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The Uses of Information and Communication Technologies to Strengthen Girls Education in Govt. Girls Secondary Schools of Rural Areas of Sindh

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Abstract*: The usage of ICTs has become essential component of the teaching methodology in the field of Education. ICT can equip the female students of the area with global information and they can meet the challenges of 21st century. The purpose behind the survey is to analyze the current practices of emerging technologies. The title of the study is; "The Uses of Information and Communication Technologies to Strengthen Girls Education in Govt. Girls Secondary Schools of Rural Areas of Sindh". Objectives of the research were to evaluate the existing practices of emerging technologies in girls' secondary schools and to propose certain measures to strengthen girls' education through the use of emerging technologies.*
Survey approach was followed to complete this study. A test, questionnaire, interview protocol and focused group discussion were used as data collection instruments. Random sampling method was followed for study. Sample size was; fifteen head teachers, twenty nine teachers, and nine hundred forty students and they were collected randomly from the population of government girls' secondary schools.

Keywords— Emerging technologies, girls' education, secondary school, teaching and learning environment

1. INTRODCTION

Digital technology is now being generally used to bring novelty and modernism to every field because world is moving so fast and progressing in the field of technology rapidly and the development of any nation depends upon the advancements made in the field of technology as it is the only way to provide a significant change in various fields (DePasquale, McNamara, & Murphy, 2003).

Tutkun, O. (2011) stated that digital technologies has made great advancement than 10 years before and flourished every field wherever applied. Educational technologies incorporate new and latest tools to cope up the education related issues by getting information through integration of technologies. (Moore, J. 2005). Keeping in view the previous record it is worth motioning that integration of technologies was deprived off as it was the need of time. Students' learning is promoted with the integration of technologies because technologies causes learners more motivated and engaged in learning and the learners are retaining much information (Coffey, G. 2012). A high quality and continuing feedback is provided by technologies to learners and students in teaching learning process (Bulut, O., & Delen, E. 2011). Williams, M. D. (2003) shared that technologies enhances ones leadership skills acquisition , professional performance, participation in academia and also in social/personal development. Miller, S. (2011) illustrated that for the purpose of adaptive learning and evaluative experiences technological tools could be designed by the students.

McKinnon, D. H. (2000) confirmed that in school curricular areas like mathematics, reading, science, and social studies digital technologies could be integrated to enhance hands on learning opportunities. Lin, W., & Yang, S. (2011) acknowledged that technological tools are those digital devices which are being used in academia for the sake of advancements in learning and maximize learning ratio in order to develop collaborative learning environment and integration of technology into education could go ahead with a constructive approach on learning and motivation of students. Bulut, O., & Delen, E. (2011) confirmed that through integration of technologies into education learning could be spread out and transmitted for constructive building of education rather than to continue the concept of traditional teaching methods and completely relying upon teacher and the text books. In the era of globalization it is very crucial to enhance efficiency and efficacy of learning organizations to get better and make advancements in very basic level of education to meet the challenges of 21st century (Jorge, C. M. H., Gutiérrez, E. R., García, E.G., Jorge M. C. A., & Díaz, M. B. 2003). Integration of technologies could bring

significant impact to develop student-centered learning environment to expose students potential and capabilities (Hussain, A. J., Morgan, S., & Al-Jumeily, D. (2011, December). Technology should be implemented as an instrument which could explore learning capabilities of students (Lin, W., & Yang, S. 2011). Learning capabilities of slow learner students and children with special needs could be enhanced and learner participation ratio could also be increased with the help of technologies. These technological instruments could provide ease educational process and could introduce new ways of learning and teaching in an effective way (Macho, S. 2005).

Keser, H., Uzunboylu, H., & Ozdamli, F. (2012) has acknowledged that digital technologies are closely associated with advancements in technological devices for the purpose of innovation and modernism. According to Benson, V. A. (2011) teachers shouldn't be the only responsible component on which students could be dependent but with the help of technologies students could interact with their peers throughout world wide and can can learn from each other by interacting with each other rather than to be dependent upon traditional learning environment.

