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# **INTERNATIONAL JOURNAL OF INNOVATION IN TEACHING & LEARNING (IJITL)**

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## **SIMULATED PHYSICS CLASS MANAGEMENT: DOES IT PREDICT STUDENT'S ACADEMIC ACHIEVEMENT?**

**<sup>1</sup>Muhammad Riaz, Ed. D, <sup>2</sup>Sajida Naureen, Ph. D, <sup>3</sup>Elsa-Sofia Morote, Ed. D**

### **Abstract**

*In this paper, we examined how simulated physics class management predicted the percentage of students who achieved a grade point average of B or better as reported by teachers in secondary school physics classes. We conducted this study with the eighty-two secondary school physics teachers who were members of the American Modeling Teachers Association (AMTA), and used physics educational technology (Ph. T) simulations in their physics classes from 2013 to 2014 in New York schools. We used the linear regression analysis to determine the relationship between simulated secondary school physics class management and student academic achievement of grade point average (GPA) of B or better. Classroom management was significantly related to the percentage of students who achieved a grade point average of B or better,  $F(7.166) = 12.50$ ,  $p < .001$ , indicating that class management accounts for 12.5 percent of the variance of the percentage of students who achieved a grade point average of B or better. To improve their students' academic achievement, teachers should focus on the use of simulations to manage secondary school physics classes.*

**Keywords:** Simulations, Physics Class management, Student achievement

### **1. Introduction**

This study offered a close examination of how simulated physics class management predicted the percentage of students achieving a grade point average of B or better as reported by teachers in secondary school physics classes. Physics learning was a national priority of the USA because its future economic prosperity was concomitant with student success in science, technology, engineering and mathematics (Miller, Michalski, & Stevens (2012). The U.S. Department of Education (1987) stated that the number of students graduating from the United States colleges and universities whose major subjects were the sciences had declined from 1970-71 to 1984-85. This decline indicated a scientific illiterate and a loss of economic competitiveness in the United States. The director of the National Science Foundation, Ernest Bloch, anticipated in his speech at Carleton College (July 13, 1988) that the nation depended upon undergraduate education to prepare the small number of students who would become research scientists and engineers and many students who would have to play role effectively in an increasingly

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technological world. The college age population was shrinking. We must persuade more students to study science and especially physics.

Knapp (1997) urged investigators to examine the practices intervening between reform initiatives and realistic practice in physics classrooms. How could the physics class become a place where students were encouraged to find answers to their questions related to physical phenomena and draw their conclusions. Carpenter (2009) commented that the physics classroom was not a well-used resource in teaching and learning instead of being the engine of conceptual understanding of physics. This trend led to rote learning and a majority of students did not have deep understanding of physics phenomena. Mazur (2014) argued that a classroom was a place where students accomplished their learning within the class time. Class time was a valuable asset for future knowledge and skills, but how often did we stop to think about it and how teachers and students used it? He posed three questions: Should already printed material in the students' textbook and electronic media transmit information-based activities of physics classroom? Did students really learn during class, or did they simply write everything teachers said, hoping somehow to understand the material later? Are large lectures stimulating passiveness, sleep inducing or both during the physics classroom teaching?

The main concern for physics educators and policymakers was that students had lost interest in physics as a major subject (Osborne, Simon, & Collins, 2003). Perkins, Beale, Pollock, and Wieman (2011) asked three questions for physics educators and policy makers: (a) what should students learn?(b) What were they learning? (c) How could teachers change teaching to improve students' conceptual understanding? Wieman and Perkins (2005) mentioned that physics educators and policymakers needed to ask themselves how they were educating all students in science especially in physics class? After getting 16 years of physics education, physics graduate students came into the laboratory inexperienced about the experimental work of physics. On the other hand, having conducted research for two to four years in physics laboratories, they worked as experienced physicists. Physics teachers should use computer simulations because they create images in students' brains about complex scientific phenomenon and provide an interactive, engaging and visual environment that promotes and supports conceptual understandings (Wieman, 2008).

The objectives of this study were to: (1)promote the interactive learning in physics classroom (2) change of Physics classroom environment, (3)provide opportunities to

evaluate conceptual understanding of secondary school physics students, (4) contribute knowledge about computer simulation and (5) changes systematic instructions in physics teaching. This study was limited to secondary school physics teachers who were members of the American Modeling Teachers Association (AMTA) and used physics educational technology (Ph.ET) simulations in their physics classes from 2013 to 2014 in New York schools.

## **2. Literature Review**

Many students thought and said, "Physics is difficult" (Ornek, 2008, p.30). Driver, Guesne, and Tiberghien, (1985); Goldberg and Nidderer, (1991) stated that educators had been working to explore students' difficulties on physical concepts since the early 1990s). Redish (1994) studied what were the reasons that students thought physics was a difficult subject. He found that physics as a subject required students to apply a number of understanding approaches: First, they need to understand text material; second, they need to understand algebra and geometry concepts, for instance, tables of numbers, graphs, equations, diagrams, and charts. Thus, Students' poor understanding of text material, algebra and geometry made learning physics difficult for them.

To change instruction in the physics class, Brown (2006) suggested computer simulation models that physics teachers would be able to access remotely in and out of their physics classrooms. Computer simulations were a computer-generated reality of concrete objects, for example, an atomic structure. Aldrich (2004) stated that computer simulations showed pictures in 3-dimensional multimedia arrangements. For a better learning of physics, why do not physics teachers integrate computer simulation in the physics classroom instructions?

Adegoke and Chukwunye (2013); Sethi (2005); Steinberg (2000); Stieff and Wilensky (2003); Zacharia (2003) found that simulations enhanced student achievement. On the other hand, Cummings, Marx, Thornton, and Kuhl, (1999); Kulik, (2002); Robertson (2003) found no significant variances in students' academic achievements using simulations in physics class teaching. These studies indicated contradiction between simulations and student achievement in the classroom. Adegoke and Chukwunye (2013) conducted experimental research in secondary school physics classes. For the treatment, they divided students into three groups: (a) computer- simulated experiment only; (b) computer simulated experiments and hand on the experiment, and (c) hand on experiment only. They found that students achieved best among the three groups who used both the



computer simulated experiments and hand on experiment. Students in the hand-on the experiment group only achieved poorly in the physics for the practical test and the physics achievement test. They concluded that computer simulated experiments enhanced student achievement in physics for the practical test. These results were similar to the findings of Steinberg (2000), Stieff and Wilenskey (2003), Zacharia (2003), and Sethi (2005). Bayrak (2008) also concluded that the students involved in hand on experimental groups who had the instruction through the computer simulations were more effective than did the students who attended traditional instruction in the physics classroom. Tambade (2013) agreed with Bayrak (2008) that the integration of computer simulations in the classroom activities was useful, realistic and helpful for applying principles of physics into practices. However, Cummings, Marx, Thornton, and Kuhl (1999), Kulik (2002), and Robertson (2003) found no significant impact of computer simulation on students' academic achievement when they used the computer simulations in the physics classroom teaching. In addition, Steinberg (2000) used simulations on air resistance to paper and pencil activities in an introductory university physics tutorial. The findings showed that students on a common examination question did not show any significant difference in their academic achievement. Kelly, Bradley and Gratch (2008) found similar results with comparative simulations in equipment based laboratory practices. Twelve students participated in the laboratory experiment. Six used the simulations and the remaining six used the laboratory equipment. The data used to make the comparisons were graded on pre and post laboratory reports. The findings showed that the achievement on these reports were not markedly different.

Other studies showed that simulations were beneficial to students' academic achievement if teachers used them properly and effectively. Computer simulations created images in students' brains of complex scientific phenomena and provided an interactive, engaging and visual environment. These deeper conceptual understandings enabled the students to form connections and relationships between ideas and concepts and improved their performance in real life work experiences (Weiman, 2005).

Teachers delivered lectures in the physics classroom using textbook contents and boring exercises. Weiman, (2005) argued that transporting students' thinking from novice to expert, teachers should use computerized simulations that was a logical approach teaching physics. In that approach, students understood the real world by computer simulation interaction in a virtual world (Sahin, 2006).

Michael (2001) found that computer simulations based experimental teaching, was not effective on creative activity of students than lecture-based teaching. Michael conducted an experiment in which he found no differences in product creativity between the computers simulated group and the hand on experiment group. He selected seventh-grade students and divided them into an experimental group and a controlled group. The experimental group used Gryphon Bricks in which Michael created a virtual environment that allowed students to work Lego-type bricks. The controlled group used classic Lego bricks. He used the Creative Product Semantic Scale to evaluate product creativity. He found that there were no differences between the two groups concerning product creativity, novelty, or practicality.

Roberts and Blakeslee (1996) studied computer simulations in a lower secondary school science classroom. They focused on hands-on scientific instructions. They studied a variable in conjunction with varying academic instructional techniques. The subjects of the study were eight students of diverse competence. In the study, fifty percent of the experiment time was in the science classroom when the teacher was present in the classroom. The remaining fifty percent time of the study was away from the classroom without the presence of the teacher. Roberts and Blakeslee reported three findings of computer simulations: (1) when teachers used a pedagogical style based on student needs versus student learning gains, computer simulations were effective for conceptual understanding. (2) Students learned more efficiently when teachers directly taught students to build basic science knowledge and engaged them in activities. (3) Students improved their learning when teachers varied performance style between direct instruction and student exploration. Consequently, computer simulation understanding was only one of a number of important variables in science education.

Adams (2010) found that how students used simulations to build a mental framework of physics concepts. She interviewed hundreds of individual student in which the students draw what they thought as they interacted using simulations. The investigation showed that the unseen elements in simulations and the use of analogy both helped students' construction of their understanding of physics concepts.

AERA Panel on Research and Teacher Education (2005) reviewed research of student simulations from 1980s and 1990s that included classroom management. Two studies incorporated classroom management. In the first study, Strang, Landrum, and Lynch (1989) used computerized simulations to find student achievement when teachers

taught spelling of English language. The subjects of the study were Sixty-one of secondary school English class students. The findings of the study showed that students improved encouragement, feedback, and prompts. In the second, study Gorell and Downing (1989) conducted an experimental study. They determined whether computer simulations were supportive for students to analyze classroom behaviors for solving problems. The results showed that the simulation group students improved classroom behaviors for solving problems.

Brush and Saye (2000) pointed out the problems of student-centered activities in the classroom. They conducted the study in a high school classroom in which students used simulations and worked together to complete a social studies project. They studied problems that students faced in completing the project and the problems that teacher faced in helping students, and strategies to support student-centered activities. They suggested that factors, which affected the student achievement activities were; student orientation to the unit problem, student collaboration and student accountability mechanisms.

Evertson and Weinstein (2006) stated classroom management as “the actions teachers take to create an environment that supports and facilitates both academic and social-emotional learning” (p. 4). They suggested that teachers should focus on the three areas of action for classroom management: (a) actions that are taken when students arrive in the classroom, (b) actions that are taken to initiate interactions among students and instruction among teachers and students, and (c) actions taken to predict reactions to misbehavior of students in classroom. Evertson (2006) reported effective teachers prepared reliable, creative and instructional responses to emergent problems in the classroom.

Taylor (2009) pointed out that classroom management was one of the greatest concerns of teachers and administrators because it affects the classroom instruction, which in turn affects students’ achievement. Quality classroom instruction required classroom management skills. He suggested that teachers and administrators should focus on simulated classroom management skills.

Huppert, Lomask, and Lazarowitz, (2002) found that computer-assisted learning, such as computerized simulations are helpful in the problem-solving process which was a complex activity. Simulations use instructional device, which require a highly structured method to understand the scientific phenomena. They conducted a study on the Growth Curve of Microorganisms based on a computer simulation program. The purpose of their

study was to examine the computer simulations' effect on students' academic achievement and on their mastery of science learning skills in relation to their cognitive stages. They selected 10<sup>th</sup> grade biology students to use problem-solving skills and then divided them into a control group and experimental group. The findings of the study indicated that the students in the experimental group achieved significantly better academic achievement than the students who were in the control group. The study proved that the higher the cognitive operational stage, the higher students' achievement was. In the control group, students in the concrete, transition and operational stages did not differ. In addition, girls achieved equally with boys in the experimental group. Students' academic achievement showed the potential effect of the computer simulation program on the cognitive skills.

Davies and Graff (2005) found that a lot of computer simulations use did not lead to significantly higher achieving passing grades. Kuh, Cruce, Shoup, Kinzie & Gonyea (2008) found that students success was because of student academic achievement, engagement in educational activities, satisfaction working with teachers and their classmate, gaining of desired knowledge, skills and capabilities, determination and attainment of educational objectives, and performance in their practical life . Kuh, Cruce, Shoup, Kinzie, and Gonyea (2008) conducted an experiment and found the net effect of time on assignment and engagement during the first year of college students. They assessed two models: In the first Model, they assessed that first-year grade point average on students' background characteristics and their first-year experiences. They comprised variables: demographic characteristics of students, pre-college experiences of students, and their prior academic achievement as predictors of grade point average (GPA). They accounted for 29 percent improvement in first-year student grades. They found that prior academic achievement had the significant effects on first-year students GPA. After adding student engagement, they found that the model accounted 13 percent of the variance in first-year GPA. That 13 percent of the variance increased the total variance explained to 42 percent. Then, they added first-year experiences to the model. They found that the demographic characteristics, pre-college experiences, and prior academic achievement were statistically significant on the students' academic achievement. Similarly, Pascarella and Terenzini (2005) found that students' engagement was small but had a high influence on the first-year students. They concluded that a one-standard-deviation increase in student engagement increased a students' Grades point average by about 0.04 points during the first year of college.

