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Accessibility of student teachers to the facilities provided for multimedia production and presentation in teacher education programme

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Abstract

The technology integration in teacher education has met with many challenges and the most among them is how far the student teachers are provided access to technological facilities and other support facilities for the effective production and presentation of multimedia. A scrutiny into the problem is valuable if the accessibility of student teachers is rated. A sample of 250 student teachers from the University of Calicut and MG University is taken through random sampling technique. Hardware, Software, Physical Support, Staff Support and Training Initiative are the five dimensions selected for the present study in which the accessibility to technological and support facilities are assessed. The findings of the study reveals that the prevailing extent of access of facilities provided for multimedia production and presentation in teacher education programmes are not satisfactory. Therefore there arises a need for designing specific training programmes for enhancing the awareness and skill of student teachers for the production and presentation of multimedia.

Keywords: Multimedia, technology integration, teacher education programme

Introduction

Technological change has been so rapid that preparing teachers today requires the best ways to proceed in a digital world by exploring global issues and shared contents and presenting it in a variety way which matches the style of different learners.

The US Department of Education report (1996) acknowledges the need for ongoing technology training and support as teachers learn how to integrate technology tools into their classroom teaching strategies. The report also states that, though some progress in teacher training is being made, the majorities of teachers are still lacking effective training opportunities and time to develop new teaching strategies which incorporate technology into classroom lessons.

Need and significance of study

The quality of teacher education depends partly on entry qualification of students, teachers training, infrastructural and techno- pedagogical facilities available in the teachers training institutions. Among others, the role of techno-pedagogical facilities in teacher education sector is increasing at a phenomenal rate and revolutionised traditional forms of teaching-learning processes (Mukhopadhaya, 2002) [7].

If proper training is not provided in pre service training for integrating technology into their teaching, then probably a negative attitude about teaching with and about technology can be developed. While, on the other hand, those who have a positive attitude towards the utility of technology in the classroom may face many challenges as proper training was not provided.

Objectives

The present study is designed with the objective

1. To find the extent of access to facilities provided for multimedia production and presentation in teacher education programmes along the dimensions

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- Hardware
- Software
- Physical Support
- Staff Support
- Training Initiative

Hypothesis of the study

The investigators formulated the following hypothesis:

1. The extent of access to facilities provided for multimedia production and presentation in teacher education programmes are inadequate along the dimensions
 - Hardware
 - Software
 - Physical Support
 - Staff Support
 - Training Initiative

Methodology

Method adopted

The normative survey method was used for the study.

Sample

Sample for the study consists of 250 student teachers selected through random sampling technique from the teacher education institutions under Mahatma Gandhi University and University of Calicut who have almost completed the course.

Tools used

The tool used for the present study was scale of technological accessibility and facility for multimedia prepared by the investigators.

Statistical techniques used

The main statistical technique employed was the computation of percentage.

Analysis of data

Extent of Access to Hardware for Multimedia Production and Presentation

To find the extent of access to the hardware components needed for the production and presentation of multimedia, the percentages of responses of the select student teachers were computed. The details are given in Table 1.

Table 1: Extent of Access to Hardware Facilities for Multimedia

Hardware	Level of Access in Percentage		
	Great Extent	Some Extent	Not At All
Computer\ Laptop	42.4	52.4	5.2
Scanner	6.4	27.6	66
DVD\VCD Player	15.2	41.6	43.2
Digital Voice Recorder	6	19.2	74.8
Digital\Video Camera	14.4	26.8	58.8
Web Camera	7.2	17.2	75.6
Printer	25.2	40	34.8
Public Addressing System	38.4	25.6	35.6
TV	12	30.8	57.2
OHP	56.8	30.8	12
LCD\Digital Projectors	58.4	29.2	12.4
Interactive Whiteboard	16.8	23.6	59.6

From Table 1, it is clear that more than fifty percent (52.4%) of student teachers had some extent of access to Computer\ Laptop and 42.4% had great extent of access and 5.2% of the student teachers reported that they had no access to the same. The extent of access is greater for the OHP and LCD\Digital Projectors since 56.8% and 58.4% student teachers have marked their access as ‘Great Extent’ respectively for the referred hardware components followed by 30.8% and 29.2 % as ‘Some Extent’. Only 12% and 12.4% remarked their extent of access is ‘Not at all’. It was also noted that only a small percentage of student teachers marked their responses as ‘Great Extent’ for the components, Scanner (6.4%), DVD\VCD Player (15.2%), Digital Voice Recorder (6%), Digital\Video Camera (14.4%), Web Camera (7.2%), TV (12%) and Interactive Whiteboard (16.8%). The percentage of student teachers who remarked their level of access is at ‘Great Extent’ for Printer and Public Addressing System is 25.2% and 38.4% respectively.

