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User Perspective on Storage and Retrieval of Multimedia Resources at Select Libraries of Delhi

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Title: User Perspective on Storage and Retrieval of Multimedia Resources at Select Libraries of Delhi

Abstract:

Purpose: *The purpose of this paper is to know the user perspective regarding various methods of dissemination, to ascertain frequency and purpose of use of different multimedia resources and to analyze the barriers in providing access to them in selected libraries of Delhi viz. Sangeet Natak Akademi (SNA), National School of Drama (NSD) and Eternal Gandhi Multimedia Museum (EGMM).*

Methodology/Design/Approach: *An effort has been taken to record the feedback of the users by way of questionnaires duly filled up by them in order to analyze the use/retrieval of different multimedia resources available in the libraries under study. Hence this paper is based on survey method which is done by the authors with the help of questionnaires and their own observation.*

Findings: *The study explores the utilization of multimedia resources, in digital format, made available online by the libraries under study. Further, it identifies the issues in the usage of multimedia resources in the libraries. Use of other multimedia resources on internet by the users of the libraries has been also recognized. Findings of the study show that TIFF, MP3 and MPEG are the most retrieved file format of multimedia resources.*

Originality/Value: *This type of research oriented studies for understanding the user's point of view on available library resources and services has not been performed till now in the libraries selected by the authors. In this paper, original and detailed study of multimedia resources as observed by the authors is presented.*

Keywords: Multimedia resources, Storage of Multimedia resources, Retrieval and use of Multimedia resources, effectiveness of Multimedia resources, etc.

1. INTRODUCTION

In the age of information technology (IT), multimedia plays an important role in providing digital information to the users. IT has a wide range of impact on education, libraries, and research. Nowadays, libraries and information centres have multimedia technology as a tool to satisfy the demands of the users and there is presence of separate multimedia libraries also. Both, the storage of multimedia resources as well as their retrieval by the users, are very important to evaluate the effectiveness and efficiency of the multimedia libraries. In order to analyse and cross-check the librarian's responses, the investigator has recorded the feedback from the users of Sangeet Natak Akademi (SNA), National School of Drama (NSD) and Eternal Gandhi Multimedia Museum (EGMM) through questionnaires and personal interviews.

2. STATEMENT OF PROBLEM

The present problem is selected to have an analytical view based on users' responses regarding the available resources in the selected libraries. Earlier, the Investigator has studied the storage process, available file formats and storage devices etc. of multimedia resources at the aforementioned three selected libraries i.e. EGMM, NSD and SNA and accordingly an article comprising the outcomes of the above studies was got published. Now, the investigator has tried to study the users' perspective regarding the utilization of multimedia resources provided by the centres under study to their users based on the responses retrieved from users. Further, an attempt has been made to identify the issues in the usage of multimedia resources in these libraries.

3. OBJECTIVE OF THE STUDY

The objective of the study is to get a detailed picture of the multimedia resources that are being provided by the selected Libraries to its users. It is important for a Library system to know that whether the multimedia resources offered by it are potentially useful to its users and whether the users are effectively using them in the best possible way. Further, there is always a scope of improvement in any system to order to ensure the highest level of satisfaction of its users and be efficient. Therefore, one more objective is to find out the problems being faced by the users of these selected libraries while utilising the multimedia resources and to look into the steps that could be undertaken to overcome/avoid/minimise these problems faced by the users.

4. SCOPE OF THE STUDY

The users of three major academic and special libraries of Delhi are selected for the study which are actively working and dealing with the multimedia resources:

- 1) Eternal Gandhi Multimedia Museum (EGMM),
- 2) National School of Drama (NSD), and
- 3) Sangeet Natak Akademi (SNA).

5. REVIEW OF LITERATURE

Xiao, & Qi¹ (2014) proposed a complementary relevance feedback based Content Based Image Retrieval (CBIR) system. This system improves the retrieval performance by exploiting the synergism between long term and short term learning techniques. The results demonstrate that the system outperforms its seven state of the art peer systems in terms of retrieval precision and storage space on a large scale imagery database. According to **Lai² (2013)** the most visited online places include YouTube, its increasing popularity appears to be illustrated by university students' greater reliance on YouTube and less on the physical CDs/DVDs of the library. In relation to this change, this study aims to understand how music undergraduates at Hong Kong Baptist University use YouTube and the library's multimedia collection, whether there is a preference between the two resources, and whether their choice of resources might vary depending on the tasks to be performed. **Fang, Kuan, Kuo, & Hsieh³ ((2012)** proposes an effective region based image retrieval technique based on novel salient region segmentation and relevance feedback. With a good and fast segmentation technique, our system achieves an "on the fly" segmentation capability, which enables users to select particular regions for matching and feedbacks without waiting for image segmentation. Therefore, investigator adopts relatively simple feedback schemes to derive the intent of the user. The experimental results show that the system performance is greatly improved with this

capability. **Rotter⁴ (2012)** found a way to elicit user preferences in the context of multimedia information retrieval, is an important issue that remains to be solved. Users are not usually able to find a sought after image or provide an example of what they want. One of several possible methods that might be used to solve this problem involves reasoning about user queries through the assessment of several samples. In this article the investigators propose a method by which user queries are retrieved based on the pair-wise comparison of sample alternatives.

