 16(12), 20.
- Fallows, D. (2005). How women and men use the internet. *Pew Research Center*. Retrieved from <http://www.pewinternet.org/2005/12/28/how-women-and-men-use-the-internet/>
- Faulkner, W. (2001). The technology question in feminism: A view from feminist technology studies. *Women's Studies International Forum*, 24(1), 79-95. DOI: 10.1016/S0277-5395(00)00166-7
- Ghani, E., Kerr, W., & O'Connell, S. (2012). What explains gender disparities in India? What can be done? *The World Bank*. Retrieved from <http://www.worldbank.org/en/news/opinion/2012/09/27/gender-disparities-india>

- Global Knowledge Partnership. (2003). *Youth, poverty, gender: ICT for development success stories*. Retrieved from <http://old.unesco.kz/publications/ci/moscow/ict-successstories.pdf>
- Haddon, L. (2007). Roger Silverstone legacies: Domestication. *New Media & Society*, 9(1), 25-32. DOI: 10.1177/1461444807075201
- Hafkin, N. J., Bhatnagar, D., Bhatnagar, S., Huyer, S., & Tandon, N. (2003). *Engendering ICT: Ensuring Gender Equality in ICT for Development*. Retrieved from <http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/EngenderingICTFinalDraft.pdf>
- Hafkin, N., & Taggart, N. (2001). *Gender, Information Technology, and Developing Countries: An Analytical Study*. Retrieved from [http://www.mujeresenred.net/zonaTIC/IMG/pdf/Gender\\_Book\\_NoPhotos.pdf](http://www.mujeresenred.net/zonaTIC/IMG/pdf/Gender_Book_NoPhotos.pdf)
- Hans, A. (Ed.). (2015). Epilogue: Transforming invisibilities and obscure directions. *Disability, gender, and the trajectories of power* (pp. 260-268). New Delhi: Sage Publications India Pvt Ltd.
- Harcourt, W. (Ed.). (1999). *Women@Internet: Creating New Cultures in Cyberspace* (p. 240). United Kingdom: Palgrave Macmillan.
- Hargittai, E., & Shafer, S. (2006). Differences in actual and perceived online skills: The role of gender. *Social Science Quarterly*, 87(2), 432-448. Retrieved from <http://www.eszter.com/research/pubs/hargittai-shafer-ssq06.pdf>
- Henwood, F. (1994). Establishing gender perspectives on information technology: Problems, issues and opportunities. In E. Green, J. Owen & D. Pain (Eds.), *Gendered by Design?: Information technology and office systems* (pp 31-49). USA: Taylor & Francis.
- Huyer, S., & Mitter, S. (2003). *ICTs, globalisation and poverty reduction: Gender dimensions of the knowledge society Part I. Poverty reduction, gender equality and the knowledge society: Digital exclusion or digital opportunity?* Retrieved from <http://unpan1.un.org/intradoc/groups/public/documents/unpan/unpan037351.pdf>
- Huyer, S., & Sikoska, T. (2003). Overcoming the gender digital divide: Understanding ICTs and their potential for the empowerment of women. *INSTRAW virtual seminar series on Gender and ICTs*, 1, 1-36. Retrieved from [http://www.onlinewomeninpolitics.org/beijing12/2003\\_gender\\_ict.pdf](http://www.onlinewomeninpolitics.org/beijing12/2003_gender_ict.pdf)