The above responses indicated that almost all the student teachers selected for the study did not have a great extent of access to the hardware components needed for the production and presentation of multimedia. To overcome this problem, specific training programmes for enhancing the awareness and skill of student teachers on hardware components for production and presentation of multimedia need to be designed.

The result is diagrammatically presented as follows

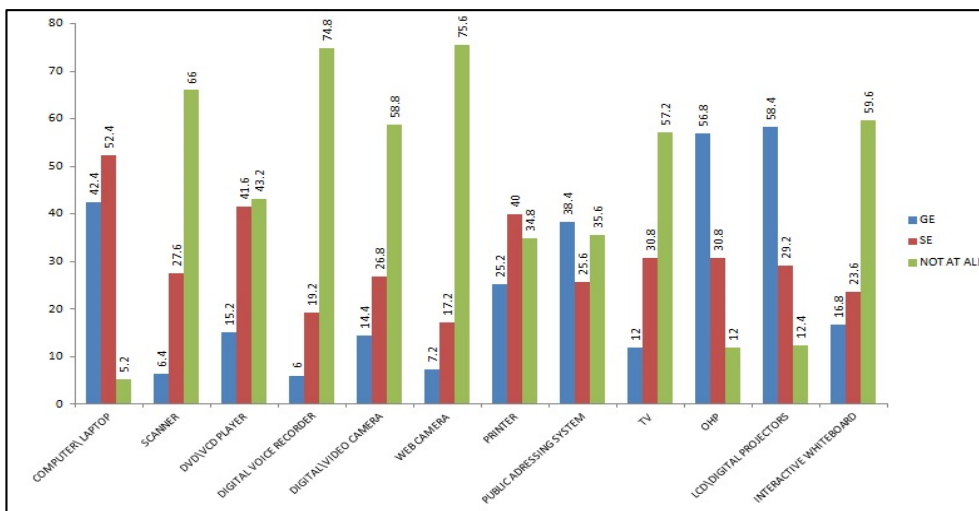


Fig 1: Extent of access to hardware facilities for multimedia

Extent of Access to Software for Multimedia Production and Presentation

To find the extent of access to the Software needed for the Production and presentation of multimedia, the percentages of responses of the select student teachers were computed. The details are given in Table 2.

Table 2: Extent of Access to Software Facilities for Multimedia

Software For Multimedia Production And Presentation	Level of Access in Percentage		
	Great Extent	Some Extent	Not At All
Basic Software	32.8	38.4	28.8
Audio Editing Software	6.8	27.6	65.6
Video Editing Software	6.4	25.2	68.4
Graphic Software	4.4	18.4	77.2
Animation Software	2	18	80
E- Content Authoring Software	2.4	15.6	82

The results of Table 2 revealed that the extent of access to the software needed for the production and presentation of multimedia were not satisfactory. While considering the responses of the select sample, 32.8% of the student teachers had a ‘Great Extent’ of access, while 38.4% of the sample selected opined that they had ‘Some Extent’ of access and 28.8% of the student teachers never had the extent of access to the Basic Software. It was also noted that only a small percentage of student teachers had ‘Great Extent’ of access to software for multimedia production and presentation namely Audio Editing Software (6.8%), Video Editing Software (6.4%), Graphic Software (4.4%), Animation Software (2%) and E- Content Authoring Software (2.4%).The percentage of student teachers who marked their level of access for these components as ‘Not At All ’ were respectively 65.6%, 68.4%, 77.2%, 80% and 82%.

