

**A STUDY OF REFLECTIVE PRACTICES
FOR PROFESSIONAL DEVELOPMENT OF
THE PROSPECTIVE TEACHERS IN
PAKISTAN**



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ISLAMABAD**

2015



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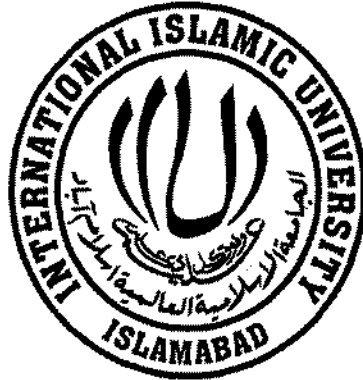
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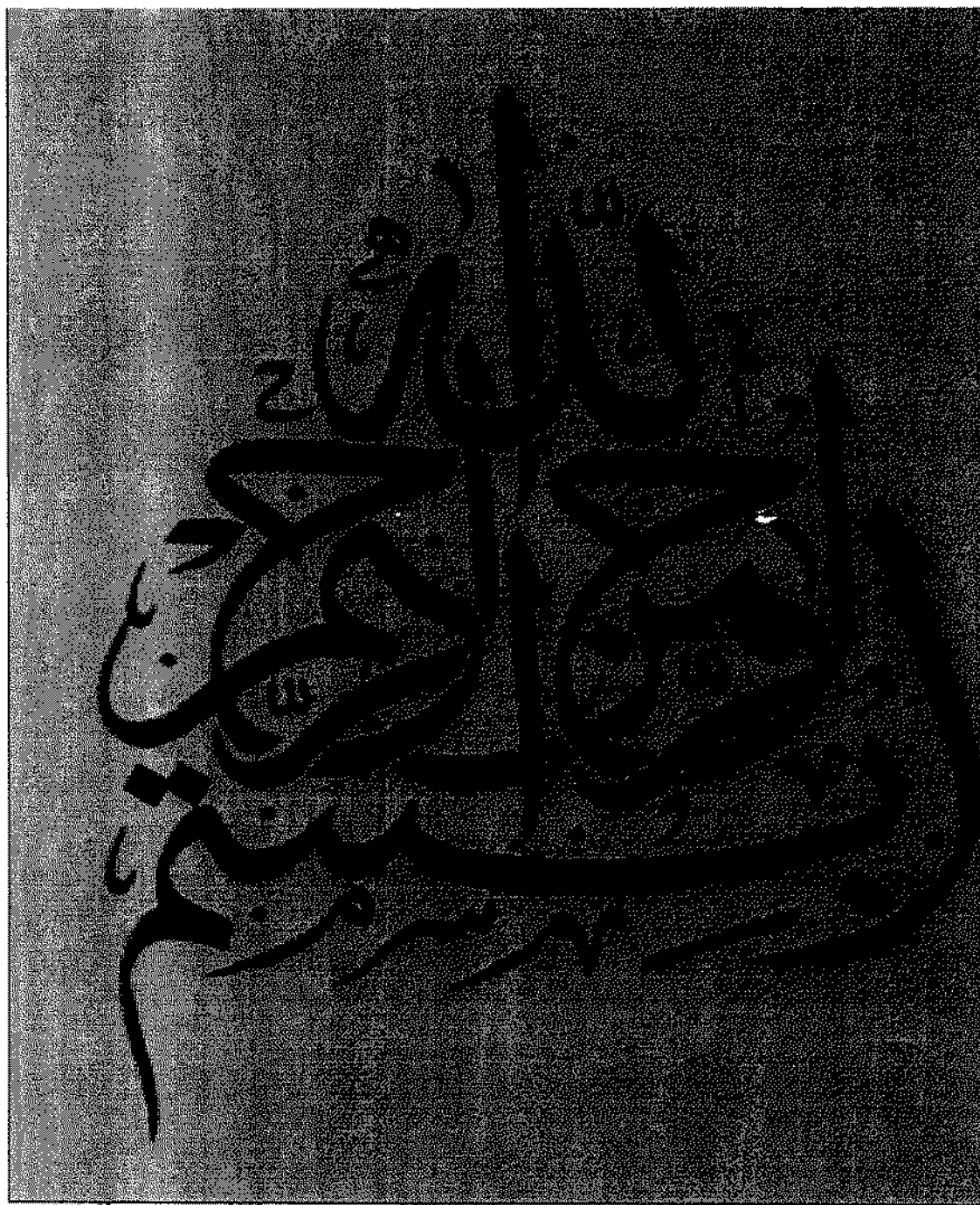
A STUDY OF REFLECTIVE PRACTICES FOR PROFESSIONAL DEVELOPMENT OF THE PROSPECTIVE TEACHERS IN PAKISTAN



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A thesis submitted in partial fulfillment of the requirements for the Ph.D degree in
Education with specialization in Teacher Education to the Department of Education at
Faculty of Social Sciences, International Islamic University,
Islamabad.

Department of Education
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INTERNATIONAL ISLAMIC UNIVERSITY,
ISLAMABAD
2015

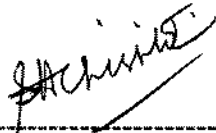



DEDICATION

This thesis is dedicated to my children Araf, Abdullah, Usama and Fatima who sacrificed their time and supported me during studies. This thesis is dedicated to my late mother. May Allah rest her soul in peace forever. Finally this thesis is dedicated to my father Muhammad Iqbal who not only evaluated my belief in merit but also taught me to always accomplish the dreams though hard work and patience.

FORWARDING SHEET

The thesis titled **“A Study of Reflective Practices for Professional Development of the Prospective Teachers in Pakistan”** submitted by Mr. Muhammad Zafar Iqbal Registration No. 57PHDEDU/F09 in partial fulfillment of Ph.D degree in Education has been completed under my guidance and supervision. I am satisfied with the quality of scholars’ research work and allow him to submit this thesis to the Department of Education for further process as per IIU rules and regulations.


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Dated: 28-04-2014

STATEMENT OF UNDERSTANDING

I, Muhammad Zafar Iqbal, Registration No. 57-FSS/PHDEDU/F09, student of Ph.D Education, International Islamic University Islamabad, do hereby solemnly declare that the thesis titled **“A Study of Reflective Practices for Professional Development of the Prospective Teachers in Pakistan”** submitted by me in partial fulfillment for the requirement of PhD degree in Education with specialization in Teacher Education is my original work. The material I have consulted is acknowledged in the text. This thesis has not been submitted or published earlier and nor will be submitted in future for any degree from any university or institution.

Dated: 28-04-2014

Signature 

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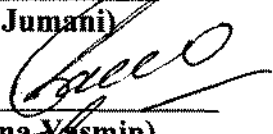
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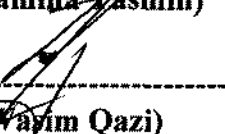
Thesis titled “A Study of Reflective Practices for Professional Development of the Prospective Teachers in Pakistan” submitted by Muhammad Zafar Iqbal, Registration No. 57-FSS/PHDEDU/F09 in partial fulfillment for the requirement of PhD degree in Education with specialization in Teacher Education is accepted by the Department of Education, Faculty of Social Sciences, International Islamic University Islamabad for the award of Ph.D degree in Education.

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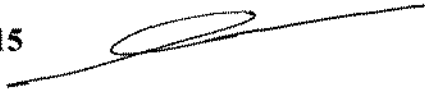
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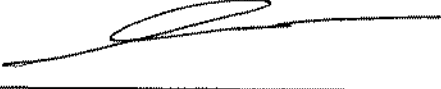
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ABBREVIATIONS

AAU	Arid Agriculture University Rawalpindi
AVR	Audio Video Recording
BCEW	Bilquis College of Education for Women Rawalpindi
CF	Colleague's Feedback
CPD	Continuous Professional Development
CRM	Class Room Management
DCTE	Directorate of Curriculum and Teacher Education
DSD	Directorate of Staff Development
ESRs	Education Sector Reforms
FCEI	Federal College of Education Islamabad
GCEE	Government College of Elementary Education
GCET	Government College of Elementary Training
GCTE	Government Colleges of Teacher Education
GOP	Government of Pakistan
HEC	Higher Education Commission
HEIs	Higher Education Institutions
ICTs	Information and Communication Technologies
IIUI	International Islamic University Islamabad
ITA	Idara-e-Taeem-o-Agahai
ITT	Initial Teacher Training
KPK	Khyber Pakhtunkua
MIT	Massachusetts Institute of Technology
MOE	Ministry of Education
NAC	National Accreditation Council
NCTE	National Council for Teacher Education
NEAS	National Education Assessment System
NEP	National Education Policy

NPS	National Professional Standards
NUML	National University of Modern Languages
PD	Professional Development
PDPs	Professional Development Programmes
PEPs	Professional Education Programmes
PITE	Provincial Institute of Teacher Education
PO	Peer Observation
PP	Professional Portfolio
RFA	Reflection for Action
RIA	Reflection in Action
RL	Reflective Learning
RLJs	Reflective Learning Journals
ROA	Reflection on Action
RP	Reflective Practices
RT	Reflective Teaching
SF	Students' Feedback
STEP	Strengthening Teacher Education in Pakistan
TALIS	Teaching and Learning International Survey
TEPs	Teacher Education Programmes
TEs	Teacher Educators
TLRPs	Teaching and Learning Through Reflective Practices
TPD	Teachers Professional Development
TRCs	Teacher Resource Centres
TTIs	Teacher Training Institutions
UNESCO	United Nations Educational Scientific and Cultural Organization
USAID	United States Agency for International Development

ACKNOWLEDGEMENTS

I am grateful to Almighty Allah for empowering me with determination, energy, courage, patience and necessary intellectual skills to complete this study. I offer praise, deepest appreciations and self-effacing thanks to my creator, the most beneficent, the supreme, the highest, the omnipotent, the omnipresent, the existent creator, the cherisher and the sustainer of mankind, who enabled me to overcome all the bereavements encountered while carrying out this research work.

I am extremely thankful to Prof. Dr. N. B. Jumani, Chairman, Department of Education & Dean, Faculty of Social Sciences, IIUI for his encouragement, guidance, insightful discussions in this arduous journey. I extend my cordial and sincere gratitude to Dr. Saeed-ul-Hasan Chishti, the supervisor of my research, for his guidance, endurance, directions, sincerity, motivating discussions, academic attention and bounty of time. I owe a special debt, deepest respect and appreciations to Prof. Dr. A. R Saghir, Dr. Samina Yasmin Malik, Dr. Muhammad Munir Kayani, Dr. Asad Abbas Rizvi, Dr. Azhar Mahmood, Sheikh Tariq Mahmood, Dr. Shamsa Aziz, Dr. Munazza Mahmood, Dr. Zarina Akhar, Ms. Fouzia Ajmal, Ms. Alina, Ms. Amna, Ms. Humera and Ms. Saima Kanwal for their time to time support and cooperation.

I would like to acknowledge the dedicated care and love of my late mother, who scarified her all so that I could achieve this level of education. May Allah rest her soul in peace forever. I express sincere thanks to my father, who is more than a father and provided me a chance to continue my studies. I also acknowledge the contribution of my aunt who taught me with devotion and fidelity during my childhood. I am thankful to my wife, sons and daughters for their supporting attitude

and helpful suggestions. I am extremely thankful to my uncle Ch. Hassan Muhamamd, Deputy Director (R), Allama Iqbal Open University for inspirational remarks, motivational comments and encouragement. I can't forget the support and co-operation extended by Chaudhary Khadim Hussain, Administrative Office, IIU. I am thankful to all the respondents for their cooperation and hospitable nature.

I would like to pay special thanks to Col. (R) Dr. Manzoor Hussain Arif, Prof. Muhammad Hashim Abbasi, Dr. Athar Hussain, Dr. Amjad Ali, Dr. Jameel Bajwa, Dr. Muhammad Arshad Dahar, Dr. Muhammad Imran Niazi, Dr. Fayyaz Ahmad Fiazi and Muhammad Bashir Mirza. In addition, I would also like to pay thanks to my friends, Mr. Humza Mubarak, Geotechnical Engineer, Singapore, Mr. Muhammad Zubair, Ph.D Scholar (Statistics), National Technological University, Singapore, Dr. Ehsan, Hafiz Zahid, Dr. Wakeel Shahzad (Singapore), Mr. Muhammad Nasir Khan, Research Associate, IIUI; Rabnawaz Lodhi, Dr. Muhammad Afzal, Lecturer, Govt. Degree College Satellite Town, Rawalpindi; Mr. Riaz Laughari, Lecturer in English, F.G Liaquat Ali Khan College, Rawalpindi, Mr. Muhammad Naeem, computer expert, IIUI; Mr. Gulenaushad, Mr. Muhammad Rashid, Accountant, NUML; and Engineer, Muhammad Ibrar Hassan. Lastly, I would like to pay thanks to the Library staff of International Islamic University; Allama Iqbal Open University; Iqra University; National University of Modern Languages; National Library Islamabad and Pir Mehar Ali Shah University, Rawalpindi.

(Muhammad Zafar Iqbal)

ABSTRACT

During present era reflective practice has become an increasingly influential strategy for the professional development of teachers. The purpose of this study was to analyze the role of reflective practices for professional development of the prospective teachers. Objectives of the study include: to investigate the reflective practices used by the prospective teachers during teaching practicum, to find out the significance of reflective teaching practices for professional development of the prospective teachers, to analyze the role of reflective practices for development of pedagogical skills of the prospective teachers and to investigate the reflective practices of teacher educators for the professional development of prospective teachers. Eight research questions were raised and eight hypotheses were formulated to investigate the phenomena. Similarly, eight reflective practices identified through previous research literature include: reflection in action, reflection on action, reflection for action, colleagues' feedback, students' feedback, peer observation, video audio recording and portfolios. This study based on mixed method approach. Quantitative data were collected through questionnaires from prospective teachers and teacher educators of nine teacher training institutions situated in Islamabad and Rawalpindi. The reliability coefficient of the questionnaires was ($\text{Alpha}=.973$) and ($\text{Alpha}= .931$) respectively. Overall sample size was 1169 (910 Prospective Teachers, 160 Teacher educators and 09 heads of department). Qualitative data were collected through observation and interview. Quantitative data were analyzed through SPSS version 16. Frequencies, percentages, mean values and standard deviation were calculated and regression analysis was made to make prediction about the role of reflective practices on the professional development of prospective teachers. While themes and subthemes were conceived to

analyze the qualitative data. The findings of the study revealed that prospective teachers were ecstatic in using reflective practices, but they were not aware about all types of reflective practices. Involvement of prospective teachers in reflective practices significantly contributed towards their professional development. Respondents opined that they can identify and rectify their professional mistakes through involvement in reflective practices. Individual and group reflective practices can work as catalyst for the professional development of prospective teachers. Reflection in action, reflection on action, reflection for action, reflections through student's feedback, reflections through colleague's feedback, reflections through peer comments, reflections through audio-video recordings of lesson and reflections through professional portfolios can significantly contribute to the professional development of prospective teachers. Majority of prospective teachers were involved in reflective practices, but they were not aware about the various contexts of reflective practices. Teaching practicum supervisors and cooperating school teachers can play a vital role to train the prospective teachers about various milieus of individual and group reflective practices. Cooperating school teachers were quite naive about certain dimensions of reflective practices. A difference was noted between what prospective teachers say and what they actually do in the classrooms.