- Joiner, R., Messer, D., Littleton, K., & Light, P. (1996). Gender, computer experience and computer-based problem solving. *Computers & Education*, 26(1-3), 179-187. DOI: 10.1016/0360-1315(96)00008-5
- Jorgenson, D. W., & Stiroh, K. J. (2000). Raising the speed limit: U.S. economic growth in the information age. *Brookings Papers on Economic Activity*. 1, 125- 235. Retrieved from [https://www.brookings.edu/wp-content/uploads/2000/01/2000a\\_bpea\\_jorgenson.pdf](https://www.brookings.edu/wp-content/uploads/2000/01/2000a_bpea_jorgenson.pdf)
- Kelkar, G., & Nathan, D. (2002). Gender relations and technological change in Asia. *Current Sociology*, 50(3), 427-441. DOI: 10.1177/0011392102050003008
- Khatun, T. (2002). Gender - related development index for 64 districts of Bangladesh. *Centre for Policy Dialogue (CPD), paper 19*. Retrieved from <http://cpd.org.bd/paper-19-gender-related-development-index-for-64-districts-of-bangladesh/>
- Lie, M., & Sorensen, K. H. (Eds.). (1996). *Making technology our own?: Domesticating technology into everyday life* (2<sup>nd</sup> ed., pp. 1-30). Boston: Scandinavian University Press.
- Lohan, M., & Faulkner, W. (2004). Masculinities and technologies: Some introductory remarks. *Men and Masculinities*, 6(4), 319-329. DOI: 10.1177/1097184X03260956
- Longwe, S. H. (1990). *From Welfare to empowerment: The situation of women in development in Africa, a post UN Women's decade update and future directions*. Michigan: Michigan State University Press.
- Mobile Health Wallet. (n.d.). *M-Tiba*. Retrieved from <https://www.pharmaccess.org/wp-content/uploads/2016/05/Mtiba-brochure-FINAL1.compressed.pdf>
- Morgan, S., Heeks, R., & Arun, S. (2004). Researching ICT-based enterprise for women in developing countries: a gender perspective. Retrieved from <http://www.tanzaniagateway.org/docs/Researching ICT Enterprise for Women in Developing Countries.pdf>
- National Telecommunications and Information Administration. (1999). *Falling through the Net: Defining the Digital Divide. A Report on the Telecommunications and Information Technology Gap in America*. United States: U.S. Department of Commerce, NTIA. Retrieved from <https://www.ntia.doc.gov/legacy/ntiahome/fttn99/contents.html>

- Oliner, S. D., & Sichel, D. E. (2000). The resurgence of growth in the late 1990s: Is information technology the story? *Journal of Economic Perspectives*, 14(4), pp. 3-22. DOI: 10.1257/jep.14.4.3
- Oxaal, Z., & Baden, S. (1997). Gender and Empowerment: definitions, approaches and implications for Policy. *Bridge development gender*, Report No. 40. Retrieved from <http://www.bridge.ids.ac.uk/sites/bridge.ids.ac.uk/files/reports/re40c.pdf>
- Pilat, D., & Lee, F. C. (2001). Productivity growth in ICT producing and ICT-using industries: A source of growth differentials in the OECD? *OECD Science, Technology and Industry Working Papers*, 2001(04). DOI: 10.1787/774576300121
- Sandys, E. (2005). Gender equality and empowerment of women through ICT. *Women 2000 and beyond*. Retrieved from <http://www.un.org/womenwatch/daw/public/w2000-09.05-ict-e.pdf>
- Schreyer, P. (2000). The contribution of information and communication technology to output growth: A study of the G7 countries. *OECD Science, Technology and Industry Working Papers*, 2000(02). DOI: 10.1787/151634666253
- Shashaani, L. (1994). Gender-differences in computer experience and its influence on computer attitudes. *Journal of Educational Computing Research*, 11(4), 347-367. DOI: 10.2190/64MD-HTKW-PDXV-RD62
- The World Bank. (2003). *ICT and MDGs: A World Bank group perspective (English)*. Washington, DC: World Bank. Retrieved from <http://documents.worldbank.org/curated/en/538451468762925037/pdf/278770ICT010mdgs0Complete.pdf>
- United Nations Development Programme in India. (2017). *About India: Challenges*. Retrieved from <http://www.in.undp.org/content/india/en/home/countryinfo/challenges.html>
- United Nations Development Programme. (1999). *Human Development Report 1999*. New York: Oxford University Press. Retrieved from [http://hdr.undp.org/sites/default/files/reports/260/hdr\\_1999\\_en\\_nostats.pdf](http://hdr.undp.org/sites/default/files/reports/260/hdr_1999_en_nostats.pdf)
- United Nations Development Programme. (2015). *Sustainable Development Goals*. Retrieved from <http://www.undp.org/content/undp/en/home/sustainable-development-goals.html>