The result is diagrammatically presented as follows

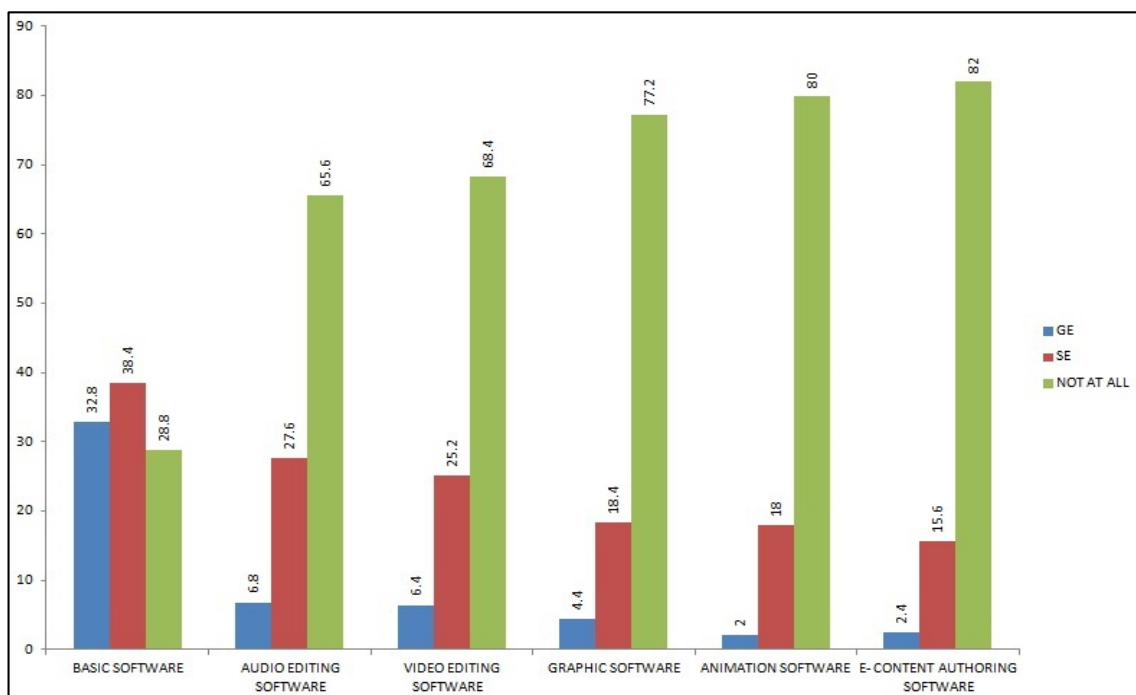


Fig 2: Extent to access of software facilities for multimedia

Extent of Access to Physical Facilities for Multimedia Production and Presentation

To find the extent of access to the Physical Facilities needed for the production and presentation of multimedia, the percentages of responses of the select student teachers were computed. The details are given in Table 3.

Table 3: Extent of Access to Physical Support Facilities for multimedia

Physical Support	Level of Access in Percentage		
	Great Extent	Some Extent	Not At All
Internet Connection	47.2	46.8	6
Alternative Power Supply	50.4	35.6	14
Computer Lab	56	37.6	6.4
Media Editing Studio	6	14.4	79.6

While analysing the results obtained from Table 3, it was found that nearly half of the selected student teachers had ‘Great Extent’ of access to Physical facilities for multimedia production and presentation namely Internet Connection (47.2%), Alternative Power Supply (50.4%) and Computer Lab (56%). Almost an equal percentage of student teachers had level of access at ‘Some Extent’ for Internet Connection (46.8%) while for Alternative Power Supply it is 35.6% and

for Computer Lab it is 37.6%. It was also noted that a small percentage (6%) of student teachers never accessed Internet Connection and Computer Lab (6.4%). A small proportion of student teachers (6%) had level of access at ‘Great Extent’ and a few (14.4%) had access at level, ‘Some Extent’ to Media Editing Studio. It was also noted that most of the student teachers (79.6%) never had access to Media Editing Studio.

The result is diagrammatically presented as follows.