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CHAPTER 1

INTRODUCTION

1.1 Structure of the Study

The entire structure of the study is as follows: the first chapter describes the general background, rationale, objectives, significance, research questions, limitations, delimitations and theoretical framework of the study. Second chapter explains relevant related literature, history of the thought, meaning, nature, types, models, benefits, challenges and limitations of reflective practices. This chapter also describes existing trends of teacher education in the light of educational policies, plans and reforms which have been set in Pakistan. The third chapter deals with methodology of the study, development of research instruments, reliability & validity of the instruments, population, sample size, phases of data collection, anonymity and research ethics. The fourth chapter deals with presentation and analyses of data. Whereas, fifth chapter of the study generates findings, conclusions, discussions and recommendations.

1.2 Introduction

Education is a fundamental right of children and is essential for realizing other human rights. Education empowers children by helping them to acquire skills, knowledge, values and attitudes that are critical to secure their basic socio-economic needs and

enable them to play their role for sustainable development of the society. But only access to education is not sufficient quality is also crucial. UNESCO, 2013 report describes that “Every child deserves the right of quality education”, millions of children in schools are failing to learn basic, reading, writing, and numeracy skills. The quality education greatly depends upon the quality of teachers. That’s why teacher’s professional development is considered as a crucial factor in obtaining quality education across the boundaries. Briefly, an education system is only as good as its teachers. Absence of quality of learning has generated wide range of learning crises. Addressing the crisis in quality of learning requires redefining the teacher’s professional skills, knowledge, values and attitudes, by enabling them to reflect on their class room practices. Such transitions may facilitate teachers to respond to the learner’s needs and expectations of the society in a better way.

Teachers are considered as key agent to change the destiny of a nation, they can convert the raw talent of a nation into a productive asset. “When a nation is challenged, school teachers are often looked upon to resolve the woes” (Rayford, 2010). Pakistan needs to recruit almost one million additional teachers to reach the ratio of 32 pupils per teacher at primary, lower secondary and secondary level (UNESCO, 2010). Teachers have the most powerful impact on the quality education. They should reflect how they can foster the lifelong learning capacity among students in local, national and global contexts. Every day they have a chance to make a difference in the lives of hundreds of students. That’s why teacher’s professional development is getting a lot of importance in global contexts and policy makers have acknowledged the vitality of reflective practices for Professional Development of Teachers. Professional development through reflective practices emphasized that merely participation of teachers in Professional Development Programmes (PDPs) is

not enough but they need to reflect and explore their own classroom practices. They should be wise enough to profit from their past experiences and brilliant enough not to commit the same mistake in future. Famous scholar Albert Einstein once said:

“Always learn from yesterday, live for today and hope for tomorrow. The important thing is never stop to questioning yourself”.

Teachers always need to question their classroom practices to identify the gaps existing between theory and practice and to search out the opportunities for professional development. Reflective practice involves unfolding, describing, analyzing and evaluating one’s own thoughts, beliefs, assumptions, theories, actions and practices (Schon,1983).

Results of many studies revealed that involvement of teachers in Reflective Practices provided them a lens to see and criticize their own teaching practices which contributed towards their professional development (Greenwood, 1998; Lougheran, 2002; Bulman & Schutz 2004; Pedro, 2005& Pollard, 2007). Involvement of Mathematics and Science teachers in reflective practices affected their decision making abilities (Long & Stuart 2004). Usage of reflective practices realized prospective teachers to adopt student centered teaching approaches and largely focus on the reactions of their actions. Reflective practices affected their choices for presenting contents and selecting teaching strategies matched with the contents. Prospective teachers realized that they had broken down the material (not exposed to the students earlier) into understandable segments. Moreover, they realized that they were responsible for the learning of many students, they must be well prepared and organized (Roadman, 2010).

In contrast results of many studies exposed that involvement in reflective practices required commitment, hard work and objective self-examination of instructional

beliefs but complexity and time-consuming nature of reflective practices leaves many teachers with no time to reflect on their classroom practices, rather they do it in a haphazard manner (Moon, 2003; Titus & Gremler, 2010). Usually teachers shoulder administrative and co-curricular duties along with teaching. They may forget some details which are considered as necessary element for 'reflection on action'. If they successfully recall all the details, they may raise erroneous questions. Teacher's excessive thinking about all practices may lead them towards insanity (Ghaye, 2011). Reflective practice has become a compulsory competency to be developed among prospective teachers (Greenwood, 1998; Bulman & Schutz 2004; Pedro, 2005). Now a days reflective practice has become a widely used term in the field of teacher education. This research aims to study involvement of prospective teachers in reflective practices to identify and rectify own professional mistakes.

1.3 Background of the Study

The early recognition of reflective practice was documented in the Socratic Method and Platonic Spiritual theory. Both methods are based on the analogy of self-questioning and self-dialogue. Socrates has regarded self-questioning as the key to reflective thinking (Brockbank & McGill, 2000). Whereas, Dewey (1933) has described reflective practice is an active, persistent, and careful consideration of an action in the light of reasons and possible consequences. Reflective thinking begins when teachers encounter a professional problem (puzzles of practice) and failed to find out a readymade solution (Dewey, 1933; Zeichner & Liston, 2013). The explanation provided by Dewey remained ambiguous. In 1983 another American Philosopher, Donald Schon described that teachers often face undefined multiple facets problems (swampy lowlands) not having perfect solutions. They apply defined solutions to solve such problems. But when they failed to do so, they attempt to find

out solutions through reflective practices. Schon has used various terms to clarify the concept of reflective practice e.g reflection in action and reflection on action. Reflective practice refers active evaluation of one's own thoughts and actions. According to Schon reflective practice refers to critical thinking, thinking on feet, exploration of experiences to become aware of; who we are? what we do? what are our beliefs? how we think and how we act as a professional? (Schon, 1987). What is and what might be? Schon has emphasized that teachers ought to question their beliefs, attitudes, values, professional & subject knowledge, and theories working behind their practices to grow as professional.

Since 1987 there is a dearth of research on the connotation of reflective practices. Results of many studies revealed that involvement of teachers in reflective practices affected their professional practices and helped them out to construct professional knowledge (Greenwood, 1998; Bulman & Schutz 2004; Pedro, 2005). Reflective practices enable teachers to become successful decision makers (Zeichner, 2004; Ghye, 2008; Roadman, 2010; Anita, 2011). Reflective teachers always take the responsibility of their own actions (Osterman & Kottkamp, 2004; McGregor & Cartwright, 2011). Habit of RPs facilitate teachers to grow and develop throughout their career and meet the learning needs of their students in a better way as compared to non-reflective teachers (Rodgers, 2002; Larrivee & Cooper, 2006, Zengaro & Nejad 2007). Prospective teachers regarded application of RPs as a fundamental quality which was developed through the reflective practicum course. They got awareness towards their own actions through videotaping of lessons, microteaching assignments, reflective learning journals, video excerpts and peer's feedback (Egrinle, 2006). Prospective teachers were able to investigate the effectiveness of their own teaching practices through reflective practices (Myers, 2009). In United

States of America, the National Council for Accreditation of Teacher Education (NCATE) has declared that involvement of prospective teachers in RPs is mandatory to enable them to reflect on their practices (NACTE, 2008). Similarly, in Canada application of reflective practices is considered as a core competency to be developed among prospective teachers during teacher training. Practice teaching in a classroom gives prospective teachers opportunities for professional immersion to improve their teaching skills.

To a varying degree, prospective teachers agreed that they could change their teaching from surface to deep and from descriptive to interpretive level through reflective practices. Within the context of action research, RPs work as a catalyst in professional development of prospective teachers (Myer, 2009). Present study aims to investigate the reflective practices of prospective teachers and to predict their professional development.

This study will contribute to fill-up the theoretical gaps of existing literature in international scenario. In national context, this study explores the phenomena of Reflective Practices (RPs) in teaching practicum context. Instead of a growing body of research concerning the types and role of reflective practices a number of core areas have not been studied yet. It could be argued that many researchers have delineated the concept of reflective practice to reflection in action and reflection on action. Few others portrayed four types of reflection; reflection in action, reflection on action, reflection for action and reflection with action (Ghaye, 2011). Researcher studied the relevant literature and found that Dewey (1933) and Schon (1987) have conceptualized reflective practice as a lonely process, while Zeichner & Liston, 1996, Smyth, 1989; Langer & Amy Colton, 1991; Langer and Colton, 1993; Osterman & Kotkamp, 2004 and Ghye, 2011 have debated that reflective practice is not a lonely

process; rather it's a social process. Individual reflective practices include: reflection in action, reflection on actions, professional portfolios, logbooks. While, group Reflective Practices include: peers observation, colleagues feedback, students feedback, group discussions, seminars, mentoring and reflective dialogues (Zeichner & Liston, 1996; Collin & Karsenti 2011).

The individual and collective dimension has raised some theoretical issues. It appears that less attention has been paid to the collective dimension of RPs in theoretical literature and practical research (Zeichner & Liston, 1996; Collin & Karsenti 2011). It seems that individual perspective of reflective practice has been studied more as compared to collective model (Vince, 2001; Marshall, 2008 & Collin, 2011). Reflective practice is a social process which takes place within a group of professionals or learning communities (Zeichner & Liston, 1996). Therefore, there is a need to question the collective dimension of RPs.

Many theorists have mentioned various types of reflective practices. Muchinsky, (2003) has included peer feedback and peer observation in the list. While, Erginel (2006) described that microteaching, reflective learning journals and professional portfolios are better reflective practices. Hative & Goodyear have added two more types; strategic reflection and epistemic reflection. Strategic reflection is used to generalize the knowledge, and epistemic reflection to get cognitive awareness about an event (Hative & Goodyear, 2004). Study of Peale, (2009) revealed that colleagues and peers always appreciate each other and rarely criticize professional practices, although they can provide valuable feedback to each other to change their weakness in to strengths. While results of the study of (Derya, 2008 & Tice, 2011), revealed that audio-videotaping are favourite reflective practices among teachers. It is

interesting to note that various theorists have talked about various types of Reflective Practices.

The connotation of reflective practice has gained momentum attention over the years, despite that collective dimension or interactional aspects of RPs have been largely ignored. (Farrell, 2004; Marshall, 2008; Fathi & Behzadpour, 2011). There is a need to elaborate more the social nature of RPs. It can be augured that there is a contradictory and multiple understanding of the concept of reflective practices. Theoretically concept of reflective practices is very rich; it has not translated into to practice yet. There is no evidence that reflective practices culminated in better professional learning of new teachers and necessarily lead towards higher academic achievement of students (Akbari, 2007; Fathi & Behzadpour, 2011). So in international context, this study is concerned with the collective and interactional dimension of Reflective Practices. Somewhere, it is understood that reflective practice is merely exploration of experiences; somewhere reflective practice is concerned with learning through experience and insight (Boud et al 1998; Mezirow, 1993). Furthermore, no study has been conducted yet to examine the benefits of eight reflective practices together. Researcher found no study which explored the perceptions of the teacher educators and prospective teachers about the usage of eight reflective practices together. How they consider reflective practices and the role of such practices to their own professional development (Study of Fox, Campbel, & Hargrove, 2011). Along with other concerns, this study also explores the perceptions of the teacher educators and prospective teachers about reflective practices together. What connotation do they consider as reflective practice? What types and methods of reflection they have used and perceived them as the most effective?

Researcher developed interest in this area and found that many studies have been conducted in U.K, USA, Canada & Newzeland about the effectiveness of reflective practices in teaching learning process (Greenwood, 1998; Muchinsky, 2003; Bulman & Schutz 2004; Hative & Goodyear, 2004 & Pedro, 2005; Myer, 2009). Few studies were conducted in Pakistan on reflective practices of university teachers (Ehsan, 2011; Hussain, Mehmood & Sultana, 2011; Hajira & Shamsa 2012; Bughio, 2013). But no study was conducted to find out the role of RPs on the professional development of prospective teachers. Therefore, researcher intended to study the role of individual and group RPs on the professional development of prospective teachers. How prospective teachers learn professional skills through reflection in action, reflection on action, reflection for action, students feedback, colleagues feedback, audio-video taping, peer observation and portfolios. This inquiry aimed at attempting to answer a number of research questions relating to the professional behaviours and pedagogical practices of the prospective teachers during teaching practicum. In national context teachers are often asked to involve in reflective practices during practicum teaching. But their reflection seldom goes beyond critical thinking. Thus, this study is an attempt to fill this research gap.

1.4 Statement of the problem

The major concern of teacher education is to produce competent, caring, responsible and qualified teachers. Many efforts have been made to produce professionally competent teachers, having excellent pedagogical skills, insight into developing positive relations with students, colleagues, school staff and community. But success in realizing these transitions is highly dependent upon teachers' ability to reflect on their teaching practices. In 2006, Higher Education Commission revised the curriculum of teacher education programmes and included four units on reflective

practices and critical thinking in the existing scheme of studies to inculcate the ability of reflection and critical thinking among prospective teachers and to enable them to linkup the theory with practice. The distinctive purpose to include four units in the existing scheme of studies was (i) to enable the prospective teachers to select suitable teaching strategies match with the nature and scope of the contents (ii) to enable them for evaluating the success of their own teaching practices in terms of students' growth (iii) to enable them to make self-efforts to become effective teachers. (iv) to provide them enough insight into developing self-confidence and self-esteem (v) to enable them for thorough analysis of their own teaching practices. Even then why prospective teachers not reflect on their class room practices. Therefore, researcher preferred to study how prospective teachers attempt to enhance their pedagogical skills, how they recognize their weaknesses and make self-efforts to change their weaknesses into strengths. How they put their self-efforts to develop confidence. How they attempt to identify the gaps of their pedagogical related practices and how they link up the theory and practice during teaching practicum. How they think on feet during the process of teaching for sake of improvement. How they reflect on classroom practices after the class and how their reflective practices contribute towards their professional development. Still more studies are needed to be conducted. Therefore, the role of number of reflective practices, perceptions of teacher educators, prospective teachers and role of RPs during teaching practicum could be questioned.

1.5 Significance of the study

This study is multifaceted attempt to understand the individual and group RPs of prospective teachers. The major focus of the study was to discover the role of RPs on the professional development of prospective teachers during teaching practicum. This

study also describes the views of prospective teachers about benefits and drawbacks of Reflective Practices. Which reflective practices prospective teachers mostly use during teaching practicum? How prospective teachers think over their professional practices, values and attitudes. How they attempt to develop good relations with students, peers, colleagues and staff through reflective practices. How they reflect over the discourteous attitude of their students. How they put self-efforts to understand and improve their pedagogical skills. How prospective teachers involve peers, colleagues and senior teachers to identify the gaps of their teaching practices. How they identify and rectify their own mistakes. What they say about reflective practices and what they actually do. How teacher educators and prospective teachers view the benefits and drawbacks of reflective practices. Study also sheds light upon the role of reflection in action, reflection on action through self-reflection, peer observation, audio-video taping, students & colleagues' feedback, discussions with senior colleagues, and critical thinking upon the professional development of prospective teachers.