6. RESEARCH METHODOLOGY

Methodology has its own importance in scientific investigation, because objectivity in any research investigation cannot be obtained unless it is carried out in a very systematic and planned manner. For research study, literature review and survey method with the help of questionnaire followed by interview of the users along with observation method to bring out the clarity to the study will be used. Multimedia resources of the selected libraries will be analysed by tabulated method on the basis of the data collected from the users of respective libraries during the survey.

7. DATA ANALYSIS AND INTERPRETATION

The investigator has administered 20 questionnaires in each library to the users of multimedia resources personally as well as through e-mail. Only 12, 18 & 5 (totalling to 35) questionnaires from three libraries viz. Sangeet Natak Akademi (SNA), National School of Drama (NSD) and Eternal Gandhi Multimedia Museum (EGMM), respectively were duly filled and returned by users. In case of EGMM which is a museum, since it doesn't have any user and only their staff retrieves the multimedia resources available to them, the investigator has asked them to fill questionnaire in order to obtain the information.

7.1 Frequency of Usage

The frequency of usage of multimedia resources by the users bears a relationship with the extent of the use. To know the frequency of use of multimedia resources by the users of the centres, the data obtained has been presented in **Table-1**

Table 1: Frequency of Usage

S.N	Frequency	EGMM	NSD	SNA	Total Respondents	Total (%)
1.	Daily	4	12	6	22	63
2.	Weekly	1	3	3	7	20
3.	Fortnightly	-	-	-	0	0
4.	Monthly	-	-	-	0	0
5.	Yearly	-	-	-	0	0
6.	Occasionally	-	3	3	6	17
Total		5	18	12	35	100

7.2 Purpose of Use

To find out the purpose of using multimedia resources by the users, the respondents have been given six options to select namely, (1) *research work* (2)*teaching/instructions*(3)

presentation/lecture (4) *reference* (5) *entertainment* and (6)*commercial purpose*. Multiple responses were permitted in the questionnaire. Analysis of the data received with regard to the purpose of using multimedia resources is given in **Table-2**.

Table 2: Purpose of Use
(Multiple responses were permitted)

S.No.	Purpose	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Research	2	9	9	20	57
2.	Training and instruction	1	6	6	13	37
3.	Presentation and lecture	-	6	-	6	17
4.	Reference	1	9	3	13	37
5.	Entertainment	5	-	-	5	14
6.	Commercial purpose	2	-	3	5	14

Total of 57% respondents consult the multimedia resources for *research*, while 14 % of respondents use it for *entertainment* and *commercial purpose*, respectively in libraries. The above analysis shows the purpose of using multimedia resources among users of respective libraries is different varying from person to person.

7.3 Awareness about Web-based Multimedia Resources

The multimedia resources are either available on shelves in the libraries or through their website. An effort has been made to find out the awareness of multimedia resources available through the website. The analysis of the responses is given in **Table-3**.

Table 3: Awareness about Web-based Multimedia Resources

S.No.	Response	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Yes	5	12	9	26	74
2.	No	-	6	-	6	17
3.	No response	-	-	3	3	9

In response to the query about awareness of web-based multimedia resources, 26 respondents in all libraries expressed that, they are aware about web based multimedia resources available on their irrespective websites. The analysis reveals that almost all users are aware about the web-based multimedia resources due to the easy accessibility and user friendliness of these resources.

