

ATTITUDE AND SKILLS ON THE USE OF COMPUTERS IN INSTRUCTION AMONG POST GRADUATE STUDENT TEACHERS

Dr.Santhakumari

Principal, Dhanalakshmi srinivasan college of education, Perambalur

Abstract

The purpose of this study is to investigating the knowledge, skills and attitudes of Post Graduate student teachers on the use of computers in teaching and learning. The sample consisted of 120 student teachers pursuing PG programme in Teacher Education affiliated to Tamillnadu Teachers Education University. Data was collected by using a questionnaire. The results showed that PG student teachers lack computer skills but had positive attitudes towards their application in teaching and learning. It was also found that these student teachers do not benefit from information provided by internet search engines because of their lack of skills in using search engines. The study recommended developing student teachers' computer skills and knowledge about use of computers; e-resources; programme software's and open sources software's, to benefit from them in teaching and learning.

INTRODUCTION

The use of computers in education opens a new area of knowledge and offers a tool that has a potential to change some of traditional and ineffective educational methods (Asan, 2003). Most of the teacher educators and student-teachers do not have knowledge of website addresses related to teaching –learning materials and they do not have adequate knowledge and awareness about the concept of virtual learning (Sahoo, 2006). Information and Communication Technology (ICT) has improved teachers' professional knowledge, skill and competencies by expanding their subject knowledge, enabling planning and preparation for teaching to be more efficient. Teachers' knowledge of ICT for teaching and learning, problem solving skills, capacity building and other relevant issues relating to education cannot be underestimated. For teachers to be able to cope with these functions of electronic technologies or ICTs there is the need for the right attitude to be cultivated towards ICTs as a tool for teaching and learning. Attitude is the general feeling or opinion of an individual about something (Oladosu, 2012). According to Pandey and Mishra (2008), knowledge of ICT is considered as a prerequisite to become an effective teacher, and it is the responsibility of the teacher training institutions to provide an opportunity to acquire these skills. ICT in teaching learning process enhances the teaching and learning which in turn provides the quality education. It is necessary for our future teachers to have the knowledge and understanding of the role of ICT in sustainable development. Yasmin (2008) argued that, Teachers' attitude towards using knowledge outside their talent and desire tend to be a factor

impeding ICT integration and successful integration of ICT requires competences and skills essential for designing, delivering and evaluating instruction as well as the students' performances to learning. It is necessary for pre-service teachers to present their abilities to use technology well and use these technologies effectively in their teaching-learning process. Moreover they must be willing regarding the use technology in their teaching (Luan, Fung, Nawawi & Hong, 2005). In the light of the above discussion, the present study is an attempt to investigate attitude and skills on the use of computers in instruction among Post Graduate(M.Ed) student teachers.

RESEARCH PROBLEM

Since computers are widely used in Indian schools by teachers as a source of information and as a teaching tool, it is important to study student teachers' computer knowledge, skills and attitudes to make sure the suitable application of the computers in the teaching and learning process. It can also be observed from the above literature that teachers' computer skills have not attained the expected level until now. In the study carried out by Akpinar (1999) emphasized that negative perceptions about technology delay the application of technology. It can be stated that as some teachers have negative perceptions of technology they do not want to use it or avoid using it, so to make them develop positive perceptions of technology they should be encouraged to use technology before they are in service (Yanpar, 2005). It is essential to seem into the level of PG student teachers' attitudes and skills in the use of computers in the classroom instruction. Through PG student teachers, we can inculcate the positive attitude towards the use of computers in instruction at gross root level.

OBJECTIVES OF THE STUDY:

1. To investigate PG student teachers computer knowledge and skills.
2. To investigate PG student teachers attitudes towards using computer in teaching.

POPULATION AND SAMPLE

The population consisted of all PG student teachers in Tamilnadu. However, due to difficulties, three districts were selected to administer the questionnaire (Namakkal, Salem and Kumbakonam). A total of 150 questionnaires were administered by the researcher. The returned rate of the responses was 140 (90%). Some of the returned questionnaires were removed for being incomplete. The final number sample contains 120 (80%).