Christen, A. (2009) investigated that study shows there are too many advantages of technologies into classroom instruction. Kozma (2005) realized that digital technologies are now the integral part of learning for faculty members as well as for students. Furthermore it is believed that for the purpose of reorganizing and redesigning of learning environment technology could be very helpful for developing a conducive learning environment in which higher order thinking skills could be promoted Kurt, (2010).
Webb, M. &. (2004) investigated that those societies are considered as information rich societies which are transmitting and managing information throughout world and are dominant in the world and in this way students collaboration could also be increased (Baytak, A., Tarman, B., & Ayas, C. 2011).
Learning could be made highly effective with collaborative activities. In collaborative learning, students collectively work over projects and learn from each other through peer tutoring (Keser, Huseyin, & Ozdamli, 2011).
Liu, T. C. (2003) investigated that an information-rich society could be developed by the integration of technologies and it can play a crucial role to make constructive education system. Furthermore the purpose of Information and communication technologies is to strengthen and to promote self sustainable learners (Gachago et al., 2013; Veletsianos, 2010). According to Khan, S. H. (2012), the main purpose of education is to prepare students for a prosperous future. Educational objectives and goals could be achieved with the help of technologies. Economic and socio-cultural development is possible only in information-rich society where education is regarded as a key source of development Kenney, L. (2011). Integration of technology in education could give more meaningful results when they are incorporated in educational policies and the nations have made them developed by incorporating it in education sector (De Pasquale, R., McNamara, E., & Murphy, K. 2003). Learning and understanding of learners depends upon web based knowledge and information (Williams, 2003). Public networks like face book could also be a good platform for dissemination of learning if used positively and that network could also give a meaningful result for civilization of teachers, students, community and society (Meisalo and Vasisenahoet, 2010). Problem solving approach and critical thinking skills could be developed by use of technologies in order to make projects and keep students busy in projects (Açıkalın, M. 2009). Furthermore it is emphasized that novelty creates a supportive and conducive environment, student-centered universal learning environment makes revolutionized changes in education scenarios, particularly in teaching methods (Herron, J. 2010). Oliver, R. (2002) analyzed that according to needs, availability and accessibility teachers and students must use information technology as it is a powerful tool to deepen students commitments to form a wealthy society of information and to promote new practices and paradigms of education that educators should play their role in assistance and encouragement of learners as they could learn independently from a broader perspective.

1.1 OBJECTIVES OF THE STUDY:

Objectives of the study were

1. To evaluate the existing practices of emerging technologies in girls secondary schools.
2. To propose certain measures to strengthen girls education through the use of emerging technologies

1.2 HYPOTHESIS:

1. H1: Use of information & communication technologies promotes girls' education.
2. H2: Use of information & communication technologies strengthens girls' education

2. METHODOLOGY:

2.1 Research Design and population

It was a descriptive study. Selected population was consisted upon of; all of the students of secondary grades, all of the secondary school teachers, all of the head teachers of secondary schools. Random sampling method was followed for this research. Number of schools was fifteen (15). Fifteen head teachers of girls' secondary schools. twenty nine secondary school teachers of girls' secondary school teachers

and nine hundred forty students of secondary classes from girls' secondary schools were the sample size

3. DATA ANALYSIS:

4. 3.1 Table 1 Students' knowledge about ICT

Author made data sheet on SPSS software and analyzed data. Data was analyzed through using relevant statistical tests and formulas. Author developed themes from open ended questions.