7.4 Multimedia Services provided by Library

Apart from the multimedia resources being provided by the Libraries, the other important aspect that strongly adds to their goodwill is the services provided by them. These services are an important tool to measure the user satisfaction in respect to the library. Accordingly, the investigator asked users about multimedia services provided to them by respective libraries and their responses are interpreted through table and figure given below:

Table 4: Multimedia Services
(Multiple responses were permitted)

S.No.	Services	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Email alerts	1	6		7	20
2.	Online Conferencing	-	-	-	0	0
3.	E-bulletin	1	-	-	1	3
4.	OPAC	-	-	-	0	0
5.	Issue-Return/Information Kiosks	2	6	9	17	49
6.	GPS networking to locate document	-	6	-	6	17
7.	Feedback/Recommendation through mail/Telephone	2	-	-	2	6
8.	Online Counseling	-	-	-	0	0
9.	Library Website, and Blogs etc.	1	6	9	16	46

It is unveiled from the analysis that a good number of users in the centre get information about web-based multimedia resources through their respective *websites* itself, and about 16 users make use of *Library websites and blogs*. In response to the question regarding multimedia services, about 17 users answered that *Information and Issue-Return Kiosks* available in their library which save their time and energy. No user responded on availability of *Online conferences* and *OPAC*. Only 1 user make use of *E-bulletin*.

7.5 Use Pattern of Multimedia Resources

In respect to the query regarding use pattern of multimedia resources; the responses are tabulated in **Table-5**. The data shows that 63 percent respondents from all respective libraries use multimedia resources *on the computer screen* only and only 9 percent get *hard copy issued*.

Table 5: Use Pattern of Multimedia Resources
(Multiple responses were permitted)

S.No.	Medium	EGMM	NSD	SNA	Total respondents	Total (%)
1.	On the Computer Screen	4	12	6	22	64
2.	Download in Storage Device	2	9	-	11	31
3.	Take Printouts	1	6	9	16	46
4.	Issue Hard Copy	-	3	-	3	9

About 31 percent respondents *download multimedia resources* in their *storage devices* from library and about 16 text lovers *take printouts* of required material.

7.6 Preference in the Use of Multimedia Resources

Since the multimedia resources are available either on *shelves* in the library or on the *website*, it can be accessed by visiting the library to use the resources available on *shelves* or accessing the multimedia resources through *website* via any remote location or within the premises of the centre.

Table 6: Preference in the use of Multimedia Resources
(Multiple responses were permitted)

S.No	Preference of multimedia types	EGMM	NSD	SNA	Total	Total
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					respondents	(%)
1.	Available on shelves	4	15	12	31	89
2.	Web based	2	9	3	14	43

7.7 Use of Resources on Shelves

It is observed by the investigator that libraries have efficiently and effectively organized the information resources for making them easily available to their users for better dissemination. These different types of resources are available on the shelves and through the website, as well. However, an effort has been made to know the types of information resources that are being used at the apex, by the users.

Data given in **Table-7** displays that, 74 percent respondents' access *photographs* and *Motion picture and films* to fulfill their information needs. Some 3percent respondents use *photo-negatives*. *Photo-negatives* are used when larger prints of photographs are required.

Table 7: Use of Resources on Shelves
(Multiple responses were permitted)

S.No.	Resources	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Photographs	5	12	9	26	74
2.	Photo negatives	1	-	-	1	3
3.	Photographic slides	4	3		7	20
4.	Digital images	5	6	3	14	40
5.	Motion pictures and films	5	18	3	26	74
6.	LP Records	-	6	-	6	17
7.	Audio spools	-	12	-	12	34
8.	Audio tapes	1	3	-	4	11
9.	Video tapes	4	18	9	31	89
10.	Digital audio	1	3	6	10	29
11.	Digital video	5	6	6	17	49

It is perceived from the above analysis that majority of users use *video tapes* followed by *Photographs* and *Motion picture and films*. As far as the least used multimedia resources are concerned, resources such as *photo negatives* and *audio tapes* are least used. These old formats are used very less because their digital surrogates are available, and users prefer the digital multimedia resources.

7.8 Use of Multimedia Resources on Library's Website

Multimedia resources are also being provided through the website of the concerned centre. Another subsequent question was asked to the users to find out the use of these resources, through the website. The analysis of responses is given in **Table 8**.

Table 8: Use of Multimedia Resources on Centre's Website
(Multiple responses were permitted)

S.No.	Types of Multimedia Resources	EGMM	NSD	SNA	Total respondents	Total (%)
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1.	Digital images	3	3	9	15	43
2.	Walk through	5	3	3	11	31
3.	Digital audio	1	3	6	10	29
4.	Digital video	2	12	9	23	66

It is stated that the *digital images* and the *digital video* (available on the shelves physically) are mostly used in both of the centres. Also, *digital video* followed by *digital images* are mostly used by the users through the website of the concerned centres.

7.9 Reason for Preference of Multimedia Resources Available on the Shelves

As indicated in **Table 9**, 89 percent prefer to use multimedia resources available on the *shelves*. An open ended question was asked to know the exact reason of preferring multimedia resources on shelves. The respondents from the centre opined that due to non-availability of enough content on the website of concerned centres, they would like to prefer the multimedia resources available on the *shelves*.