Findings of the study may helpful for prospective teachers guiding them how they can improve their pedagogical skills through Reflective Practices. Study also explores the common mistakes of prospective teachers commenced during practicum. Findings of the study may helpful for prospective teachers to understand their common mistakes. The findings of the study may helpful for the teacher educators, head of departments, principals, administrators and curriculum designers. The study also exposes the perceptions of the head of the departments about the usage of reflective practices. Therefore, findings of the study may beneficial to academicians, teacher training departments and principals to understand and promote reflective practices among prospective teachers. Similarly, findings of the study may helpful to teacher educators

offering them an insight to evaluate the outcomes of their teaching. Moreover, this study will contribute to the theoretical literature about Reflective Practices.

1.6 Objectives of the study

Objectives of the study include:

1. To investigate the reflective practices used by the prospective teachers during teaching practice.
2. To find out the significance of reflective teaching practices for professional development of the prospective teachers.
3. To analyze the role of reflective practices for development of pedagogical skills of the prospective teachers.
4. To investigate the reflective practices of teacher educators for the professional development of prospective teachers.

1.7 Research questions of the study

On the basis of research objectives, the following research questions were devised for this study:

1. To what extent prospective teachers use reflective practices during teaching practicum?
2. To what extent reflective practices influence the professional development of prospective teachers?
3. To what extent prospective teachers show behaviours indicating their involvement in reflective practices?
4. To what extent there are similarities between, what prospective teachers say and what they actually do during teaching practicum?
5. What are the perceptions of prospective teachers about benefits and drawbacks of reflective practices?

6. To what extent teacher educator's use reflective practices while teaching to the prospective teachers?
7. Which are the factors contributing to the involvement of prospective teachers in reflective practices?
8. To what extent reflective practices affect prospective teachers' pedagogical skills, lesson planning and implementation skills?

1.8 Hypotheses

H₀₁: There is no relationship between involvement of prospective teachers in Reflection in Action (RIA) and smooth rolling of lesson plan.

H₀₂: There is no relationship between involvement of prospective teachers in Reflection on Action and understanding of professional mistakes.

H₀₃: Reflection-for-Action (RFA) is not a predictor of professional development of prospective teachers during practicum.

H₀₄: Students feedback is a not a significant reflective practice for professional development of prospective teachers.

H₀₅: Colleagues feedback is not a significant reflective practice for professional development of prospective teachers.

H₀₆: There is no relationship between peer observation and incorporating peers comments into practice.

H₀₇: Preparation of portfolios is not significant predictor for professional development of prospective teachers during practicum.

H₀₈: Videotaping of lesson and identification of mistakes committed during lesson presentation are not allied with each other.

1.9 Assumptions of the study

Following formed the assumption of the study:

1. It was assumed that each Teacher Training Institution is adopting the HEC, 2006 revised scheme of studies and there is no major change in the scheme of studies provided by the HEC.
2. Contents being taught to the prospective teachers in selected Teacher Training Institutions (TTIs) and universities departments of education are articulating appropriate teaching knowledge and skills to the prospective teachers, necessarily required to involve in RPs.
3. Participants of the study provided right answers and to the best of their understanding either in quantitative instruments or qualitative form.

1.10 Research method

In order to address the research questions of the study, mixed method approach including both quantitative and qualitative method were used.

1.11 Population

All male and female prospective teachers, teacher educators and heads of departments of teacher training colleges and universities departments of education of Rawalpindi and Islamabad were the population of the study. The following population was catered under this study:

Prospective Teachers: 910 prospective teachers enrolled in B.Ed programme during year 2011-2012.

Teacher Educators: The second population of the study was 160 teacher educators and.

Head of Departments: All male and female heads of departments of the selected TTIs were the population of the study. Details about population and sample are given in chapter three.

1.12 Research Instruments

Two questionnaires were used to collect quantitative data each from the prospective teachers and teacher educators respectively. Observation sheet was used to observe the prospective teachers during practicum and structured interview guide was used to interview the heads of the departments.

1.13 Data Collection

Data were collected by administering the research instruments. Initially researcher thought to collect data through electronic distribution of the questionnaires, but keeping in view problems and issues for electronic data collection, researcher personally visited all the selected teacher training institutions to collect the data. Data collection consisted of three major phases discussed in detail in chapter three.

1.14 Data Analysis

Quantitative data were analyzed through SPSS version 16. Frequencies, mean values and standard deviation were calculated by using SPSS software. Data collected through open ended questionnaire was coded and percentages of similar responses were calculated. Similarly data collected through observation and interview was analyzed through content analysis approach. Themes and subthemes were developed to understand the data. Identical responses were identified to develop themes and sub-themes.

1.15 Delimitation of the study

This study was delimited to the followings eight reflective practices: Reflection in action (RIA), Reflection on Action (ROA), Reflection for Action (RFA), Colleagues' Feedback (CF), Students' Feedback (SF), Peer Observation (PO), Audio-Video Recordings (AVRs) and Professional Portfolios (PPs). Moreover, study was delimited

to the following Teacher Training Institutions situated in Rawalpindi and Islamabad, Pakistan:

1. National University of Modern Languages, Islamabad.
2. Arid Agriculture University, Rawalpindi.
3. Federal college of Education, H/9 Islamabad.
4. International Islamic University, Islamabad.
5. Government College of Education for Elementary Teachers, H/9 Islamabad.
6. Bilquis College of Education, Rawalpindi.
7. Foundation University, Rawalpindi.
8. Fatima Jinnah Women University, Rawalpindi and
9. Govt. Elementary College of Education for Elementary Teachers, Rawalpindi.

1.16 Limitations of the Study

Researcher identified few limitations of the study to guide future researcher on the topic. Empirical study should be executed to study the impact of Reflective Practices on the Professional Development of Prospective Teachers. According to Cook and Campbell (1997) in social sciences research surveys research respondents are more likely to knock responses to fulfill expectation of the researcher, instead of positive reflection, firm beliefs, knowledge, abilities and opinions. Therefore, researcher was aware and looked the filled questionnaires carefully. The survey data were specifically limited to the prospective teachers pursuing B.Ed programme. Due to non-availability of consent, researcher could not record the interviews of few heads of departments.

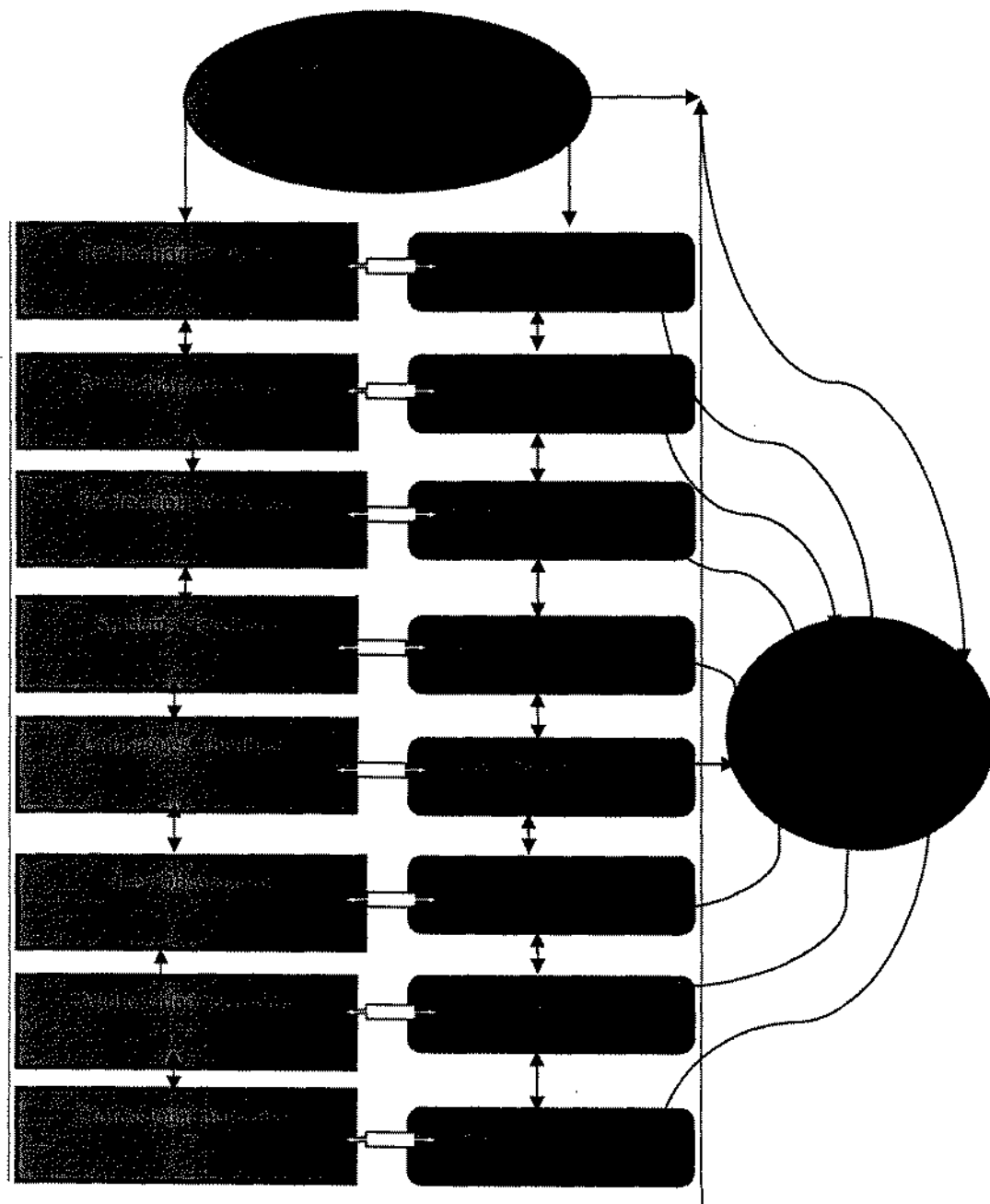
1.17 Theoretical framework of the study

The early recognition of reflective practice is recognized in the Platonic Spiritual theory which is based on self-questioning and self-dialogue. Renowned Greek philosopher Socrates once said “Know thyself: the unexamined life is not worth living” (Brockbank & McGill, 2000; Killen, 2007). Initial seeds of the connotation of ‘reflective practice’ were cultivated by John Dewey in 1910. “Reflective practice is an active, persistent and careful consideration of an idea or action. It is a supposed form of knowledge acquired in the light of the grounds which support it and the further conclusion towards which it tends” (Dewey, 1933). Dewey was first educationist of 20th century who stated that teachers can play an active role in educational reforms through reflective thinking. Reflective thinking leads toward reflective practices, which begins when teachers encounter a professional problem (puzzles of practice) and failed to find out a readymade solution (Zeichner & Liston, 2013).

The explanation provided by John Dewey remained ambiguous. Many theorists introduced further theories to clarify the concept. In 1987, another American Philosopher, Donald Schon described that during the process of teaching, teachers often face undefined multiple facets problems (swampy lowlands) not having perfect solutions. When teachers failed to solve a problem with defined solutions, they attempt to find out solutions through RPs. Schon used various terms to clarify the concept e.g reflection in action and reflection on action. Reflective practice refers active evaluation of one’s own thoughts to become aware who we are? What we do? What are our beliefs? How we think & act as a professional? (Schon, 1987). Schon has associated all the related terms with exploration of experience.

In 1991, Killion and Todnem expanded the Schon's theory by including a third type of reflective practice and named it Reflection for Action (Killion & Todnem, 1991). Seven years later, Copper & Boyd divided RPs into two major types (i) individual RPs (ii) Group RPs and further bifurcated group RPs into small group RPs and large group RPs (Copper & Boyd, 1998). This study focused on the role of both forms of RPs. Graphic presentation of the theoretical framework of the study is as under:

Figure: 1 Theoretical Framework of the study



1.18 THE MODEL

In this study Reflective Practice refers to thoughtful consideration and self-questioning of prospective teachers about their own professional practices to find out solutions of professional problems. Previous research literature shows a relationship between the usage of Reflective Practices and development of professional skills of teachers (Schon, 1983; Russell 1989; Zeichner & Liston 1996; Ferraro, 2000; Moon, 2003; Jasper, 2003; Sotto, 2004; Osterman & Kottkamp, 2004; Larrivee & Cooper, 2006; Dixie, 2009; Bolton, 2010; Roadman 2010; Ghaye, 2011; Brightside, 2012; Heather & Amy, 2012; Zeichner & Liston 2011; Amoh, 2011; Tice, 2011 and; Burniske, & Meibaum, 2012. Therefore, it has been recognized that eight major reflective practices namely (1) Reflection on action, (2) Reflection in action, (3) Reflection for action, (4) Audio-Video recordings, (5) Students feedback, (6) Colleagues feedback, (7) Peer Observation and (8) Professional portfolios may concern with the professional development of prospective teachers.

Eight models were considered for generating this model: namely, (1) Schon's Reflection in & on Action Model, 1983, (2) Kolb's Model, 1984, (3) Gibbs Cyclical Model of Reflection, 1988, (4) Greenway Model, 1988, (5) Peter's DATA Model of Reflective Practice, 1991 (6) John's "Ten Cs" model of Reflective Practice, 2000 (7) Rolfe, Freshwater and Jasper model "The What Model of RPs" 2001 (6) Ghaye's Strength-Based Big "R" Model 2008 (7) Marchi & Ghaye Appreciative Reflection & Action Model, 2011. These models focused on: (1) teachers individual reflections to describe the event, (2) exploration of experiences (3) social conditions and (4) commitment. Schon's model focused upon reflection in action and reflection on action. Gibbs model emphasize upon description of the event, feelings about the event, evaluation, analysis and future planning. Greenway's model described Do,

Review and Plan. Peter's model tag professional development with describe, analyze, theorize and action. Johns model emphasize upon conflict, connection, challenge, connection, congruence and construction. Rolfe, Freshwater and Jasper model put emphasize upon What, So What and Now What? Ghaye's & Marchi Model emphasize upon appreciation, imagination, design and acting. Farrell, 2004; Akbari, 2007; Marshall, 2008; Fathi & Behzadpour, 2011 found that collective dimension of RPs largely ignored. This model will be named Individual & Collective Perspective Model of Reflective Practices. The model explain role of individual and collective reflective practices on the development of pedagogical skills, searching out materials, preparation & presentation of lessons, better relationships with colleagues, students and peers, classroom discipline, class room momentum, understanding learners, understanding Para-Language of class, determination of difficulty level of text books, overcoming hesitation, awareness about professional weaknesses, dealing with un-expected situations, better teaching of controversial contents, effective communication with students, dealing with discourteous attitudes of students, encouraging students behaviours, knowing merits and demerits of teaching method before application, concerns about the creative aspect of classwork and homework, identification of talented and slow learners, understanding learners and understanding learners problems. These together exert a force on teachers to involve in individual or group reflective practices. Each variable is composite variable conceived through the related items which were asked in questionnaire. The composite variables are the sum of the points of answers to the question items. Detail about variables is given below:

