

Full Length Research Paper

Research on staff perception on the relevance of hardcopy materials and library use in this digital age

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This study assessed the value of hardcopy materials and its actual use at the National Centre for Technology Management (NACETEM). Structured questionnaire was designed and administered to 75 employees across four departments (Training and Research, Planning and documentation, Technological Innovation and Enterprise Studies, and Finance and Administration Department). Data gathered was analysed using descriptive statistics (percentage distribution) with the aid of Statistical Package for Social Sciences (SPSS) version 17. The findings revealed that 97.5% of the employees supported the use of hardcopy materials. It was noted from the findings that employees use of the library has not significantly changed as a result of Internet availability in the institution. The study concluded that newspapers were most in use among the hardcopy materials in the library.

Key words: Hardcopy, electronic, materials, library use.

INTRODUCTION

The America Heritage Dictionary of English Language 4th Edition (2004) defined hardcopy as “a printed copy, especially of the output of a computer or word processor”. Hardcopies can be described as “readable output from a computer generated in a storable form such as printed on paper or microfiche. A hardcopy material may include journals, dictionaries, encyclopaedias, almanacs, yearbooks, tele-printer pages, continuous printed tapes, facsimile pages, computer printouts and radio photo prints memos. In Nigeria, where electricity supplies are inadequate and many lack access to computer databases, hardcopy materials seem to be preferable for the purpose of service delivery. In medical records practice,

patient case files are usually preserved in hardcopy format because of poor electricity supply. The printed documents later serve as means of communication among healthcare workers. Public and private organizations have benefited greatly from the use of hardcopy materials. It has protected the rights of people in the court of law and has contributed to knowledge acquisition in the libraries. Hardcopy materials guarantee security and durability of information resources. Marti (2009) documented that hardcopy materials have the advantage of being accessible to everyone. There is potential for a hardcopy to last much longer than an electronic archive if the material is produced on archival quality paper, handled and stored properly.

The main focus of this study is not to compare hardcopy with electronic materials but to assess the “perception” of staff about the value of hardcopy materials as

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well as its actual use based on circulation data available in the institutions' library.

In the present information society where creation, distribution, use, integration and manipulation of information is of high value, the need for easy information retrieval cannot be overemphasized just as it has earlier been documented by scholars such as (Beniger, 1986; Martin, 1995; Aina et al., 2008). These scholars did not fail to document the limitations of digitization in a country with poor electricity supply.

While analysing the role of Library in modern society, Aina (2011:9) made reference to library as collectors and stewards of heritage, knowledge centres as well as public institutions where knowledge of the past, present and future are preserved for man utilisation.

In an attempt to make library use more attractive to its clients, information professionals have adopted the principle of information repackaging which is an effective way of selecting useful information for user groups. According to authorities in the field of information science, the overall objective of information repackaging is to fulfil user group's specific information need and this is done by specific organizational procedures and by providing various indexes and search facilities in the library so as to put the consolidated information in a user-friendly and easy to search format. Hitherto, information is repacked to facilitate dissemination, organization and for communication, to facilitate interactivity between user, knowledge base and technology. While justifying the need for information repackaging for efficient use, Prathibha and Pradeep (2010) opined that repackaging of information which refers to the presentation of information in more understandable, readable, acceptable and usable forms mostly in hardcopies. Prathibha and Pradeep (2010) saying the same thing but in a different way described information repackaging as a process of repackaging the analyzed, consolidated information in that form which is more suitable and usable for library users.

THE STUDY AREA

The National Centre for Technology Management (NACETEM) is an Agency of the Federal Ministry of Science and Technology (FMST) vested with the mandate of training and developing middle-to-high level manpower and conducting policy research in the areas of Science, Technology and Innovation (STI) management for all tiers of government and the private Sector. The establishment of the Agency originated following a recommendation of the 2nd Conference of Ministers Responsible for Application of Science and Technology to the Socio-economic Development of Africa in 1987 (CASTAFRICA II), which called for the development and harmonization of human resources needed to promote, project and propagate technology management in Africa. In November 2005, resulting from the on-going reforms of the National

Science, Technology and Innovation System by the Federal Government of Nigeria, the original mandates of NACETEM were expanded to cover activities in the West-African sub region and beyond with the merger of former Regional Programme for Technology Management (REPTTEM) with NACETEM. Consequently, REPTTEM, located in Lagos, was re-designated as the NACETEM South West Zonal Office.