Table 9: Reasons for Preference of Available on Shelf Multimedia Resources

(Multiple responses were permitted)

S.No.	Reason of preference	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Easily available	1	9	9	19	54
2.	Well Organized	4	6	3	13	37
3.	Less time consuming searching	1	6	-	7	20
4.	No internet or electricity issue	-	-	6	6	17

7.10 Reasons for Preference of Web-based Multimedia Resources

It has been found that 14 out of 35 respondents prefer web-based multimedia resources provided by the website of the centres. A question was asked by the investigator to know the reason for preferring web-based multimedia resources instead of resources available on the shelves.

Table 10: Reasons for Preference of Web-based Multimedia Resources

(Multiple responses were permitted)

S.No.	Reason of preference	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Ease of search / navigation	-	9	6	15	43
2.	Less Cognitive load	-	-	-	0	0
3.	Connectivity/ Interactivity	1	6	3	10	29
4.	Less time consuming	2	3	6	11	31
5.	Easy to download/ save	-	6	-	6	17
6.	Multiple access	3	3	3	9	26

The breakup wise analysis of data shown in **Table 10** clearly displays that *ease of search/navigation* is the major reason behind preference of web-based multimedia resources provided by libraries website followed by *connectivity and interactivity*, and *multiple access*.

7.11 Access to the Web-based Multimedia Resources

A question was asked about the medium used to access web based multimedia resources. It is observed that 100 percent of the users were using web-based digital multimedia resources through *internet* and only 5 respondents were using through *intranet*. (Table-11)

Table 11: Access to the Web-based Multimedia Resources
(Multiple Responses were permitted)

S.No.	Medium	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Internet	5	18	12	35	100
2.	Intranet	5	-	-	5	14

7.12 Use of Special Multimedia based Services

The libraries provide some special services based on multimedia technology other than the provision of availability of multimedia resources. The special services provided by libraries are *special multimedia documentation* of various events, rituals, lifestyle studies etc. to show the art, culture and other related subject documents. Multimedia Presentation is highly used multimedia service, about 50 percent respondents use this service. *Webcasting* service is not provided by any of the libraries. Only 9 users use *videoconferencing* and *information literacy programs*.

Table 12: Use of Special Multimedia based Services
(Multiple responses were permitted)

S.No	Special Multimedia Services	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Webcasting	-	-	-	0	0
2.	Special multimedia documentation	1	9	5	15	43
3.	Video conferencing	-	6	3	9	26
4.	Multimedia presentation	4	9	3	16	46
5.	Information Literacy Programs	1	3	3	7	20

7.13 Facilities in the Use of Multimedia Resources

Various facilities are being provided by the centre to facilitate the maximum use of multimedia resources. **Table 13** reveals the facilities which had impressed the respondents while using multimedia resources. The respondents are impressed with the proper organization of multimedia resources in the Libraries (20 respondents) followed by *cooperative staff* (19 respondents). Only one respondent in SNA is impressed with *written pamphlets* provided to them by library.

Table 13: Facilities in the Use of Multimedia Resources
(Multiple Responses were permitted)

S. No.	Facility	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Proper organization of multimedia resources	5	5	10	20	57
2.	User friendliness of mediated devices	3	2	7	12	34
3.	Cooperative staff	5	3	11	19	54
4.	Timely service	5	-	5	10	29
5.	Conference/Workshop/Orientation Programs	2	12	-	14	40

6.	Special staff/Expert	3	3	1	7	20
7.	Small training and awareness session	3	3	-	6	17
8.	Written Pamphlets	-	-	1	1	3

It can be concluded from the above analysis, that the Written Pamphlets are least used method by users. Small training and awareness session are also least preferred method, only 6 users admire this facility.

7.14 Constraints in Use of Multimedia Resources on Shelves

An effort was made to find out the challenges in using multimedia resources available on shelves. Respondents were given four options viz. *improper organization, lack of subject access, non-user friendly mediated device and non cooperative staff*. The responses are shown in **Table 14**.

Table 14: Constraints in Use of Multimedia Resources on Shelves

(Multiple Responses were permitted)

S.No.	Constraints	EGMM	NSD	SN A	Total respondents	Total (%)
1.	Improper organization	-	9	2	1	31
2.	Lack of subject access	-	-	3	3	9
3.	Non-user friendly mediated devices	2	-	5	7	20
4.	Non cooperative staff	-	3	-	3	9
5.	Lack of Awareness	5	5	5	15	43
6.	Library lacks required resources	2	-	-	2	6
7.	Time consuming	2	3	-	5	14
8.	Non Portable	2	-	5	7	20
9.	Cognitive load	-	1	-	1	3
10.	Difficult to search	2	5	1	8	23

It is clear from the above analysis that 5 respondents found retrieval of multimedia resources *Time consuming*. It is found from the above analysis that *lack of awareness* about multimedia resources is the major barrier faced by the respondents, followed by *improper organization*, because the centres have not adopted any standard technique of organizing multimedia resources on shelves.