Table 1: Variables for regression analysis

Variables	Items
Dependent variable	Professional Development (PD) <ul style="list-style-type: none"> • I reflect over my professional mistakes to rectify on the spot (q39) • I think reflection on action is helpful to understand professional weakness (q14) • when I think about classroom practices after class it contributes to my professional development (q35) • I think about my classroom practices before class which contributes towards improvement of pedagogical skills (q49) • I attempt to overcome shortcomings of teaching practices in the light of students feedback (q6) • I can improve my pedagogical skills through colleagues feedback (q10) • Peer observation contributes towards my professional development (q27) • Preparation of portfolios is helpful for my professional development (q24) • I record my lesson to understand professional weakness and strengths (q21)
Independent variables	Reflection in Action (RIA) <ul style="list-style-type: none"> • I reflect over discourteous attitude of students during class (q1) • I reflect over my practices during lesson to overcome my unwanted practices (shyness, shivering, repetition of words) (q7) • I reflect over my lesson plan for its smooth rolling (q9) • I reflect whenever I teach controversial contents in the class (q15) • I reflect on class room discipline to maintain discipline (q18) • I feel hesitation to respond to students questions (q19)
	Reflection on Action (ROA) <ul style="list-style-type: none"> • I attempt to find out reasons of students' discourteous attitude after class (q2) • I attempt to improve my relations with colleagues, peers and school staff (q13) • I think about effectiveness of teaching after class (q17)

	<ul style="list-style-type: none"> • I think about the learning outcomes after class (q22) • I think after class that how I can improve my relations with my students • I think about the strengths and weakness of teaching method after class (q 41) • I think that my teaching fulfills community needs (q42) • When students demonstrate positive behaviour I think after class how to appreciate (q56)
Reflection for action (RFA)	<ul style="list-style-type: none"> • I reflect over the merits and demerits of teaching method before application in the class room (q40) • I reflect over the possible reactions before taking actions (q43) • I reflect over the difficulty level of classwork before I assign to the students(q44) • I reflect over creative aspect of classwork before assigning it to students(q45) • I reflect over creative aspect of homework before assigning to the students(q46) • When I give assignments to my students I reflect over the difficulty level of assignments (q50)
Students' feedback (SF)	<ul style="list-style-type: none"> • I allow my students to comment on personality • I understand para-language (tiredness, boring) of students during teaching process (q23) • When I feel text book activities are difficult I design easy activities for my students (q25) • When I feel that my students are not fully involve in lesson I deviate from lesson plan (q26) • I plan teaching activities in light of feedback of my students(q38) • I think feedback from students is helpful to establish good relations with my students (q54)
Audio-Video Recordings (AVRs)	<ul style="list-style-type: none"> • I think Audio-Video recording is helpful to identify professional mistakes (q11) • I think I can improve my teaching skills through audio-video recording of my lesson (q16) • I think I can overcome intra-conflict through audio video recording of my lesson (q20). • I think Audio-Video recording of lesson is helpful to improve my communication skills (q53).

Colleagues' feedback (CF)	<ul style="list-style-type: none"> • I take colleagues feedback on my pedagogical skills (q12). • I think colleagues feedback is helpful to improve of my teaching skills (q31). • If unexpected situation occurred in my class I attempt to find out the solutions through colleagues feedback (q32). • If unexpected situation occurred in my class I discuss with my colleagues (q33). • My colleagues provide me feedback in professional way (q47).
Peer-Observation (PO)	<ul style="list-style-type: none"> • I allow my peers to comment on teaching competencies during teaching practicum (q28). • Whenever my peers pass comments I incorporate in to practice (q29). • I invite peers feedback on application of teaching method (q37). • I asked my peers about maintenance of school record (q52). • Peer observation contributes towards my professional development (q58)
Professional Portfolios (PP)	<ul style="list-style-type: none"> • I learn through portfolios which teaching skill need improvement (q36) • Portfolio is a source of guidance to improve my pedagogical skills (q48) • Preparation of portfolios contributes towards learning of pedagogical skills (q57)

Table 1 deals with variable of the study. Major variables tested in this study include; Reflection in Action (RIA), Reflection on Action (ROA), Reflection For Action (RFA), Students Feedback (SF), Audio-Video Recordings (AVRs), Colleague's Feedback (CF), Peer Observation (PO) and Professional Portfolios (PP). All variables comprised of five to six items.

Table 2: Observable Indicators Reflection in Action

Sr.	Theme	Observable Indicators
1	Reflection over Discourteous attitude of students	Students demonstrated discourteous attitude: chat during lesson; not listened teacher's voice; were not looking at teacher. Ignore teacher's presence.
2	Reflection to overcome unwanted practices	Unwanted practices: shyness, shivering, repetition of words, excessive use of supporting words, low voice, sweetening, under-confidence.
3	Reflection over Class room momentum: Proper start & end of the lesson	Classroom momentum: proper start of lesson: checked already assigned work properly; every student was involve in lesson; students were looking towards teacher's face; assigned classwork & homework; finish class on time; completed the topic; revised major themes at the end of class. Give proper time to students to ask questions, encouraged students to raise questions, assigned homework and. provided guidelines to the students to complete homework.
4	Reflection over Smooth rolling of lesson plan	Smooth rolling of lesson plan: Asked questions from students to test their previous knowledge; introduced the topic; talked about objectives of the lesson or purpose of the lesson; illustrated difficult concepts. Asked questions to know students level of understanding, teacher asked questions to know previous knowledge of students. Announced the topic, attempted to relate the topic with previous knowledge, gave hints about previous knowledge. Teacher highlighted the importance of topic. Voice of teacher was very loud or very slow. Teacher eye contact with students. Usage of whiteboard.
5	Reflection over controversial contents	Controversial contents: contents were about sex; political parties; religious conflicts; social norms; animal keeping, marriage. Teacher designed new activity to clarify the concepts of students. Teacher changed teaching methodology, if students were not grasping the concept or skipped the contents.
6	Reflection over Class room discipline	Classroom discipline: students were busy in their studies; note passing, chatting, whispering was not seen; students were not using mobiles. Teacher noticed such activities of students. Student were taking notes. Students were asking help from their bench mates. Student was unable to follow teacher's instructions. Class teacher went to the students desk and helped students.
7	Refection to overcome hesitation to respond students questions	Teacher feel hesitation to respond students' questions: discouraged or ignored students' questions; encouraged students to ask questions; appreciated students' questions.
8	Reflection over Learning outcomes	Invited students to draw a diagram on board; inquired about specific concept/formula; asked specific questions about the topic; asked students to explain, describe, demonstrate, calculate, compare or analyze major theme of the lesson.
10	Reflection to rectify professional mistake on the spot	When teacher feel students can't grasp the contents, he/she abruptly adopted another method to explain the contents. Teacher attempted to clarify concepts of students through models and examples. Teacher admitted in front of class, he/she was wrong, then give another example.

Table 2 describes the observable indicators of reflection in Action. Indicators of Reflection in Action were determined through the extensive study of previous research literature. Major indicators of reflection in action include, attention of Prospective Teachers towards student's discourteous attitude, awareness about own unwanted practices, e.g shyness, repetition of words, lack of confidence, failure to maintain classroom discipline, attention towards students learning outcomes, and self-attempts of prospective teachers to rectify of professional mistakes during teaching learning process.

Table 3: Observable indicators Reflection on Action

<i>Sr.</i>	<i>Theme</i>	<i>Observable Indicators</i>
1	Reflection over students discourteous attitude after to find out the reasons	Teacher discussed about students' discourteous attitude after class; wrote letter/comments to the head teacher; wrote on dairy to bring his/her parents, said that he/she will discuss about discourteous with parents in PTM.
2	Relationship with colleagues	Sharing classroom experiences with colleagues, sharing of ideas, sharing information about student's attitude, sits together.
3	Reflection over professional weaknesses	Discussed professional weakness with colleagues and peers. Discussed about own professional weakness in class. The materials I used to prepare lesson was attractive and interesting.
4	Reflection over effectiveness of teaching	Teacher used models, charts, and diagrams to clarify students' concepts. Teacher provided feedback to the students. Guide students about homework. Teacher voice was reaching at every corner of the class. Teacher arrange a small quiz at the end of lesson related to the lesson.
5	Reflection over relationship with students	Teacher shared jokes with students. Allowed students to call him. Students were afraid before teacher's arrival. Allowed students to ask questions. Asked students to share their problems with him/her.

Table 3 elaborates the observable indicators of reflection on Action. In other words, self-attempts of prospective teachers to identify their weaknesses after class. Key Indicators of Reflection on Action include; self- attempts of Prospective Teachers to find out the reasons of students discourteous attitude

after class, discussions with colleagues about students discourteous attitude, taking a quiz at the end of class, reflections on student's questions. Teacher promised students that he/she will reconsider certain classroom practices in the light of student's feedback.

Table4: Observable indicators Reflection for Action

Sr.	Theme	Observable Indicators
1	Reflection over merits and demerits of teaching method before application	Discussions about merits and demerits of teaching method with colleagues, peers or senior teachers prior to class. Discussed merits and demerits of selected teaching method with students in the beginning of lesson.
2	Reflection over class work and homework beforehand	Asked from students can they complete it? Teacher verbally asked from students about the difficulty level of the home work and class work in the beginning of class. Assigned homework was merely writing exercise from textbook. Asked students to give examples which are not included in the text. Assigned class work was merely writing exercise from text books.
3	Reflection over possible reactions of actions	Teacher punish student in front of class, invited him/her to office. Issued warning to him/her. Asked that he/she will discuss the matter with HOD. Wrote comments to parents on student's diary.

Table 4 describes observable indicators of reflection for Action. In other words, thinking of teachers about the strengths and weaknesses of teaching method and possible reactions of own actions in advance refer reflection for action. Mainly involvement of prospective teachers in reflection for action was determined; if they asked about the difficulty level of home work in the beginning of class or discussed about the merits or demerits of teaching method with peers and colleagues prior to class.

Table 5: Observable indicators Reflection through Audio-Video Recording

Sr.	Theme	Observable Indicators
1	Audio Video Recording	Availability of recording camera in the class. Prospective teachers requested to peer/friend to record the lesson with mobile phone.
2	Reflection over class room practice through audio video recording	Teacher demanded copy of the recording from peer/friend at the end of class. Reply the video in the class to observe presented lesson. Discussed about the recording with peers after class. Peer appreciated the recording. Passed comments on the performance. Presenter asked peers to provide critical comments.

Table 5 describes the observable indicators of reflection through Audio-Video Recordings. It was determined by involvement of prospective teachers in video audio recordings during class. Prospective teacher asked his/her peers to record the lesson, demanded copy of the recording from peer/friend at the end of class. Watched the video after the class or discussed with peers about previous recordings.

Table 6: Observable indicators Reflection through Students' feedback

Sr.	Theme	Observable Indicators
1	Overcoming weaknesses in light of student feedback	Teacher invited students' suggestions at the end of lesson. Teacher used feedback form to invite suggestions or invited their verbal feedback. Used sentence that next time he/she will adopt another method or bring improvement in the light of student's feedback.
2	Understanding Para language of class	Students were passing notes, using mobile phones; All students were looking at teacher attentively. Teacher said that I know you are tired. Used sentence that I feel you are getting bore. Students were saying they are tired and not want to continue; even teacher forced to complete. Teacher noticed whenever students talked to each other.
3	Feedback about difficulty level of text book/contents	Teacher frequently asked to the students; do you understand? During lesson asked few students to repeat major theme? Asked few students are they facing any difficulty to grasp the contents. Teacher noticed that students are not taking notes. Teacher stopped and gives explanations.
5	Planning future teaching in light of students feedback	Teacher promised that next time he/she will do something in different way. Teacher was keen to take more and more feedback. Quoted about previous feedback of the students in the class
6	Attempts to establish good relations with students	Every time teacher called his/her students by name. Teacher repeatedly asked names of student. Teacher used sentence I not know your name. Attempted to remember students names

Table 6 deals with the observable indicators of reflection through Student's Feedback. It was determined by involvement of prospective teachers in following practices; Prospective Teacher invited students' suggestion at the end of class, used student's feedback form, invited verbal suggestions from students at the end of class and acknowledged that next time he/she will adopt another method or bring improvements in teaching practices. Similarly teacher noticed, note passing, usage of mobile phones. Used words I know you are feeling tired. I feel you are getting bore in the class. Students were saying that they are feeling tired and do not want to continue; even then teacher forced students to complete the lesson.

Table 7: Observable indicators Reflection through Colleague's Feedback

Sr.	Theme	Observable Indicators
1	Inviting suggestions from colleagues for improvement	Teachers were inviting colleagues to observe his/her class. Colleagues were looking at prospective teacher's face during lesson and taking notes. Colleagues suddenly came to class and left the class after some time. Colleague asked questions from the prospective teacher. At the end of class prospective teachers discussed his/her classroom performance with colleagues. Colleagues handed over written comments to the prospective teacher. Quoted example of the class of a colleague during class. Mentioned about teaching practices of a colleague during class.
2	Sharing unexpected classroom situations with colleagues	Prospective Teacher welcomed and appreciated colleague's comments and confessed that he/she will incorporate. Admitted own mistakes and promised to rectify. Allowed colleagues to talk on a specific part of his/her lesson during lesson. Asked about some matter from peer during class. They were working in group about any task assigned to them in addition to teaching.
3	Colleagues provide friendly feedback	Prospective Teacher appreciated colleagues' comments, argued with colleague about performance or use words its merely criticism. Colleagues appreciated certain practices or made a criticism on few teaching practices.

Table 7 describes the observable indicators of reflection through colleague's feedback for example prospective teacher invited suggestions from colleagues to bring improvement in his teaching practices, shared classroom experiences with colleagues. Colleagues provided oral feedback to the PTs to rectify their professional mistakes related to teaching learning process.

Table 8: Observable indicators Reflection through Peer Observation

Sr.	Theme	Observable Indicators
1	Peer Observation	Prospective Teacher invited peers for observation. Peers were looking at teacher during lesson and taking notes. Peers were present in the class. Both were looking quite frank. Peers left the class during lesson. Peers raised questions. They discussed about lesson performance after the class. Peers handed over written comments to the PT. Prospective Teacher appreciated peers comments, argued with peers about his/her performance and said its merely criticism. Peers merely criticized the practices of prospective teachers or appreciated few practices. Feedback was provided by the peers during or after the class.
2	Incorporation of peer comments in to practice	Teachers appreciated and welcome peers comments and admit that he/she will incorporate. Teacher admits his/her mistakes and confessed he/she will improve. Allowed peers to talk on a specific part of his/her lesson during or after the lesson. They were working in group about any task assigned to them in addition to teaching.

Table 8 reflects the observable indicators of reflection through peer observation. Following indicators were determined for peer observation: invited peers to observe the lesson, peers were present in the class and taking notes during lesson presentation. Prospective teacher shared his/her classroom experiences with peers, were working in groups at any task assigned by the head teacher or cooperating school teacher. Presenters welcomed peers comments and admitted that he/she will improve his/her practice.

Table 9: Observable indicators Reflection through Portfolios

Sr.	Theme	Observable Indicators
1	Professional Portfolios	Portfolio was available and containing material about lesson plans, teaching methods. Notes were available in the portfolios. Prospective teachers works or peers comments regarding lesson plan, delivery of lesson, extra material handed over to students was available in the portfolios. Portfolio was containing pictures drawings and diagrams used by the PTs during teaching process.
2	Reflection through professional portfolios	Teacher talked with colleagues and peers about portfolios. Asked colleagues, peers, cooperating school teachers or practicum supervisors to check his/her portfolios.