TOOL USED IN THE STUDY

A questionnaire was adopted by the researcher to collect data. The original questionnaire was developed and standardized by Al- Rabaani Ahmed Hamed Hamdan (2008). It consisted of five sections: the first section includes two sub sections (yes, no) and (rating questions) aimed at gathering general information. The second section verifies PG student teachers' skills in using software programs.

The third section examines the benefit to PG student teachers from internet facilities. The fourth section examines using computer in teaching. The fifth section examines PG student teachers' attitudes towards using computers in teaching.

RELIABILITY AND VALIDITY OF THE TOOL

The questionnaire’s reliability was established by using Cronbach's alpha coefficient because it allows an investigation of how well the different items complement each other in their measurement of different aspects of the subject (Al- Rabaani Ahmed Hamed Hamdan, 2008). The value of Cronbach’s Alpha of the questionnaire was 0.8556. The validity of the questionnaire was established by experts in teacher education programme and experts from instruction technology. Based on the opinion, some items even some section of the questionnaire were deleted and some were modified. In order to ascertain the reliability of the modified tool, again the researcher used the same Cronbach’s alpha coefficient for establishing reliability. It was found to be 0.879. So the tool was valid and reliable.

RESULTS AND DISCUSSION

Questions1: How do PG student teachers rate themselves regarding computer general information?

Data gathered under this question was divided into two sections: Section (A) investigating PG student teachers information about having computers and their training in the use of computers while section (B) aimed at investigating PG student teachers skills in using computer.

Section 1. (A):

Table (1) shows the percentage of PG student teachers’ ratings of themselves in their response of general information about computers.

Table No. 1

Percentages of PG student teachers' responses about computer general information

Sl.No.	General information	Yes	No
1.	Do you have your own computer?	62 (51.7%)	58 (48.3%)
2.	Do you use internet at home or in internet center?	104 (86.7%)	16(13.3%)
3.	Have you participated any Online courses?	2 (1.7%)	118 (98.3%)
4.	Do you wish to participate online course?	75 (62.5%)	45 (37.5%)
5.	Do you wish to attend any computer course on usage of computers in teaching?	108 (90%)	12 (10%)
6.	Do you use internet to update your information in teaching and learning?	95 (79.2%)	25 (20.8%)

7.	Do you have your own e-mail account?	46 (38.3%)	74(61.7%)
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Table (1, item 1) shows that the majority of PG student teachers have their own computers. Around 48.3% of them do not have computers. The high number of PG student teachers who have their own computers is a positive indicator because this reflects their understanding of and attitudes towards the importance of computer in the teaching and learning process.

The results (item 2) also prove that the majority of PG student teachers are using internet either at their home or at internet centre. Only 13.3% of them do not using internet. This shows the interest of the student teacher in using the internet for their professional growth.

The results (item 3) also show that the majority of PG student teachers did not participated any online courses. Only 2(1.7%) student teachers have participated in online course. Such results indicate that the need for the online learning for getting vast professional experience.

The finding of (item 4) presents that the majority (62.5%) of PG student teachers wishes to participate online courses to mould themselves in their teaching field. Around 37.5% of them are not ready to attend any online course. Such results increase positive indication that PG student teachers are aware of the importance of being online courses.

The result of item (5) addresses 90% of PG student teachers' wish to have computer courses about using computer in teaching. Such results indicate that these student teachers desire to apply computers in their instructional practice.

The result of items (5) highlights that around 79.2% of PG student teachers using internet to update information in teaching and learning. It indicates that the PG student teachers are having more interest in using internet to update information for better classroom instruction.

Section 1 (B):

Table No 2:

Percentage of teachers' using of computer, computer skills and time spent on internet

S.No	General information	Rating		
		Very Basic	Basic	Online teaching learning
8.	To what extent are you skill full in using computer?	13(10.8%)	106 (88.3%)	1(0.8%)
		Always	Sometimes	Not at all
9.	To what extent do you use computer in teaching and learning?	18 15.0%)	85 (70.8%)	17(14.2%)

		Never	2-5hr	Over 5 hr
10	How many hours do you use internet per week?	17(14.2%)	78(65.0%)	25(20.8%)

The results of (item 8) address that 88.3% of student teachers have only basic computer skills, while 10.8% of them are very basic level of skill full in computer. The results also indicate that among 120 student teachers only 1(0.8%) having skilled in using computer with online teaching level.