7.15 Constraints in Use of Web-based Multimedia Resources

Since the multimedia resources are also being used through the website of the libraries, the users face some constraints such as *IT infrastructure problem, incompatibility of hardware and software, bandwidth constraints/slow downloading, unorganized resources and lack of subject access*.

Table 15: Constraints in Use of Web-based Multimedia Resources

(Multiple responses were permitted)

S.No	Constraints	EGMM	NSD	SNA	Total respondent s	Total (%)
1.	IT infrastructure	1	3	10	14	40

2.	Incompatibility of hardware and software	2	-	-	2	6
3.	Bandwidth constraints	2	3	-	5	14
4.	Unorganized sources and lack of subject access	1	4	2	7	20
5.	Lack of computer literacy	1	10	10	21	60
6.	Non-supportive staff members	-	-	-	0	0
7.	Lack of training in multimedia	1		2	3	9
8.	No problem	-	3	1	4	11

It is clear from the above analysis that ‘*lack of computer literacy*’ is the major problem faced by the respondents of the centres. This is due to the very fact that the libraries lack staff and user with computer literacy. Multimedia resources are not organized properly on the website of the digital multimedia library, on which these resources are made available to the users, is not designed on a proper policy and there is also lack of skilled technical staff members.

7.16 Utility of Multimedia Resources/Services

In order to find out the utility of multimedia resources in terms of its usefulness, the respondents were asked for the same and the responses are presented in **Table-16**. The data reveals that 16 respondents consider it *very useful*. A significant percentage of respondents i.e. 10 users viewed it as *useful*. About 5 respondents felt that this service is *not useful*.

Table 16: Opinion about Multimedia Resources/Services

S.No.	Opinion	EGMM	NSD	SNA	Total respondents	Total (%)
1.	Very useful	5	10	1	16	44
2.	Useful	-	5	5	10	29
3.	Undecided	-	3	1	4	11
4.	Non useful	-	-	5	5	14
5.	Not at all useful	-	-	-	0	0

7.17 Satisfaction regarding Overall Multimedia Services

The opinion of users is pooled regarding satisfaction of multimedia services and the data received from the users are presented in **Table 17**.

Table 17: Satisfaction Regarding Overall Multimedia Services

S.No.	Satisfaction	EGMM	NSD	SNA	Total respondents	Total %
1.	Highly satisfied	1	-	-	1	3
2.	Satisfied	3	9	12	24	68
3.	Undecided	-	3	-	3	9
4.	Not satisfied	1	6	-	7	20

However, 3 respondents failed to decide, whether they are *satisfied* or *not*. The response show that 7 respondents are *not satisfied* with the multimedia services made available. Therefore, it is implicit that the highest responses (68 percent) received from users is that, they are *satisfied* with multimedia services.

7.18 Purpose of Use of various Internets based Multimedia Programmes

It has been observed that the users also explore multimedia resources on internet (such as youtube, wikipedia, flicker and facebook etc.) which are different from the available programmes on respective centre's website, when their information requirement is not fulfilled by the content available on the corresponding websites of the centres. A question was asked to the respondents in order to know the purpose of using other multimedia resources on internet and the responses are shown in **Table-18**. It is clear from the table, that *Teaching/instruction* is another purpose of using multimedia resources on internet by 20 percent respondents. Moreover 69 percent respondents view multimedia resources on Internet for *reference*.

Table 18: Purpose of Use of various Internet based Multimedia Programmes

(Multiple responses were permitted)

S.No.	Purpose	EGMM	NSD	SNA	Total respondents	Total %
1.	Research	-	9	6	15	43
2.	Teaching and instruction	1	-	6	7	20
3.	Presentation and lecture	-	15	1	16	46
4.	Reference	1	18	5	24	69
5.	Entertainment	2	3	6	11	31
6.	Commercial purposes	2	3	-	5	14

It can be concluded from the above analysis that most of the users of multimedia resources view these resources on internet for the purpose of *reference*. Further, it is also found that more users use internet based multimedia resources for *reference and research*.

7.19 Usage of Different Types of Media on Internet

Different types of media accessed through Internet are *text, image, graphics, animation, audio and video*. A question was asked to the respondents to find out the types of multimedia resources used by them on internet. **Table 19**, shows that all the users (100 Percent) use *textual* media on internet, followed by 94 percent respondents who watch *video* on internet.