Table 9 describes the observable indicators of reflection through portfolios. Following indicators were determined: Portfolio was available with prospective teachers and containing material about lesson plan, teaching methods, students creative works, notes about application of teaching methods. Portfolios were containing pictures drawings or diagrams used by the teacher to explain some concept. Prospective teacher talked about portfolios with colleagues or peers.

1.19 DEFINITION OF TERMS

Reflection: In the context of present study, reflection refers thinking of prospective teachers about their own class room practices, actions and results of their own actions during teaching process, after class or before class.

Reflective Practice: In this study reflective practice refers to the active process of examining one's own experiences to create opportunities for professional learning in teaching context. Self-efforts of prospective teachers and teacher educators to improve their own teaching practices or skills. In the context of this study reflective practices refers; Reflection in Action, Reflection on Action, Reflection for Action, Colleagues' Feedback, Students' Feedback, Peer Observation, Audio Video Recording and Professional Portfolios.

Reflection in Action: Reflection of Prospective Teachers on students' attitude, class room momentum, class room discipline, self-attempts to overcome unwanted practices e.g (shyness, shivering, repetition of words) during teaching process is termed as Reflection in Action. In other words thinking of prospective teachers that what they are doing and how they are doing during the lesson.

Reflection on Action: Reflection of Prospective Teachers on student's attitude, learning outcomes, weaknesses of teaching method and relationship with students at the end of class is defined as Reflection on Action (e.g. thinking about what they did and how they did the things).

Reflection for Action: Involvement of Prospective Teachers in reflection to think about benefits and limitations of teaching method before its application in the classroom. Reflection over difficulty level of contents, creativeness of

classwork and homework is termed as Reflection for Action.

Portfolios: Documentation of teaching related materials, classroom experiences, photographs, drawings, lesson plans, goals and objectives by the prospective teachers during teaching practicum. A compiled record by the prospective teacher to demonstrate his/her performances and contributions during teaching practicum

Professional Development: In this study professional development refers understanding of professional mistakes related to classroom experiences e.g lesson planning, lesson presentation, smooth rolling of lesson plan, maintaining of classroom momentum and discipline, development of good relationship with students & colleagues, incorporating student's and colleagues feedback into practice.

Teacher educators: Individuals who deliver pre-service teacher education in the departments of education at university or colleges of education on regular, adhoc, contract or part time basis are cogitated as teacher educators. Both male and female teachers teaching pedagogical courses during course work or involved in supervision of prospective teachers during teaching practice are regarded as teacher's educators in this study.

Prospective Teachers: Pre-service teachers formally enrolled in B.Ed programme in education colleges or departments of education in a university are regarded as prospective teachers in this study.

Reflective teacher: Teachers who regularly pay attention to their own teaching practices and reflect on the effectiveness of their teaching for sake of improvement are regarded as reflective teachers. Teachers who regularly review

their teaching practices and reflect on the teaching learning process, put self-efforts to improve the quality of their teaching and take the responsibility of their continuous professional development are regarded as reflective teachers. (Reimers, E. V. 2003 page 104).

Teaching practicum: In this study long term or short term teaching practice of B.Ed students is regarded as teaching practicum.

Students Feedback: Written or oral suggestions and comments of the students about the teaching style, teaching methodology and difficulty level of homework or classwork is regarded as students' feedback.

Colleagues Feedback: Suggestions, comments or criticism of the colleagues about the classroom related practices of prospective teachers and teacher educators is regarded as colleagues' feedback.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter presents a critical review of the phenomenon of Reflective Practices (RPs) to situate a theoretical understanding of the concept. Researcher has studied hundreds of the prominent previous works on RPs and relevant research studies. This section is divided in to seven major parts. Part one deals with introduction, meaning, nature, definitions, and history of RPs. Part two takes a critical review of various models, benefits and drawbacks of RPs. Part three relates to process and types of RPs. A critical review of teaching practicum, its importance, principles and duties of the prospective teachers is discussed in part five of chapter two. Part six provides a brief review of educational policies, plans and reforms developed for the Professional Development (PD) of teachers in Pakistan. Major challenges, opportunities and various approaches to Teachers' Professional Development (TPD) are also critically reviewed in part six. Critical analysis of previous research studies and gaps existing in literature are focused in part seven.

2.1 Introduction

Teachers play significant role to burn and keep burning the lamp of civilization. They are architectures of the mankind, role models for their students, and

guardians of young generation. Teachers shoulder the responsibility to transfer knowledge, values to their students to develop their personalities. The role of teacher in child's education is more important than money, family circumstances and school environment. Careful professional practices of teachers can secure future of a nation. Reflective teachers can turn the dream of a progressive society into a reality. They help out students to transform their thoughts into reality (Rayford, 2010). Results of many studies revealed there is a need to inculcate the knowledge of RPs among teachers to promote professionalism, autonomous and collaborative learning (Cameron, 2010). Aristotle says:

“Parents give life to children but teachers teach them the art of living, therefore, teachers' need to be more honoured”

Similarly Mustafa Kamal says:

“A good teacher is like a candle, it consumes itself to light the way for others”

Teachers should be wise enough to reflect over their values, beliefs, attitudes and practices to profit from their past experiences and brilliant enough not to commit the same mistakes in future. Teachers need to understand who they are? what type of interests they have? which type of attitude they have? how they can contribute to the lives of their students? where they want to go in future? and which professional standards they need to observe? (Jakson, 2010). Usually teachers discuss about the behaviours of their students e.g submissiveness, creativity, good character, bad habits, but they seldom reflect over their own professional behaviours and classroom practices (Reimers, 2003).

Teachers shoulder most important responsibility in society; they need to have conscious awareness about their professional practices to study the effects of their actions, ideas and theories on the learning and behaviour of their students.

That's why developed and developing countries are putting serious and promising efforts to inculcate reflective abilities among teachers. In Pakistan tremendous changes have been made in the field of teacher education to set out and maintain professional standards and to promote reflective & critical thinking among prospective teachers. Higher Education Commission (HEC) revised the curriculum of B.Ed programme and included four chapters on reflective practices and critical thinking in B.Ed programme. Present study is concerned with the reflective practices of prospective teachers and teacher educators.

2.2 Meaning and nature of reflective practices

John Dewey was the first philosopher who advocated the significance of reflective learning and attempted to distinguish between the routine and reflective learning. Many times teachers face un-expected situation in class rooms and failed to cope with such situations through routine actions. Therefore, they intentionally adopt deliberate approach to find out solutions with foresight (Dewey, 1933). Dewey has made a distinction between routine practices and reflective practices. Routine practices are habitual and unsystematic relying on tradition & authority, while reflective practices are conscious, systematic and based exploration of experiences (Larrivee & Cooper, 2006). Literally word 'reflective' refers thoughtful, insightful and deep thinking about an idea or action.

Philosophically, the term 'reflection' refers to a process of conscious thinking making self-judgments, questioning personal beliefs, noticing differences and observing dissatisfactions to find out the solution of professional uncertainties. Many terms e.g 'reflection', 'reflective practice', 'reflective thinking' are interchangeably used. But generally, reflective practice refers to critical thinking

and serious contemplation of an action (OUD, 2009). Reflective teachers assumed dual posture, they teach to the class at the same time play their role as critic who sits among the students and watch own actions to gain higher level understanding of his/her own actions.

Renowned philosopher Confucius says that human beings learn wisdom by three methods: first, by imitation which is easiest, second, by experience which is bitterest and third, by reflection which is the noblest. Many philosophers have defined reflective practices in different ways. A critical analysis of few definitions is given below.

2.3 Reflective Practices Discourse

Role of reflective practices have been widely acknowledged in the professional development of teachers since 1987. It is an essential component of various teacher training programmes (Pollard, 2005). Many philosophers have defined the concept. Donald Schon, originator of the term, defined RP as under:

“Reflective Practice is thoughtful consideration of own experience in applying knowledge to practice” (Schon, 1983).

After two years another philosophers defined the concept as under:

“Reflective practice is a process of gaining new insight of self and own professional practices through experience” (Boud et al 1985).

Ghaye has defined the reflective practice as under:

“It is a way to make a sense of the professional uncertainties, providing a courage to work competently and ethically at the edge of order and chaos” (Ghaye, 2000).

The term reflective practice refers to the active process of examining one’s own class room experiences to create opportunities for professional learning. In teacher education context, reflective practice involves willingness of teachers

to actively participate in a perpetual growing process requiring on-going critical reflection classroom practices (Larrivee, 2010).

These definitions have portrayed that reflective practice is conscious thinking to trace the uncertainties of professional practices. A process of thinking to understand the classroom practices in the light of the situation teachers have already faced. The familiar situation works as a precedent to deal with unexpected situation. Merely understanding of a practice is not a reflective practice rather it is conscious effort to search out new ways to strengthen the practice in the light of previous experiences (Schon 1983). Bolton (2010) has defined RP as under:

“Critical attention of teachers towards professional values and to find out the theories working behind their day to day actions is called reflective practice” (Bolton, 2010).

Above definitions exposed that reflective practice is profound consideration of events and examination of whole classroom scenario from as many aspects as possible. It is a process to pay critical attention to the missed details about an event not noticed during the process of teaching. Moon (2003) has defined as under:

“Ability of the teachers to take a critical stance to solve professional problems is called reflective practice. It is a process of thinking to reconsider the experience within a context of theories to find out the differences between the actual practice and expectations of the theory” (Moon, 2003).

Russell, (1999) has defined the reflective practice as under:

“Ability of the teachers to re-examine their teaching experiences in order to learn how their students responded to their teaching and searching out the new ways of teaching is called reflective practice” (Russell, 1999).

Osterman & Kottkamp, (2004) have defined as under:

“A systematic and comprehensive data-gathering process enriched by dialogue, and collaborative efforts, which enable the teachers to understand and analyze their teaching practices (Osterman & Kottkamp, 2004).

Renowned educational psychologist has defined the concept as under:

“Thinking to become aware of own professional actions to become expert is called reflective practice” (Wolfook, 2004).

Sotto, (2004) defined the concept as under:

“Ability of teachers to see their own actions in terms of their past experience and theories they already have studied is called reflective practice” (Sotto, 2004).

Similarly Brightside 2012 has defined the concept as under:

“Reflective practice is a ways of studying own practices to improve the way of practice” (Brightside, 2012).

Variety of definitions revealed that reflective practice is a critical thinking and thoughtful consideration of the experience to refine professional teaching skills.

It is concern of the teacher about the impact of his/her own actions on students.

On one hand, teacher acts as drama actor and on the other hand, play his role as a critic who sits among the audience and critically evaluate the entire performance to suggest plan for actions. Many theorists pin the learning through reflective practice with experiential learning, but there is deliberate difference between experiential learning and learning through reflection. However, professional learning through reflective practices essentially takes experience as a starting point and underpins the professional knowledge with experience (Jasper, 2003).

It is a learning strategy used to promote experiential learning and learning by doing” (Gidmnan, 2000). The term reflective practice has no single

interpretation. Many theorists have given it a particular meaning. John Dewey (1933) says:

“Reflective thinking is a systematic, deliberate and self-directed learning to improve one’s own actions”.

Majority of theorists have described that reflective practice is critical thinking to identify the gaps between theory and practice and to develop better understating of professional practices. According to Bolton, (2010) comparatively it is difficult for teachers to travel around their day to day experiences to hypothesize their false ideological impressions, social discriminations, personal variations and question their personal behaviours. But their involvement in RPs enables them to rise following questions:

1. What they think, feel, believe and understand about their role as a teacher?
2. How their actions are consistent with their beliefs?
3. What they know, but not know they know?
4. What they don’t know but want to know?
5. How they can take into account their values and personal feelings?
6. How they can change the situation? and
7. How they rate the perspective of others? When there is a difference of opinion (Bolton, 2010).

Concept of reflective practice is interpreted in different ways and normally confused with reflection, but it is neither a lonely nor a comfortable pensive process. It is challenging and demanding process which is equally successful in groups (Osterman & Kottkamp, 2004). It is a tool to explore and understand one’s own experience (Blendord, 2000; Reimers, 2003; Osterman & Kottkamp, 2004; Bentham, 2004 and Bolton 2010). The connotation of RP has developed a wide range of meanings but it always travelled around the words of thinking and action (Loughran, 2002). RP is intentional thinking to take an account of various

aspects of professional practices and to take complete liability of own actions (Farrell, 2007). The term reflective practice is the culmination of 'reflective thinking', 'reflection' and 'reflective inquiry' (Larrivee & Cooper 2006). Variety of definitions exposed that reflective practice is a continuous cycle of self-evaluation in order to understand one's own actions to refine practice and to relinquish ineffective and unproductive practices.

2.4 Reflective Practices Examples

Reflective practice is a technique of studying own actions to increase confidence as a professional. Dewey (1938) has illustrated the concept of RPs with following example. A traveler is travelling on a road in an exotic region. Suddenly road divides in to two branches, traveler is not sure which road leads towards the destination. He suffers in a state of perplexity, confusion, suspense and hesitates to decide which road leads towards destination. Traveler ponders over the situation to resolve the state of perplexity. There will be two options, trust to luck and select one road or discover grounds that he has opted the right road. If the stranger stops there and ponder over the situation and attempt to decide that opted road is right or wrong is called reflective thinking (Dewey,1938).

Dixie (2009) has illustrated another example: if a Chemistry teacher does not act upon the rules and regulations and failed to demeanor successful experiment, before he/she allowed the students to conduct the experiment. There will be disrupting learning of the concept and students will behave in an unruly fashion. This blunder may cause accident and breached the health of students as well as safety rules. Dixie called such mistakes "watershed moments" because such actions of the teacher can lead to adverse consequences. Attempt to recognize the

potential consequences of teacher own action is called reflective practice (Dixie, 2009). Dixie concept of 'watershed moments' is similar to the Schon's concept of 'swampy lowlands'. Teacher's habit to reflect on 'watershed moments' may enable them to escape their students from major disasters. Heather & Amy, (2012) has documented another example:

Officially it was the last working day for students; I was grading the students while sitting on my desk. I thought about the strengths and weakness of my work of the year of 2011 as a teacher. I noticed many gaps in my teaching practice. I could not set the class room in a better way. I reviewed my teaching habits and draw a sketch that how I would physically set my class room next year. I found that as a teacher I need to change few habits. How many times I forget to use visual aids, why I not appreciated the project of my students. I could not document the students' assignments record alphabetically. One donor gifted a camera for my classroom but I could not capture the images of many models prepared by the students. I will put the greater use of donated camera next year. I made all these notes for my reflective journal with a self-commitment to overcome all such gaps next year (Heather & Amy, 2012). Heather & Amy has quoted a practical example of reflective practices. Teacher's self-efforts to question their routine teaching practices may result in their professional development.

Sotto (2004) says that teachers learn many teaching skills through personal experience; but learning through experience is limited. Experience enables teachers to learn that water is compound of two gases, but they can't learn through experience that earth is round. Even they walk thousands years on the earth; they will experience that earth is flat. But travelling around earth will

enable them to look that there are mountains, rivers, lakes and forests on the earth. Similarly, during the process of teaching, teachers used a variety of methods, they cannot decide about their effectiveness. Reflection enables them to identify the gaps existing between the theory and practice (Sotto, 2004). Since 1987 a lot of work has been done on reflective practices.