Holmes (2012) argued that students having 3.5 or higher grade point average (GPA) are considered as a high achieving student and accepted in a majority of universities for admission and qualify for jobs in markets. Furthermore, students having a full-time job, a family, and a 3.2-grade point average could also be considered for admission in the majority of Universities. Although, Grade point average was the most generally considered characteristic of high achieving students and students who have low achieving were very driven, intelligent and had an excitement for learning. These students liked the prospect of getting novel skills and succeeded in universities environment that allowed them to partake in different experiences. Universities' advisors had to consider students based universities program details instead of high achieving in grade point average of students.

### **3. Research Methodology**

The target population consisted of physics teachers who were members of the Science Technology, Engineering and Mathematics Teachers of New York City (STEM teachers NYC) and American Modeling Teachers Association (AMTA). They used simulations in their physics classes for the 2013 and 2014 school years. We constructed the survey based on the literature review and used a 6-point Likert scale to evaluate the response on simulations in physics class management effect on student academic achievement. We asked the teachers to circle the number that related to their level of agreement: 1. strongly disagree, 2. disagree, 3. slightly disagree, 4. slightly agree, 5. agree, and 6. strongly agree. In the case of the dependent variables, teacher view of student academic performance, we used 1. Never, 2. Rarely, 3. Sometimes, 4. Often, 5. Most of the time, and 6. Always. For student academic achievement, the percent of students taught by each physics teacher that achieved a GPA of B or better was used. We provided the opportunity to all physics teachers of the (STEM teachers NYC) and AMTA to participate in this study. We also obtained permission from the chairperson of (STEM teachers NYC) to distribute the survey instrument to physics teachers through the email and Google survey. All respondents were anonymous.

Eighty-two physics teachers completed the survey about instructional practices in the physics class and returned the completed survey on Google survey form. Out of eighty-two survey forms, we selected fifty-two for this study. A panel of five physics Teachers established content validity. We calculated reliability for each scale using a Cronbach Alpha Analysis of internal consistency based on participants' responses. Table 1

presents the items that retained in each scale after an analysis of internal consistency. We deleted the item 21 from the classroom management scale and item 58, 60, 63, and 64 from the teachers' views of student academic achievement scale.

**Table 1: Survey Dimensions – Reliability Coefficients**

Survey Dimensions	Survey Item Number	Number of Items	Raw Score	Alpha
Simulations in Physics class	1, 2, 3, 4, 5, 6, 7	7	7-42	.941
Classroom Management	15, 16, 17, 18, 19, 20	6	6-36	.709
Use of Simulations	8, 9, 10, 11, 12, 13, 14	7	7-42	.892
Teachers' views of students' performance	59, 61, 62	3	3-18	.668

#### 4.

#### 4. Data Analysis and Interpretation

Teachers used the following types of simulations in physics class during 2013 and 2014: physics Educational Technology (PhET), interactive physics, applets, video loops of phenomena, flash simulations (some online, some homemade), visual quantum mechanics and a number of Physics PhET and others, poets, physical analog and computer. Electronic workbench, PhET simulations PhET, Vpython other java apps PhET, and student-generated simulations (VPython) were also used. The table 2 presents use of simulations. Only 7.4 percent teachers reported that they had no use of simulations in physics class.

**Table 2: Use of Simulation in Physics Class**

Simulation	Use of Simulations	No of Teachers	%
1	Before Hands-on experiments	5	9.3
2	After Hands-on experiments	8	14.8
3	Both before and after hands-on experiments	27	50.0
4	Instead of hands- on experiments	10	18.5
5	I do not use-simulations	4	7.4
<b>Total</b>		<b>54</b>	<b>100</b>

Table 3 shows the results for the regression analysis in which Class Management was an independent variable and percentage of students achieving a grade point average of B or better was the dependent variable.

**Table 3: Regression Model: Percentage of Students who Achieved a Grade Point Average (GPA) of B or better**

Model	R	R	Adjusted	Std.	Change Statistics
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		Square	R Square	Error of the Estimate	R Square Change	F Change	df 1	df 2	Sig. F Change
1	.354 <sup>a</sup>	.125	.108	22.8019 %	.125	7.166	1	50	.010

a. Predictors: (Constant), Class Management

Using a linear regression analysis, we calculated the variance for use of simulations in physics class management to determine their relationship to the dependent variables of the percentage of students who achieved a grade point average of B or better. Classroom management was significantly related to the dependent variable of the percentage of students who achieved a grade point average of B or better,  $F(7.166)=12.50$ ,  $p<.001$ , indicating that class management accounts for 12.5 percent of the variance of the percentage of students achieving a grade point average of B or better.

### 5. Discussion and Conclusion

Physics Class management accounts for 12.5 percent of the variance of the percentage of students who achieved a grade point average of B or better in their physics classes. To improve the percent of students who achieved a grade point average of B or better, teachers should focus on class management. Taylor (2009) stated that classroom teaching affected student achievement more than other activities that did in the classroom; quality classroom teaching required quality classroom management skills. Gorrell and Downing (1989) found that computer simulations were best at helping students learn to analyze phenomena and solve problems. Kuh, Cruce, Shoup, Kinzie, and Gonyea (2008) suggested that students' success closely linked with students' academic achievement in educational focusing activities: attaining of preferred knowledge, learning skills and capabilities, achieving educational objectives and having post-college performance in real life. Sahin (2006) stated that computer simulations could be supportive tools for classroom instruction because students could interact and see a real world experience through them. Computer simulations might be incorporated in the Pre-service and in-service Teachers' training program because teachers could engage students in the practices associated with the task or practice through an underlying set of organized lessons. Simulations provide a unique tool that made learning more fun and more effective. Educators could integrate simulations into the curriculum with appropriate activities.

### 6. Recommendations

Future researchers should consider the following potential areas:



The first potential research area is what are the topic-specific questions that students formulate in working with the simulations, how do they address these questions, and how does that result in their understanding? By exploring these issues with a number of students, it will provide a greater understanding of topic specific learning and how better to teach physics, with or without the use of simulations.

Future researchers may:

- Consider replicating this study using different subjects, for instance, chemistry, biology and mathematics for measuring student academic achievement;
- Conduct experimental research with Science Technology, Engineering and, Mathematics Teachers of New York City (STEM teachers NYC), American Modeling Teachers Association (AMTA), American Association of Physics Teachers (AAPT) and American Physical Society (APS) physics teachers during summer workshops where teachers use simulations;
- Conduct research studies of teaching techniques for promoting productive classroom discussions and using simulations for conceptual understanding of scientific phenomena;
- Employ an action research process in which they could evaluate variables through classroom observations and interactions;
- Investigate how teachers can teach STEM through flight simulations;
- Instruct with simulations of real classrooms taught by simulator teachers.

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## IMPEDIMENTS FOR UNIVERSITY TEACHERS AND STUDENTS IN THE USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGY

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### Abstract

*This research was intended to discover the impediments for teachers and students in the usage of information communication technologies (ICT) in public and private sectors universities of Islamabad. Main objectives of the study were to identify the impediments in the usage of ICT in private and public sectors universities and to explore the teachers and students' demographic variation in their usage of ICT in the private and public sectors universities. Stratified random sample of 40 teachers and 60 students was collected from 2 public and 2 private universities of Islamabad. Results revealed that at present university teachers and students are facing several impediments in their usage of ICT in the teaching and learning process. Study also found that teachers having M. Phil qualification and students studying in PhD programmes are facing more impediments in their usage of ICT. Comparative analysis of ICT impediments in the private and public sector universities revealed that teachers and students of private sector universities are facing more impediments in their usage of ICT as compared with teachers & students of public sectors universities. Findings of the study would be useful for the management of private and public sector universities in order to remove the impediments in the usage of ICTs.*

**Keywords:** Impediments, Information and Communication Technology

### 1. Introduction

During last twenty five years man has achieved tremendous success in the field of Information and Communication Technology. The volume of information is growing rapidly and it is expected that in every five years, the volume of information is going to be doubled. ICT (information and communication technology) are diverse set of technological tools and resources, used to handle information and communication. It includes any communication application or device e.g. computer, internet, cellular phone, broadcasting technology (radio, TV) satellite system as well as the various service and application associated with them such as distance learning and video conferencing. ICTs have ability to accelerate, innovate, enrich and motivate students' skills. It also has ability to strengthen teaching because it increases flexibility in deliverance of education and enables students to obtain knowledge anywhere and anytime. It focuses on the students'

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perspective that how they learn and how they are taught. The process is driven by students not by teachers. This change would prepare students for long life as well as enhance the effective learning. It transfers content from content centred to competence based paradigm. The delivery mode of curricula has now shifted from teacher centred to student centred form of delivery (Kumpulainen, 2007).

Present era is the era of information explosion, information is transmitting too faster that even a literate person feels that he or she is illiterate and unable to cope up with such explosive information. Here, the question arises that how a person can cope up with it? The answer is information technology, which is coping with such explosive information. It consists of two words information and technology. The term *information* is directed to any communication or representation of knowledge such as facts, data or opinion in any medium or for including numerical, textual, graphic cartographic, narrative or audio-visual form. *Technology* is the practical form of scientific knowledge or the science of application of knowledge into practical mode. The emergence of this new global economy has serious implications for the nature and purpose of educational institutions. As the access to information continues to grow rapidly, schools cannot be contented with the limited knowledge to be transmitted in a fixed period of time. They have to become compatible to the ever expanding knowledge and also be equipped with the technology to deal with this knowledge. Information and communications technology (ICT) is often used as an extended synonym for information technology (IT), but is a more specific term that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, and manipulate information (Venkatesh, Morris & Davis, 2003).

Pelgrum (2001) stated that IT gained the position of term computer near the end of 1980s which signify a transformation of focus from computing technology to the ability to store and retain information. Educational field is influenced by ICTs which directly affect research, teaching and learning. ICTs have capability to enrich and accelerate the abilities and skills of the students. ICTs motivate the student to do by themselves i.e. they don't depend on the teachers which in turn motivates the students to be engaged in different learning activities. Furthermore, ICTs strengthen the teaching, learning process. In scientific world, where new inventions are invented day by day in this era, fundamental education is necessary for the learners to enable them to get and apply this information. In

traditional teaching more emphasis was laid on the content and for many decades course had been written in books only. Teachers have taught through presentation and lectures collected through learning and tutorial activities designed to rehearse the content.

ICT has removed communication barriers, it allows for the creation of digital tools like digital libraries where professionals, learners and teachers can take research material from anytime and anywhere. It simply removes geographical barriers. It improves quality of education, to give direction to teachers in their professions and help students to teach more effectively (Hennessy, 2010). But unfortunately there are many hurdles found in the use of ICT in private and public sector universities. These hurdles are as follows: Lack of competence and skills, lack of internet facilities, lack of computers facilities and lack of technical support.

Today, universities are focusing more on the curriculum that enhances students' performance and competency. At present ICTs are able to support all these needs and there are many examples of performance and competency based curriculum that make intellectual use of these affordable technologies. Information communication technology can help both the teacher and students in teaching learning processes. Through this, ICT improves the quality of education. According to Haliso (2004) the flexibility of time and place is calculated by the integration of information and communication technology in the teaching learning environment which brings to accelerate the communication and receipt of information. Such possibilities suggest change in the teaching learning processes and in communication models giving a new path which is favourable to both learner and cooperative learning. In educational setting, ICTs act like a catalyst; as in chemistry role of catalyst is to speed up the reaction, same is the case with ICTs that can facilitate each learner and improve the quality of education. Information communication technology tool is very effective as it encourages the learners to get education by themselves and it also makes the learners independent from the concept of spoon feeding knowledge as happened in past traditional system of teaching learning process. Now students are using ICTs tool in their learning processes and more and more students are using ICT tools as cognitive tools (Jones, 2004).

Just as the technology is supporting and predominating what is being learned in universities and other learning institution so is too influencing change to the way learners are learning. It changes the learning pattern from content curriculum to competency curriculum and teacher centred form of teaching to student centred forms. Through

technology facilitated approaches, today's learning intends to boost up the students to take responsibility of their own learning. The advancement of technology and its extensive use in every field specifically in education field brought major transformation. Application of information communication technology provides many choices and options and these choices extend from when and where the learner can choose to learn. ICTs promote the flexibility of deliverance of education, so the learner gets the knowledge at any place (Ougunsola & Abuyade, 2005).

The introduction of ICTs into teaching learning process is very complex process due to certain problems which are known as impediments. These impediments can be defined as "Any environment that makes it difficult to make progress or to obtain objectives". Pelgrum (2001) classified impediments at teaching and institutional level; teaching level impediments include lack of confidence, time and resist to change whereas, institution level impediments include lack of access to recourses, lack of effective training in order to solve the technical problem. He further classified two types of impediments known as material and non-material, the material condition includes copies of software and insufficient numbers of computers. The non-material barrier contains teacher's insufficient ICTs skills and knowledge and insufficient teacher's time. Sometimes teacher have fear while using the equipments, fear mainly concern with damage of equipments. When a teacher has this sort of fear he directly loses his confidence level. For example; if a teacher uses computer in his lecture in the same time he has fear of the damage of hardware. This is the main cause that makes the teachers avoid from the ICTs. The above description is about barrier in the use of ICTs that how it causes the fear in teacher i.e. this barrier of ICT is the damage of equipments. Other thing is unavailability of technician on learning place. Sometimes institutes have the equipments but have some technical problems, and they remain unsolved as there are no proper technicians.