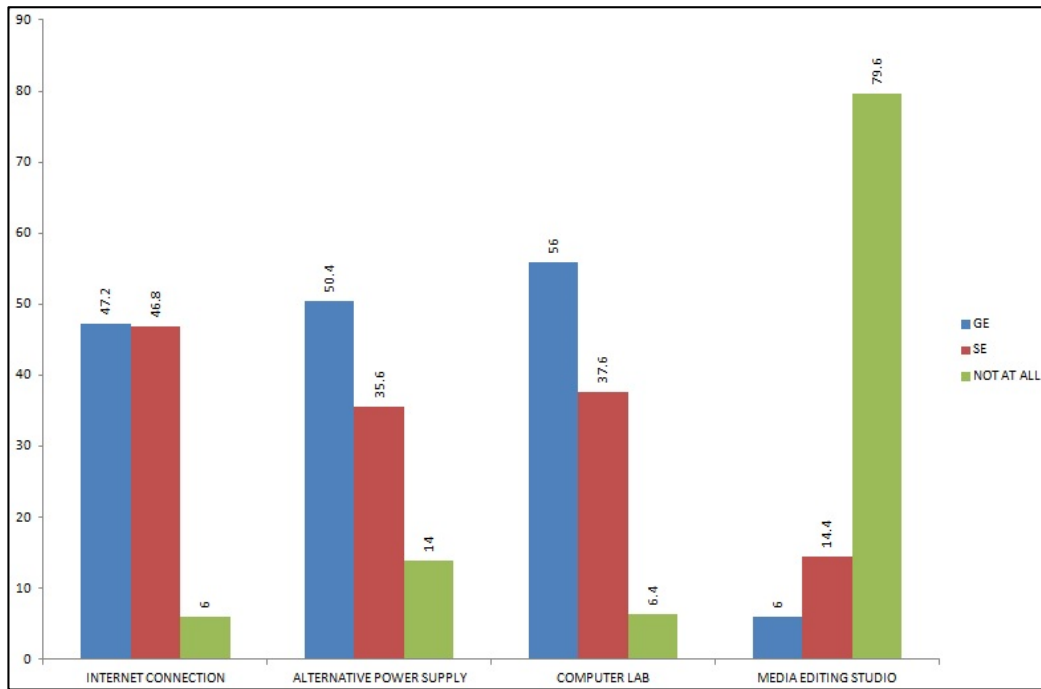


Fig 3: Extent of access to physical facilities for multimedia

Extent of Access to Staff Support for Multimedia Production and Presentation

To find the extent of access to the Staff Support for the Production and presentation of multimedia, the percentages of responses of the select student teachers were computed. The details are given in Table 4.

Table 4: Extent of Access to Staff Support Facilities for Multimedia

Staff Support	Level of Access in Percentage		
	Great Extent	Some Extent	Not At All
Staff For Technical Support	35.2	35.6	29.2
Competent Teachers for Multimedia	22	45.6	32.4

A close analysis of Table 4 revealed that the percentage of student teachers who had accessibility to staff for technical support is 35.2% and 35.6% respectively for ‘Great Extent’ and ‘Some Extent’ level of access. But 29.2% remarked that they didn’t get any support from the technical staff. The table further shows that only small proportion of student teachers (22%) had level of access at ‘Great Extent’ and most of them (45.6%) had access at level ,‘Some Extent’ to Competent Teachers for Multimedia. It was also noted that most of the student teachers (32.4%) never had access to Competent Teachers for Multimedia.

The result is diagrammatically presented as follows

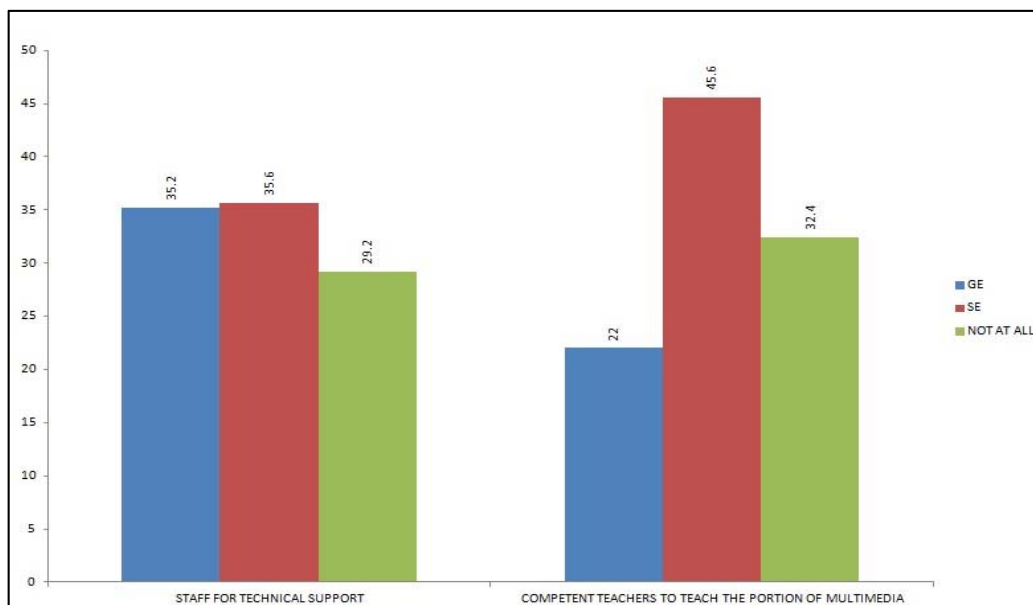


Fig 4: Extent of access to staff support facilities for multimedia

Extent of Access to Training Initiative for Multimedia Production and Presentation

To find the extent of access to the Training Initiative for the Production and presentation of multimedia, the percentages of responses of the select student teachers were computed. The details are given in Table 5.