The results of (item 9) highlight that 14.2% of student teachers do not use computer at all, and 70.8% of them use computer sometimes. Only 15% of them are always using computer in teaching and learning.

The results of (item 10) show that 14.2% of PG student teachers never use internet at all, 65% of them are using internet from 2 to 5 hours per week and 20.8% of them are using internet over 5 hours per week. This indicates that the need to increase the using hours of internet for constructive professional growth.

Question 2: How do PG student teachers rate themselves in the skills of using programme software, benefiting from internet facilities and using computer in teaching?

Data gathered under this question was divided into three sections: Section (2) investigating PG student teachers skills of using programme software while section (3) aimed at investigating PG student teachers benefiting from internet facilities and section (4) addressing the student teachers usage of computer in teaching.

Section (2):

The following table (3) shows the extent of PG student teachers' skills of using programme software

Table 4: Percentage of PG student teachers Skill fulness in using program software

Sl.No.	To what extent you are skillful in	Good	Fair	Poor	Not at al
1.	MS-Word and its facilities like opening, printing, saving etc.	80 (66.7%)	31 (25.8%)	2(1.7%)	7(5.8%)
2.	MS-Power owerpoint and its facilities like slide preparation, slide design, animation etc.	67 (55.8%)	32 (26.7%)	14 (11.7%)	7 (5.8%)

3.	MS-Excel and its facilities like sum, average, calculation etc.	70(58.3%)	33(27.5%)	11(9.2%)	6(5.0%)
4.	Statistical Package software like SPSS	28(23.3%)	50(41.7%)	21(17.5%)	21(17.5%)
5.	Edraw Mind Map software and its facilities like creating mind map for teaching and learning content content	0(0%)	0(0%)	6(5.0%)	114 (95.0%)
6.	Articulate storyline for creation of e-content	0 (0%)	0 (0%)	2 (1.7%)	118 (98.3%)

The results of the item (1) indicates that 80(66.7%), 31(25.8%) and 2(1.7%) of PG student teachers are good, fair and poor skilled in using MS-word and its facilities respectively, while 7 (5.8%) of them are not at all skilled in using MS-word and its facilities.

The results of the item (2) indicates that 67 (55.8%), 32(26.7%) and 14(11.7%) of PG student teachers are good, fair and poor skilled in using MS-power point and its facilities respectively, while 7 (5.8%) of them are not at all skilled in using MS-power point and its facilities.

The results of the item (3) indicates that 70(58.3%), 33(27.5%) and 11(9.2%) of PG student teachers are good, fair and poor skilled in using MS-Excel and its facilities respectively, while 6(5.0%) of them are not at all skilled in using MS- Excel and its facilities.

The results of the item (4) indicates that 28(23.3%), 50(41.7%) and 21(17.5%) of PG student teachers are good, fair and poor skilled in using statistical software’s like SPSS respectively, while 21(17.5%) of them are not at all skilled in using MS- Excel and its facilities.

The results of the item (5,6) indicates that most of the student teachers are not at all using Edraw Mind map software and Articulate Story line software for creating e-content. This shows that the importance of these software’s

Section (3):

The following table (3) shows the extent of PG student teachers' “Benefit from internet facilities”

Table 4: Percentage of PG student teachers benefiting from internet facilities

Sl.No.	To what extent you are skillful in	Good	Fair	Poor	Not at al
7.	Usin search engines likegoogle, yahoo.etc.	85 (70.8%)	24 (20.0%)	8 (6.7%)	3 (2.5%)
8.	Using emails and sending files	73 (60.8%)	30 (25.0%)	11 (9.2%)	6(5.0%)
9.	Using Social Networking like face book, orkut, blog etc.	31 (25.8%)	30 (25.0%)	29(24.2%)	30(25.0%)
10.	Downloading resources from internet	72(60.0%)	33(27.5%)	12(10.0%)	3(2.5%)
11	Listening video lectures from You tube	35 (29.2%)	37 (30.8%)	23(19.2%)	25(20.8%)
12	Using acrobat(Adobe) reader to read files	30(25.0%)	35 (29.2%)	31(25.8%)	24(20.0%)

The results of the table 4 shows that 70.8% of student teachers are good enough in using search engines, 60.8% of them are good enough in using emails and sending files, 25.8% of them are good in using social networking sites, 60% of them are good in downloading resources from internet, 29.2% of them are good in listening video lectures from You tube, 25% of them are good in using Acrobat reader to read files. This indicates that most of the student teachers are good enough in benefiting internet and its facilities.

