



Technology Competency Among School Teachers': An Emerging Need In Global Era

Dr Sushma H.B

Assistant Professor School of Education Central University of Karnataka

sushmahaigar@gmail.com

ABSTRACT

Due to the advance of technology in twenty-first century, every parent thrive their children to be technology experts and in parallel to this every school are trying to effectively transact instruction process by outfitting with modern pre-requisite technological resources. As technologies are being integrated into classroom, the important and immediate emerging need in this global era is to know proficiency and competency among school teachers in using these technologies. The purpose of this quick survey was to discern the usage of information and communication technology among school teachers. For this purpose survey was administered from grade 1 to 10 teachers covering 30 teachers of only one private English medium school of Kalaburagi city, as the school campus is made wifi free by the school management, with the following objectives. 01. To Know teachers' frequency of access to ICT's. 02. To know availability of ICT's facilities in school. 03. To know factors hindering teachers' readiness and confidence of

using ICT's. 04. To know teachers' perceived ease of using ICT's. 05. To know teachers' perceived usefulness of ICT's. 06. To know teachers' use of ICT's facilities. Data collected were analysed using frequency and simple percentage. The results showed moderate competency among teachers in using technologies in transacting instruction and further conclusions was drawn with suggestions for sustaining.

Key Words: Technology, Competency, School Teacher.

INTRODUCTION:

In the emerging era of digital technology, we all are noticing by integrating a piece of equipment into class room is making noticeable difference in instruction process. Successful integration of technology in the school system depends largely on the availability and competency and the attitude of teachers towards the role of modern technologies in teaching and learning (Abdul-

Salaam Aminat Obakhume 2011, p. 781). The “effective professional development of teachers in the integration of technology into instruction” is the number one factor for success (ISTE 2008, p. 7). As rightly said great teachers who use digital technology will be the most powerful teachers in the 21st century and quality of teaching is often related to the use of ICT in teaching and learning. The current issue is the use of ICT’s in the classroom by the teachers which includes specifically the use of computers, Internet, telephone, white board, digital camera, data projector, etc. As the world continues to revolve around technology, teachers need to continue incorporating these new technologies into their teaching. Therefore it is no longer acceptable for teachers to be technology illiterate.

NEED AND IMPORTANCE OF THE STUDY

To move in par with the twenty-first century digital era, the infusion of ICT into classroom instruction has become essential to make students to cope and compete in present digital era, But the most need factor is to know for successful integration of ICT in the classroom will by largely depends upon the proficiency, competency and attitude of teachers’ in using such modern technologies in teaching and

learning. Therefore the study has taken with the following title.

STATEMENT OF THE PROBLEM:

“Technology Competency among School Teachers’: An Emerging Need in Global Era.”

OPERATONAL DEFINITION OF KEY TERMS:

Technology:

(Lan & Young 1996, p. 227) defines, there are two basic components that can be identified: 1) ‘knowledge’ or technique; and 2) ‘doing things’. Technology is always connected with obtaining certain result, resolving certain problems, completing certain tasks using particular skills, employing knowledge and exploiting assets.

Competency:

(parry 1996, p.50) defined competence as, “a cluster or related knowledge, skills and attitudes that reflects a major portion of one’s job (a role or responsibility), that correlates with performance on the job, that can be measured with well-accepted standards, and that can be improved with training and development.”

school teacher:



(senge 2000, p. 26) defined school teachers as, “an expert who is capable of imparting knowledge that will help learners to build, identify and to acquire skills that will be used to face the challenges in life. the teacher also provides to the learners knowledge, skills and values that enhance development. an educated person is capable of utilizing the available opportunities in both private and public sectors. the educated person can easily secure employment as well as having life skills that will enable him/her to interact well in the society.”

LITERATURE REVIEW:

(Shihkuan Hsu 2010, p.321) results of his study showed a positive correlation between teacher’s ability and usage in technology integration, and suggest that well-trained teachers successfully integrate technology and when teachers have better understanding and higher competence of integrating technology into teaching, their chance of having higher integration will be within reach. Lajeane Thomas, the NETS project director, emphatically said, “To unleash the power of technology in their classroom, teachers must embrace the technology themselves and share their enthusiasm for the learning that ensues with their students” (International Society for Technology in

Education 2000, p. 1). (Guma Ali et al. 2013, p. 4069) found that use of ICT in education include teachers’ attitudes, ICT competence, computer self-efficacy, teaching experience, education level, professional development, accessibility, technical support, leadership support, pressure to use technology, government policy on ICT literacy, and technological characteristics. However, the presence of all factors increases the probability of excellent integration of ICT in teaching-learning process. (Khalid Abdullah Bingimlas 2008, p. 243) through findings of his study indicated that the teachers have a strong desire for the integration of ICT into education but that they encountered many barrier to it and major barriers were lack of confidence, lack of competence and lack of access to resources.

OBJECTIVES OF THE STUDY:

01. To Know teachers’ frequency of access to ICT’s.
02. To know availability of ICT’s facilities in school.
03. To know factors hindering teachers’ readiness and confidence of using ICT’s.
04. To know teachers’ perceived ease of using ICT’s.

