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THE DEVELOPMENT AND EVALUATION OF A MULTIMEDIA RESOURCE CENTRE TO SUPPORT ICT TRAINING IN INFORMATION AGE: A CASE STUDY OF ABADINA MEDIA RESOURCE CENTRE

Omoba Florence Adeola
Hezekiah Oluwasanmi Library
Obafemi Awolowo University, Ile-Ife

Ojo Reuben Abiodun
Kenneth Dike Library
University of Ibadan, Ibadan.

Abstract

Addressed are the issues surrounding the process of training the staff of a multimedia centre in the use of Information and Communications Technology (ICT), and application of outcomes of training in the workplace. It was discussed in the context of development and evaluation of a multimedia centre with respect to supporting proper adoption and implementation of Information and Communications Technology (ICT) in information age. It highlights important issues that must be kept in proper perspective if the objectives of Information and Communications Technology (ICT) adoption to enhance performance on the part of staff are to be achieved. It reports on the pilot study, focusing on design issues, training needs, processes and users' experiences.

Introduction

Multimedia is the use of computers to present text, graphics, video, animation, and sound in an integrated way. Long touted as the future revolution in computing, multimedia applications were, until the mid-90s, uncommon due to the expensive hardware required. With increases in performance and decreases in price, however, multimedia is now commonplace. Nearly all PCs are capable of displaying video, though the resolution available depends on the power of the computer's video adapter and CPU.

The Multimedia Resource Centre brings together educational materials, information, tutorials and links for those persons who have an interest in the creative and scholarly uses of emerging multimedia technologies.

The Center recognizes the rapidly changing and expanding uses of multimedia and instruction of multimedia technologies within the educational community. Therefore, the media resource Centre is to promote, establish, activate and focus on multimedia knowledge, and make it available for educators and, most especially for students.

Students, who acquire skills with multimedia, become active creators of content, not just passive end-users or viewers of prepackaged materials. As educators, we must have the resources to teach these fundamental skills and to effectively present and communicate ideas that provide all students with a broad range of technological skills. The multimedia resource Centre are organized exclusively for educational purposes, more specifically to:

- Establish, maintain and/or link to a large group of resources for educators who use multimedia in the education process or those who teach multimedia.
- Establish, maintain and/or link a large group of resources and tutorials for students of multimedia.
- Facilitate the establishment of National Performance Standards for multimedia education.
- Update and more closely align with the Six Trait Writing model.
- Establish norms for educational infrastructure which supports multimedia education.

The Objective of the Study

The broad objective of this research is to address the issues surrounding the development and evaluation of a multimedia resource to support ICT training. While the specific objectives are:

- To identify the training process of multimedia resource centre in the use of ICT.
- To identify the benefits and the outcome of training in Abadina Media Resource Centre.
- To determine the effectiveness of ICT in the multimedia resource centre.
- What is the ease of using the resources?

Statement of the Problem

The use of multimedia resources is to enhance teaching and learning processes in order to ensure effective assimilation of what is being

taught as well as allow easy transformation of information. The communication links between source and recipient is bridged by the use of multimedia, therefore the design issues, the training process and the users' experience will be examined to see how effective and efficient is the ICT training in support of multimedia mode of communication is what this study tends to reveal.

Research Questions

The research gives answers to the following research questions:
1. What is the process of training people in the use of information and communications technology?
2. Where can the application of the outcomes of training in the Abadina Media Resource Centre be visible? and
3. What are the steps taken to ensure effectiveness of information and communications technology training?

Literature Review

Media can also be defined as a means of communication, especially to a large number of people, e.g. radio, television, etc. According to Baran (2005), media resources are often designed to touch us at the emotional level. We enjoy loosing ourselves in a good song or in well crafted movie or television show; this is among our great pleasures. In his views, consuming media resources is simple, push a button and you have television pictures or music on a radio. If there is enough money one can buy movie or buy a magazine. He also believes that, media literacy requires mastery of several skills which are: the ability and willingness to make an effort to understand content, to pay attention and to filter out noise; an understanding of and respect for the power of media messages. The ability to distinguish emotional from reasoned reactions when responding to content and to act accordingly; development of heightened expectations of media content; a knowledge of genre conventions and the ability to recognize when conventions are being mixed. Also, the ability to think critically about media messages, no matter how credible their sources may be; and a knowledge of the internal language of various media, and the ability to understand its effect no matter how complex.