2.5 History of the Thought

History of the thought of reflective practice starts with the saying of famous philosopher Socrates. Who once said “the unexamined life is not worth living”. Similarly Plato argued that “behind every experience there is room for interpretation”. Human life becomes worth living through the interpretation of experiences. The Socratic Method or Dialectic Approach centrally based on continued questioning (Jennifer, etal, 2006). Aristotle’s concept of “Eudemonic Well Being” for the wellbeing of the individuals. According to Aristotle the ultimate goal of human life is the realization of human potential through reflection (Ghaye, 2011). Reflective practice is a contemporary term, but since the existence of this universe man adopted RPs to find out the solutions of the knotty circumstances. Aristotle, Plato, Galileo, Newton, Confucius and Einstein all were reflective thinkers (Killen, 2003). We may say that the connotation of RPs has evolved over decades many philosophers have contributed to the body of knowledge, through carefully constructed theories, vigilantly conducted research and watchful applications.

2.5.1 John Dewey founder of the idea

Dewey was the first philosopher who attempted to make a distinction between impulsive actions, routine actions and reflective actions and introduced the concept of reflective learning. The first type of action is based on the concept of learning through trial and error, second type relied on traditional ways of learning approved by the authorities, while the third type of learning is based on self-reflection (Ryan, 2010, Ferguson 2011). During 1933 John Dewey brought into light the concept of reflective learning. According to Dewey reflection starts when professionals faced uncertain and doubtful situations. Learning through reflective practices is not a new idea; followers of Buddhism used reflective practices to search the truth (Loughran, 2002 & Farrell, 2007).

Names of John Dewey and Donald Schon are frequently cited in the literature. But there is a significant difference between the thoughts of both philosophers. The thoughts of John Dewey emerged during the era of progressivism when scientific advances were at peak and influencing education. Dewey has emphasized on scientific learning and learning through experiment. Whereas, Schon has merely emphasized on exploration of various contexts of the experience to learn professional practices (Jennifer, et al, 2006). Dewey has described reflective thinking as an ability of human to deal with unknown situations. While Schon has described reflective practice as an ability of the professionals to explore professional practices for sake of professional learning.

Since the last thirty years, literature about the role of reflective practices in professional learning is increasing. History of mankind is full of fears and uncertainties and man solved many problems through reflective practices. When Qabeel murdered Habel and was uncertain what to do with the dead body of his

brother “Habeel”. He saw a crow digging out ground to bury a dead crow and learned the art of burring. Perhaps, it was the first RP on this planet. The thought of reflective practice is highly influenced by the Greek philosophers Socrates, Plato, and Aristotle. Socrates engaged his students in dialogues and discussions. In modern times many philosophers used Socratic Method to identify the truth. Dewey’s theory of reflective thinking is discussed below.

2.5.2 Dewey’s Theory of Reflective Thinking

John Dewey has categorized human experience in to two major types; educative experiences and de-educative experiences. Reflective learning is a conscious thinking process to explore educative and de-educative experiences. Dewey argued that two words “thinking & thought” often comes to our lips. Everything that comes to our mind is called a thought. But experience differs from thought and provides solid foundations for learning (Dewey, 1910). Dewey has discussed few unique qualities of reflective thinker’s e.g open mindedness, wholeheartedness and a sense of responsibility. Dewey’s five stages model of reflection is discussed below.

2.5.3 Dewey’s Model of Reflection (1938)

During 1938 Dewey presented a five stages model of reflection. This model consists of following major steps:

1. Identification of the problem causing perplexity.
2. Observation & refinement of the identified problem to have a complete understanding.
3. Development of hypotheses by understanding the problem, looking for its origins & possible solutions.
4. Testing of hypotheses through scrutiny & reasoning.
5. Application of the understandings in to practice. (Dewey, 1938)

John Dewey's five stages model of reflective practices looks like the illustration of scientific method. Dewey's advocacy for scientific method and learning through experience is reflected in five stage model of reflection. This model looks like various steps of action research. During 1987 another American educationist Donald Schon revitalized Dewey's work.

2.5.4 Donald Schon's founder of the idea of Reflective Practices

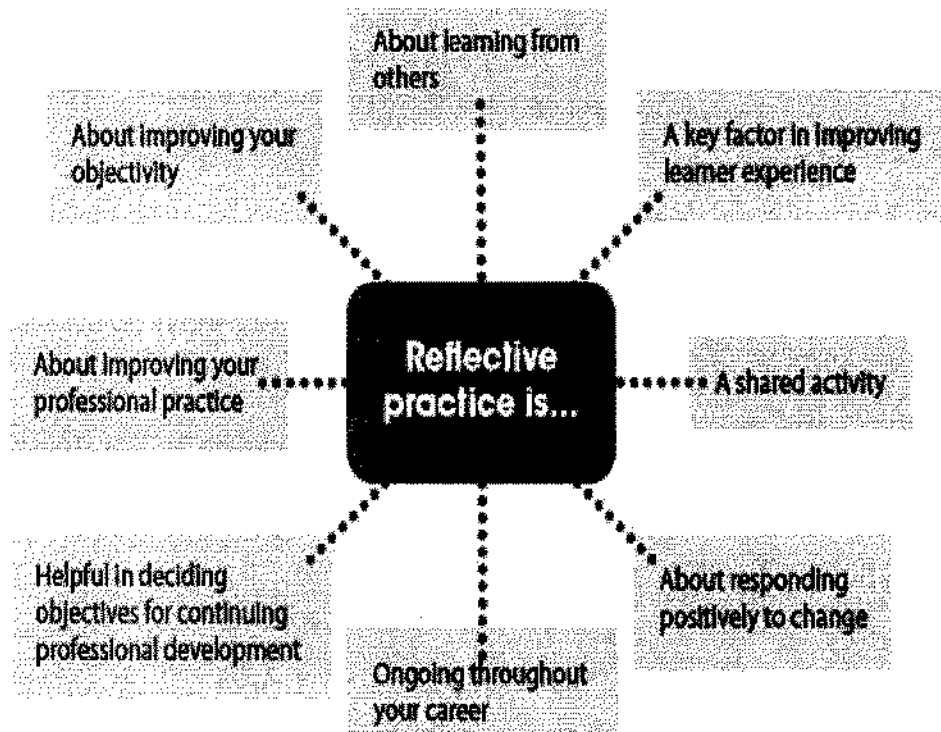
Donald Schon invigorated the work of Dewey and highlighted the importance of reflective practices in professional learning "The Reflective Practitioner" (Rodgers, 2002; Suibhne, 2009; Marzano, etal, 2012). Schon, believed that professionals not only apply professional knowledge but they generate knowledge through reflection on their professional practices. Generally, professionals know more than they can say and named it as 'knowledge in action'. Schon was keenly interested in Dewey's philosophy and pragmatist's framework. The focal point of his doctoral thesis was "Dewey's theory of inquiry". Schon's key publications include: (i) Increasing Professional Effectiveness, (ii) Organizational Learning: Theory and Practice; Displacement of Concepts; 1963, Technology and Change: The new Heraclitus; 1967. During his stay at MIT he developed his interest in process of professional learning. Schon deeply studied all the approaches to epistemology of practice and closely examined what different practitioners actually do. It was result of his focused observation that he published an influential series of books around the processes and development of professional learning. Conscientious study of the process of professional learning enables him to analyze the learning habits of various professionals. During 1987, Schon published another book titled 'Educating the Reflective Practitioners' and conferred "Theory of Reflective Professional

Development” about the process of reflection-in-action and reflection on action. Knowledge in action distinguishes skilled practitioners from unskilled practitioners.

2.6 Schon’s Theory of Reflective Learning

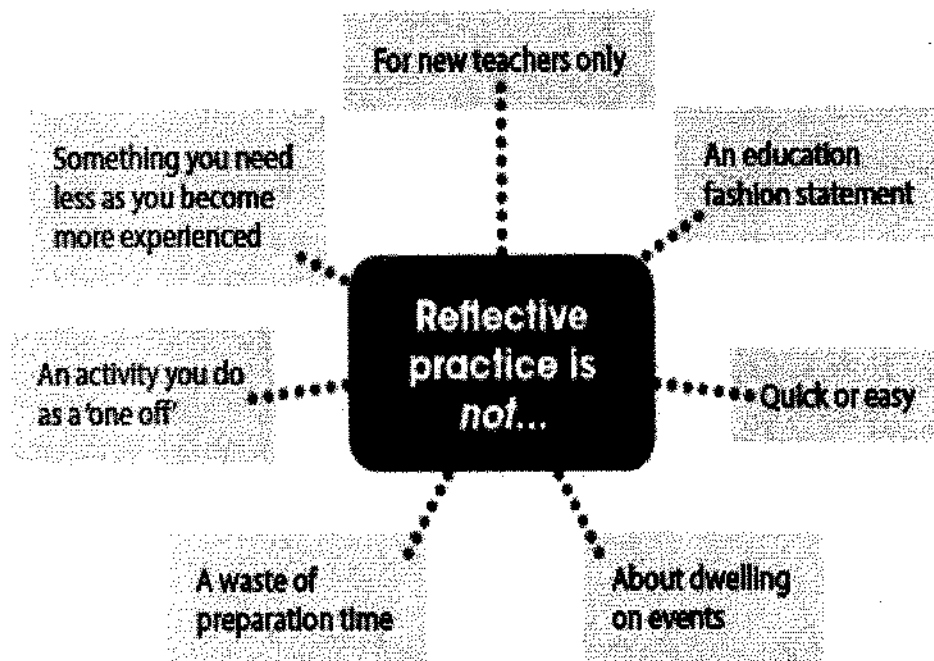
Schon was particularly interested in the investigation of professional’s ability to ‘think on feet’ and its relationship with their professional development. Schon used various unique terms e.g “the loss of the stable state” “swampy low lands” ‘reflection in action’, ‘reflection on action’, ‘single-loop and ‘double-loop learning’. Schon described that what is reflective practice and what is not in education context.

Figure 2: What is Reflective Practice



Schon (1983)

Figure 3: What is not Reflective Practice



Schon (1983)

Professionals cannot expect a stable state to spend their whole professional lives (Schon,1983). Schon claimed that there is need to understand all the transformations taking place in educational institutions. Since 1987 Schon's theory of professional development has gained momentum attention. Many philosophers have criticized the theory presented by Schon.

Schon has re-explained the Dewey's theory of reflective inquiry. Theory of systematic reflection is confusing; Schon failed to differentiate the reflective practices from other types of thought (Lyons, 2006; Carter, etal, 2009). Schon has portrayed RP as a solitary process, while it is group activity (Ghaye, 2011). It is quite difficult to criticize one's own work specifically in groups. However, self-criticism in a favorable and pleasant environment is likely to cause a greater source for professional learning (Osterman & Kottkamp, 2004). Teachers shoulder hectic velocity of work load in their daily professional lives while learning through reflective practice required conducive learning environment.

Generally, school teachers are not provided with opportunities to notice and think about what they have done? Moreover, sometime teachers put aside carefully planned lessons because of unexpected events, accidents and unusual circumstances.

Teachers can improve their practices through self-criticism but it requires courageousness and open-mindedness. They may need proper training about the usage of reflective practices in professional learning. Dewey has highlighted the importance of cooperative and collaborative environment for reflective learning, whereas, Schon emphasized upon questioning of professional beliefs and practices. Changing long-held beliefs and practices is also a difficult task. Rodgers, (2002) described that when teacher will attempt to apply reflective practices, they may face following problems: (i) How reflective thought differs from other types of thoughts? (ii) Which skills teachers need to possess to become a reflective teacher? (iii) Which examples they will follow? (iv) What result they will achieve? and (v) How RPs will affect students' learning (Rodgers 2002). Many experiential learning theorists e.g Jean Piaget and John Dewey maintained that effective learning based on experience, particularly when experience is problematic. Similarly, Schon defined problem as a puzzling situation (Osterman & Kottkamp, 2004).

Dewey is credited as founder of the concept of reflective learning. He divided human actions into two types, routine actions and reflective action. The spirit of the theory of Schon remains almost same. Regardless of name both theorists agreed that teachers reflect when they face uncertain situations and dilemmas which do not lend them to find clear solutions of classroom problems. Coping with such dilemmas require deeper understanding of the problem and some

innovative actions to search out better solutions (Larrivee & Cooper, 2006, Rayford 2010). Generally, teachers do not have enough time to stop to reflect on their teaching practices after teaching. The flow of teaching may be slowed down when teacher will stop to involve in reflection in action. Dewey has divided human actions into two major types reflective actions and routine actions. Whereas, Schon named it 'reflection in action' and 'reflection on action'.

2.6.1 Schon's Reflection in & on Action Model 1983

Schon has presented a three tier model of reflective practices. Schon has used the term "swampy lowlands" to mention professional uncertainty. When teachers face "swampy lowlands" they cope with such situations through a spiral of reflections on their actions and plan new actions. The spiral reflection is a continuous process which highlights the problems of professional practices but not offers solutions. Graphic representation of Schon's model is given below:

Figure 4: Representation of Schon's Model of Reflective Practice



Schon's Reflection in on Action Model 1983 (Schon, 1983)

Figure 5: Representation of Schon's Concept of Reflective Practice



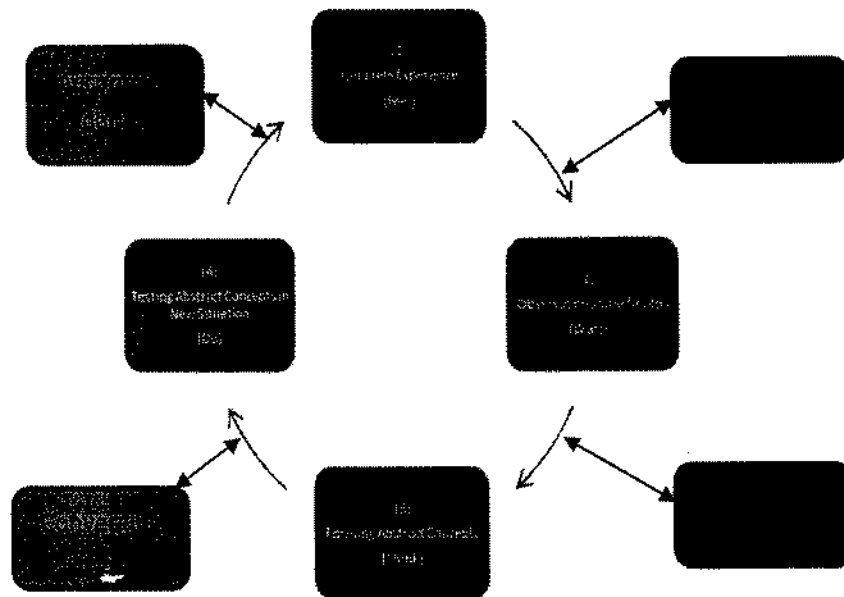
(Schon, 1983)

Since 1983 many educationists have presented models of reflective practices. Few models of reflective practices are critically discussed in coming section.