One of the factors which create impediments in the implementation of ICT in any institution is the network connection; if not reliable it can be disconnected at any moment. The cause for network being not connected could be the web server, cabling network problem, virus or hacker attacker. This de-motivates and frustrates both teacher and the students during the teaching learning process. In education system the effective use of ICT contain substantial funding, that is hard to manage in developing countries like Pakistan. As ICT supported software, hardware, audiovisual aids, internet and teaching aids demand



huge funds therefore, present study designed to gather information regarding the impediments for university teachers and students in the usage of ICTs.

### **1.1. Statement of Problem**

The problem of the study included to explore impediments for teachers and students in the usage of ICTs. It further aimed to investigate the role of students and teachers' demographic variations of gender and qualification in determining their perceived level of ICTs impediments in the private and public sectors universities of Islamabad.

### **1.2. Objectives of the Study**

1. To identify the impediments in the usage of ICT in private and public sectors universities of Islamabad.
2. To explore the students and teachers demographic variations of gender and qualification in determining their perceived level of ICT impediments in the context of private and public sectors universities of Islamabad.

### **1.3. Hypotheses**

1. Male university teachers are facing more impediments in their usage of ICTs as compared to female teachers.
2. Male university students are facing more impediments in their usage of ICTs as compared to female teachers.
3. Students doing PhD are facing more impediments while using ICTs as compared to students of Master and M. Phil level.
4. Teachers of private sector universities are facing more impediments in their usage of ICTs as compared to teachers of public sector universities.
5. Students of private sector universities are facing more impediments in their usage of ICTs as compared to students of public sector universities.

## **2. Methodology**

### **2.1 Sample**

Data were collected through stratified random sampling technique by dividing population in to two parts, public sector and private sector. A stratified random sample of 100 individuals was collected; among them 40 were faculty members and 60 were students. Data were collected from 4 universities (2public sector and 2 private sector) located at Islamabad.

## 2.2 Research Instruments

Two separate research questionnaires were developed i.e. one for teachers and the other for students. For the measurement of impediments in the usage of ICTs among public and private sector universities, teachers' questionnaire comprising of 24 items and four subscales were used namely Impediments faced by Teachers, Management Attitude, Lack of ICT Awareness and Lack of ICT Tools. For the measurement of impediments in the usage of ICTs among public and private sector universities, students' questionnaire comprising of 20 items and four subscales were used names of subscales are Impediments faced by students, Management Attitude, lack of ICT Tools and Lack of ICT Awareness.

## 2.3 Data Collection

Data were collected from 4 universities of Islamabad after taking permission from respective authorities. Teachers and students were contacted individually at their respective staff rooms and classrooms. Furthermore, they were requested to fill in the questionnaire according to their own point of view keeping in view the impediments in their usage of ICTs at campus.

## 3. Results

After collecting the data, whole data were transferred to computer with the help of software SPSS 16. Various statistical tests were used including Mean and Standard Deviations and analysis of Variance. Alpha Reliability coefficients were determined for both questionnaires.

**Table No. 1. Mean, Standard Deviation and t-test of University Teachers on Impediments in the usage of ICT Questionnaire in relation to Variable Gender (N=40)**

GENDER						
Subscale of ICT Impediments Questionnaire	Male University Teachers (N=17)		Female University Teachers (N=23)		t	sig
	M	SD	M	SD		
Difficulty faced by Teachers	24.6	4.2	24.4	3.5		
Management Attitude	13.2	4.1	12.1	3.2		
Lack of ICT Awareness	21.7	4.0	19.0	4.7		
Lack of ICT Tools	7.4	1.8	6.7	1.4		
Total	67.0	14.1	62.3	2.8	3.9	.02

Table 1 shows the Mean and Standard Deviation of private and public sector universities on impediments in the use of ICT for the variable Gender. Result indicates



that male university teachers are facing more impediments in their usage of ICTs as compared to female university teachers.

**Table No. 2. Mean, Standard Deviation and t-test of University Students on Impediments in the usage of ICT Questionnaire in relation to Variable Gender (N=40)**

Gender						
Subscale of ICT	Male			Female		
Impediments	University students			University Students		
Questionnaire	(N=25)			(N=35)		
Difficulty faced by student	M	SD		M	SD	
	14.6	3.0		14.4	3.6	
Management Attitude	12.8	2.9		12.2	3.5	
Lack of ICT Awareness	18.2	3.1		15.2	3.6	
Lack of ICT Tools	8.2	1.4		6.8	1.5	
Total	53.8	7.7		48.6	9.5	3.5 .01

The table 2 shows the Means and Standard Deviation of private and public sectors universities on questionnaire for the variable Gender. Result indicates that male university students are facing more impediments in their usage of ICTs as compared to female university students.

**Table No. 3. Mean, Standard Deviation and t-test of University Teachers on Impediments in the usage of ICT Questionnaire in relation to Variable Qualification (N=40)**

Subscale of ICT Impediments Questionnaire	Qualification					
	Master (N=12)		M.Phil (N=23)		PhD (N=5)	
Impediments faced by Teachers	M	SD	M	SD	M	SD
	22.5	2.9	26.1	3.7	22.2	2.2
Management Attitude	12.5	3.2	13.1	4.1	10.4	1.1
Lack of ICT Awareness	6.5	1.8	7.6	1.4	5.6	0.5
Lack of ICT Tools	18.7	2.9	21.1	5.1	18.8	4.7
Total	<b>60.3</b>	<b>7.0</b>	<b>68.0</b>	<b>1.1</b>	<b>57.0</b>	<b>4.3</b>

Table 3 shows Means and Standard Deviation of private and public sectors universities teachers' scores for the variable Qualification. Result indicates that teachers who are having M. Phil degrees are facing more impediments in the usage of ICT as compared to teachers having Master and PhD degrees.

**Table No. 4. Analysis of Variance of Students Scores on Impediments in the usage of ICT Questionnaire in relation to Variable Qualification (N=40)**

ANOVA		Df	Mean Square	F	Sig
<b>ICT</b>	Between groups	2	20.305	4.288	.021
	Within groups	37	87.595		
<b>Total</b>		<b>39</b>			

P<0.05\*\*

Table no 4 shows that there is a significant difference between response of teachers on impediments in the usage of ICT questionnaire the value of F = 4.288 and level of significance is .021.

**Table No. 5. Mean, Standard Deviation and t-test of University Students on Impediments in the usage of ICT Questionnaire in relation to Variable qualification (N=40)**

Subscale of ICT Impediments Questionnaire	Qualification					
	Master (N=34)		M. Phil (N=20)		PhD (N=6)	
Impediments faced by students	M	SD	M	SD	M	SD
Management Attitude	14.7	3.7	13.7	3.0	16.0	2.2
Lack of ICT Awareness	12.5	3.4	11.6	2.7	14.8	3.9
Lack of ICT Tools	16.4	3.8	15.3	2.9	16.3	3.8
Total	7.0	1.6	7.0	1.5	6.6	1.0
	<b>50.7</b>	<b>1.0</b>	<b>47.7</b>	<b>6.4</b>	<b>53.8</b>	<b>7.3</b>

Table 5 shows the qualification wise differences in the Means and Standard Deviation of private and public sectors universities students' scores. Result indicates that students doing PhD are facing more impediments in their usage of ICT as compared to Master and M. Phil students.

**Table No. 6. Analysis of Variance of Students' Scores on Impediments in the usage of ICT Questionnaire in relation to Variable Qualification (N=60)**

ANOVA		Df	Mean Square	F	Sig
<b>ICT</b>	Between groups	2	18.05	3.78	.034
	Within groups	58	82.57		
<b>Total</b>		<b>60</b>			

P<0.05\*\*

Table 6 shows that there is a significant difference between response of teachers on ICT at value of F = 3.78 and level of significance is .034.

**Table No. 7. Mean, Standard Deviation and t-test of University Teachers on Impediments in the usage of ICT Questionnaire in relation to Variable Sector (N=40)**

Subscale of ICT Impediments Questionnaire	Sector		t	sig
	Public (N=27)	Private (N=13)		

<b>Impediments faced by</b>	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>
<b>Teachers</b>	24.6	3.7	28.3	4.1
<b>Management attitude</b>	12.7	3.9	12.3	3.1
<b>ICT awareness</b>	7.1	1.7	6.9	1.4
<b>Lack of Availability of ICT Tools</b>	19.4	4.8	23.5	3.9
<b>Total</b>	<b>64.0</b>	<b>14.1</b>	<b>71.0</b>	<b>12.5</b>

The table 7 shows the Means and Standard Deviation of private and public sectors universities on impediments in the usage of ICT in relation to variable sector. Result indicates a significant difference in the scores of teachers who are serving in the private sector and public sector universities.

**Table No. 8. Mean, Standard Deviation and t-test of University Students on Impediments in the usage of ICT Questionnaire in relation to Variable Sector (N=40)**

		<b>Sector</b>			
<b>Subscale of ICT Impediments Questionnaire</b>		<b>Public (N=24)</b>	<b>Private (N=36)</b>	<b>t</b>	<b>p</b>
<b>Difficulty faced by students</b>	M 13.9	SD 3.8	M 17.8	SD 3.0	
<b>Management Attitude</b>	12.6	4.0	12.3	2.6	
<b>Lack of ICT Awareness</b>	16.0	4.4	16.0	2.9	
<b>Lack of ICT Tools</b>	7.2	1.7	6.8	1.3	
<b>Total</b>	<b>49.9</b>	<b>17.9</b>	<b>53.0</b>	<b>6.8</b>	<b>.9 .01</b>

The table 8 shows the Means, SD and t value of private and public sectors universities students' scores on impediments in the usage of ICT questionnaire. Result indicates that students of private sector universities are facing more impediments in the usage of ICT as compared to students of public sector universities. A significant difference also exists in the scores.

#### **4. Findings and Conclusions**

It is general observation that at higher education level in many countries, universities are facing serious challenges in leading to a number of developments in the process of integrating information and communication technologies into practice due to certain barriers. Watson (2002) supported the use of ICT and revealed that teachers do not use it properly. Furthermore, he was of the view that the use of ICT in education is not only a catalyst for change, but also change in teaching style, change in learning approaches and change in access to information. Yet, research indicates that teachers are

both threatened by change, and conversely not impressed by change that appears to focus on what the technology can do rather than learning. In this line of thinking, Jones (2002), declared that too many teachers still lack confidence in using ICT and this often made worse by lack of appropriate software, unreliable computers and internet connections and insufficient technical support when things go wrong. Findings of the present study are consistent with these results because in our cultural perspective in the context of IT at university level teachers are facing challenges due to management attitude, lack of ICT tools and lack of their own awareness

Nwankwoala (2015) carried out an investigation on lecturers' and students' use of ICTs in Nigerian university education as a panacea for national development. It was conducted in two states owned Universities of Rivers State. Random sampling technique was employed in the selection of 1154 subjects (i.e. 146 lecturers and 1008 students). A 40 item and 20 items self-structured test titled: "Information and communication Technology Usage Scale" (ICTUS) and National Development Inventory (NDI) validated by experts and with a reliability coefficient of 0.763 was used to analyse the data using t-test and regression analysis. Results revealed that the gender of university lecturers did not predict their usage of ICT while it also revealed that ICT usage contributed to national development. It was recommended that the National universities Commission (NUC) should commence an urgent review of the course content of university education, with a view at compulsorily incorporating ICT usage as a standard for all teaching, learning and examinations. As far as gender differences are concerned, according to findings to present study male university teachers and students are facing more difficulties when compared to female teachers and students. Female teachers and students have more awareness of ICTs and have access to ICTs tool more as compared to male teachers and students.

In Pakistan, universities are facing many challenges in the field of ICTs therefore present study planned, so impediments in the use of ICTs in public and private sectors universities of Islamabad can be explored. Results have shown that university teachers and university students are facing challenges in the usage of ICTs due to management attitude, due to lack of ICT tools and due to their own lack of awareness. Results also provided us information that students are facing difficulties in their usage of ICT more due to lack of ICT tools as compared to university teachers.

Followings are conclusions of the study:

1. Male university teachers and male university students are facing more impediments in their usages of ICTs as compared to female university teachers and students.
2. There is significant difference in the impediments' in the use of ICT among public and private university teachers and students. Teachers and students of private sector universities are facing more impediments in their usage of ICTs as compared to students of private sector universities.
3. Teachers having M. Phil degrees, perceived more impediments in their usage of ICTs as compared to teachers having PhD and Masters Degrees. M. Phil teachers faced more difficulties and lack of availability of ICTs tools. Subscales wise analysis revealed that teachers having Master degree are having low score on Lack of ICT Awareness.
4. Students doing PhD are facing more impediments in their usage of ICTs; they are facing more difficulties due to lack of ICTs tools.

#### **5. Recommendations**

It is a long way to run ICT in an under developing countries like ours however, higher education institutions may show serious concern for the promotion and improvement of ICT software and there should be proper training of teachers to educate them with the use of ICT and its importance in current technological world. Management may ensure the availability of ICT in universities up to the satisfaction level of teachers and students.

1. At present male university teachers and male university students are facing more impediments in their usages of ICTs as compared to female university teachers and students therefore; it is recommended that university management may conduct a baseline survey to get more precise information about impediments existed in the usage of ICTs at campus (specifically for male teachers and students, keeping in view their expectations as well).
2. At present teachers and students of private sector universities are facing more impediments in their usage of ICTs as compared to teachers and students of private sector universities; it is therefore, recommended that management of private sector universities may focus more on the removal of impediments through strengthening ICTs facilities.