Improved media proficiency ultimately depends on the training and educational development on the use of ICT. Herring, Notar, Wilson, (2005) reported that the most successful technology-

using teachers function with relative independence more as instructional designers than lesson planners. To this end, the development and introduction of ICT has enhanced availability, accessibility and utilization of products and services in the teaching and learning processes. The integration of skills development and reflective learning programme thus presents a significant challenge.

Teaching and learning has grown to require the use of multimedia in the area of knowledge acquisition. In order to really enhance productivity or that what is being taught is duly assimilated. Most proponents of media resource are advocating for increase in training of manpower in the use of ICT to teach in academic environment. Training of media educators needs to be preceded by an institutional commitment to investment in appropriate staff development as well as the provision of adequate resources in support of a robust personal tutor system for learners, combined with more relevant and transparent exposition of the benefits it will provide for students (Bloxham, S.M., Cerevkova, A. & Parrish, R. 2006). The result of which is germane towards the betterment of multimedia personnel as well as a development of information technology.

One of the most crucial needs for implementing multimedia resource center that is in support of ICT is to ensure that the members of staff are adequately trained in use of ICT and sometimes in administration and maintenance of ICT systems. Without a strong capacity building programme, multimedia resource centre will never take off. Information and Communications Technology (ICT) Training Program for Multimedia Resource Center Staff should always be organized. The programme should aim to make sure that all multimedia resource center staff is able to use ICT effectively in the workplace.

Therefore, the following are of paramount importance in achieving an ICT based mutimedia resource center;

- Competence with ICT;
- Understanding how ICT can support multimedia resource center;
- Health, safety and legal issues relating to ICT;
- Using ICT to find information for users (including evaluating information);
- Using ICT to support user development;
- Using ICT to support users to ensure effective learning;

- Effective management of ICT resources;
- Knowing how to use ICT to improve efficiency.

As a measure of training effectiveness, an evaluative measure should be introduced on the participants (multimedia resource centre staff) in the ICT training carried out to evaluate their knowledge and skills themselves. Participants should be required to respond to the evaluative measure before taking the course (pre-check), again just after taking each of the courses (post-check), and one last time after all the training was finished (after check). Compare differences among scores of pre-, post-, and after check scores in the course. In order to analyze the factors influencing differences of pre- and post-scores, we should carry out an analysis, which will help us to obtain participants' reaction for their new training experience, also conduct questionnaires with pre-, post-, and after checking. Questionnaire should include such aspects as contents, instructors, training style, CD-ROM and Web-based support system, and built-in self-evaluation processes. All of evaluation data should be used to analyze the strengths and weakness of various aspects of the training system for confirmation of effectiveness and further revisions.

It should focus specifically on staff evaluation of a variety of training methods, assistance and support for use of the Internet including multimedia resource centre based learning, informal methods, self-study, and tutor led online learning. The potential of online training delivery for multimedia resource centre staff should be considered.

Multimedia resource centres are established to equip teachers with the knowledge, understanding and skills about learning processes so that the standard of students' achievement is made by the use of ICT in their learning. That is, to enhance high quality, technology-enhanced teaching and learning created by teachers for students. All PCs are equipped with high quality extending it in the areas of sensing devices, Virtual Reality (VR), Human Computer Interface (HCI) design and multimedia applications of sensing technologies.

ICT trainings are designed in order to enable trainees have hands on training participation so that trainees would be able to imbibe what he/she has learnt correctly. The effectiveness of media resource personnel will depend on the amount of training workshops or seminars organized for them in the area of ICT. According to

Adesola, Omoba and Tella (2007), outlined in Ostrow (1998) in the advent of the Internet, digitization, and the ability to access library and research materials from remote locations created dramatic changes by the end of the twentieth century. The introduction of information communication technology has allowed easy information storage and retrieval also replacing manual forms of carrying out activities. ICT trainees agreed that training had a positive impact on their professional practice and were increasingly confident in the use and application of ICT in their teaching.