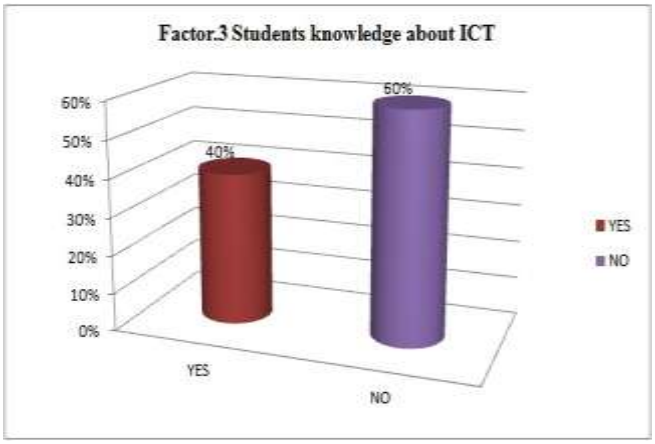


Table 1 Students' knowledge about ICT

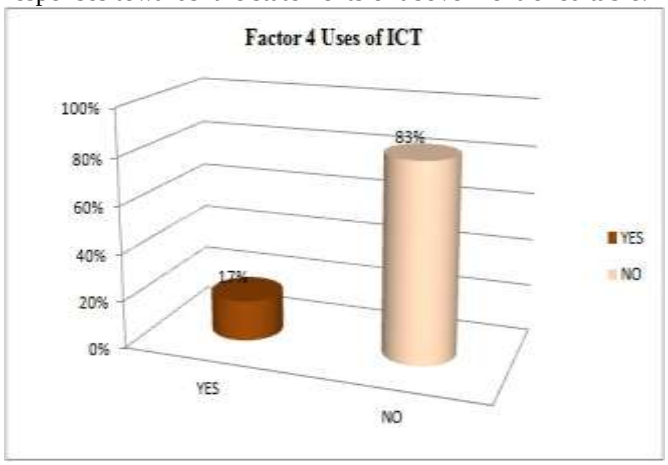
Item	Replies Formula	Yes	No	Total	Mean
Are you familiar towards computer?	Freq:	860.0	80.0	940.0	1.84
	Percent:	92.0	8.0	100.0	
Are you familiar about parts (CPU, Monitor, Mouse and Keyboard) of computer?	Freq:	654.0	286.0	940	1.40
	Percent:	70.0	30.0	100	
Are you availing personal computer/laptop at your home?	Freq:	405.0	535.0	940	1.14
	Percent:	43.0	57.0	100	
Are you able to operate computer?	Freq:	477.0	49.0	940	1.02
	Percent:	51.0	49.0	100	
Are you familiar with internet?	Freq:	404.0	43.0	940	1.14
	Percent:	43.0	57.0	100	
Do you have access of Internet?	Freq:	340.0	600.0	940	1.28
	Percent:	36.0	64.0	100	
Are you frequently using Smartphone/touch screen mobiles?	Freq:	593.0	347.0	940	1.26
	Percent:	63.0	37.0	100	
Are you interested to study subject computer?	Freq:	761.0	179.0	940	1.62
	Percent:	81.0	19.0	100	
Do you possess any basic knowledge about MS Office?	Freq:	130.0	810.0	940	1.72
	Percent:	14.0	86.0	100	
Are you using MS Word?	Freq:	149.0	791.0	940	1.68
	Percent:	16.0	84.0	100	
Are you able to create MS Word file?	Freq:	156.0	784.0	940	1.66
	Percent:	17.0	83.0	100	
Dare you able to save file on MS Word?	Freq:	177.0	763.0	940	1.62
	Percent:	19.0	81.0	100	
Are you able to use MS PowerPoint?	Freq:	87.0	853.0	940	1.74
	Percent:	9.0	91.0	100	
Are you able to make presentation at MS PowerPoint?	Freq:	91.0	848.0	940	1.80
	Percent:	10.0	90.0	100	
Over all	Freq:	5284.0	6968.0	12,252	1.64
	Percent:	40.0	60.0	100	

access of girls' students towards computer. This table shows that 60% of the selected population didn't possess basic knowledge, application/practices and skills of computer, whereas 40% of the selected population has a little knowledge, practices, proficiency and expertise of computer. A larger part of selected population 60% didn't possess basic expertise of computer. Mean score of 1.64 represented inclination towards negative side.

3.2 Table 2 Basic practices of Computer

Item	Responses Formula	Yes	No	Total	Mean
Are you familiar with MS Excel?	Ƒ	174.0	761.0	940.0	1.62
	%	19.0	81.0	100.0	
Did Computer teacher availing computer facility for teaching in class?	Ƒ	214.0	726.0	940.0	1.54
	%	23.0	77.0	100.0	
Computer teacher uses Multimedia projector for teaching in class?	Ƒ	72.0	863.0	940.0	1.84
	%	8.0	92.0	100.0	
Over all	Ƒ	460.0	2350.0	2810.0	1.66
	%	17.0	83.0	100.0	

Above data depicts responses of the population towards uses of ICT. The data shows that 83% of the population didn't have any practices upon ICT, whereas only 17% of the selected population uses ICT. On the whole, a great majority of 83% of the selected population adopted negative responses towards the statements of above mentioned table.