Presently, NACETEM, in addition to the headquarters office in Ile-Ife, operates offices in Lagos (South West), Abuja (North Central), Kano (North West) and Yenogoa (South South). In discharging its mandates, NACETEM operates through three main technical activities: training, policy research and consultancy. The training arm of the Agency is responsible for the running of the Centre's Postgraduate Diploma in Technology Management, organises short term courses, workshops, seminars and conferences. Policy oriented researches deal with topical issues in technology management and national development. Results of the Centre's research works are published in reputable international and local journals and more importantly they are becoming reliable inputs into national debates and decisions of governments at all levels.

Vision, mission and mandates of NACETEM

NACETEM's vision which is to be an internationally recognised centre of excellence in science, technology and innovation (STI) management for sustainable development is being pursued through her mission to play a leading role in the build-up of expertise for effective management of science, technology and innovation and to actively engage in policy research, design, evaluation and review. The foregoing is translated into action via a 6-point mandate articulated as follows:

- 1) Serve as a training Centre for the development of middle-to-high level manpower in STI management for all tiers of government and the private sector;
- 2) Conduct policy research, policy evaluation and review;
- 3) Establish, maintain and provide access to databanks on STI research outputs and facilitate activities towards their commercial exploitation;
- 4) Design and run postgraduate courses/programmes in STI management in conjunction with appropriate departments/units of the Obafemi Awolowo University and other Universities/Institutions within and outside Nigeria;
- 5) Assist the various tiers of government (Federal, State and Local) in the country in STI policy formulation and the development strategies for utilizing such for development; and
- 6) Collaborate with other countries, especially African countries in capacity building activities and policy research in STI.

Table 1. Test of reliability and validity in support of the results.

Cronbach's alpha based on standardized		
Cronbach's alpha	Items	N of Items
0.679	0.695	49

Table 2. Sociodemographics.

	Classification	Percentage
Age	21-25	26.7
	26-30	46.7
Mean age = 29 years	31-35	23.3
	36-40	3.3
Sex	Male	75.0
	Female	25.0
Marital status	Single	74.2
	Married	25.8
Level of education	National Diploma	10.0
	HND/BSc.	56.7
	Masters Degree	30.0
	PhD	3.3
Department	Training and Research	40.8
	Technological Innovation and Enterprise Studies	12.5
	Planning and Documentation	18.3
	Finance/Admin	28.3

Source: Survey at NACETEM in 2012.

The centre also has a fully functional specialised library with over six hundred books and journals spanning the fields of management, science, technology, engineering and innovation.

MATERIALS AND METHODS

This study made use of descriptive survey design which involved the design and administration of questionnaires to staff of the National Centre for Technology Management (NACETEM). The questionnaire comprised three pages of 49 items. The questionnaire was composed of close and open format questions that were divided into two main sections A and B. Section A was on employees' socio-demographic profile while Section B focused on employees' knowledge of hardcopy materials and its use. The use of questionnaire was appropriate for this study because it is the most widely used research instrument in management sciences, social sciences and education and can easily be validated. The selection of respondents was done using Simple Random Sampling Technique. With prior set alpha level of 0.05, reliability analysis was carried out by calculating Cronbach's coefficient alpha. A score of 0.6 or higher indicated acceptable reliability of the instrument (Hair et al., 1998, 2009) *Multivariate data analysis* 97th Ed). Upper Saddle River, NJ: Prentice-Hall. Analysis of data was carried out using descriptive statistics with the aid of Statistical Package for Social Sciences (SPSS) version 17.