Methodology

Abadina media resource centre staff and users formed the population of study. A phenomendogical approach was adopted for the data collection. The purpose of such an approach was to describe natural setting as fully as possible so that a better understanding of participant and events can be achieved. Data were collected first through a questionnaire and then through interview with both users and members of staff of Abadina Media Resource Centre. Copies of questionnaire were administered on 13 members of staff, while 20 users filled questionnaires and were also interviewed. The instrument featured items on demographic attribute of subjects, development of media resource centre, media programmes in the support of ICT training, users' experience, and design issues. Experts' opinion was employed to validate the instrument for this study. Research assistants were employed and trained for the purpose of collecting data for the study. Expert data analyst was employed to use appropriate statistics to describe relationships among variables.

Analysis and Interpretation of Result

Question 1: What is the process of training people in the use of information and communication technology?
Based on a comprehensive literature reviewed, training included traditional library methods such as 'on the job' and cascade training and formal courses, both in-house and external. Respondents were asked to indicate if they had received a particular kind of training, assistance or support for learning how to use the Internet and to rate its usefulness in gaining the skills required on a scale from 1 to 5, where 1 represents *poor* and 5, *excellent*. Numerically all members of staff experienced on the job training for the internet than any other

method (100%). Although not necessarily considered forms of training, methods of support and assistance were also included to comprehend how relevant staff perceived them to be. Examples included mentoring, coaching and support from the director and colleagues in emails and discussions. Materials produced by the library in the form of newsletters and updates were considered whilst staff's own efforts in reading relevant books or guided reading were detailed. A large section on self-study was included in the survey, which included learning at home, when the library was closed, and in spare time off the desk using notes, books or a tutorial such as a CD-ROM. In addition, staff were asked to rate the usefulness of training projects and activities to help them acquire the skills to use the Internet in both work and personal time.

Table 1 Methods of Training

	Frequency	Percentage
Self study	6	46.1
Mentoring	1	7.7
Coaching	1	7.7
Support from director	1	7.7
Support from the centre	1	7.7
Support from colleagues	3	23.1
	13	100

Table 1 reveals the various methods of training that are used by the staff of Abadina Media Resource Centre.

Most members of staff trained in the use of ICT through self study (46.1%), while more trained in the use of ICT through the support they get from their colleagues (23.1). those that trained in the use of ICT through coaching, support from Director, and support from the centre are all of the same percentage, which is the least (7.7%).

Table 2: Self Study Methods

Methods	Frequency	Percentage
Learning at home	1	7.7%
Learning off desk	-	-
Using of notes	-	-
Reading of books	1	7.7%
Learning with tutorial packages	10	76.9%

Use of CDROM	1	7.7%
Total	13	100

Table 2 shows the various methods adopted by individuals to train in the use of ICT.

From Table 2, the method of learning that has the highest percentage is learning with tutorial packages (76.9%). Reading of books, use of CDROM, and learning at home all have the same percentage of 7.7%. This implies that even in the self study, the mode of study varies among the members of staff.

Table 3: Usefulness of Skills acquired in Training.

	Excellent	Very good	good	Poor	Total
Frequency	2	4	7	-	13
Percentage	16	31	53	0	100

Table 3 shows the usefulness of the skills acquired in the training that the members of staff attended.

From Table 3 it is observed that despite the fact that the members of staff attended various training of their choice, the methods of training were not all satisfactory. Although there is no training that is poor, but the excellent training had has the least percentage (16%), followed by very good training method with 31% and good training has the highest percentage of 53. The modal value for all forms of self-study was 7 respondents good i.e. over half (53%) of respondents indicated that they had learnt at home on a personal computer by themselves or with the help of family or friends. Two respondents (16%) felt that this was an excellent way to learn how to use the Internet whilst 4 respondents (31%) thought it was very good as shown on table 3.

Classroom Based Training

External provider (course attended off site with external trainer) was the only choice with the respondents surveyed. Furthermore, from the interview conducted on the staff, it was found out that all the trainings acquired were self sourced and sponsored. They agreed that the management only gives the staff the permission to attend. This implies that the management approves of it but did not sponsor it.