3. Teachers having M. Phil degrees, perceived more impediments in their usage of ICTs as compared to teachers having PhD and Masters Degrees. M. Phil teachers faced more difficulties and lack of availability of ICTs tools. Subscales wise analysis revealed that teachers having Master degree are having low score on Lack of ICT Awareness. University management may arrange training for the professionals.
4. Students doing PhD are facing more impediments in their usage of ICTs; they are facing more difficulties and lack of ICTs tools. Management may focus to provide ICTs related tools to the PhD scholars.
5. Management may hold awareness seminars and training workshops to instruct teachers about the utilization of ICT effectively.
6. Management may ensure well equipped classrooms with latest tools so teachers can utilize ICTs in their teaching & learning process effectively.
7. Provision of skilled supporting staff would be helpful for students as well as for teachers in case of any trouble.
8. Technology based classes may be arranged, in which teachers & students could collaborate through internet devices.
9. More ICT-related courses for students may be offered and every ICT-related course may be practice-oriented. For the promotion of ICTs in the teaching learning process management may reward to the teachers who are integrating ICTs in their courses (i.e., through incentives)
10. ICT-related courses can be integrated in teaching practice courses. University management may provide at least one computer with Internet access and LCD projector to each class.
11. Management is recommended to ensure the proper utilization and maintenance of ICT tools regularly.

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## TEACHERS' PERCEPTION ABOUT FEMALE EDUCATION AND THEIR SOCIAL LIFE

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### Abstract

*Many researches elaborated that female education is such substantial for families and for girls themselves that some economists have stated that educating girls may be the single highest return investment available in the developing countries. The researchers revealed the fact that to educate the girls not only improve their personality and enhance their prestige within the society but also benefit the economic growth of the country. So it was very important to find out the reasons for the importance of female education and its impact on their lives. The proposed study was intended to explore the teachers' perception about the effects of female's education on their social life. The sample comprised of eight women; all of them were senior teachers and working at different positions for more than 4 years in the Education Department, International Islamic University Islamabad. The study was a phenomenological design of qualitative research. As a phenomenology study explores the personal experiences of the participants about any phenomenon. To collect the data a semi-structured interview was conducted to obtain the relevant information from the respondents. The interview guide was constructed keeping in view the main variables of the study i.e. female education, social life, health, economic status, home environment. The results of the study portrayed that education enables female to handle their home issues successfully and trains them in the way that they get confidence to find solution for different problems. Almost all participants were in favor that educated females are more courageous, confident and have potential to make their own decisions whether they are in job or not. They started to realize their rights and responsibilities. This study revealed some important themes such as education brings a dramatic change in the women's life as it lifts up their living standard not only within the family but also within the societies, enhancing their confidence, making them aware of their family's health, enhancing their self-esteem and self-efficacy, increasing their awareness about the behaviors of people, better upbringing of their children and boosting their management skills. It would not be wrong to say that through women education we can achieve sophistication of civilization, companionate behaviors and sociable living and transmit it to upcoming generations.*

**Key words:** Female education, Social life, family health, economic status, home environment, effects of job.

### 1. Introduction

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Diverse approaches related to the need of women empowerment for the development programs were appeared from the 1970s onwards, when it was realized that social development and innovations influence differently on both male and females. The Women in Development Approach (WID) framework put emphasis on the fact that women development has strong association with the concept of liberal feminism. It emphasizes the fact that involvement of females in development projects and plans improves the overall efficiency of any program (Ghazala & Awan, 2011).

Fatima (2010) stated in one of her research article that every civilized society gives special consideration to the educational sector especially for the social and economic progress of the women's lives. No one can refute the importance of both male and female's part in the progressive activities and it is essential for the human societies to utilize all human assets to get economic, social and cultural progress. Without paying the attention to female education no society could get any type of development or prosperity. Certainly no one can expect complete progress or prosperity without recognizing the role of women's potential (Fatima, 2010).

A lot of research work is seen related to the socio-economic impact of female education within the international development. Increase in women education highly correlate with the high level of progress in developing countries especially some effects are seen related to the economic developments. Efforts made for female education not only raise the income of women but also leads to GDP growth of the country. Some other effects of women education related to social development are seen in many researches. Women education offers many social benefits which are mostly related to the empowerment of women.

### **Factors Influencing Girl's Education**

Cammish (1997) stated in the educational research report about the factors affecting girl's education are delineated below.

#### **Physical Facilities**

The considerable spatial disparity is seen in many researches that are related to the provision of institutions even at primary level that shows difficulty in access of physical facilities more for women than the males. Disparity is observed related to the facilities for secondary education especially for girls in urban areas. Furthermore, the insufficiency in transportation facilities for women is observed which extremely correlated with the women education.

### **Socio-cultural Factors**

Numerous research results illustrate the fact that a major hindrance to get educational facilities for women, even when these are available, is the fundamental cultural bias in the favor of boys. There are many other socio-cultural factors which highly influence the participation of females in getting formal education such as family systems that compel their young girls for early marriages, incident of early pregnancies, heavier household and subsistence duties of girls and most importantly low respect and regard for female's needs, requirements and whole life. Above mentioned all factors profoundly affect the women education.

### **Wellbeing and Health related Factors**

The effects of malnutrition and poverty are observed on the school going children particularly more in girls as compared to boys. Especially, in most of Asian countries parents seem more concerned about the health of boys and their food habits as compared to girls whereas females have to do heavier domestic duties and more likely remain under nourished. And even if girls are provided educational facilities, this inequality badly affects their performance during school tasks. Furthermore, problems related to health directly correlate with pregnancy in young girls as well. Family planning and family size is also considered as a critical factor that affects the girls' health and their participation in education. It is obvious that health factors directly or indirectly affect the females for getting education, so these must be kept under consideration while planning for women's education.

### **Financial Factors**

The biasness of parents, as seemed in socio-cultural factor, related to female education is more obvious especially in rural areas when we discuss about the economic factors. Most of parents consider it wastage of resources and money when it is spent on girl's education especially in terms of the provision of uniform, fee, books and other educational necessities. They also consider that due to education of girls they loss their help for household tasks. Mostly the contribution of females is voluntary and they do not have practice of money handling which further decreases the status and power of parents and leads their vulnerability. They think that expenditure on girl's education is just wastage because their education could be beneficial for the family where the girl marries rather than their parent's home. For some people investment in girl's education could be fruitful for marrying them well and to attract good match for the girl. Whereas for some

people girls can get vocational education only, that is considered as weak and underrated everywhere but suitable for women.

### **Religious Factors**

Generally religions do not directly act as a factor that gets in the way of females education and often overcome by the fundamental socio-cultural biasness for the males. Sometimes it seems that religious practitioner and followers are male and make a powerful image in the favor of this gender. In Islamic and Christianity religions, this factor has a positive effect on female education but in Hinduism the religious significance of sons seems against the daughter's education because here girls are considered as lower creature as compared to man.

### **Legal Rights**

According to Ghazala & Awan, (2011), the factor 'legal' also does not act against the female education directly but there are many areas where reforms regarding this gender are required encouraging respect for the females. Although many countries have legislated for the equal rights for both genders "male and female" but still many efforts are mandatory to further promote compliance and strengthen the justice to ensure that this is actually happening in the societies. Especially in developing countries, it is often observed that the rights of women are still constrained as most of women are kept deprived from their inheritance of the property; some are engaged in early marriages without asking their consent.

### **Political / Administrative Factors**

Many policies are formed related to developments such as universal primary education, provision of equal opportunities for enjoying all educational resources and facilities, and omission of materials and texts illustrating the biasness against female gender etc. but most of such policies could not get the status of implementation status due to various reasons. Political and administrative staff has to carry these through but they seem helpless due to rigorous economic restrains. Specifically in under-developing countries poor administrative staff and allocation of unsatisfactory resources by the government are insufficient and ineffective. In places where such political and administrative dichotomy exists even elite women are deprived from their basic rights and their possible participation in the national progress may be lost.

### **Educational Factors**

This factor sometimes becomes a hindrance itself for the participation of females in getting education such as lack of proper educational facilities, resources and female trained teachers etc. Most of parents especially in rural areas are reluctant to send their girls to educational institutions particularly if schools are far away or there is co-educational system in the schools. Due to lacking of female teaching staff and poor accommodation facilities, parents feel reluctant to send their daughters for education. This situation becomes severe when secondary education starts as for secondary education parents insist for separate female schools, proper place with high security measures, less fee and more scholarships. Females must be offered vocational education to be equipped with skills. One other key issue that is a major obstruct for female education is the gender bias books and materials specifically beneficial only for males (Ghazala & Awan, 2011).

### **Necessity for Female Education**

Many researches illustrated through their results the importance of female education especially for the progress and prosperity of families, societies and even nations. Some of the benefits are discussed below showing the importance of female education:

#### **Increase in Incomes**

Herz (2011) stated in one of her article that results of the World Bank studies demonstrate the fact that a person's basic income can be increased till 5% to 10% if one more year beyond the primary education is obtained and it is considered as higher returns for girls than the boys. And one more year of secondary education can boot the income till 15% to 25%.

#### **Faster Economic Growth**

Education of males and females generally results in the increase of the economic growth of a family. Many studies supported that increase in secondary education of females cause a boost in per capita income growth of any country especially developing countries like Pakistan.

#### **Food Protection**

It is seemed in the results of International Food Policy Research Institute that educated women are better farmers and cultivators that indulge in better ways of farming and contributes 40% of decrease in malnutrition from 1970 to 1995 (Herz, 2011).

#### **Family-welfare**

For healthier and prosperous families it is crucial to get our girls to be educated. It is obvious that females have more responsibility for caring and rearing the children as compared to males in our societies. Many studies demonstrate the fact that educated

women manage the resources more efficiently as compared to the men and more educated women are more likely to increase income that in turn benefits the whole family. Furthermore, the educated woman and her educated husband are more likely to have smaller family and try to spend more income on the health and education of their children that in turn causes the well-being of the whole family.

Many studies revealed that:

- Educated women especially who have at least secondary education are more likely to have small families with two or three kids. As the family income increases, the mortality rate decreases and it ensures the whole family health and well-being. Other than this all the children likely to attend the school.
- Many studies revealed that one more year education beyond the average for women decrease the infant mortality till 5% to 10%.
- The children of educated mothers attend the school more regularly and for longer time. It is revealed through many studies that mother's education is more important as compared to father's education especially for the children's schooling because educated mother can realize the importance of education for the complete development of her children.
- Girls having at least secondary education are more conscious about the risky situations and can avoid HIV/AIDS related problems because they can obtain more relevant information and take control of their lives.

The women who are educated are more likely to have smaller, healthier and educated families that in turn help in the increase of financial conditions and train children to face challenging situations and solve their problems efficiently (Gupta & Srivastava, 2012).

### **Female's own Well-being**

Educated females have power to convey their thoughts and ideas freely using convincing arguments. These women can get more financial opportunities; can be encouraged to participate in political activities and can bring betterment in the society. Providing the girls best opportunities to get education till higher secondary level enable them to bring positive changes in their lives such as do not get marry in early age, get equipped with new skills, assist their families, and avail better chances and opportunities from social and economic changing environments.

The fruits of the girl's education can be seen as it starts from primary education but enhanced flavor is obtained if they are given opportunities for secondary education. Many countries are striving for universal primary education, which is one of the key goals of millennium developmental goal with ensuring the gender equity. While providing equal opportunities of education for both males and females will help to achieve universal primary education and further offering secondary education especially to girls will help them to achieve economic stability, get confidence to handle managerial tasks and ensuring prosperity of their family. So the proposed study was very significant to recognize the fact that how educating the large number of girls will help in constructing enlightened society with prosperous generations. The present study was designed to understand the importance of education in the life of women and the effects of their jobs for the development of their social relations.

### **Statement of the Research**

Many research studies have illustrated the socio-economic impact of education on the female's life. A woman education and high level of socio-economic development is positively correlated especially in under developing countries. Impact of women education not only increases the economic status of their families but also improve the social and national progress respectively. Women education also offers many social benefits which are mostly related to the empowerment of women (Malhotra, 2004). The key purpose of the study was to comprehend the importance of female's education for their social life and the influence of their jobs on their social relationships specifically in Pakistani context. Furthermore, it was inspected that what are the major impact of being educated especially for female teachers on their social life and home environment. The proposed study was intended to explore the teacher's perception about the effects of female's education on their social life.

### **Research Questions**

Following were the main research questions of the study:-

1. What do female teachers of International Islamic University, Islamabad feel about the effects of education on their social life?
2. How do they see the effects of their job on their personal and social life?

### **2.Methodology**

#### **Research Design**

Design of this research was based on phenomenological design of qualitative research. A phenomenology study explores the personal experiences of the participants about any phenomenon. Hence the researcher tried to explore the impact of participants' formal education and their job on the development of their social relations and home environment.

### **Participants**

The participants of the proposed study were females working in various administrative and teaching posts at the International Islamic University, Islamabad. Main focal point of this study was to investigate how education brings changes in the female's life. These participants (females) were selected because they all were enjoying the same organizational culture and working environment, only their home and social background determined the effects of their education on their social life and relationships. The purposive sampling technique was used to select the participants for the study. These were eight female senior teachers working at different positions since more than four years in the Department of Education, International Islamic University Islamabad. Three participants were PhD degree holders and had done their post doctorate from foreign universities. Two of the participants were enrolled in PhD program. Two had done their M.S degree from the same university (IIUI) and one had done M.A. The age of the all females were within the range 30-55 and almost all belonged to middle and upper middle social class. Fathers of more of the participants were graduate and masters and worked in good organizations but most of mothers were not well educated and were just household women. All of participants were married except one. Three of them had children and four didn't have kids. Details are given below:-

1. Participant A: She was working as Assistant Professor and married but did not have any kid.
2. Participant B: She was working as Assistant Professor and married having 2 children.
3. Participant C: She was working as Assistant Professor and married having one child.
4. Participant D: She was working as Teaching and Research Associate and married but did not have any child.
5. Participant E: She was working as Teaching and Research Associate and married having one child.
6. Participant F: She was working as Teaching and Research Associate and married but did not have any child

7. Participant G: She was working as Program Coordinator and married but did not have any child.
8. Participant H: She was working as Lecturer and not married.