2.7 Kolb's Model (1984)

Kolb has presented another model of reflective practices. This model exposed reflective practices as cyclical process and seldom stops after one cycle is over. Kolb's model illustrates the significance and contribution of Dewey's thoughts to understand the teaching learning process (Vince, 2001). Teachers learn when they recall the event and put their observations on all the aspects of the event to develop profound understanding of the situation. Following diagram illustrates Kolb Model:

Figure 6: Kolb's Model (1984)



Kolbs Model for experiential learning (1984)

When teachers intentionally complete first cycle of reflection and noticed same results. In second cycle of reflection they observe the shortcomings of their practice and adopt a different strategy to cope with the weaknesses. In this way their same experience converts into different experiences. After four years Gibbs presented cyclical model of reflective practices, which is discussed below.

2.8 Gibbs Cyclical Model of Reflection (1988)

Gibbs model comprised of six stages (1) Description of the event (2) Feelings about the event (3) Evaluation of the event (4) Analysis of the event (5) Conclusions and finally (6) Formulation of action plan.

1) Description of the event (What happened?)

Teachers describe in detail the location, context, actions, participants, witnesses and results of the event. They describe the event by asking following questions; where he was?, who else was there?, why he was there?, what he was doing?, what were other people doing?, what was the context of the event?, what

happened?, what was his role in that particular situation?, what parts did the other people play?, and what was the result? (Gibbs,1988).

2) Feelings about the event (What did you think and feel about it?)

At second stage teacher attempt to recall and explore his/her feelings after the event e.g why does this event stick in my mind? when the event started?; what I was thinking at the time?, how did I feel?, how did other people feel?, how did I feel about the outcome of the event?, and what did I think about it now?

3) Evaluation of the event (What were the positives and negatives?)

At third stage teacher makes judgments regarding the reasons behind the event and its possible consequences and consider what was good and what was bad in the event?

4) Analysis of the event (What sense can you make of it?)

At fourth stage teacher breaks down the event into various components to analyze positive and negative aspects. Teacher may need more detailed answers e.g the sense I made of the event at that time. Why situation distress me? Was I giving full attention to my job? Was I thinking something else when potential error occurred? This stage also includes questions raised in previous stages e.g. what went well? What did he do well? What did others do well? What went wrong or did not? How it should have done? and in what ways did he or others contribute to this? (Gibbs,1988).

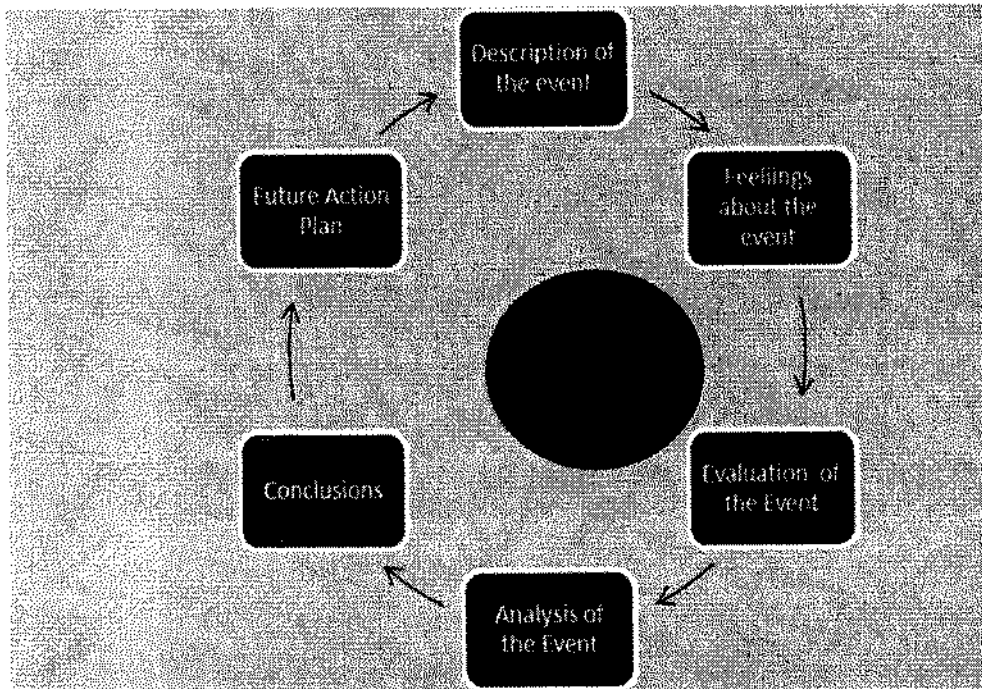
5) Conclusion (What else could you have done?)

Fifth stage differs from the evaluation stage. Now teacher explored the issue from different angles and has a lot of information to base his judgments. He is likely to develop an insight into his own and other people's behaviour in terms of how they contributed to the outcome of the event. Without detailed analysis and honest exploration that occurs during all the previous stages, it is unlikely that all aspects of the event will be taken into account and therefore, valuable opportunities for learning can be missed. During this stage teacher should ask himself what he has done differently.

6) Future action plan (What teacher will do next time?)

Lastly teachers think if they face the similar situation again what they will do? Would they act differently or do the same practice? (Gibbs,1988).

Figure 7: Illustration of Gibb's Model (1988)



Gibbs Cyclical Model of Reflection (1988)

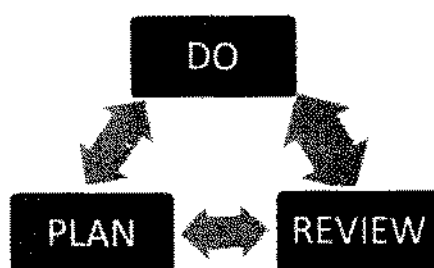
Gibbs Cyclical Model is most popular model of reflective practice. Bentham (2004) criticized that at description stage teachers can write down the details of the event to write down their feelings, grade their level of confidence, what was good and what was bad about the event, what was difficult and what was easy? But it is always difficult to evaluate the negative aspects of the event. If a lesson has gone really well then teacher knows which thing made the lesson effective. If a lesson was not effective teacher will rarely take in to account the negative aspects (Bentham, 2004). Focused attention towards negative aspects of performance may lead towards inferiority complex. Teachers need to evaluate the negative aspects of their performance along with positive aspects. Jasper (2003) says that although Gibbs Model provides a convenient framework for reflective practices but it does not provide the means for the cycle to be closed (Jasper, 2003). This model allows teachers to think and plan about occurring of

the same event again and what would to do differently next time. During 1988 Greenway developed another model which is discussed below.

2.9 Greenway (1988) Model of Reflective Practice

Greenway (1988) has presented three-step model of reflective practice. This model emphasize on experiential learning. Figure eight describes Greenway's Model:

Figure 8: Representation of Greenway's Model



Greenway (1988)

Greenways model described that teachers have the experience, review that what happened and what they learned from that experience. Lastly think out a plan that what they will do in the next time. Generally, many professionals adopt this approach to enhance their professional learning. Gibbs cyclical model (1988) consist of six stages and required time to reflect. Whereas, Greenways model consists of only three stages. If teachers have not more time Gibbs model is inadequate to reflect. Greenways model empower teachers to adopt trial and error approach to learn pedagogical skills.

2.10 Peter's DATA Model of Reflective Practice (1991)

Peter's model is generally called DATA Model of Reflective Practice which consists of following four stages:

1. Describe

2. Analyze
3. Theorize and
4. Act (Peter,1991)

1) Describe: At “describe” stage teachers describe the situation identifies the context in which current practice took place and search out the reasons to change it.

2) Analyze: Teachers identify the factors contributing to their current practices. An important part of this stage is to identify the assumptions, underlying beliefs, rules, and motives already governing their practices.

3) Theorize: Teacher theorize about alternative teaching approaches. They attempt to check the theory on which alternative teaching approach will base.

4) Act: At the fourth stage teachers’ act in accordance with newly gained knowledge (Peter,1991).

Above illustrated models put emphasis merely exploration of experience. But teachers also need to reflect upon the social and cultural beliefs of the society.

During 2000 John has introduced a novel model of reflective practice.

2.11 John’s “Ten C” model of Reflective Practice (2000)

John’s Model of RP comprised of following ten stages generally called 10 “Cs”:

- | | | |
|----|---------------|---|
| 1 | Commitment | Teachers make a commitment that they will accept responsibility of all their actions and be open to change their practices. |
| 2 | Contradiction | Note tension between their actual practices and required practices. |
| 3 | Conflict | Harness energy to take appropriate actions. |
| 4 | Challenge | Confront their typical actions, beliefs & attitudes in a non-threatening way. |
| 5 | Catharsis | Working with negative feelings. |
| 6 | Creation | They move themselves beyond old-self to novel-self by considering alternatives |
| 7 | Connection | Attempt to connect the new insights in the world of practice. |
| 8 | Caring | Realize the vitality of desirable practices. |
| 9 | Congruence | Attempt to use reflective practice as a mirror to care about practices |
| 10 | Constructing | Finally build up their own knowledge about their practices and develop themselves as reflective practitioner (Johns, 2000). |

This model narrates that commitment is first requirement to reflect on professional practices. Many other philosophers; Dewey, 1933; Zeichner & Liston 1996; and Larrivee & Cooper, 2006 have also talked about commitment.

John has explained that at the stage of “commitment” teachers take the responsibility of all their actions. While, Dewey, 1933; Zeichner & Liston 1996; and Larrivee & Cooper, 2006 have separately discussed the role of responsibility in reflective practices. Similarly Tate (2011) says that many stages of the “Ten Cs Model” e.g ‘conflict’ ‘catharsis’ and ‘congruence’ are ambiguous and challenging for novice teachers, particularly for those who have scientific educational backgrounds. Moreover, novice teachers may resist involving in reflective practices; under these circumstances the role of facilitator is very crucial to minimize the resistance (Tate, 2011). Ten “Cs” model raise certain questions about class room practices e.g which practice was well? Why it was well? What did not work well? Why did not work well? What will they differently next time?

2.12 Rolfe, Freshwater and Jasper “The What Model of Reflective Practice”

In 2001, Rolfe, Freshwater and Jasper presented “The What Model of Reflective Practice”. The model described that expert professionals are not only conscious of what they are doing but also know how they are doing it” This model has advocated raising only three simple questions to reflect on a practice or situation. What? So What? and now What?” At the first stage “What” professionals reflect to describe the situation. At the second stage “So What” they hypothesis their own personal theory to understand the situation and to learn from it. At the last stage they reflect on their actions, what can be done to improve their actions and have a concern about the consequences of their actions (Rolfe,2001). Details of this model are as under:

WHAT

Descriptive Level of RPs

What is the problem or reasons for being stuck?

What was my role in the situation?

What action did I take?

What were the consequences for me? For the students?

SO WHAT

Theory & Knowledge

Building through RPs

So What does this tell me?

Suggest about my teaching?

So What did I base my actions on?

So What should I have done?

So What is my new understanding of this event/incident?

NOW WHAT

Action orientated level of RPs.

Now What do I need to do to improve situation/ prevent recurrence?

Now What are the broader issues?

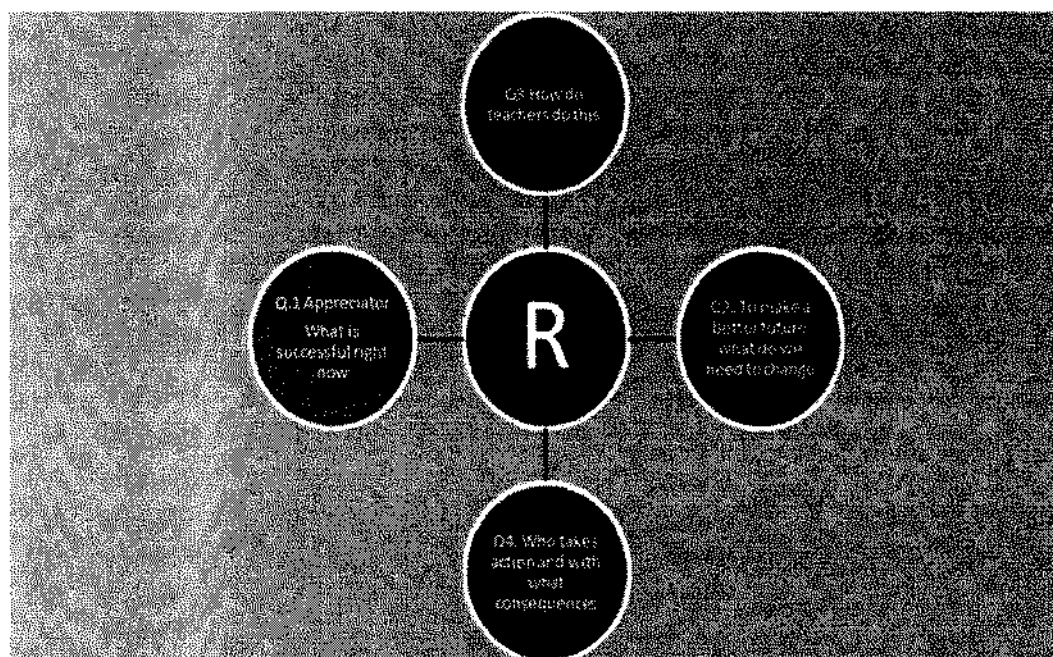
Now What are the consequences?

Now What can I do to transfer this learning from other contexts?

(Rolfe et al 2001)

2.13 Ghaye's (2008) Strength-Based Big "R" Model of Reflective Practice

During 2008, Ghaye presented another model, which is generally called "Strength Based Big R Model of Reflective Practices".

Figure 9: Representation Ghaye's (2008) Strength-Based Big "R" Model

Ghaye et al, 2008

Big "R" Strength Based Model of Reflective Practice put emphasize on four major questions to start reflection. Teachers can begin with any one of the four questions. Model reflects that Ghaye is inspired by Dewey's 1933 Model of

Appreciative Inquiry, Schon Model 1983 and Cooperrider & Whitney 2005 model of appreciative intelligence. Four major stages of the model are discussed below:

- i. **Appreciation stage:** (What is useful right now?) Teachers attempt to understand and appreciate their own strengths and practices e.g talent and gifted characteristics. They identify the responsibilities they can shoulder. They appreciate their self-knowledge, professional knowledge, self-efficacy and strength based practices and attempts to understand the strengths of their colleagues to develop a deeper understanding of their own strengths Ghaye et al (2008).
- ii. **Imagination stage:** (What do they need to change in future?) Teachers imagine how they can acquire, reframe and utilize their knowledge in a better way in future. They make an analysis of their knowledge through portfolios, narrative diaries and problem based learning assignments. They intentionally imagine which knowledge works well? Which knowledge needs to be changed? and through which ways they can get new knowledge to improve their practices in future. They consider their previous ways of working and imagine different new ways for sake of improvement Ghaye et al (2008).
- iii. **Design stage:** (How do they do this?) This stage is influenced by stage 1 and stage 2. It connects teachers' capabilities with island of innovations. They critically question the conviction laden policies and practices to design their own practices. They may require to demonstrate emotional literacy, political insight and ethical courage to design their practices. They may need to develop collective wisdom by raising some practical questions about their professional practices Ghaye et al (2008).
- iv. **Acting stage:** (Who take actions and with what consequences?) At this stage teachers know that moving forward is only one option and they need to achieve something. They decide how and when to take actions in future. Teachers also decide when they do not need to take any action. It is crucial to find out the reasons for own actions. If they failed to find out the reasons they have no way of knowing where they have come from or

how far they have travelled? Ghaye et al (2008) has suggested following questions need to be asked during the various stages of the model:

2.13.1 Individual reflective questions:

- What did I feel that I did really well?
- What possibilities are there for my improvement?
- What are my core values?
- Why did I hold these values?
- How far I am able to put these values into actions?
- How I can strengthen my own practices? (Ghaye et al, 2008)

2.13.2 Group reflective questions:

- What is the talent of the team?
- What are the achievements of the team?
- How can team play to its strengths?
- How team members can develop more strength based practices?
- What are the values of the team?
- Why team holds these values?
- How can team explore more opportunities? (Ghaye et al, 2008).