Table 5: Extent of Access to Training Initiative for Multimedia

Training Initiative	Level of Access in Percentage		
	Great Extent	Some Extent	Not At All
Practical Classes on Multimedia	23.6	51.2	25.2
Time For Practice	28.8	40.4	30.8
Upgraded Syllabus with respect to Advancements of Technology in Teaching	19.6	45.2	35.2

From Table 5, it is noted that the training initiative for multimedia production and presentation were not satisfactory. The percentage of students who opined their level of access at 'Great Extent' is 23.6% for Practical Classes on Multimedia, 28.8% for Time for Practice and 19.6% for Upgraded Syllabus with respect to Advancements of Technology in Teaching. More than half (51.2%) of the student teachers selected for the study reported that they had access level only to 'Some Extent' for Practical Classes on Multimedia. The percentage of students at level of access at 'Some Extent' was 40.4% for Time for Practice and 45.2% for Upgraded Syllabus with respect to Advancements of Technology in Teaching. The percentage of students who marked their level of access as 'Not At All' were respectively 25.2%, 30.8% and 35.2% for Practical Classes on Multimedia, Time For Practice and Upgraded Syllabus with respect to Advancements of Technology in Teaching. The result is diagrammatically presented as follows.

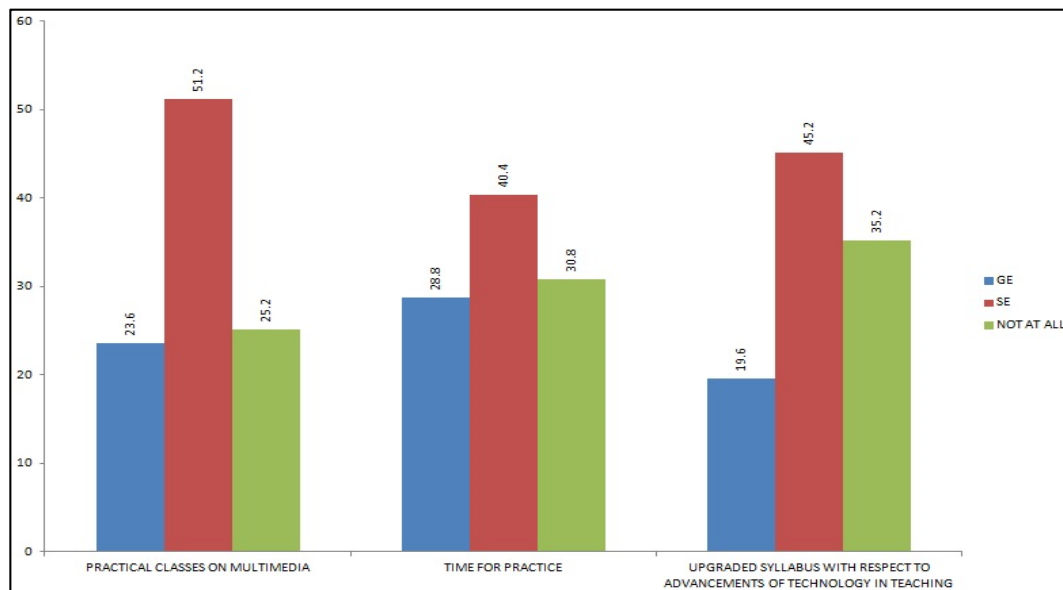


Fig 5: Extent of access to training initiative for multimedia

Findings and summary of the study

- The prevailing extent of access of facilities provided for multimedia production and presentation in teacher education programmes are not satisfactory in all the select four dimensions namely Hardware for Multimedia, Software for Multimedia, Staff Support Facilities and Training Initiative. But the dimension Physical Support Facilities is comparatively having better rating of extent of access.
- Dimension wise analysis points out that there exist basic hardware components and physical facilities for Multimedia production and presentation but the software facilities are under used or not at all used. This demands the need for training in software related to Multimedia production and presentation.
- The dimension Staff Support revealed that accessibility to staff for technical support is inadequate and only small proportion of student teachers had 'Great Extent' of access to Competent Teachers for Multimedia. This draws attention to the need of recruiting staff for technical support and competent and qualified teachers to teach the discipline 'Multimedia'.

- The results clarify that the training initiative for multimedia production and presentation were not satisfactory. This announces the need of modifying the syllabus with advancements of technology in teaching. It also demands the need for practical classes and more time for practical classes.
- It is identified that specific training programmes for enhancing the awareness and skill of student teachers for production and presentation of multimedia need to be designed and should be incorporated in their curriculum.

Conclusion

The study has thrown light to the fact that most of the institutions have physical and hardware facilities for multimedia production and presentation. The steps done for the practical implementation of it by providing upgraded curriculum, competent staff, media editing studio and software for multimedia production and presentation are not satisfactory. In addition to offering ICT as a compulsory and special course, integrated approaches need to be studied along with methodology courses to incorporate multimedia production and presentation for the professional development of teachers.

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