### **Research Instrument and Data Collection**

A semi structure interview was conducted to obtain data from the participants. It was based on 5 introductory questions concerning about the demographic information and 20 informal open ended questions related to the research problem, constructed by the researcher keeping in view the main variables of the proposed study i.e. Female education, Social life, health, economic status, home environment. The informal interview was conducted by the researcher at various times schedule given by the participants. Approximately 2 to 3 interviews were conducted in informal setting (in the teachers' offices) per a day, having all discussion or interview in very light mode and comfortable environment. All participants gave their responses in very pleasant and relaxed mode enjoying the questions related to their life experiences and their feelings.

### **3. Data Analysis**

The researcher personally visited the teachers and requested them to give their response for the interview questions. It was made sure that data will be kept confidential and will be used only for research purpose. It took almost an hour to take detailed responses of the teacher. Some probing questions were asked to obtain their in-depth views and clarifying vague comments. Qualitative data were analyzed using different steps, before proper coding and analysis it is necessary to transcribe interview data accurately so that meanings, feelings and ideas of participants can be reported truthfully. Interview data collected from teachers were analyzed through manual procedure by the researcher and different codes and themes were identified. Certain steps were followed to precede the qualitative data analysis. Firstly the initial coding was made by highlighting the meaningful text and memos were created. Secondly associations and relationships among the various initial coding were identified. Next some new concepts and ideas formed as they appeared and these concepts were grouped to create categories. Finally the themes were identified based on the concepts and categories.

### **4. Interpretation of the Data**

The system of formal education in any community is very important especially in life of women and for the well-being of the family and in turn development of the whole society. This study provided some evidence that education both in form of formal and



informal is the key factor for empowering the women in society creating a strong bond in the family which leads towards a prosperous society.

### **Theme 1: Impacts of Education on Social Relationship Development**

Many studies are come up with this conclusion that education has countless positive impacts on the social development of people especially for female's life. In this study many participants were in the favor of this fact as said by some of participants;

*"Educated people are better in social interaction thus developing their relations" (P2)*

*"Good impact on my relations because most of the time I take burden on my shoulders" (P5)*

*"Females learn a lot through education how to be socialized and how to move in the society."(P8)*

*"Through education we are able to mix up with others, we learn how to socialize and how to get adjusted in the society" (P6)*

But some of participants felt their education and job sometimes caused the intervention in the development of their social relations. As some families were not well educated and they were against the female's education and created problems for them, so that's why they stopped to meet them. Some of them were in the view that they could not find time to meet their close relatives frequently because of their busy schedule as stated;

*"We couldn't get much time to visit our relatives very often" (P7)*

*"If you are talking about the socialization with my friends and colleagues at job, yes education helps me a lot in developing and maintaining these relations. But if we link it with family socialization it causes some restrictions and has some negative impacts because most of my cousins were getting married after graduation and only one did master. My mother side relatives are not well educated even some of them were very against to my masters and PhD"(P3)*

*"I am very keen to have relationships with few people but not with everyone" (P1)*

*"I couldn't get much time to spend with my family"(P4)*

Almost all of the participants have very good relations with their mothers, and for them their mothers are very good in relations, managing different tasks and even understand every child's psychology while treating them instead of this fact that they are not well educated.

*"She is not a highly educated lady but she knows how to deal with kids even she knows that every child has a different psyche and she handles accordingly" (P5)*

*‘She is not a working woman but she is used to do all type of tasks which are usually done by men. Picking and dropping us from the colleges and schools, parties and friend’s homes. She is used to pay bills, doing grocery and from morning till night she is on duty.’(P4)*

Now the question is; what is the key with those ladies who are not well educated but respond like highly educated and well-mannered women, even considered as all round personalities. When asked to the participant, some said it may be their family values imparted from generations to generations, according to some it can be due to their personal characteristics or personality traits but some were in the opinion that it is the matter of both informal and formal education;

*“I think both education and their family values are the cause. It is because they have very strong family values and informal education which enriched them with such qualities” (P2)*

*“I don’t know about rest but it’s my personal thinking that maybe it is because of her early marriage. She is the favorite among all youngsters, old ones and even small kids like her a lot”(P4)*

*“In fact they are educated not formally but informally so we can’t say that they are not educated. I think that every person who has born in this world has some education. We have limitized the term education to schools, colleges and degrees but education has a broader perspective.”(P6)*

So it became obvious that for the social development of females it is very significant to educate them through providing quality education. Furthermore, family values and family culture are critical factors which enhance social development of the females, hence it would not be wrong to say that education must comprises of “*taleem-u-tarbiat*” instead of only awarding degrees.

## **Theme 2: Educated Women are more Conscious about the Health of their Family**

Herz (2011) explained in one of her articles that the International Food Policy Research Institute illustrated through its research work that educated females contributed very productively in farming practices that helped in decreasing malnutrition about 40% from 1970 to 1995 (Herz, 2011). In this study almost every participant showed their concern for the health of their families and for this they made their best efforts to keep their home clean, cook food by themselves and furthermore tried their best to create a

pleasant and comfortable home environment to keep their family healthier. As stated by participants;

*"I do care of my family and make them healthy in form of cleanliness of home, hygienic food, talking to their issues and resolving them"(P1)*

*"I am conscious about the health of my family. I always try to cook healthy food which my family members like most. And I think that is nutritious and healthy food."(P7)*

*"I avoid teasing others. Actually I am not much demanding. There is calm environment in our home. There are fewer issues"(P6)*

Education of women improves family wellbeing and their children's health because it is well thought-out that mothers who are well educated have been more concerned about the significance of hygiene and cleanliness of their family.

### **Theme 3: Effects of Job on the Home Environment**

In a web article the "Women, Work and Motherhood it was stated that most of females accounted that they feel high level of stress while managing their job and family. When it was asked how do they feel regarding their time management, most of mothers replied that they feel rushed (Women, Work and Motherhood, 2012). To some extent the picture is depicted in the same study. Most of participants feel job and home responsibilities are as double duty especially for the women in our society as said by some teachers;

*"I think in our society it is double duty for females which is very difficult to manage. It ultimately affects the female's health and even their whole life as their joys, their thinking, their pleasures and even their rest".(P1)*

*"Sometimes it does negative effect on my home environment. Last night I spent 3 hrs on the checking of thesis and assignments of my students. So I feel sometimes my kids and husband are neglected due to my busy schedule"(P2)*

*"I think it is my job which may have some negative impact on my relations development"(P2)*

*"I think job has some adverse effects on my health because I have to do household tasks and even sometimes I feel I couldn't give proper or enough time and attention to my daughter as my mother used to give me as she was a household lady".(P3)*

But this is not the whole scenario, for some participants to manage the home and job is not big issue and they feel that their job helps in creating positive home environment.

*"It is very smooth running and pleasant. Otherwise I was very lazy lady and due to my job I am very active now and learn to manage in different situations".(P7)*

*"I remain busy and can support to my family so I feel its influence is very good on home environment".(P5)*

These words are showing the importance of female job helping them in their personal grooming, enabling them to learn and managing different tasks within limited time. But in our society the women are supposed to do household tasks and it is considered their responsibility, so when they are doing full time job and have to take care of home, husband, children and other family members, then it causes over burden and stress in the life of women.

#### **Theme 4: Effects of Education on their Lives**

Many researchers concluded that efforts for increasing and improving the female's education and their literacy rate in turns improves the socio-economic status of females and causes the well-being of the whole families. There is no haziness about the significance of education in the life of woman which not only influences the well-being of that particular lady but its fruit is enjoyed by all family members and even the society(Fatima, 2010). All participants of this study feel proud on being educated and express countless returns of this ornament in their lives as expressed by participant;

*"Through education my behavior is molded, I have learnt a lot of manners, dealings with the people, and live in society through rules and regulations".(P8)*

*"I never thought about it that not having education, but if it would be, I think there would be some economic problems, some emotional issues and less socialization. And a limited thought as well because education broadens someone's vision and thought".(P6)*

*"Education gave me a great strength; it has broadened my views, a sense of how a life should be how the child should be brought up. I couldn't even think that I would be without education".(P3)*

*"Especially my anger is under control due to education. It has influenced my power of planning; managing the things and it has a strong impact on my behavior". (P2)*

*"Definitely, it helps in my grooming, knowledge and awareness. Secondly it develops me professionally and socially where ever I go I have a reputation and respect. It has an effect on my over all personality development". (P4)*

*“Education has influenced my behavior and attitudes. It makes me aware how to handle the different situations and how to manage the things in time. Even it makes me able how to communicate with others about different matters”. (P5)*

It is obvious that education has endless effects on the life of women and it should not be only for the sake of employment or economic purpose but for the whole personality grooming and complete development.

### **5. Conclusion and Discussion**

Education is the key to develop the whole individuality. No one can deny the importance and value of the education due to its wide spread effects not only for a single individual but for whole generations, societies and the nations. Education helps to widen the prospect of people experiences as providing them opportunities to directly interact with the realities of life. As Mishra (2005) stated in her work that if the mothers are well educated it is more likely that they will send their children to schools. Her work illustrates multiple benefits of education not only for themselves but also for their family and whole community. Education enables women to manage the work and home tasks more effectively and handle various critical situations positively. Throughout the world, education is considered as one of the key factors that help women to overcome all barriers facing in their life. Almost all participants are confident that educated females are more authorized and empowered. They can make their own decisions and can convince others with logics whether they are in job or not;

*“It is not essential for female to do always a job even if she is qualified but some years ago I was in view that the females who are not intended to do a job should not go for professional or high education but now I feel if you are not planning for job even then a female should get education because it is not only for the financial benefit but it gives many other benefits which are not possible otherwise without education”.(P3)*

Educated women are more renowned and practical national beings. They become aware of their rights and can analyze various things related to their life. The results of the study illustrated that education can bring some unique influences and effects in female's life such as:

- ascend their status in family and community
- escalating their self-assurance and self-efficacy
- become conscious about the health of their family

- boost their confidence and self esteem
- make them aware about the behavior of people
- Better upbringing of their children
- Enhancing their management skills

In nut a shell, it can be said that only with the educated females we can transmit empathetic behavior to succeeding generations, developing economic and socially stable beings and bringing the sophistication of civilizations in Pakistan. As only a quality education can endow females with a special power to express their feelings and ideas freely by convincing arguments and can get more opportunities; as being encouraged to participate in social and political activities and can bring betterment in the society. Providing the girls best opportunities to get education at least till higher secondary level could enable them to bring positive changes in their lives such as do not get marry in early age, get equipped with new skills, assist their families and avail better chances and opportunities from social and economic changing environments.

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## RELATIONSHIP BETWEEN REFLECTIVE PRACTICES OF TEACHER EDUCATORS AND THE CREATIVITY OF THE PROSPECTIVE TEACHERS

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### Abstract

*The main focus of the study was to find out the relationship of reflective practices and creativity of prospective teachers at university level. The objectives of the study were; to identify the types of reflective practice of teacher educators; to identify the frequency of reflective practice of teacher educators; to determine the creativity level of the prospective teachers; and to find out the relationship of reflective practices of teacher educators with creativity of prospective teachers. The study is survey by method and correlation by purpose. Two questionnaires were used for the purpose of data collection. One questionnaire was tailor made and the other was a custom made questionnaire. Each questionnaire consisted of 25 questions and was scored for the use of establishing the relationship between the two variables (i.e., reflective practice of teacher educators and creativity of the prospective teachers). The population of the study consisted of all the B.Ed. students in the six public sector universities of Khyber Pakhtunkhwa Province of Pakistan out of which a sample of 220 B.Ed. students was taken through proportionate random sampling technique for the collection of data. The findings of the study reveal that teacher educators carry out various reflective practices during their instruction with a variation in their frequencies. The study also shows a strong, positive and significant relationship between the reflective practices of teacher educators and creativity of prospective teachers. The teacher educators, therefore, might concentrate more on new and innovative forms of reflective practices enabling the prospective teachers to discharge their duties in future efficiently and effectively.*

### 1. Introduction

Teacher education is aimed at to improve learning of the learners in the schools and develop in them the ability to cope with daily life problems. This can be achieved by adopting effective approach from the spectrum of different approaches to the teaching practices, for example, instructional approach, pragmatic approach and exploratory approach. Teaching creatively is one of the core ability of teacher. In recent years, teacher education faces new areas of teaching creatively and professional development. Wideen, Grimmer and Andrews (2002) contends that professional development has to be made in

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three different perspectives; firstly, the knowledge transfer and skill development; secondly, the reflective practices; and thirdly, the socio-political-cultural change.

Teachers' creativity and productivity has direct bearing on learners' creativity and productivity. Teachers' productivity and creativity must be developed through different means like reflective practices during their training period (Chilvers, 2005). These practices engage participants of the teaching-learning process in a "cycle of thought and action based on professional experience" (Weil, 2004, p. 4). Reflective teaching practices enable individuals to learn through their wide-ranging experiences throughout their life in general, and in the profession in particular in order to improve themselves. According to Osterman & Kottkamp (1993, p.19):

Reflective practice is viewed as a means by which practitioners can develop a greater level of self-awareness about the nature and impact of their performance, an awareness that creates opportunities for professional growth and development.