RESULTS

The test of reliability and validity in support of the results is given in Table 1.

Percentage distribution of respondents by sociodemographic profile

It is shown in Table 2 that the highest percentage of the respondents (46.7%) was between the ages of 26 and 30 years with 29 years mean age. Besides, majority (75.0%) were males and singles (74.2%) which confirmed that the institution is blessed with group of dynamic young people with a lot of strength to work. Regarding their educational qualification, about 57% were university graduates or Higher National Diploma degree holders, 30.0% had Masters Degree as well, while PhDs accounted for 3.3% and National Diploma 10.0%. The table presents the ratio of staff by department. It shows that Training and Research had the highest percentage (40.8) of responses when compared with other departments such as Technology, Innovation and Enterprise Studies (12.5%), Planning and Documentation (18.3%) and Finance and

Table 3. Use of library and hardcopy materials.

Parameters	Classification	Percentage (%)
Support the use of hardcopy today	Yes	97.5
	No	2.5
Frequency of use of hardcopy materials	Daily	65.0
	Weekly	28.3
	Monthly	6.7
Frequency of Library use	Decreased substantially	10.0
	Decrease slightly	38.3
	Not changed	51.7
Most in use hardcopy materials in the library	Newspapers	61.3
	Print Journals	21.7
	Books	17.0
When use of library becomes necessary	When electricity is off	13.0
	When I want to read Newspapers	67.0
	When I want to read or borrow books or other library materials	20.0

Source: Survey at NACETEM in 2012.

Admin Department (28.3%), respectively. The gap in the number of participants in the different departments may be an indication that the institution recruited more of technical staff than other caliber of employees. Nevertheless, on a general note, the respondents' profiles revealed that the workers of the institution are researchers with high education background. As researchers, it is expected that the personnel will have a need for library use. There is also the likelihood that the workforce will use other hardcopy materials such as the newspapers and journals in the library.

Respondents knowledge of hardcopy materials and library use

Table 3 presents the knowledge and use of hardcopy materials in the library. It is shown that 97.5% of the workers supported the use of hardcopy materials till date. On the frequency of use, 65.0% agreed that they use hardcopy materials on daily basis. It is also shown in the table that 51.7% agreed that their visit to the library has not significantly changed as a result of access to electronic materials. Besides, 10.0% said their visit to the library have decreased substantially, while 38.3% said their visit to the library has slightly decreased. It could be deduced from the foregoing that although there is a slight decrease in employees' visit to the library, a good number of them have not changed their frequency of

library use. As shown in the table, 61.3% of the workers regularly visits the library to read newspapers, 21.7% visits the library to read print journals while 17.0% visits the library to read books, despite the development brought about by the advent of the Internet. The table further shows that the majority of the workers 67% use the library when they want to read newspapers or other materials such as books.

The results corroborate the findings of Modepalli (2010), who investigated the information use pattern of postgraduate students at P. B. Siddhartha College of Art and Science, India and found that 65% of the postgraduate students in the college used library on daily basis.

Use of hardcopy materials today

Table 4 shows that newspapers had the highest percentage (54.2%) of daily use when compared with other materials in the library. Nevertheless, 35.6% of the workers made use of reprinted copies at least monthly; while weekly use of print journals accounted for the highest percentage. Moreover, 48.9% consulted Newsletters every week while the use of books accounted for 36.2% of weekly use. Thus, it could be assumed from this outcome that workers at NACETEM use hardcopy materials on regular basis either for knowledge acquisition or for research and training.

Table 4. Use of hardcopy materials today.

Parameters	Not in use	Daily	Weekly	Monthly	Yearly
Newspapers	3.3	54.2	3.5	10.0	0
Reprint	4.1	15.1	39.7	35.6	5.5
Print Journals	6.2	35.1	48.5	7.2	3.1
Newsletters	18.2	17.0	48.9	8.0	8.0
Books	10.6	18.1	36.2	14.9	20.2

Source: Survey at NACETEM in 2012.