Table 19: Usage of Different Types of Media on Internet

(Multiple responses were permitted)

S.No.	Type of multimedia resources	EGMM	NSD	SNA	Total respondents	Total %
1.	Text	5	18	12	35	100
2.	Image	5	9	5	19	54
3.	Graphics	5	-	-	5	14
4.	Animation	5	-	-	5	14
5.	Audio	5	5	5	15	43
6.	Video	5	18	10	33	94

The analysis clearly shows that, majority of the respondents from the centres use *text* on internet because most of the information content is available in textual media on Internet. *Images* and *video* clippings are essentially useful for research and developmental activities. Majority of the users use *image* and *video* for their research work. Only few number of

respondents use *animations and graphics*. *Graphics* is being used increasingly on Internet for locating geographical areas.

7.20 Internet based Sources Used for Multimedia Information

Multimedia resources have been provided through a wide range of sources on internet. **Table 20** shows the use of internet based sources for multimedia information by the respondents. All respondents i.e. 100 percent use *multimedia search engines* like Google (Google video, Google images), Yahoo, Excite, Alta Vista etc. Only 1 respondent uses *media websites* on internet for newspapers and news TV channels.

Table 20: Internet based Sources Used for Multimedia Information

(Multiple responses were permitted)

S.No.	Internet based sources	EGMM	NSD	SNA	Total respondents	Total %
1.	Search engines	5	18	12	35	100
2.	Organization websites	4	-	-	4	11
3.	Library archives and museum websites	5	5	10	20	57
4.	Media websites	1	-	-	1	3
5.	Community websites	5	18	12	35	100
6.	Others	-	-	-	0	0

Community websites including YouTube and social networking sites are used by all respondents. YouTube is a major resource on Internet for multimedia information. Some other internet based sources for multimedia content are also available but they are not used by any respondent. Most of the users use websites for free downloading of movies and songs and the multimedia advertisements for online shopping and podcasting.

7.21. Retrieval of Multimedia Resources

There are various formats available in the fast growing digital environment which is being retrieved by various users according to their need and comfort. Some questions are asked to the users regarding which file format is being used by them. File formats for text is given in the **Table 21**.

Table 21: File Formats of Text

S.No.	Formats of Text	EGMM	NSD	SNA	Total respondents	Total %
1.	TIFF	1	15	5	21	60
2.	BMP	2	5	4	11	31
3.	DIB	-	-	-	0	0
4.	GIF	1	6	-	7	20
5.	JPEG/ JPG/JIF	4	4	12	20	57
6.	TGA	-	-	-	0	0
7.	PNG	2	10	1	13	37
8.	PCX	1	-	-	1	3
9.	OIF	-	-	-	0	0
10.	CAD	-	-	-	0	0

It is clear from the **Table 21** that *TIFF* is the highest referred file format for text by the users (21respondents), followed by *JPEG/JPG/JIF* (20 respondents). Some file formats are not being used by any of the respondents; some of them are *DIB, TGA, OIF* and *CAD* etc. *PCX* is referred by only one respondent.

7.22 Audio/ Sound

There are various file formats for audio/sound available which are referred by users according to their wish and requirement. **Table 22** shows that *MP3* is the most retrieved file format of audio/sound, i.e. 29 respondents use this format of audio/sound. Some audio/sound formats are not at all used for retrieving by any respondent, *SBI, VOC, AAC, AC3, FLAC*, and *VQF* are among them.

Table 22: File Formats of Audio/Sound

S.No.	Formats of Audio/Sound	EGMM	NSD	SNA	Total respondents	Total %
1.	WAV	-	10	-	10	29
2.	MP3	4	15	10	29	83
3.	OGG	-	1	-	1	3
4.	AIFF	1	-	-	1	3
5.	WMA	1	-	10	11	31
6.	RA	1	-	-	1	3
7.	MIDI	1	5	-	6	17
8.	SBI	-	-	-	0	0
9.	VOC	-	-	-	0	0
10.	AAC	-	-	-	0	0
11.	AC3	-	-	-	0	0
12.	FLAC	-	-	-	0	0
13.	VQF	-	-	-	0	0

7.23 Video

Videos are most used multimedia resource and are available in various file formats and also retrieved in various respective file formats by different users. **Table 23** explains the division of file formats of video and their respective users. *MPEG* is the most referred multimedia resource, i.e. 23 respondents' retrieved videos in this file format.