Creativity is viewed in two perspectives; as historical new or something new in personal sense. In historical creativity the work is relatively rare whereas in personal creativity, the individual irrespective of the others' view and response to it considers the work new. Csikszentmihalyi (1996) has defined creativity in terms of rare individuals who have been judged by others, to have significantly creative, often domain-changing contributions, whereas Craft (2001) has focused on creativity in a general population, with respect to education.

The empowerment of individuals to survive in the novel and challenging situations of life can be achieved, if the teachers are capable enough to do so. Whatever has been done so far or has been planning to be done, the main focus is the effective learning of the individuals at the receiving end in the instructional programme (Woolfolk, 2004). The behaviour of teachers, their instructional methodology, their vision of educating new generation, their approach to teaching profession, their awareness of the instructional situation as well as knowledge of the individual differences of the learners mostly determine the effectiveness of the process of education (Phan, 2015).

The purpose can be served if the teacher education programmes focus on such techniques, approaches and methods that train the prospective teachers and even the in-service teachers accordingly. The practice of teacher educators persuades the prospective

teachers while they are teaching in schools. They do practice what they have received during their training programmes (Richards & Farrell, 2005).

Reflective practice is one such innovative approach to the art and science of instruction that has been in vogue since the mid of second half of the previous century in various applied fields. Individuals in the field of teaching acknowledged its effectiveness and hence adopted it at every level (Schon, 1987). The study identifies the reflective practices of teacher educators and their frequency. It also finds out the relationship between the reflective practices of teacher educators and the creativity of prospective teachers (Osterman & Kottkam, 1993).

There are a number of studies (Phan, 2015; Palmer et al, 2008; Ferede, & Gorfu, 2008; Ross, 2011; Donnelly, 2007) that highlight the effects of reflective teaching practices on the academic performance and teaching-learning process; however little has been done so far to probe into the linkage between reflective teaching practices and the creative thinking and creativity.

### **1.1. Statement of the Problem**

Teaching is a complex phenomenon which deals with the management of diverse situations and people with individual differences. So the development of creativity in the prospective teachers enables them to manipulate the situation in future and address adequately the diversified nature of human beings as learners at the school in the days to come. Reflective practice in teaching is an important aspect of instructional process and can be helpful in the development of creativity. The study identifies the reflective practices of teacher educators and their frequency. It also finds out the relationship between the reflective practices of teacher educators and the creativity of prospective teachers. So the problem to investigate was, to find out the relationship between reflective practices of teacher educators and creativity of prospective teachers.

### **1.2. Objectives of the Study**

The objectives of the study were to:

1. identify the types and frequency of reflective practices of teacher educators.
2. determine the creativity level of the prospective teachers.
3. find out the relationship between the reflective practices of teacher educators with creativity of prospective teachers.

### **1.3. Research Question**

The basic research question was “What is the relationship between the reflective practices of teacher educators and creativity of the prospective teachers?”

#### **1.4. Significance of the Study**

The study would be significant for many stake holders in following aspects;

1. It is significant for teachers as it allows to give more time to students to think and explore in their own way.
2. It is significant for parents to understand that there is always an alternative way of teaching kids at home.
3. The study would be significant for school administrators to make their institution a place of learning with happiness.
4. In order to make a classroom creative, a teacher too has to be creative, to some extent.

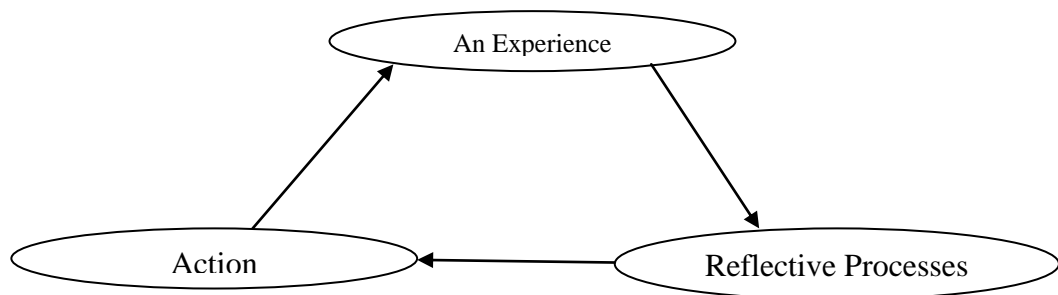
Creative teaching can only be a part of a classroom if the teacher presiding over is an ingenious individual. A teacher who is creative enough to be part of the innovative classroom can design exciting new lessons, motivate the right classroom environment required for students to showcase their innovative minds. So this study would be significant for teachers as they also turn into creative persons.

### **2. Review of Literature**

#### **2.1. Models of Reflective Practices**

Reflective practices have been developed and implemented by experts in different ways. They have devised various models for it. Here we will discuss some most important models of reflective practices described in the literature are presented below:-

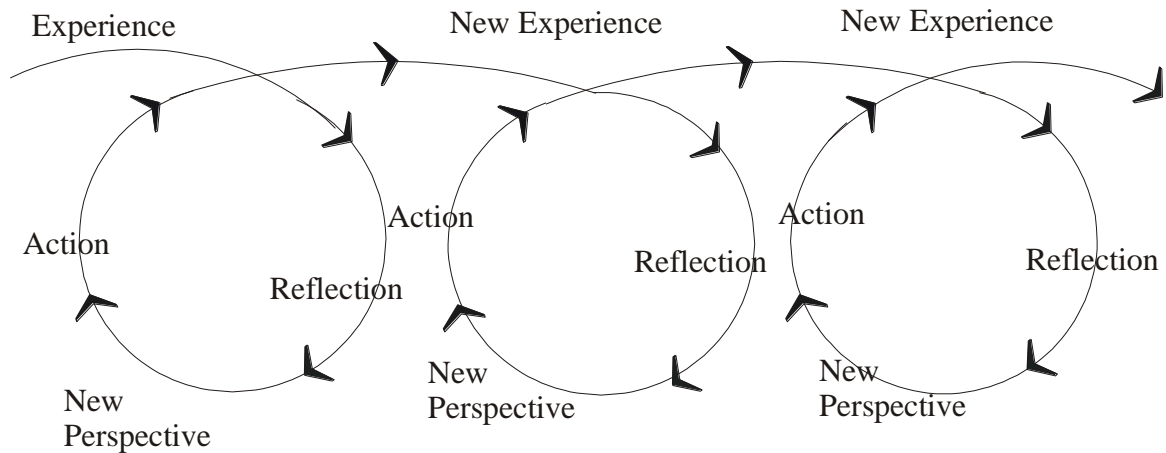
##### **2.1.1. Jasper’s ERA Cycle of Reflective Practice**



**FIG 2.1: The ERA cycle of Reflective Practice**

The reflective practice is primarily based on the past experiences of the practitioners “to understand and develop their practice” (Jasper, 2003, p. 2) as these experiences are the basic stuff for one’s further progress. Jasper (2003) presents the ERA Cycle of Reflective Practice (see figure 1), which consist of three basic components.

The process is not once for all, but continues unlimitedly as the first round of the process completes, which provides stuff (experience) for the next round and thus “the experience itself has been transformed, making it into a different experience” (Jasper, 2003, p.3) forming a spiral which can be seen in figure 2.2.



**FIG. 2.2: Reflective Spiral**

### **2.1.2. Johns' Model of Structured Reflection**

Johns (2006) attempted to make the reflective practices more easy and comprehensible for the practitioners, and put forward a framework for reflective practice in Nursing. His model of Structured Reflection appeared in the early part of the last decade of 20<sup>th</sup> century as it was “first constructed in 1991” (Johns, 2006, p. 42), which has gone “through many developments and presentations” (Jasper, 2003, p. 84) that continued till the last moment of the first decade of 21<sup>st</sup> century (Feiman & Beasley, 2007). In 1994, it was presented in a simple cue questions form dividing into five different sections that included description of the experience; reflection; influencing factors; could I have dealt with the situation better?; and learning.

The model of Structured Reflection is not a checklist but the cue questions are meant for suggestion (Hall, 1997), which provides a very simple and easy understanding for the new practitioners. It is “a framework for challenging ‘unexamined norms’ and ‘habitual’ practice; for ‘interpret[ing] the subjective experiences’, for ‘project[ing] the effects of nursing actions’, and for ‘becoming a certain sort of person” (Johns, 2006; Feiman, 2001) that can put into operation of his/her own past experience while performing new actions during their professional life.

### **2.1.3. An Overview of Available Literature**

The review of the available literature related to the study reveals that the concept of reflective practice was, although introduced by John Dewey on the onset of twentieth century, however, it has its roots in the works of ancient philosophers like Socrates, Plato and Aristotle (Zeichner, 1981). The study of literature shows that at all ages, reflective practice was used with different and specific nomenclature. Nonetheless, as an independent instructional strategy, reflective practice got attention among the academicians and practitioners of other applied fields in the last quarter of the previous century. Since then a number of research studies were carried out about the practice and its implications on various aspects of the academic performance in the various fields (Chilvers, 2005).

Reflective practice is an effective instructional strategy that is based on the practitioners' experiences. It provides for the utilization of known in a situation that is novel and unknown or abstract. It can be made during or after the activity or instruction as Schon states, but before the activity it would be more result oriented and productive as compared to the earlier ones (Bolton, 2010). The practitioners can use either of the modes of reflection such as contextual, dispositional or experiential, according to the situation.

For the benefit and ease of the practitioners, different models of reflective practice are available. The different forms and types of reflective practice can be helpful to the practitioner in order to practice reflective activities (Wideen, Grimmer & Andrews, 2002). They may include, active learning, action research, collaborative learning, team teaching, micro teaching, storytelling, unit review, course review, programme review, brainstorming, blogging, individual and group projects, critical incident analysis, clinical supervision, lesson report and many more (Bolton, 2010).

Reflective practice is an evidence-based inquiry that is meant for the attainment of aims and strives for outcomes through judgment and insight takes place in a cyclic process (Schon, 1996). It demands collaboration, cooperation, responsibility, wholeheartedness, open-mindedness and creative mediation from the practitioners (Zeichner, 1994). It provides thinking opportunity to the practitioners in a new situation, whenever arise (Adair, 2007; Schon, 1983).

Creativity is generated and flourished through various means, if desired so. It is ability, an attitude, a habit and a process of doing things in a different and innovative way (Harris 1998). It is looked upon in different manners, such as process, product, person, place, persuasion, and potential. It is intangible and can only be recognized by the

characteristics a person possesses, when s/he is creative. These include ability to solve problem, curiosity, humour, fluency, tolerance, flexibility, open-mindedness, imaginative, witty, positivity, adventurous, risk-taking, optimism and reflectivity (Craft, 2001).

### **3. Research Methodology**

Research method adopted in the study is briefly discussed below.

#### **3.1. Type of the Study**

The study was a survey by design and correlational by purpose.

#### **3.2. Research Instruments**

Two questionnaires were used for the purpose of data collection.

1. A tailor-made questionnaire was used for identifying the type of reflective teaching practices and their use by the teacher educators.
2. A custom made questionnaire was used for calculating the creativity quotient (CQ) of the prospective teachers. The questionnaire was a quiz adopted from ("QuizMoz", 2016). The publisher encourages using the quiz as the site states, "Go ahead and find out what you know about yourself and the world around you" ([www.quizmoz.com/quizzes/personality-Test/c/Creativity-Quotint-Test.asp](http://www.quizmoz.com/quizzes/personality-Test/c/Creativity-Quotint-Test.asp), para 1).

#### **3.3. Population of the Study**

Population of the study comprised of the prospective teachers enrolled in Bachelor of Education (B. Ed.) programme in the Departments/Institutes of Education in universities of Khyber Pakhtunkhwa Province of Pakistan. The total population of the study consisted of 512 prospective teachers in six universities of the Province. The list of universities and the students, enrolled there in Bachelor of Education programme, is given in Table 1.1.

**Table No. 1. Target Universities & number of their enrolled B.Ed. students**

<b>No.</b>	<b>Universities</b>	<b>No. of B.Ed. Students</b>
1	University of Peshawar	253
2	Gomal University, D.I. Khan	127
3	Hazara University, Mansehra	68
4	University of Malakand, Chakdara	24
5	University of Science & Technology, Bannu	15
6	Abdul Wali Khan University, Mardan	25
<b>Total</b>		<b>512</b>

#### **3.4. Sample of the Study**

The proportionate random sampling technique was used for the selection of sample size. The total sample size consisted of 220 (43%) prospective teachers of different universities of Khyber Pakhtunkhwa Province of Pakistan.

### **3.5. Scoring of the Research Instruments**

The instruments were scored by assigning each option a particular score ranging from 0-4 for identifying the relationship between the two variables.

### **3.6. Data Collection**

The data were collected through personal administration of questionnaires by the researcher in approachable areas, whereas postal correspondence was used for the collection of data from the distant areas of the province for variety of reasons such as security situation of the area, time and resources, etc.

### **3.7. Data Analysis**

The univariate data were analyzed by using percentages whereas bivariate data was analyzed by using Pearson Product-Moment Correlation Method.