This table shows MCQs type items to check students appropriate and in depth practices upon basic applications of computer. There were included 07 MCQs type items in the test. Keeping in view the results of MCQS type test it here mentioned that greater part of population selected wrong options. The results of above table shows that a greater no of students haven't any practices upon basic applications of computer and most of the students are unable even to operate computer.

3.3 Table 3 Applications of ICT

Statements	Options	Responses Frequency	Percentage
_command should be selected to save a new document.	New	213.0	23%
	Save	181.0	19%
	Open	476.0	51%
	Save as	70.0	7%
	Total	940.0	100%
____command is used to open existing document of MS Word?	New	213.0	23%
	Save	181.0	19%
	Open	476.0	51%
	Save as	70.0	7%
	Total	940.0	100%

__Command is used for adding more slides in presentation?	Add new slides	472.0	50%
	Create new presentation	205.0	22%
	To print	201.0	21%
	To save	62.0	7%
	Total	940.0	100%
__is main function of MS Excel?	To write application	233.0	25%
	To make presentation	197.0	21%
	To make budgeting, calculations etc documents	428.0	46%
	To make video file	82.0	9%
	Total	940.0	100%
_is full form of MS?	Most secure	127.0	14%
	Most slow	190.0	20%
	Microsoft	557.0	59%
	Most sensitive	66.0	7%
	Total	940.0	100%
Home work is given in__by Computer teacher	Hand written	285.0	30%
	Soft copy	154.0	16%
	Hard copy	177.0	19%
	Both soft & hard	324.0	35%
	Total	940.0	100%
Learning is assessed through _____ by computer teacher.	Test	225.0	24%
	Interview	137.0	15%
	Discussion	207.0	22%
	Computer skill	371.0	39%
	Total	940.0	100%

5. RECOMMENDATION:

Government should make sure that all schools are equipped with digital technologies like internet and multimedia projector facility. Furthermore technical trainings for head teachers and teachers must be arranged and organized on priority basis. Concerned stakeholders should ensure ICT facilities in girls' secondary schools. A framework for teachers' competencies should be developed in order to strengthen girls' education. A proper mechanism should be designed for integration and implementation of ICT in schools. It is the core responsibility of Provincial government to design a clear policy to provide IT infrastructure, IT teachers and IT technical staff to all the schools particularly in rural and under privileged areas

6. CONCLUSION AND DISCUSSION:

In the light of findings it is here cleared that a greater no of selected population is familiar with computer but are not familiar with different parts and functions of computers like CPU, monitor and keyboard. Research has discovered that a greater part of selected population is not using computer or unable to use computer. The situation found alarming that most of head teachers and teachers are unable to turn on and off the computer and they didn't have personal computers and laptops at their homes. It was exposed that a greater no of population don't have basic knowledge of computer and internet where as some of the respondents are familiar with computer and internet. It was concluded that access of internet is not available to the secondary schools whereas very limited students have internet access. It was revealed that a greater no of students are keeping keen interest in learning and using computer but they are unable to use computer because of unavailability of computer and lack of knowledge and practices they cannot use computers. It was found a greater no of students were unaware about basic applications of MS office, MS Word, MS excel, and MS power point whist a very few no of students were found familiar with very basic applications of computer. It was signified that a half of the selected students are using save as command to save a new document. It was found that most of the students have in appropriate knowledge of MS word. It was declared that majority of the respondent's selected correct option while less than half of the respondents selected incorrect option. It was found that most of computer teachers are not using computer for teaching in the classroom, whereas a very few no of computer teachers are using computers while teaching in the classrooms. It was signified that most of the teachers are unable to use multimedia projectors in the classrooms because of unavailability of multimedia projectors. It was declared that computer teachers are not focusing upon practical applications of computer they are just teaching theory of computer. It was cleared that computer teachers are not assigning homework properly and they are not using proper techniques and methodology for teaching computer. It that majority of the computer teachers are not assessing the computer skills of students, while less than half of the computer teachers are focusing on computer skills of students. It is concluded that computer skills of students are

not being focused properly but teachers are focusing upon theoretical knowledge of computer.

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