- United Nations Population Information Network. (n.d.). Guidelines on women's empowerment. Retrieved from <http://www.un.org/popin/unfpa/taskforce/guide/iatfwemp.gdl.html>
- Wajcman, J. (1991). *Feminism confronts technology*. United States: The Pennsylvania State University Press. Retrieved from [https://monoskop.org/images/3/38/Wajcman\\_Judy\\_Feminism\\_Confronts\\_Technology.pdf](https://monoskop.org/images/3/38/Wajcman_Judy_Feminism_Confronts_Technology.pdf)
- Wajcman, J. (2004). *Technofeminism*. Oxford: Polity Press.
- Whelan, K. (2000). Computers, obsolescence, and productivity. *Finance and Economics Discussion Series*. 2000(06). Retrieved from [http://www.karlwhelan.com/Papers/computers\\_obsolescence\\_etc.pdf](http://www.karlwhelan.com/Papers/computers_obsolescence_etc.pdf)
- Woetzel, et al. (2015). *The power of Parity: How advancing women's equality can add \$12 trillion to global growth*. Retrieved from <http://www.mckinsey.com/global-themes/employment-and-growth/how-advancing-womens-equality-can-add-12-trillion-to-global-growth>
- World Health Organization. (2017). *Gender*. Retrieved from <http://who.int/gender-equity-rights/understanding/gender-definition/en/>

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## Preferential Places and Gadgets for Accessing e-resources in Agricultural Libraries of Northern India

Nazir Ahmad Bhat  
Shabir Ahmad Ganaie

### Abstract

**Purpose:** The study was conducted to assess the preference of the places and gadgets with respect to the use electronic information resources (EIRs).

**Design/methodology/approach:** Using questionnaire as data collection tool, seven sampled universities were surveyed personally. Face to face interaction was also made with respondents to substantiate the responses and remove ambiguities thereof. Statistical Package for Social Science (SPSS) was used to make analysis of the data on empirical basis.

**Findings:** 'Place of work' viz. department & office chamber and 'residence' viz. hostel and home prove to be most popular places to access EIR's. A good proportion of users access EIRs from library also. Majority of the users prefer to use e-resources via laptop, but smart phones and desktops are also used by a good number of users. The newly emerged devices, i.e. 'tablets' and 'e-book readers' are not much popular.

**Research limitations:** Study has been conducted on e-resources only. Response to a similar set of questions need to be collected from same library users to consolidate the facts about print form of information and thus carryout a comparative study.

**Originality/value:** This is first work of its nature in Northern India with domain as agricultural libraries. The outcome of the study may provide a thought for the librarians to facilitate adequate, smooth and reliable access to EIRs from places of work and residence and strengthen browsing opportunities and Internet connectivity.

**Keywords:** Electronic information resources (EIRs); Electronic resources; Electronic gadgets; Smart phones; Tablets and e-book readers; Northern India-Agricultural libraries

**Paper type:** Research Article

### Introduction

The prime objective of a library is to identify the information, specific & relevant to the needs of its clientele; acquire the identified information; organize the acquired information by passing it through a series of technical processes; facilitate easy, economical, fast & reliable search, retrieval and access to the organised information for meeting the demands of users at appropriate time & in shortest possible time. Finally, the libraries aim to deliver the information to the demanding users at appropriate place of access through a convenient mode and in a preferable format. The electronic availability of information and incorporation of various Information Communication



Technology (ICT) tools and techniques in the library architecture has revolutionised the scenario in libraries. However, in this changing scenario libraries seem to be more dependent on technology and thus the rendering of library services is becoming more costly than print era. It is not possible for a user to read directly from an electronic form of information resource through a naked eye but needs some reading aid for the purpose. This given birth to a series of reading aids, which among others include desktop, laptops, smart phones and the like.

It is now an admitted fact that the advent of e-resources in association with the ICT developments has carved out better and extensive opportunities for users to gain access to information and as such has laid an impact on the choice of users so far as the *places wherefrom they tend to access* and the *gadgets they use* for the purpose are concerned (**RIN and CIBER, 2011; Chirra & Madhusudhan, 2009, etc.**). Libraries thus cannot ignore the change registered in behaviour of users with respect to these two aspects. It is in this context that an effort is made *to identify the most preferential place(s) and the gadget(s) of accessing EIR's from the users' point of view*. The outcome may enable the authorities to make efficient planning with regard to arrangements to be made in respect of the preferred place(s) and gadget(s) of access. The findings may provide them with logical facts to architect and develop the required browsing & networking infrastructure necessary for outreaching the end users at their preferred place(s) of access, facilitate the users with preferred gadget(s) of access, and at the same time ensure that information can be displayed over the newly emerging devices of access likely to gain popularity in future.