Table 23: File Formats of Video

S.No.	Formats of video	EGMM	NSD	SNA	Total Respondents	Total %
1.	AVI	4	15	-	19	54
2.	MPEG	1	12	10	23	66
3.	WMV	2	-	-	2	6
4.	MOV	-	-	5	5	14
5.	QuickTime	1	10	4	15	43
6.	Real Video	3	5	-	8	23
7.	RM	-	1	-	1	3
8.	RMVB	-	-	-	0	0

Table 23 describes that *RM* is the least used video format, i.e. only 1 respondent (3 percent of the total respondents). It is clear from data analysis that *MPEG* and *AVI* are the most retrieved video formats and *WMV* and *RM* are least used video formats.

7.24. Animation

Animation is the least used multimedia resource as per investigators point of view with response to the data collected. **Table 24** describes the animation file formats to be retrieved by users for animation resources. 83 percent respondents retrieve animation resources in *3D* file format which is widely used file format for animation as per investigation reveals.

Table 24: File Formats of Animation

S.No.	Formats of Animation	EGMM	NSD	SNA	Total respondents	Total %
1.	2D	1	8	10	19	54
2.	3D	4	15	10	29	83
3.	5D	-	1	5	6	17

It is clear from the **Table 24** that 2D animation file format is used by 19 respondents and 5 dimensional animation formats is retrieved by only 6 respondents. So 5D is least used file format for animation in respective centres under study.

7.25 Problem In Retrieval

Due to digitization, there are various advancements in technology and digital environment is taking place but it still faces many problems to satisfy users of multimedia resources. Problems like *Vast information database*, *Unstandardized keywords*, and *inappropriate search engines* etc. Investigator has asked some questions to users of respective libraries regarding problem faced by users, which is described in **Table 25**.

Table 25: Problems in retrieval of multimedia resources

S.No	Problem in Retrieval	EGMM	NSD	SNA	Total Respondents	Total %
1.	Vast Information Database	3	-	5	8	23
2.	Unstandardization of Keywords	1	10	4	15	43
3.	Inappropriate Search Engines	1	-	3	4	11
4.	Inconstant guidance and Supervision	1	16	5	22	63
5.	Not using thesaurus and Subject Headings	3	1	1	5	14

It is evident from the above **Table 25** that the biggest problem faced by users while utilizing multimedia resources is *Inconstant guidance and Supervision* as observed by 22 respondents. 5 users are also not fully aware of availability of *thesaurus and subject headings*. Availability of *inappropriate search engines* in libraries also creates problems for its users as evident by about 4 respondents in the table above.

7.26 Bad Impact of Library to Retrieval

There are certain limitations which hinders/obstructs effective and efficient use of multimedia resources by the user in the libraries. Investigator has asked question to users about this and their responses are discussed in **Table 26**. Various problems like *Downloading problem*, *Slow*

processing of softwares, absence of internet, and charges etc. prevent these users from effectively using multimedia resources.

Table 26: Limitations in retrieval

S.No	LIMITATIONS	EGMM	NSD	SNA	Total Respondents	Total %
1.	Downloading Problem	1	10	10	21	60
2.	Slow processing of Softwares	2	1	-	3	9
3.	Absence of internet availability	3	5	12	20	57
4.	Charges (cost of download, subscription)	-	6	-	6	17
5.	Need other devices to do work	-	-	-	0	0
6.	Need Special skill to use	1	5	1	7	20
7.	Lack of knowledge of availability and use of multimedia resources	-	-	-	0	0

Table 26 reveals that 21 respondents have admitted that *Downloading problem* is the biggest problem which influence users to not to use multimedia resources, followed by *absence of internet availability* in libraries (i.e.20 respondents and about 57 percent). These facilities are very essential for retrieval of electronic multimedia resources. *Need for other devices to do work* and *lack of knowledge of availability and use of multimedia resources* have not been pointed out by the users amongst the problems faced by them in the libraries under study.

7.27. Need for Training/Orientation Programs

With the increasing number of multimedia resources being available online, a variety of interfaces are available to access them. More sophisticated skills are required to explore and utilize them. In order to explore the need of training, a question was raised to the users of multimedia resources on Internet. **Table-27** shows that 17 respondents have accepted that they need *monthly* training on multimedia, while 5 respondents requested for training programs *twice in a year*.

Table 27: Need for Training/Orientation Programs

S.No.	Frequency	EGMM	NSD	SNA	Total respondents	Total %
1.	Monthly	-	9	8	17	49
2.	Twice in a year	-	5	-	5	14
3.	Yearly	-	3	3	6	17
4.	Only once	5	1	1	7	20

7.28 Methods of Learning Multimedia Resources Usage Skills

There are various methods adopted by users to make them more skilled and developed. In order to have a knowledge regarding methods mostly used by users to develop themselves, question is asked to users regarding this, which is described in **Table 28**. *Self study/ Instruction* is mostly used method as a learning tool by the users of respective centres as observed from 30 respondents.