Table 5. Use of hardcopy materials five years ago.

Parameters	Not in use	Daily	Weekly	Monthly	Yearly
Books	0	89.9	6.4	3.7	0
Reprint	3.3	43.0	25.6	17.4	9.3
Print journals	9.6	24.1	31.3	30.1	4.8
Newsletters	23.8	8.8	32.5	25.0	10.0
Newspapers	15.6	30.0	20.0	8.9	25.6

Source: Survey at NACETEM in 2012.

Table 6. Use of hardcopy materials ten years ago.

Parameters	Not in use	Daily	Weekly	Monthly	Yearly
Books	0	92.9	4.1	3.1	0
Reprint	4.9	46.3	8.5	40.2	0
Print journals	17.9	28.6	23.8	26.2	3.6
Newsletters	23.8	3.6	10.7	40.5	21.4
Newspapers	43.5	8.2	18.8	20.0	9.4

Source: Survey at NACETEM in 2012.

Use of hardcopy materials five years ago

Table 5 revealed that use of books had the highest percentage 89.9% of daily use five years ago compared with other library materials. On the other hand, use of reprint materials on weekly basis accounted for 43.0% five years ago whereas use of print journals was 31.3% of weekly use five years ago. It is noted in the table that daily use of newsletter accounted for 32.5% five years ago while Newspapers were consulted by the majority on daily basis. It could therefore be reasoned from this findings that hardcopy materials are still very relevant at NACETEM.

Use of hardcopy materials ten years ago

As shown in Table 6, use of books ten years ago accounted for the highest percentage (92.9) as against

other hard copy materials as reported by the respondents. Although, the institution is a technology management centre; the daily use of reprint materials ten years ago accounted for 46.3%, whereas, the use of print journal ten years ago accounted for 28.6% despite the fact that monthly use of newsletters was 40.5% and daily use of Newspapers accounted for 43.5% ten years ago.

Modern means of obtaining journal articles by staff

As shown in Table 7, the highest percentage of the respondents (17.6%) reads the library's print copies for research and training, while 15.5% reads personal subscription of print copies, 16.7% photocopy the library's hardcopy materials for personal reading, 5.2% requests for photocopied materials from the librarian and 1.7% orders reprint of the materials from authors. These results show the significance of hardcopy materials at NACETEM

Table 7. ** Means of obtaining journal articles for research.

Parameters	Percentage (%)
Reads personal subscription of print copy	15.5
Reads the library's print copy in the library	17.6
Photocopy the library's print copy for personal readings	16.7
Request for photocopies from the librarian	5.2
Order reprints from author	1.7

** Multiple responses

despite the advancement in technology.

CONCLUSION

This study assessed the Staff Perception on the Relevance of Hardcopy Materials and Library Use in this Digital age at the National Centre for Technology Management (NACETEM). As articulated in this study, hardcopy materials may include journals, dictionaries, encyclopaedias, almanacs, yearbooks, tele-printer pages, continuous printed tapes, facsimile pages, computer printouts and radio photo prints memos. The study measured the „perception“ of users about the value of hardcopy materials alongside their actual use, based on circulation data available in the library. On the use of the hardcopy materials today, five years ago and ten years ago, respectively, the findings of this study revealed that about 98% of the workers supported the use of hardcopy materials. Besides, 65% uses hardcopy materials on daily basis. About 52% said their frequency of library use has not changed as a result of Internet technology. Based on circulation data, it was similarly established that about 62% of the workers argued that newspapers and books were the most in use.

Above all, while information technology (IT) and the Internet are highly useful in the management of information resources, the findings of this study revealed that hardcopy materials are always required, particularly in the countries where there is inconsistent electricity and lack of computer access by the majority.

LIMITATIONS OF THE STUDY

The results of the present study must be viewed in light of some notable limitations. First, there is dearth of literature on hardcopy materials; secondly, this study reports the results of a single institution, more evidence may be required to draw a definitive conclusion. And finally, staff perception was measured using nominal scale.

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