### Review of literature

In context with the place where from users tend to gain access and use the EIRs, the **Research Information Network & Centre for Information Behaviour and the Evaluation of Research (2011)** are of the view that "nowadays the researchers seek to obtain & use the sources of information mostly '*outside the library*', whether in the computer lab, the office, at home or on the move. Only a small percentage of users, mostly from the humanities, visit the library building to browse or to read hard copy of journals". **Melo (2013)** explored that users from the *Engineering, Humanities and Social Science* disciplines are the ones who mostly use e-resources within the premises of the *university libraries*. The users from *Science streams* like Mathematics, Physics & Chemistry, Biology, etc. are the least visitors of libraries. It is because they remain busy in laboratories and usually need to work in the fields and even outside the university campus, therefore do not find time to visit their libraries".

**Chirra and Madhusudhan (2009)** have also recorded that *majority of Doctoral students* access e-journals from *departmental computer labs*, followed by the *university library* and computer centre. One more study also indicates that *majority of users* access the e-resources from the *departments*, followed by the *hostels*, *computer centres* with least priority to the library (**Kaur & Verma, 2009**). **Trivedi and Joshi (2009)** found that *most of the research scholars* were referring to e-journals from their *departmental library* as well as the *computer centre* in the central library. *Majority of users* from The Essential Electronic Agricultural Library (TEEAL) search information from their *offices* or *chambers* and come to the library only when they need to print full-text of articles (**Salaam & Aderibigbe, 2010**). *Majority of the users* of the scholars portal resources across OCUL were observed to make its use from *off-campus locations* (**Davidson & Kyrillidou, 2010**). **Jagboro (2003)** reports that respondents access electronic resources from *cybercafes*.

### Objectives

- To assess the popularity of the places of access with respect to EIRs;
- To identify the much popular gadgets used to access EIRs;
- To examine the similarities/dissimilarities among different categories of users with respect to both places and gadgets in terms of accessing the EIR's.

### Scope and methodology

The study was conducted with main focus on the agricultural libraries of Northern India. Four out of seven States of Northern India, viz. *Delhi, Himachal Pradesh (HP), Jammu & Kashmir (J&K)* and *Punjab*, were selected randomly as a sample for investigation. Seven well established agricultural universities/deemed to be universities existing in the sampled out states were taken into study. They were:

1. Indian Agricultural Research Institute (IARI), New Delhi;
2. Chowdhury Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya (CSKHVKV), Himachal Pradesh;
3. Dr. Y.S. Parmar University of Horticulture and Forestry (DYSPUH&F), Himachal Pradesh;
4. Sher-e-Kashmir University of Agricultural Science & Technology of Jammu (SKUAST-J), Jammu & Kashmir;
5. Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir (SKUAST-K), Jammu & Kashmir;
6. Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana (GADVASU), Punjab; and
7. Punjab Agricultural University (PAU), Punjab.

Three categories of users, viz. scientists (faculty members), PhD scholars and Masters’ students were only covered in this study.

A survey was conducted across the universities using questionnaire as a data collection tool. The investigators also interacted with the respondents through telephone and also availed the e-mail service correspondence for ascertaining timely response and clearing doubts of the collected responses.

The data collected through the survey was processed with the help of Statistical Package for Social Science (SPSS). In order to convert the data into meaningful information and draw necessary inferences, the data about each entity was codified into meaningful numerical and alphabetical codes. The values were entered in the form of standardized codes to avoid misinterpretation and spelling errors.

**Data analysis and interpretation**

The data analysis was carried out under two sub-headings:

- Popular places of access & use, and
- Popular gadgets of access & use

**Popular places of access & use**

Library (ARIS Centre) with 47.42% of user indication ranks 1<sup>st</sup> for access & use of e-resources. However, if ‘department/division’ and ‘office chamber’ are collectively taken as ‘place of work’ and the ‘hostel’ and ‘home’ collectively as ‘residence’, they prove to be most popular places of access with a user base of 58.83% and 68.25%, respectively. Internet Cafe, the most commonly used and the only option of initial years of advent of Internet seems to have lost its importance, as only 6.25% users have expressed to use it as a place to access e-resources (Table 1).

**Table 1: Popularity of place of access & use with respect to e-resources (n=1200)**

Place of Use	Frequency	Rank
Library (ARIS Centre <sup>#</sup> )	569 <sup>*</sup> (47.42%)	1
Department/ Division	498 (41.50%)	2
Hostel	453 (37.75%)	3
Home	399 (33.25%)	4
Office chamber	208 (17.33%)	5
Internet Café	075 (06.25%)	6

<sup>\*</sup> Respondents have opted for more than one place

<sup>#</sup>ARIS Centre: Agricultural Research Information System sponsored by ICAR and mostly existing as a part of agricultural libraries

A deeper analysis of the data shows that only 43% of users use a single place to access and use e-resources, whereas majority of users (57%) use more than one destination simultaneously. Forty such combinations are observed out of which the combinations with maximum score are shown in Table 2.