05. To know teachers' perceived usefulness of ICT's.

06. To know teachers' use of ICT's facilities.

METHOD AND PROCEDURE OF THE STUDY

Descriptive survey method was adopted for the study. Investigator personally visited the schools after obtaining the permission from the head of the school, made a personal contact with the teachers, explained the purpose of the visit, importance of their sincere response and the procedure to fill the questionnaire, questionnaire were distributed among teachers and was collected back.

ANALYSIS AND INTERPRETATION

01. Teachers Frequency of Access to ICT's.

Sl No	Hours of Access / Week	Yes	Percentage (%)
01	0 – 5 hours	20	67
02	6 - 10 hours	07	24
03	11 – 15 hours	-	-
04	16 – 20 hours	01	03
05	21 hours & Above	02	06
	Total	30	100

The results in the table 01 are on the teachers' frequency of access to ICT's. The study showed that out of 100% teachers 76% of them will

POPULATION AND SAMPLES

Sample for this study consist of 30 teachers' from grade 1st to 10th class of only one private English medium school of Kalaburagi city.

TOOL:

The data was collected from teachers by administering questionnaire on "ICT Usage Scale among School Teachers."

STATISTICAL TECHNIQUES:

Frequency and simple percentage were used to analyse the data.

access ICT 0-5 hours per week and 24% teachers 60-10 hours while 06% of them will

access ICT 21 hours and above per week and

03% of teachers uses 16-20 hours per week .

02. Availability of ICT's Facilities in School.

SI No	ICT's Facilities in School Items	Yes	Percentage (%)	No	Percentage (%)
01	There are enough computers in my school	30	100	00	-
02	My school has Educational Software for teaching	25	84	05	16
03	Our computers are connected to the internet	30	100	00	-
04	We have interactive Boards in our schools	30	100	00	-
05	Our school is WIFI free	30	100	00	-
06	We have enough printers	28	94	02	06
07	There are Photocopiers in my school	25	84	05	16
08	Multimedia Facilities are available for teaching	25	84	05	16
09	We have Projectors in our schools	30	100	00	-
10	Presence of a virtual library	12	40	18	60

The results in table 02 are on the availability of ICT facilities in school. Results shows that All 100% teachers stated that, there are enough computers in school, connected with internet, school is wifi free and they have projectors in

schools. 94% of teachers stated they have enough printers and 84% teachers responded there are photocopiers and multimedia facilities available for teaching in school while 60% teachers admitted that there is no virtual library.

03. Factors Hindering Teachers' Readiness & Confidence of Using ICT's.

SI No	Problems With Teachers' Items	Yes	Percentage (%)	No	Percentage (%)
01	Teachers lack of expertise with ICT	05	16	25	84
02	Lack of confidence in using ICT	03	10	27	90

03	Insufficient knowledge of appropriate software	05	16	25	84
04	Insufficient knowledge of how to use ICT equipment	05	16	25	84
05	Lack of knowledge in using ICT in teaching and learning	05	16	25	84

The results in table 03 are the factors hindering teachers' readiness and confidence of using ICT's. Out of 30 teachers, 90% of them have admitted that they do not lack confidence in using ICT, while 84% of them responded that

they do not lack expertise with ICT, have insufficient knowledge of appropriate software and how to use ICT equipment and also do not lack the knowledge in using ICT in teaching and learning process.

04. Teachers' Perceived Ease of Using ICT's.

Sl No	Difficulty in ICT's use by Teachers' Items	Yes	Percentage (%)	No	Percentage (%)
01	Using ICT makes it more difficult to control the class	01	03	29	97
02	ICT makes the lesson more difficult	00	-	30	100
03	ICT makes preparing the lesson more difficult	00	-	30	100
04	Hardware and software problems often disrupt the lesson	12	40	18	60
05	Using ICT in teaching is expensive	24	80	06	20

The results in the table 04 are the teachers' perceived ease of using ICT's. 100% of teachers' responded that ICT will not make the lesson difficult and ICT will not make difficult in preparing lesson, while 97% of teachers'

stated that using ICT makes them not difficult to control the class while 40% of teachers' admitted hardware and software problems often disrupts the lesson and 80% of teachers agree that using ICT in teaching is exp

05. Teachers' Perceived Usefulness of ICT's

Sl No	Perceived usefulness items	Yes	Percentage (%)	No	Percentage (%)
01	Using ICT makes lesson more interesting	29	97	01	03

02	Using ICT in my teaching is not enjoyable	02	06	28	94
03	Using ICT makes lesson more fun	30	100	00	-
04	Using ICT makes lesson more diverse	28	94	02	06
05	Using ICT improves presentation of materials.	29	97	01	03
06	Using ICT makes lesson more difficult	04	14	26	86
07	Using ICT reduces pupils' motivation	11	37	19	63
08	Using ICT impairs pupils' learning	13	44	17	56

The results in the table 05 are the teachers' perceived usefulness of ICT's. 100% of teachers admitted using ICT makes lesson more fun. 97% teachers responded using ICT makes lesson more interesting and improves presentation of materials. 94% of teachers say

using ICT in teaching is enjoyable and makes lesson more diverse. 86% of teachers using ICT will not make lesson difficult. 63% of teachers admitted using ICT will not reduce pupils' motivation and 56% of teachers say using ICT will not impair pupils' learning.