Majority of the trainings were carried out in Nigeria Television Authority (NTA), Ibadan

For some respondents, learning at home was the only option available to them, as they had not attended any training, whilst for others learning at home was simply more enjoyable. Respondents judged on the job training to be a good way of learning how to use the Internet.

The users were also interviewed and it was discovered that the training on the use of ICT that they have is not from the centre but from their homes.

Question 2: Where can the application of the outcomes of training be visible in Abadina Media Resource Centre?

The respondents agreed that the requests of some of the users have changed to the present age ICT resources. With the trainings attended by the staff, it has been easy for them to meet the needs of the users.

The respondents agreed that training makes them relevant in the present ICT age in knowing and using the following: 16mm motion picture projector, 8mm motion picture projector 35mm motion picture projector, film strip projector, 2 by 2 slide projector, overhead projector, opaque projector, 35mm still camera, and so on, which were what they were trained to use. It can be noted that the advent of ICT has come to aid more effective ways of using multimedia projectors. Therefore, it is necessary to make training in the use of ICT important for the members of staff in order to improve themselves, because users' need has changed from what it used to be, users now request for internet connectivity, projector screen, and the likes.

Table 4: Application of ICT Training

ICT use	Personal	Centre
Well developed	4	1
Reasonable	2	-
Quite limited	1	-
Don't use it	6	12
Total	13	13

Table 4 shows the different levels of ICT training and where they are applied.

From Table 4, it is discovered that only 4 members of staff are well developed in the use of ICT that make use of it for their personal use. Six members of staff do not use it at all for their personal use. Only one person makes use of it for the work at Abadina Media Resource Centre, while the remaining 12 do not use ICT at the Centre. From the interview conducted on the members of staff, it was discovered that it is the man in charge of the media resources room that makes use of his training in ICT to carry out his assignment.

Similar questions were also asked from the users, their response is on table 5.

Table 5: Application of ICT by Users

ICT use	Personal	Academics
Well developed	1	2
Reasonable	6	4
Quite limited	12	6
Don't use it	1	8
Total	20	20

Table 5 shows the various levels of application of ICT by the users on their personal use and for academic use.

Only one person is well developed in the use of ICT and makes use of it for personal use, 12 persons have limited knowledge of ICT and make a personal use of it, while 6 persons have reasonable training on the use of ICT and also make personal use of it. Most of the users do not make use of the training acquired on their academics as it is also shown on table 5. Eight persons do not use it on academics, while only 2 persons are well developed in the use of ICT and they make use of it in academics.

There is none of them that make use of the training they have on ICT in the Centre, because the users are only allowed to make use of the reading space and the few old books on the shelves. The media resources allowed to be used by some users are the realia, chart, games, maps, globes, cartoons, posters, and photographs.

Question 3: What are the steps taken to ensure effectiveness of information and communications technology training?

For now, official permission is granted to whoever comes with evidence that training will be held. There is no opportunity yet to study online, because there is no internet connection at the centre,

but the internet connectivity is on going at the centre. New personal computers have been purchased for the use of staff and users.

All the steps taken were personal. The only staff that is saddled with the responsibility of multimedia resources was interviewed and he revealed that he reads newspapers, listens to radio and television in order to know of where and when training on ICT will take place and he goes there with the permission of the management.

Summary and Conclusions

The ICT training and use is not effective in the centre, as it was discovered that the training had by members of staff and users is not through the centre but through self effort outside the centre. When it is time to make use of the training they had, there was no opportunity again to make use of the training had at the centre. It is only the staff in charge of the media resources that makes use of the training he got to some extent on the job he performs at the centre.

Members of staff and users are usually attracted by the Internet access. With very basic skills from a workshop, they browse the Internet, mostly for personal searches. Since there is yet to be an internet connection, the users make most use of realia, chart, games, maps, globes, cartoons, posters, and photographs. The users of these resources are University of Ibadan Staff School teachers, Abadina Primary and Secondary School Teachers. The same request they have been having in the ages past is still their still request now. ICT based work is central and students are involved in high level thinking, decision-making and problem solving. Some old practices become obsolete. One disadvantage in attending external training for staff in the resource centre was the time spent travelling to colleges and test centres. Staff also needed time to practise what they had learnt at classes and finding the opportunity to do this was often difficult, especially in the situation where there is only one person working in the multimedia room.

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