Table 2 displays that the combination ‘Library (ARIS Centre)’ and ‘hostel’ is the most preferred combination as marked by 95 (i.e. 7.8%) users followed by a three place combination i.e. ‘Library (ARIS Centre)’, ‘department/division’ and ‘hostel’ marked by 84 (i.e. 7.1%) users.

**Table 2: Combinations about different places of use (n=1200)**

Rank	Combinations of places	Frequency	Percentage
1	Single Place	516	43
2	Library (ARIS Centre) & Hostel	94	7.8
3	Library (ARIS Centre), Deptt/Division & Hostel	84	7.1
4	Deptt/Division & Home	64	5.3
5	Office Chamber & Home	62	5.2
6	Deptt/Division & Hostel	61	5.1
7	Other combinations	329	26.5
<b>Total</b>		<b>1200</b>	<b>100</b>

**Popular gadgets of access & use**

‘Laptops’ prove to be the preferential gadgets as 79.83% of users are seen to use the same for accessing the e-resources followed by ‘mobile phones’ (52.42%) and the ‘desktop’ (47.17%) respectively. However, ‘tablets’ and ‘eBook readers’ are not popular among users (Table 3).

**Table 3: Gadgets used for accessing and using the e-resources (n=1200)**

Gadgets Used	Frequency*	Rank
Laptop	958 (79.83%)	1
Mobile	629 (52.42%)	2
Desktop	566 (47.17%)	3
Tablet	089 (07.42%)	4
eBook reader	039 (03.25%)	5

\* Respondents opted for more than one gadget

The data on further analysis reveals that only 38.90% of users use a single gadget to access e-resources, while majority of them (61.10%)

simultaneously use more than one gadget for accessing the e-resources. Eighteen combinations are traced among the multiple gadget use options, among which 8 prefer to use two gadgets, 6 use three gadgets, 3 use four and 1 group uses all the five gadgets. Data about 9 highly used combinations is presented in Table 4).

It is observed from Table 4 that the combination 'laptop' and 'mobile' with 268 (22.10%) users and 'desktop', 'laptop' and 'mobile' with 166 (16.30%) remain the most popular combinations with the combination 'desktop' and 'laptop' used by 99 (8.30%) users ranks 3<sup>rd</sup>.

**Table 4: Combinations about different gadgets of access (n=1200)**

Combinations of gadgets	Frequency	Percentage
Single gadget	467	38.9
Laptop & Mobile	268	22.3
Desktop, Laptop & Mobile	196	16.3
Desktop & Laptop	99	8.3
Desktop & Mobile	51	4.3
Laptop, Tablet & Mobile	28	2.3
Desktop, Laptop, Tablet, & Mobile	25	2.1
Other combinations	66	5.43
<b>Total</b>	<b>1200</b>	<b>100</b>

**Findings and Discussion**

'Place of work' viz. department & office chamber and 'residence' viz. hostel and home prove to be most popular places for accessing e-resources. A good percentage of users (47.42%) are observed to access and use e-resources from 'Library'. However, 'Internet Café', seems to have lost its importance, as it is observed to be used by a meager proportion of respondents. These findings are in tune with the overall trend noted across India by a number of research studies (Chirra & Madhusudhan, 2009; Davidson & Kyrillidou, 2010; Kaur & Verma, 2009; Kumar & Kumar, 2013; Trivedi & Joshi, 2008).

The fact that only 47.42% of the users are observed to use 'library as a place of access' should not disappoint the authorities as the major reason explored, upon minutely assessing the situation, is that nature of access has registered a remarkable change. The users now need not to physically visit the libraries to collect and use the information resources, which happened to be the only way out in print era. Users can now, rather prefer, to access and use the information resources from their work places and even from their residence like that of home, hostel or staff

quarters, as also revealed by the findings of **Davidson and Kyrillidou (2010); Melo (2013) and RIN and CIBER (2011)**.