Section (4):

The following table (5) shows the extent of PG student teachers' using computer in teaching and learning.

Table 5: Percentage of PG student teachers using computer in instruction

Sl.No.	To what extent you use computer in teaching and learning	Always	Sometimes	Rarely	Not at al
13	Slide presentation	21(17.5%)	77 (64.2%)	12 (10%)	10 (8.3%)
14.	Prepare study material	38 (31.7%)	64 (53.3%)	10 (8.3%)	8 (6.7%)
15	Show the video lesson	11 (9.2%)	49 (40.8%)	44 (36.7%)	16 (13.3%)

16.	Recording marks	16 (13.3%)	51 (42.5%)	35 (29.2%)	18 (15.0%)
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The result of the item 13 shows that 17.5% of student teachers are always using slide presentation in teaching. 64.2%, 10% and 8.3% of them are using slide presentation in teaching for some time, rare and not at all respectively.

The result of the item 14 shows that 31.7% of student teachers are always using computer to prepare study material. 53.3%, 8.3% and 6.7% of them are using computer to prepare study material for some time, rare and not at all respectively.

The result of the item 15 shows that 9.2% of student teachers are always using computer to show the video lesson in classroom. 40.8%, 36.7% and 13.3% of them are using computer to show the video lesson in classroom for some time, rare and not at all respectively.

The result of the item 16 shows that 13.3% of student teachers are always using computer to record marks. 42.5%, 29.2% and 15% of them are using computer to record marks for some time, rare and not at all respectively.

Question 3: How do PG student teachers rate themselves in the attitude towards using computers in teaching and learning?

Section (5):

The following table (6) shows the extent of PG student teachers' attitude towards using computers in teaching and learning

Table 6: Percentage of PG student teachers' attitude towards using computers in teaching and learning

Sl.No	Using computer will	Agree	Uncertain	Disagree
17	make the classroom interesting	109(90.8%)	9 (7.5%)	2 (1.6%)
18	make the learning joyful	107(89.2%)	10 (8.3%)	3 (2.5%)
19	increase learner's achievement	99 (82.5%)	18(15.5%)	3 (2.5%)
20	Increase communication and technological skills between peers	91 (75.8%)	21(17.5%)	8 (6.7%)
21	give benefits as it is available learning equipment	84 (70.0%)	30 (25.0%)	6 (5.0%)
22	make information comfortably transferable	79 (65.8%)	25 (20.8%)	16 (13.3%)
23	develop my thinking skills	93 (77.5%)	19 (15.8%)	8 (6.7%)

24	help to update my knowledge	100(83.3%)	13(10.8%)	7 (5.8%)
25	encourage learners to participate in learning activities	83 (69.2%)	30 (25.0%)	7 (5.8%)
26	reduce the use of conventional instructions like lecture method	71 (59.2%)	36(30.0%)	13(10.8%)
27.	improve my teaching with confidence	101(84.2%)	18(15.0%)	1 (0.8%)
28	make teaching learning more interactive	94(78.3%)	17(14.2%)	9 (7.5%)

The results of the table 6 shows that most of the PG student teachers agreed in all the statements which was raised to know the attitude towards using computers in teaching and learning. These findings highlight that the PG students’ teachers are having positive attitude towards the using of computer in teaching and learning.

CONCLUSION AND SUGGESTION:

Computer is an electronic device that has come to reshape the world in all aspects of human endeavour with its iron grip in the provision of ‘Education for All’. Essential to the provision of ‘Education for All’ teachers who have been trained professionally to educate, improvise and integrate emerging technologies into the standard of education. In some educational institution’s computer are available, these computers are not connected to the internet and the teachers can hardly access the computer. Adequate awareness of the teachers towards ICT and the positive attitude towards the use of computers in instruction is a need of hour.

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