## **4. Findings of the Study**

The findings of the study are divided in three parts, as present below:

### **4.1 Types and Frequency of Reflective Practice**

The findings concerning the frequency and types of reflective practice were as follows:

1. The 41.99% prospective teachers reported that learning activities are used by the teacher educators most often whereas 39.78% viewed that they carry out learning activities mostly during their instruction.
2. The 39.23% prospective teachers believe that the unit review is frequently made by their teachers while 28.18% think that teacher educators go for it mostly and 23.20% consider that the teacher educators do unit review sometime while 5.52% think that they rarely do it.
3. Following are the types of Reflective practices used by teacher educators as perceived by prospective teachers;
  - a) Review of courses
  - b) Story telling
  - c) Record Keeping of classroom activates by themselves and by students
  - d) Group assignment/Project
  - e) Completely monitor and guide the group-activities of the learners



given by teacher

- f) Allow to check their fellow work
- g) Start new topic with making questions
- h) End their discussion in a query for the learners
- i) Engage with critical friends/colleagues in the classroom activities, for the improvement of instructional procedures
- j) Mind mapping activity is often carried out by teacher educators
- k) Use of problem solving methods during their instruction
- l) Often acknowledge the mistakes before the students in the class that were committed during instruction
- m) Assign individual writing assignments to the learners
- n) Writing self-reports regarding different things what the learners thought interesting and mention worthy by the teacher educators
- o) Ask the students to present different topic before the class
- p) Encourage to ask critical question during their instruction by teacher educators
- q) Reinforce students' views and comments
- r) Conduct Collaborative Action Research
- s) Use of AV Aids and real examples

#### **4.2 Creativity**

The findings regarding creativity level were as follows:

1. The average creativity quotient for the students of University of Peshawar was 70.72. The average creativity level calculated for the students of Hazara University, Mansehra was 71.2
2. The average creativity level point for the students of University of Malakand was 73.57.
3. The average creativity quotient for the students of University of Science and Technology, Bannu was 80.00.
4. The average creativity quotient for the students of Gomal University, D. I. Khan was 64.58.
5. The average creativity level of the students at Abdul Wali Khan University, Mardan was 74.62.

6. The overall average of creativity quotient for the B.Ed. students at different universities was 70.08.

#### **4.3 Relationship between Reflective Practice and Creativity**

The findings about the relationship between reflective practice and creativity were as follows:

1. The relationship between reflective practice and creativity level is positive and significant at the University of Peshawar as the calculated  $r$  value (i.e. 0.40576131) is greater than that of table value of  $r$  (i.e. 0.205) at  $\alpha = 0.05$ .
2. The relationship between reflective practice of teacher educators and creativity of the prospective teacher at the Hazara University, Mansehra is positive and significant as the calculated value of  $r$  (i.e. 0.52399471) is greater than that of the table value of  $r$  (i.e. 0.3493) at  $\alpha = 0.05$ .
3. The calculated value of  $r$  is 0.85411183, which is greater than that of the table value of “ $r$ ” that is 0.7545 at  $\alpha = 0.05$  for University of Malakand, Chakdara, Lower Dir, so relationship is strong, positive and significant.
4. The relationship between reflective practice and creativity is positive, significant and strong as the calculated value of  $r = 0.97448058$  is greater than the tabulated value of  $r = 0.8783$  at 0.05 level of significance for the University of Science and Technology, Bannu.
5. At Gomal Univeristy, D. I. Khan, the relationship between the reflective practice and creativity level is positive and significant as the calculated value of  $r = 0.54403733$  is greater than its table value 0.2875 at the level significance 0.05.
6. The  $r = 0.84703433$  is greater than the table value 0.7067 at  $\alpha = 0.05$  for Abdul Wali Khan University, Mardan that show as positive, significant and strong relationship between reflective practice and creativity.
7. Over all the relationship between the reflective practice of teacher educator is positive, significant and strong as the calculated  $r$  is 0.53318639 that is greater than the table value of  $r = 0.1946$  at the probability level of 0.05.

#### **5. Discussion**

The discussion on the study was carried out according to the objectives of the study as under

##### **5.1. Types and Frequency**

It was found that there are different types of creative practices with different frequencies. Henriksen (2011) emphasized on variety of creative teaching techniques. Similarly David & Milgram, (2006) stated that it is difficult to make a list of creative techniques and its use as it depends upon the nature of subject, teacher's expertise, content and ability of learners (David & Milgram, 2006). It indicates that no matter what the technique used and how many times it was used, the focus may be on creativity of stakeholders

According to Cowley (2005), Creativity, as can be developed by different means, similarly has adversely affected by many factors. These factors include undue criticism, product bias, neglecting brainstorming, convergent practices, negative attitude, lack of motivational environment, problem hoarding, person's feelings about creativity, fear, lack of experience, lack of techniques, over-reliance on techniques and outsourcing change.

### **5.2. Creativity Level**

The second group of findings was related to the creativity of the prospective teachers. It was found that they have a good creativity level with an average more than 70. Pink (2005) stated that anything above 50 is considered as a good level of creativity. On the other hand Mishra, Koehler, & Henriksen (2011) stress that creativity level may be at least 70 to be a good creative person. In this research, the minimum level of the creativity was found to be 70. This means that most of the prospective teachers were creative, but there is very little room in our educational system that they express and excel their creativity.

### **5.3. Relationship between Reflective Practices and Creativity Level**

The third and the main objective of the research was related to find out the relationship between reflective practices and creativity level. A strong relationship was found in this regard. Root-Bernstein (2003) argued that there is a close relation between creativity and reflective practices. The same results were discussed by Mishra, Henriksen and Bolton (2010). They studied many creative teachers using different tools of research and concluded that teachers who were perceived as creative are those who also carried out different reflective practices.

## **6. Conclusions**

On the basis of research findings, the following conclusions were made:

1. The teacher educators realize and recognize the effectiveness of reflective practice and they do their level best to train and educate the individuals for the education of new

generation of the society. They generally use different forms of reflective practice during their instruction. The types/forms that they use include storytelling, unit review, brainstorming, mind mapping, critical enquiry, learning activities, group assignment, mentoring, students' presentations, referring daily life examples, course review, journal keeping, peer observations, engaging critical friends, problem solving, self-accounting, individual writing assignments, self-reports, writing account of life experiences, reinforcement, action research, collaborative action research, using audio-visual aids.

(Objective No. 1)

2. The frequency of different forms of reflective practice practiced by teacher educators was different. The teacher educators regularly use storytelling, unit review, brainstorming, mind mapping, critical enquiry for the intellectual development of their learners. They most often conduct learning activities, group assignment, supervising group work, students' presentations and referring daily life examples to make clear the concepts to their learners and ensure effective learning. (Objective No. 2)

3. Teacher educators go less frequently for course review, journal keeping as well as students' journal keeping during their instruction. They also do not work out the peer observations, engaging critical friends, problem solving, self-accounting to the level it need to be addressed. The procedures of individual writing assignments, self-reports, writing account of life experiences, reinforcement, limited action research, collaborative action research, using audio-visual aids are typically practiced by the teacher educators. (Objective No. 2)

4. The creativity quotient of the students at different universities individually as well as the overall creativity quotient shows high level of creativity. The average point of creativity quotient was higher than the mean score. (Objective No. 3)

5. The relationship between the reflective practice of teacher educators and the creativity of prospective teachers was highly significant, strong and positive. Both, the reflective practice and creativity have a direct relationship between themselves. (Objective No. 4)

### **7.Recommendations**

In the light of the research findings and conclusions, the following recommendations were made:

1. The teacher educators may concentrate on the new and more effective reflective practice during their instruction, so that their learners are trained in a better way for the discharge of their future responsibility of the nation building.
2. The evaluation procedures of the teacher education programmes may be made so innovative and dynamic that the teacher educators should not follow the stereotype methodology and materials during their instruction.
3. Teachers' reflective practice requires creativity on their part. In future, research studies may be carried out on the effects of teachers' creativity on their reflective practices during their instruction at various levels.
4. Individual differences matter a lot, particularly gender differences in instructional practices; therefore, research studies may be conducted on the basis of gender-based difference in reflective practice and effects on the creativity of their heterogeneous-gender learners. For instance; A study of the gender role in the effectiveness of reflective practices on the creativity of learners
5. Last but not the least; reflective practice journal may be introduced in the institutions of teacher education. And research studies may be carried out on the effectiveness of reflective practice journals.

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## CONCEPTUAL AWARENESS OF SECONDARY SCHOOL TEACHERS REGARDING PEACE EDUCATION: ANALYSIS

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### Abstract

*Peace education is a key process for creating peace and devastating conflict and violence. Therefore, peace education promotes the knowledge, skills, attitudes as well as values that pursue to convert individual's mindsets, attitudes as well as behaviours. So, peace education is a key instrument for developing a culture of peace and a plan which has been used a large number of nations to stop violent and fatal conflicts. The objectives of the study were: (i) to examine the conceptual awareness of secondary school teachers regarding knowledge component of peace education in Khyber Pakhtunkhwa, Pakistan.(ii) To examine the awareness of secondary school teachers regarding the skills and attitude of peace education in Khyber Pakhtunkhwa, Pakistan. All secondary school teachers of Khyber Pakhtunkhwa were the population of the study. According to the nature of the study the researcher selected 320 secondary teachers from different districts. A self-developed questionnaire was used as a research tool. All statements on the questionnaire were related to conceptual awareness of secondary school teachers regarding peace education. The validity and reliability of the research instrument were accurately confirmed. The data were analyzed through SPSS (version 20). The findings and conclusions of the study showed that most of male secondary school teachers were aware about the three components of peace education. Majority of female secondary school teachers were not aware about the components of peace education.*

**Key Words:** Peace Education, Knowledge, Attitude, Skills, Secondary Teachers

### 1. Introduction

The main effort of Peace education is that to end conflicts and encourage peace by providing an understanding regarding peace and develop an attitude for examining peace. According to Fountain, education is a key mechanism to boost knowledge regarding peace education,(Fountain, 1999). It has been delivered by numerous nations in their educational systems, programs as well as objectives. These reasons are the basic subjects of each and every peace education program to be formed contrarily contingent on their determinations, (Salomon, 2011). So, the contents of peace education are quite clear amongst specialists, regarding what should be incorporated in peace education, (Hakvoort, 2010). The United Nations organization was established in 1945, its main concern is to promote the concept

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of peace in all over the world to stop the conflicts and continue peace but people sustained to be suffering by huge scale. It is becoming the catastrophe for the United Nations to convey their mandate. Furthermore, 62 conflicts in Africa, 41 in Latin America, 31 in Asia, 19 in Europe as well as 15 in the Middle East, so 168 wars were fought in different parts of the world. Obviously, these wars-interrelated evidences as well as facts, individual's wants for a non violent creation could not be completely understood throughout the twentieth century. So, it was the catastrophe of the twentieth century, that an individual cross the threshold of this century with a newcomer of carrying the end of conflict, but this century finished as being the world's goriest one, with a demise peal of 110 million fatalities of conflict, (Henry, 2007). So as to clash the philosophy of violence that permeates our culture, the upcoming cohort justifies a drastically diverse education, one does not lionize conflict, but teaches for nonviolence, peacefulness and worldwide collaboration. It's a wide-ranging arena as well as can be problematic to explain. Basically, one can say that, it's authorizes beginners with the knowledge, skills, attitudes as well as values compulsory to finish battles, discrimination and encourage a philosophy of peace. It is the practice of gaining the values, knowledge as well as emerging the outlooks, abilities as well as performances to alive in congruence with self, others as well as with the likely situation, (Henry, 2007).

### **1.1. Statement of Problem**

It is a rigorous point, that the government of chaos as well as misunderstanding in the world is moving the youngsters' cleared concentrations. Youngsters certainly captivate the essence of viciousness in the situation and will quickly develop into the upcoming people of the perpetrator of clashes. So, it is necessity to encourage peace in the mind of children to rise as a crucial concern to be spoken. Therefore, it can be communicated in wide range, methods and ways at diverse stages, however the prevailing study has engrossed on proper way of education at Secondary school level in Khyber Pakhtunkhwa, Pakistan. The selection of secondary school level is centered on the datum is the rudimentary stage of youngsters and their educational career, so, it delivers a scenario for the improvement of peaceable outlooks as well as performances for the future of Pakistan. Finally, it delivers a large provision to cultivate a peaceable culture in al over the word as well as teacher is the central performer in stimulating peace and non violent principles amongst the scholars. So, it's essential to examine to what degree the secondary school teachers were conscious regarding peace education. The main effort of this preparation is

to search the “Conceptual Awareness of Secondary School Teachers regarding Peace Education: An Analysis”.

### **1.1 Objectives of the study**

1. To examine the conceptual awareness of secondary school teachers regarding knowledge of peace education Khyber Pakhtunkhwa, Pakistan.
2. To examine the awareness of secondary school teachers regarding skills and attitude of peace education in Khyber Pakhtunkhwa, Pakistan.

### **1.2 Research Questions**

- 1 What is the extent of conceptual awareness of secondary school teachers regarding knowledge of peace education in Khyber Pakhtunkhwa, Pakistan?
- 2 What is the extent of conceptual awareness of secondary school teachers regarding skills and attitude of peace education in Khyber Pakhtunkhwa, Pakistan?

## **2.Literature Review**

Peace is derived from the Italian word ‘Pax’, and its meaning is an agreement, discrepancy and treaty to finish the battle or else some clash and fight between two people, two countries and two aggressive set of peoples, (Khemananda, 1996). Oxford Learner’s Dictionary defined peace in such a way that,” It is a state in which there is no conflict or viciousness in a nation. Or the situation of presence tranquil and noiseless and the situations of existing in relationship with someone lacking of quarreling, it is called peace”. It is a kind of training which influences in the norms, values as well as attitudes of the students, it could convey regarding the encouraging situation for human being. A wide range of philosophies, descriptions and practices are mentioned in peace education works. Since both ‘peace’ and ‘education’ is concept lacking a little solid and complete importance, peace education is somewhat difficult to discover extensive treaty regarding, what it is in reality, (Haavelsurd, 2008). Yet, it is a program of many fields in nature as well as concealment of a diversity of viewpoints and methods concerning, particularly, to philosophy, attention, subjects, performs and even aims, (Bar-Tal, 2002).