Table 28: Methods of Learning Skills

(Multiple responses were permitted)

S.No.	Methods	EGMM	NSD	SNA	Total Respondents	Total %
1.	Training from Library	1	6	1	8	23
2.	Self study/ Instruction	2	18	10	30	86
3.	From Friends	3	10	5	18	51
4.	External Sources	1	2	9	12	34

7.29. Rating of Staff's Behavior

The behaviour of staff members also plays an important role to enhance use of resources in the centre. The investigator has asked a question to rate the behavior of staff by the users of multimedia resources. The response in **Table 29** shows that 15 respondents felt the behavior of staff members as *excellent*. Few respondents i.e. 5 users consider it as *average* while only 1 respondent rated the behavior of staff members as *below average*.

Table 29: Rating of Staff's Behaviour

S.No.	Rating	EGMM	NSD	SNA	Total respondents	Total %
1.	Excellent	5	-	10	15	43
2.	Very good	-	3	2	5	14
3.	Good	-	9	-	9	26
4.	Average	-	5	-	5	14
5.	Below average	-	1	-	1	3

It can be concluded from the above analysis that majority of the users feel that staff behavior is *excellent*.

7.30 Role of Library in Retrieval of Information

Libraries provide various facilities and take various efforts to influence its users to encourage them to use the resources that have been provided by the Library including multimedia resources. Various parameters which could influence the users to use library's multimedia resources in the selected libraries such as *good connectivity of internet, supportive staff, portability of multimedia resources, OPAC, and Multiple access facility* etc. have been tabulated under **Table 30**.

Table 30: Role of library in retrieval

S.No.	Influence	EGMM	NSD	SNA	Total respondents	Total %
1.	Good internet connectivity	1	-	-	1	3
2.	Supportive staff	5	8	12	25	71
3.	Portability	-	10	2	12	34
4.	Easy issue-return facility (Kiosk)	-	1	-	1	3
5.	Easily accessible (OPAC)	-	-	-	0	0
6.	Quick knowledge and awareness	1	-	-	1	3
7.	Availability of good multimedia	-	1	1	2	6

	resources					
8.	Multiple access facility	2	5	-	7	20

It is clear from the Table that *supportive staff* has the biggest influence on users to make them to retrieve multimedia resources, 25 respondents are influenced by their library's staff. *OPAC* does not have any influence on respondent to retrieve multimedia resources. So, analysis of data collected from users of respective libraries under study shows that library itself has a great influence on its users which make them use libraries' resources which can be print, electronic or multimedia resources.

8. CONCLUSION

Multimedia resources are crucial and important aspect of a modern day library. This fact has also been supported by the present findings whereby it is observed that more than half of the users in the selected libraries (i.e. 63 percent) use multimedia resources daily. It is important to note that the purpose of use of multimedia resources is different among the users and it is observed that the highest percentage of respondents use multimedia resources for research purpose. It is also observed from the above study that TIFF, MP3 and MPEG are the most retrieved file format of multimedia resources. The selected libraries have also ensured time and energy of their may be saved by providing information about web-based multimedia resources through their respective websites itself. Since the multimedia resources are available either on shelves in the library or on the website, it can be accessed by visiting the library to use the resources available on shelves or accessing the multimedia resources through website via any remote location or within the premises of the centres. Non availability of large volume of contents on the websites compelled the users to use the multimedia resources on shelves. Video tapes and Photographs on shelves are the maximum used multimedia resources in the centres. It has been observed that 100 percent respondents are using web-based multimedia resources through internet. Multimedia resources are accessible only through intranet in EGMM.

Another important aspect for achieving highest goals in the field of Library is to come across the problems being faced by the users while accessing the Library and its multimedia resources. There are various constraints in using multimedia resources which are available on shelves. It is observed that Lack of awareness is the major barrier (43 percent response) faced by the respondents. Another problem is lack of computer literacy. It is pertinent to mention that despite these problems being faced by the users of the multimedia resources at the selected libraries, majority of the users i.e. 68 percent are satisfied with multimedia services. The Libraries also emphasize on adopting various techniques to make its users more skilled and developed to ensure the best and effective utilization of the resources and services provided by them to its users. Further, Libraries provide various faculties and take various efforts to influence users to use their resources, here multimedia resources. Supportive staff has the biggest influence on users to retrieve multimedia resources. *OPAC* does not have any influence on respondent to retrieve multimedia resources.

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