The information generated by analysing data about the electronic gadgets used for accessing the e-resources, depicts that the *'laptops'* proves to be the *most popular gadgets*. At the same time *'mobile phones'* and the *'desktops'* are also seen to be used by a *good %age* of users. However, *'tablets'* and *'e-Book readers'* are *not much popular* among users of North Indian agricultural libraries. It is thus comprehended that *users prefer to use light weight and portable devices* to access and use the e-resources. The reason for using these devices may be their battery backup and portability features, which the heavy & fixed devices lack.

### **Conclusion**

The availability of information sources in electronic form and the advent of a number of ICT avenues have revolutionized the accessibility of information resources as it has enabled the users to access the required information irrespective of any binding on time and place. The accessibility has really become unimaginably high and has laid tremendous impact on the mindset of users. They are now little interested to visit the libraries and prefer to access the information at their *place of work viz. department & office chamber and residence viz. hostel and home*. The users prefer to use *light weight and portable devices* like that of *Laptops/Smart Phones* to access and use the e-resources and the importance of heavy and fixed devices (desktops) is lessening day by day.

### **Suggestions**

1. Libraries need to create adequate facilities for smooth and reliable access to e-resources from places other than library premises especially from work places and residences of users. As such they may have to establish adequate number of browsing nodes by laying extensive wired networks or establishing the wireless connectivity through *WiFi / Infra Red* technology.
2. Libraries should take utmost care that their information resources are smoothly accessible and usable across light weight devices like that of smart phones, tablets, e-document readers, etc. Libraries should also ensure that all of their EIR's are operable over smart phones as users are seen scanning through and browsing across their smart phones touch screens at hostels, at home, while travelling or even at a run.

## References

- Chirra, R. & Madhusudhan, M. (2009). Use of electronic journals by doctoral research scholars of Goa University, India. *Library Hi Tech News*, 26 (10), 12-15.
- Davidson, C. & Kyrillidou, M. (2010). The Value of Electronic Resources: Measuring the Impact of Networked Electronic Services (MINES for Libraries®) at the Ontario Council of University Libraries. In *Research Library Issues: A Bimonthly Report from ARL, CNI, and SPARC*, no. 271 (pp. 41-47). Retrieved from <http://www.arl.org/resources/pubs/rli/archive/rli271.shtml>.
- Jagboro, K. O. (2003). A study of internet usage in Nigerian universities: A case study of Obafemi Awolowo University, Ile-Ife, Nigeria. *First Monday*, 8(2). Retrieved from [http://Firstmonday.Org/Issues/Issue8\\_2/Jagboro/Index.html](http://Firstmonday.Org/Issues/Issue8_2/Jagboro/Index.html)
- Kaur, B. & Verma, R. (2009). Use of electronic information resources: A case study of Thapar University. *DESIDOC Journal of Library and Information Technology*, 29(2), 67-73.
- Kumar, B. T. S. & Kumar, G. T. (2013). Search engines and their search strategies: The effective use by Indian academics. *Program: electronic library and information systems*, 47(4), 437-449. DOI: 10.1108/PROG-03-2012-0009
- Melo, L. B. (2013). The impact of electronic information resources in Portuguese academic libraries. In *Proceedings of the International Conference on QQML2010, Chania, Crete, Greece, 25-28 May 2010*. Singapore: World Scientific.
- Research Information Network (RIN) & Centre for Information Behaviour and the Evaluation of Research (CIBER), (2011). *E-journals: Their use, value and impact: Final report*. London: Research Information Network. Retrieved from [www.ucl.ac.uk/infostudies/research/ciber/Ejournals2.pdf](http://www.ucl.ac.uk/infostudies/research/ciber/Ejournals2.pdf)
- Salaam, M. O. & Aderibigbe, N. A. (2010). Awareness and utilization of The Essential Electronic Agricultural Library by academic staff: A case study of University of Agriculture, Abeokuta, Nigeria. *Chinese Librarianship: An International Electronic Journal*, 30. Retrieved from <http://www.iclc.us/cliej/cl30SA.pdf>
- Trivedi, M. & Joshi, A. (2009). Usage of electronic journals (e-journals) versus print journals by healthcare professionals in H M Patel Centre for Medical Care and Education (HMPCME). *Journal of Health Informatics in Developing Countries*, 3(1), 13-16. Retrieved from <http://www.jhidc.org/index.php/jhidc/issue/view/6>

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### A. For Citation

Busha and Harter (1980) or (Busha & Harter, 1980)

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#### Essays or Chapters in Edited Books

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