In the early of the 1980s, the danger of atomic battle provoked, and teachers from all over the world caution of imminent destruction in forthcoming. Therefore, Reardon is peace scholar, who highlighted a new pattern of truthfulness as well as the totality along side with the dominant part of the ecosystem in the field of peace education, (Reardon, 1988). He discussed that the concealment principles of education should be precaution, unease as well as an obligation, and the basic perceptions of peace education should be

universal nationality and benevolent associations. According to Ian Harris a universal method to peace education is that it could relate to public education, schools and institution of higher education. So, the main elements of such training are supportive knowledge, self-governing community, decent understanding, as well as perilous philosophy, (Harris, 2008). Castro & Galace, (2010) discussed the following components of peace education.

### **2.1 Knowledge**

**Holistic Concept/Content Areas:** Peace is not only the non existence of straight or corporal violence, while it is the existence of circumstances of happiness, collaboration and the link of people with their natural domains.

**Conflict and Violence:** It is the usual portion of individual's societal life, however, they develop glitches of conflict contingent on the approaches of war determination recycled.

**Disarmament:** In this beginner can be presented with the objective of eliminating conflict as well as dropping worldwide armed militaries and weapons.

**Nonviolence:** In this beginner can be presented the logical as well as mystical foundations of fierceness and its effectiveness as a technique to outcome alteration. Furthermore, the circumstances of persons as well assets, who have encouraged nonaggression as a viewpoint and technique, can be studied.

**Conflict Resolution, Transformation and Prevention:** Scholars can study the current techniques of solving clashes peacefully as well as how it can be smeared into their day to day life. It can change the study how a war can be determined and changed into a condition that is further anticipated.

**Human Solidarity:** Therefore, numerous groups quandary composed opposing spiritual, social, native and country wide collections. Every person has mutual rudimentary requirements and aims to communal association in a dependent social or universal society. Pupils can stare at how to upsurge inter-religious, intercultural as well as inter-group faith, understanding, reverence as well as collaboration, in addition to dishearten type casting and bias.

**Development Based on Justice:** The students can be completely judgemental conscious of the certainties as well as disastrous significances of organisational strength. It requires comprehending that the growth is not financial tumour only, but also the unbiased distribution of its berries.

**Democratization:** Democratization is the main thing for students to comprehend as well as it delivers the situation inside which is the ultimate rights, wellbeing and requirements for people.

**Sustainable Development:** it very important for students to comprehend the reliant association between human being and the natural situation as well as realise the variations, which is essential to confirm the happiness of the world's environments, and it can carry on to meet upcoming as well as existing requirements. They must revive the understanding of our native inhabits, who have continuously appreciated environment.

## 2.2 Attitudes / Values

Some of the attitudes which are essential to be developed are:

**Self-respect:** It is an intellect of their personal values as well as a sagacity of arrogance in their personal specific societies, traditional and domestic training and an intellect of their personal supremacy as well as golly. It can assist them to subsidise in the direction of optimistic modification.

**Respect for Others:** It is the sagacity of the value as well as integral self-esteem of new individuals, containing those with communal, spiritual, traditional and domestic upbringings altered from their personal.

**Respect for Life/Nonviolence:** The esteeming of social life as well as negation to answer to the antagonist or else battle condition with furious, inclination for peaceful procedures, for example cooperative problem solving as well as further optimistic procedures as in contradiction of the practice of corporal strength and armaments.

**Gender Equality:** To give equivalent opportunities to women as well as men, and to be allowed from exploitation, mistreatment as well as viciousness.

**Compassion:** The understanding of problematic circumstances as well as misery of new people and performing with profound understanding and compassion in the direction of those, who are side-lined or omitted.

**Global Concern:** It is helpful for the entire society excelling or else working elsewhere for apprehension which they have for their country or native/cultural society.

**Ecological Concern:** It means to be compassionate for the normal situation, inclination for supportable incarnate as well as a humble existence.

**Cooperation:** The esteeming of accommodating developments as well as the opinion of functioning self-possessed in the direction of the recreation of mutual aims.

**Openness/Tolerance:** The openness is a procedure of development as well as modification in addition to enthusiasm to attitude and obtains other individual's thoughts, views as well as involvements with a dangerous but vulnerable awareness; concerning the ridiculous multiplicity of our biosphere's mystical civilizations, values as well as procedures of appearance.

**Justice:** It is performed with wisdom of justice in the direction of others, continuation the opinion of equivalence as well as refusal of each and every procedure of mistreatment and domination.

**Social Responsibility:** The inclination is an accomplishment to subsidise to the determining of a civilization categorised by integrity, peacefulness as well as happiness; the sagacity of accountability in the direction of contemporary as well as upcoming peoples.

**Positive Vision:** It is the imaging part of the upcoming; they desire with a sagacity of confidence as well as dogging, its understanding in techniques that they can.

### 2.3 Skills

Some of the skills that essential to be developed are:

**Reflection:** To use the meditative philosophy as well as thinking, it can excavate their sympathetic of themselves and their connectedness to others peoples who are living in this world.

**Critical Thinking and Analysis:** The skill to tactical matters with a vulnerable but serious awareness, perceptive how to investigation, enquiry, estimate and understand confirmation, the capability to distinguish and contest biases and unnecessary statements in addition to adjustment thoughts in the expression of confirmation as well as balanced influences.

**Decision-making:** The ability to examine difficulties, improve alternate clarifications, examine different resolutions allowing for compensations as well as shortcomings, and having reached at the desired conclusion, capacity to formulate a strategy for the employment of the result.

**Imagination:** The constructing and visualising innovative examples and different chosen techniques of existing as well as concerning.

**Communication:** Attending thoughtfully and with understanding, in addition to the capacity to direct philosophies as well as requirements obviously and in a non-violent way.

**Conflict Resolution:** The capacity to examine clashes in an objective as well as efficient approach and to propose a variety of peaceable clarifications. War determination assistances consist of suitable decisiveness, negotiation, vigorous attending as well as combined problem-solving. Conversation assistances are significant initial helps in battle determination.

**Empathy:** It is the capacity to understand the outlook of alternative individual or else group as well as to the atmosphere, what that individual and group sensation. It is ability that assistances in enlargement the beginners' personal viewpoints, particularly in the examination of reasonable and beneficial choices.

**Group Building:** To work obligingly with one another so as to attain shared objectives. Team work and group-building are assisted by joint confirmation and reassurance by the supporters. The hypothesis is that everybody has approximately to subsidize, each person is part of the clarification.

### **3. Methodology**

#### **3.1 Research Design**

The nature of the study was descriptive as it was concerned with the existing status of the subject under investigation. Due to limited time and the expended nature of the investigation the study was delimited to the Secondary Teachers of public sector in a District. All secondary school teachers of Khyber Pakhtunkhwa were the population of the study. According to the nature of the study the researcher selected 320 secondary teachers from different districts. A multiple choice questionnaire was developed and every statement was followed by three statements. All statements on the questionnaire were related to conceptual awareness of secondary school teachers regarding peace education. The respondents were given the option to choose the one that best validate the main statement in their opinion, exploring the conceptual awareness of respondents about peace education. The validity and reliability of the research tool was sufficiently ensured. The instrument was directed to the sample participants merely afterward full validity as well as confirmation checks.

#### **4. Data Analysis and Interpretation**

The data were analyzed through SPSS (version 20). The analyzed data were presented in the form of tables.



**Table 1: Showing the overall results of participants about peace education**

S. No	Variables	N	Yes (%)	No (%)
1	Knowledge	320	47.62	52.38
3	Skills	320	39.25	60.75
2	Attitudes/Values	320	55.43	44.57
<b>Overall Percentage</b>			<b>46.55</b>	<b>53.45</b>

Table 1 revealed that, 47.62% teachers were given their response in ‘yes’ towards knowledge, while 52.38% were given their response in ‘no’ towards knowledge. 39.25% teachers were given their response in ‘yes’ about skills while 60.75% were given their response in ‘no’ about skills. 55.43% teachers were given their response in ‘yes’ towards attitudes while 44.57% were given their response in ‘no’ about values. So, the total percentage interprets that 46.55% teachers were give positive response towards the main components of peace education while 53.45% of the teachers were given negative response towards main components of peace education. Thus, it decided that most of teachers were not conscious about the main components of peace education.

**Table 2: Presenting the mean values, std. Deviation as well as Std. Error of mean of the Components of Peace Education**

Components	N	Mean	Std. Deviation	Std. Error Mean
Knowledge	320	4.69	1.76	.078
Skills	320	3.23	1.65	.084
Attitudes/Values	320	4.75	1.79	.074

According to table 2, the mean value of knowledge is 4.69, skills are, 3.23 as well as the attitudes/values is 4.75. Thus, it decided that most of secondary school teachers were conscious about knowledge as well as attitudes compares with skills components of peace education.

**Table 3: Presenting the t test results on “knowledge” component of peace education in term of gender**

Gender	N	Mean	Std. Deviation	Std. Error Mean	t value	p value
Female	150	3.48	1.421	0.084		
Male	170	4.76	1.643	0.107	4.453	0.0001

Table 3 reflects that, the mean score of male secondary school teachers higher than female secondary school teachers towards its element ‘knowledge’. 4.453 is its t value which is significant at 0.05 level of significance. Thus, it’s decided that male secondary school teachers were aware if we compare with female secondary school teachers, towards its element “knowledge”.

**Table 4: Presenting the t test results on “Attitudes/Values” Component of Peace Education in term of Gender**

Gender	N	Mean	Std. Deviation	Std. Error Mean	t value	p value
Female	150	4.11	1.311	0.063		
Male	170	4.98	1.742	0.166	4.528	0.0001

Table 4 reflected that, the mean score of male secondary school teachers higher than female secondary school teachers towards its element ‘attitudes/values’. 4.528 is its t value which is significant at 0.05 level of significance. Thus, it’s decided that male secondary school teachers were aware if we compare with female secondary school teachers, towards its element “attitudes/values”.

**Table 5: Presenting the t test results on “Skills” Component of Peace Education in terms of Gender**

Gender	N	Mean	Std. Deviation	Std. Error Mean	t value	p value
Female	150	4.01	1.213	0.042		
Male	170	4.70	1.834	1.153	4.828	0.0001

Table 5 reflected that, the mean score of male secondary school teachers higher than female secondary school teachers towards its element ‘Skills’. 4.828 is its t value which is significant at 0.05 level of significance. Thus, it’s decided that male secondary school teachers were aware if we compare with female secondary school teachers, towards its element “Skills”.

## **5. Discussions, Conclusions and Recommendations**

### **5.1 Discussion**

The key concern of this investigation was towards the conceptual awareness of secondary school teachers about peace education. The researcher has measured the three basic components of peace education. The result of the investigation exposed that a large number of the teachers were not aware about the element of peace education. Whereas, it’s shown that male secondary school teachers have better consciousness if compared with female secondary school teachers. The findings of the current study were a sharp contrast with the findings of the research carried out by Makoni (2015), Mishra (2011) and Bratlett (2009), who conducted an investigation regarding peace education practices in pre-service teachers training programs, and concluded that teachers have positive attitudes about the peace education practices.

## 5.2 Conclusion

The main conclusions of the study have demonstrated that the most of male secondary school teachers were aware about the three components of peace education, while the most of female secondary school teachers were not aware about the components of peace education. This study also demonstrated that the majority of the respondents were not aware to peace education. The mean score of male secondary school teachers on the components of peace education was higher than female secondary school teachers, as well as p value was less than 0.05. It shows that there was an important difference between mean score in favour of female secondary school teachers. So, total percentage shown that 60.20% secondary school teachers were not aware with peace education and 39.80% of secondary school teachers were aware about the components of peace education.

## 5.3 Recommendations

The main recommendations of the study were:

1. All formal, informal, and non-formal modes of education may be structured by the Government on the philosophy of peace and peace education.
2. A Peace Education University may be established by the United Nations Organization in each third world country.
3. Peace education as a discipline and as a subject may be incorporated in the mainstream education system and be made a compulsory part of the course syllabus at every stage of the educative process.
4. Teachers as well as students may be imparted training in peace-promoting skills, and in peace education. Such trainings may equip the trainee with the knowledge, skills, and attitudes compendium of peace education.

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The review of literature should generally begin on a new page. Discuss the literature related to your proposed study. This section is designed to inform readers about past studies that have already been conducted, and provides perspectives on your area of interest. The review should include a brief discussion of any "classical studies" in this area, if appropriate, but the major portion of the content should focus on the past decade of research. It should close with a logical summary of past research and transition to a statement about what should be studied next. After you present what is already known, make your case for your research either answering a new question, getting a new answer to an old question, answering a question about a new population, etc. After you have made your case that your research is going to give new information, you will summarize the major points. Remember that the Introduction discusses the problem. The review of literature should concentrate on solutions (those that exist, those that are still required).

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Introduce the general methodology that was used for your study. You should ensure that your research methodology has been designed properly and that all the elements required have been considered.

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Population

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Data collection

**v) Data Analysis and Interpretation**

Mention the data analysis technique and interpret the data accordingly.

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In this section discuss the findings of data in light of other studies.

**vii) Recommendations**

Give practical recommendations based on data analysis.

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