06. Teachers' Use of ICT's Facilities

Sl No	Use of ICT Facilities Items	Yes	Percentage (%)	No	Percentage (%)
01	I can boot the computer	30	100	00	-
02	I use the computer to teach my students	27	90	03	10
03	I use the computer to keep records	30	100	00	-
04	I use Microsoft Word to type Questions and other documents	30	100	00	-
05	I use Power Point In Presenting my Lesson	25	84	05	16
06	I browse the Internet to get materials for teaching	27	90	03	10
07	I have an e-mail address	27	90	03	10



08	I can use a search engine such as Google	27	90	03	10
09	I can operate a printer that is connected to the computer	27	90	03	10

The results in the table 05 are the teachers' use of ICT's facilities. 100% of teachers responded they can boot the computer and use computer to keep records and use Microsoft Word to type questions and other documents. 90% of teachers stated they use computer to teach students, will browse internet for material to teach, have e-mail address, can use a search engine such as Google and can operate a printer that is connected to computer. 84% of teachers responded they use power point in presenting lesson.

FINDINGS:

01. 100% Of teachers' stated that, there are enough computers in school, connected with internet, school is wifi free and they have projectors in schools, ICT will not make the lesson difficult and ICT will not make difficult in preparing lesson, using ICT makes lesson more fun and they can boot the computer and use computer to keep records and use Microsoft Word to type questions and other documents.
02. 97% of teachers agreed that, using ICT makes them not difficult to control the class and also

say using ICT makes lesson more interesting and improves presentation of materials.

03. 94% of teachers stated that, they have enough printers and using ICT in teaching is enjoyable and makes lesson more diverse.
04. 90% of teachers agreed that, they use computer to teach students, can browse internet for material to teach, have e-mail address, can use a search engine such as Google and can operate a printer that is connected to computer and also admitted that they do not lack confidence in using ICT.
05. 86% of teachers accepted using ICT will not make lesson difficult.
06. 84% of teachers stated that, there are photocopiers and multimedia facilities available for teaching in school, they do not lack expertise with ICT, have insufficient knowledge of appropriate software and how to use ICT equipment and also do not lack the knowledge in using ICT in teaching and learning process.
07. 76% of teachers agreed that they will access ICT 0-5 hours per week.
08. 63% of teachers admitted using ICT will not reduce pupils' motivation.



09. 56% of teachers say using ICT will not impair pupils' learning.

SUGGESTION AND CONCLUSION:

It is shown in this study that all the respondents were selected from one single private English medium school and also indicates that proprietors of this school are really putting up effort in providing ICT equipment in their school. To sustain the technology competency among teachers' following suggestion are recommended.

01. Teachers from primary to secondary school level should be trained on the use of ICT facilities through regular seminars and computer literacy workshops to keep them abreast of computer and ICT based instruction.

02. Government should revisit the curriculum at secondary schools level with a view to incorporating the use of computer and ICT assisted instruction in the teaching and learning process.

03. It is recommended that: employers of teachers and teachers themselves should take advantage of the several on-going in-service training on ICT by participating with enthusiasm and partnering with organizers to expand the tenure of such training or workshops.

04. Teachers themselves should try to update with ICT knowledge and skills by using self study software's and hardware's.

Thus successful integration of technology and to make teachers more relevant in 21st century requires teachers with right competencies, values attitudes towards ICT and their roles need to be redefined,

REFERENCES:

- [1] Abdul-Salaam, A. O. (2012) Assessment of Secondary School Teachers' use of information and communication technology (ICT) IN Oyo metropolis of Oyo state. *Human Resource Management Academic Research Society*, 787.
- [2] Guma, A. Faruque, A.H. & Khushi, M. (2013) The role of ICT to make teaching – learning effective in higher institutions of learning in Uganda. *International Journal of innovative research in science, Engineering and technology*, 2, 8, pp. 4061-4073.
- [3] Khalid, A. B. (2008) Barrier to the successful integration of ICT in teaching and learning environment: A Review of the Literature. *Eurasia Journal of Mathematics, Science and Technology Education*, 5, 3, pp. 235-245.
- [4] International Society for Technology in Education (2008). International Society for



Technology in Education policy brief—
Technology and student achievement— The
indelible link. Retrieved from
[http://www.iste.org/content/navigation
menu/advocacy/policy/policy.htm](http://www.iste.org/content/navigation/menu/advocacy/policy/policy.htm).

[5] Lan, P., & Young, S. (1996)
International Technology Transfer Examined at
Technology Component Level: A Case Study
in China. *Technovation*, 16, 6, pp. 277-286.

[6] Parry, S.R. (1996) The Quest for
Competence. *Training Magazine*, pp.48-
56.

[7] Senge, J. (2000) *Schools that learn*.
Double Day Publishing Group, New York.

[8] Shihkuan, H. (2010) The Relationship
between teacher's technology integration
ability and usage. *Educational Computing
Research*, 43, 3, pp. 309-325.