Different types of individual & group reflection questions of “Strength Based Big R Model” highlight different aspects of professional practices. Four stages of Big “R” Model are confusing, teachers rarely attempt to find out the reasons for their actions, however they can think about the possibilities for improvement. There is an old saying that practice makes a man perfect but Ghaye’s model exposed that practices does not make perfect but it makes permanent. Therefore, teachers question their correct and incorrect practices. During 2011 Marchi & Ghaye developed a model which is discussed below.

2.14: Marchi & Ghaye Appreciative Reflection & Action Model 2011

Marchi & Ghaye, (2011) model is generally called Appreciative Reflection and Action Model, consisting of following four stages:

1. **Stage-1 Appreciative intent towards knowing:** At the first stage teachers recognize their own talent and the talent of other teachers. They focus on what they are now and what they can be. They do not spotlight what isn't and can't be. First stage is about being selectively attentive to the positive and essential attitude they need to adopt (Marchi & Ghay, 2011).
2. **Stage-2. Appreciative intent towards relating:** At this stage teachers affirm the worth of their values through dialogue and good relations (interaction) with colleagues. This stage is about enhancing the relationships to care about their own growth and improvement of talent (Marchi & Ghay, 2011).
3. **Stage-3. Appreciate intent towards action:** At third stage teachers take positive actions for the betterment of self, group, organization and community. They care about social, cultural and organizational ethics to reach towards their highest potential (Marchi & Ghay, 2011).
4. **Stage-4. Appreciative intent towards organizing:** At fourth stage teachers concerned about organizing for the best individual group, social, organization and community practices from an appreciative stance. At this stage they show commitment to get better ideas for teaching, learning and team working (Marchi & Ghay, 2011).

Appreciative model of reflective practice demands commitment and trust building. Teachers should be ready to do different things and ready to do things differently (Marchi & Ghay, 2011). The model demands awareness, astuteness and alignment. The model emphasizes that group reflection may be used to learn professional skills in particular situations. All models motivate teachers to question their practices. Various models encourage teachers to raise three simple questions; what? so what?, & now what? All models add few trigger questions to facilitate teachers to develop a deeper and meaningful understanding of the situation. Reflective practices models also stimulate teachers to formulate of

action plans for future. A critical analysis of the benefits and drawbacks of RPs is given below:

2.15 BENEFITS & LIMITATIONS OF REFLECTIVE PRACTICES

There is a great debate on the benefits and drawback of RPs since 1983. According to Schon involvement of teachers in RPs provides them opportunity to systematically diagnose their socio cultural influence of their practices and deal with multifaceted problems. They modify their practices according to various scenarios (Schon, 1987). Reflective teachers can find out the rationale of their teaching practices by developing a deeper understanding about their own teaching style. Ability to question and understand of own actions results in professional growth of teachers (Ferraro, 2000: Amoh, 2011).

Reflective teachers got better awareness of their beliefs and roles which may positively contribute towards their professional development. According to Osterman & Kottkamp (2004) it is difficult for teachers to identify the gaps of their teaching practice, and particularly viewing the problems in an optimistic way is more difficult. Involvement in RPs enables teachers to have attentive attitude to find out ascertain solutions of problematic situations (Osterman & Kottkamp, 2004, Ghaye, 2011). A critical review of specific and general benefits of reflective practices is given below:

2.15.1 General Benefits

Reflection on action enables trainee teachers to examine an event from more than one perspectives and think about its occurrence. They asked them that what happened? why it happened? and what else they need to do? They become good decision makers, build up their teaching abilities and increase level of self-awareness. Reflective teachers have a concern how their teaching style affects

the learners? (Roadman 2010). Self-reflection facilitates teachers to learn: (i) How to slow down the influence of their own reasoning on their practices? (ii) Understanding of conscious ways to respond the students. (iii) Which personal beliefs influence their relations with students? And (iv) Why they showed intolerance in specific situations? (Larrivee & Cooper, 2006). Many others benefits appeared in relevant literature are summarized as under:

- Improvement in quality of teaching.
- Objective analysis of events.
- Better professional judgments.
- Identification of practices needs to be changed.
- Planning for the future actions.
- Conscious learning from the experience.
- Taking responsibility of actions.
- Identification of differences between what they say and what they actually do?
- Continuous self- assessment.
- Understanding professional practices in cultural and policy contexts.
- Improvement of communication professional skills.

Reflective teachers carefully observe their own practices and critically reflect over the framework of their responsibilities and have passion to improve teaching practices (Ferguson 2011). Reflective teachers can identify their own educational needs, cross all barriers involved in their own professional development, attempt to maintain professional standards, easily understand complex situations and can cope with work stress in a better way as compared to non-reflective teachers (Tate, 2011). Lack of time management skills and work load are two major hurdles in reflective teaching (Robson, 2002). Either explicitly or implicitly reflective teaching practices lead teachers towards moral, personal, psychological and emotional development.

2.15.2 Specific benefits

Many specific benefits of reflective practices have appeared in previous literature. Branch & Paranjape, (2002) have counted the following specific benefits of reflective practices:

1. Better understanding of own strengths and weaknesses.
 2. Identification of underlying values and beliefs.
 3. Acknowledgment of possible challenges.
 4. Understanding of possible assumptions on which teachers ideas, feelings and actions based.
 5. Reorganization of areas of potential bias or discrimination.
 6. Acknowledgement of professional fears.
 7. Identification of possible inadequacies and areas need improvement.
- (Branch & Paranjape, 2002).

Reflective teachers may get greater self-awareness about their teaching style and bring positive changes in their practices. Prospective teachers can use reflective practices as a tool to evaluate their teaching practices by raising questions e.g did the lesson really go well? which parts of the lesson were most effective? why some parts of the lesson were not effective? If they will teach the same class tomorrow what they will do differently? Moreover, they can become self-indulgent, solipsistic and self-obsessed. Reflection on professional practices will enable them not to blame others for their own shortcomings (Brockbank & McGill, 2007). Chappell, (2007) says that teaching is greatly a skill oriented, sympathetic and benevolent profession. Teachers need to build up self-confidence, curiosity and commitment. Therefore, reflective practices should be essential component of all teacher education programmes. Reflective teachers easily align their beliefs with their teaching practices, readily become self-

conscious about their actions and realize their values to open new doors for professional learning (Chappell, 2007; Pollard, 2007 & Johns, 2009).

Due to a range of contextual and situational factors teaching has become a complex and dynamic activity. No two classes respond exactly in same way. Teachers deal with learners having mingled qualities, unique characteristics and experiences. Teachers need to manage all the teaching activities within prescribed set of standards. Under such circumstances reflective practices enable teachers to concentrate on all the aspects of their teaching to overcome the shortcomings of their practice. Prospective teachers may face challenges during early days of teaching e.g lack of confidence and hesitation. Habit of reflection enables them to maximize opportunities to cope with all the challenges (Freshwater, 2003).

2.15.3 Reflection leads from deficits to strengths

Reflective teachers consider the reactions of their actions, observe teaching practices with concentration and raise following questions to travel from deficit based practices to strength based practices:

- What was going wrong?
- Which practice is less desirable?
- How to seek feedback from students and colleagues?
- How to incorporate feedback in to future practices?
- Which steps need to be taken to go in the right direction? (Ghaye, 2011).

Similarly Lateef (2005) says reflective teachers may rise following question to change the practice:-

1. How to deal with scheduled work and ad hoc work?
2. Which skills, methods or techniques they are utilizing?
3. Which skills, methods or techniques they do not utilize?
4. Which new skills they need to learn?

5. Have they reviewed the work of their colleagues?
6. Would they adopt a different approach in future? (Lateef, 2005).

Professional learning through RPs is an emerging trend. Results of the study of Roadman revealed that majority of the prospective teachers applied teacher centered approaches during early days of teaching practicum (ii) they largely focused on their actions (iii) they were anxious about their class performance (iv) usage of reflective practices empower them to adopt student centered teaching approaches (v) They were able to see how their teaching practices increased the students' academic performance (vi) Reflective practices affected their choices for presenting contents and selecting teaching strategies (vii) Teachers realized that they had broken down the material (not exposed to the students earlier) into understandable segments and (viii) Reflective teachers realized that they must be well prepared and organized because they consider that they are responsible for the learning of their students (Roadman, 2010). A critical analysis of types of reflective practices is given below:

2.16 TYPES OF REFLECTIVE PRACTICES

The connotation of RPs has gained much attention yet there is great confusion about types of RPs (Farrell, 2004; Marshall, 2008; Fathi & Behzadpour, 2011). Dewey (1933) and Schon (1983) have talked about two types of RPs. Ghaye, (2011) has divided RPs into four types: RIA, RoA, RFA and RWA. Muchinsky, (2003) has included peer observation in the list. While, Erginel (2006) has labeled that microteaching, reflective learning journals and professional portfolios are important RPs. Hativa & Goodyear have added two more types; strategic reflection and epistemic reflection. Strategic reflection is used to generalize the

knowledge, and epistemic reflection to get cognitive awareness about an event (Hative & Goodyear, 2004).

Results of the study of Peale, (2009) revealed that colleagues and peers always appreciate each other and rarely criticize professional practices, although they can provide valuable feedback to each other to change their weakness in to strengths. While results of the study of (Derya, 2008 & Tice, 2011), revealed that audio-videotaping are favorite reflective practices among teachers. It is interesting to note that various theorists have talked about various types of reflective practices. Types of RPs frequently appeared in previous research literature are critically discussed below:

2.16.1 Reflection in Action (RIA)

Reflection in Action refers 'thinking on feet', thinking about action in the midst of practice. Teachers recap the surprising, unique, puzzling and uncertain situation during lesson to reflect over the occurrence of an event (Schon 1983). The term RIA has two meaning: (i) thinking about the particular contexts of the classroom, lab or staff room and (ii) immediate thinking to take an action. RIA mainly concerned with adjustment on the spot or adjustments in the midst of action (Ghaye,2011). Schon has not mentioned the physiological elaborations and psychological realities of RIA (Russell 1989). Results of the study of Dixie (2009) revealed that mostly RIA occurs when teachers face anonymous situations. Experienced teachers do this instinctively without interrupting the proceedings. However, beginner teachers may face difficulties to involve in RIA. They become quite disturbed when things do not occur according to their plans (Dixie, 2009). Trainee teachers may have concerns about discipline and become frustrated when they encounter unexpected situations in the classroom. Thinking

about action in the midst without interrupting action to re-shape the action required training. Prospective teachers particularly need to think about their actions during the teaching practice. But it is difficult to think during teaching process, they may engage the class in activity to ponder over their actions.

2.16.2 Reflection on Action (ROA)

Reflection on Action refers thinking back on what teachers have done in order to discover deficiencies of various class room practices (Schon, 1987). It refers recapturing the details of class room actions at the end of class. Teachers find it difficult to articulate the incidents spontaneously happened during the classroom e.g their interaction with students, presentation of lesson, starting of the lesson, proper end of the class and homework assignments. It is not easier for teachers to decide about the righteousness of their own actions. Prospective teachers may write down the details or record the class proceeding to question their classroom practices. Ghaye, (2011) says that ROA is a process of selective thinking to look back at the details after the event. But it is unwise and un-healthy to reflect on everything (Ghaye, 2011). ROA required conscious documentation of details about the event individually or in groups, while, RIA is an individual activity. ROA may take place through reflective discussions with colleagues or by keeping reflective diaries.

2.16.2.1 ROA potential benefits

Reflection on Action (ROA) is conscious reply of the teachers to event to identify the strengths and weaknesses of the knowledge applied during teaching. According to Ghaye, (2011) potential benefits of ROA include: (i) deeper understanding of own teaching practices (ii) greater awareness about professional abilities and disabilities and (iii) improvement in lesson planning &

grading skills. But teachers may forget some details to involve in ROA, if they successfully recall all the details they may raise erroneous questions (Ghaye, 2011). Objective interpretation of own actions is another issue. Teachers can compare the results of their self-evaluation with the results presented by outside observers. Recording of the event is more effective to reflect upon actions. Objective visualization of the event is more fruitful when emotional influence of the event has been lessened.

2.16.3 Reflection for Action

Reflection for Action (RFA) is also called Prospective Reflection. Ghaye (2011) has named it Anticipatory Reflective Practice. RFA is planning to improve the performance in future or conscious thinking to improve practice in future. It may take place individually or in groups (Ghaye, 2011). Lesson Study is a good example of RFA, where teachers look at probable situations and think what they could do to improve their teaching in future. Reflection for action is understandings of own skills to perform an action. Thinking about own skills and options to make decisions and to perform in a particular situation is called reflection for action. Ghaye, (2011) explained that Schon has talked about only two types; 'reflection in action' and 'reflection on action' but there are many other types of reflective practices. Teachers applied various reflective practices to make a sense of the events occurred in class rooms.

Generally, beginner teachers involve in 'reflection for action' when they think which actions they will take during teaching process while experienced teachers involve in 'reflection in action' and 'reflection on action'(Ghaye, 2011). Reflective practice is not merely undertaken to think about the past but to guide future actions as well (Larrivee & Cooper 2006). Reflection for action has

certain limitations, often it required team work. Human beings naturally replicate and evaluate their past actions instead of future actions. Teachers may talk about the techniques really works well in the staff room during breaks. Reflection with action may enable teachers to analyze why and how they will use a strategy. Therefore, they may consider many approaches before taking an action in the class rooms.

RFA is a form of self-dialogue focusing on the deep examination of own beliefs, assumptions, values, expectations and cultural conditions which may have an impact on the learners. According to Larrivee & Cooper, 2006 teachers hold firmly holds some beliefs and values which are tagged with their professional behaviour and steer their classroom performance. Professional beliefs guides them that which actions they will always take and which actions they will never take (Larrivee & Cooper, 2006). Classroom behaviour of teachers is fixated by their beliefs about students willingness to learn and teacher's own professional values. Beliefs of teachers create a lens through which they view the world. Self-reflection enables teachers to understand, criticize their beliefs and modify their practices. RFA promotes self-accountability, responsibility and moral commitment among teachers to perform in class (Farrell, 2008, Tice, 2011). Reflective teachers reflect over the possible reasons of their actions beforehand.

2.16.4 Mentoring

Mentoring refers to a process of teachers training. During the process of mentoring a professional trained companion (mentor) having more professional experience criticizes the work of a junior colleague (mentee) and put practical example before him/her for sake of professional learning. Mentoring programmes aimed to foster the professional and personal growth of junior

teachers by providing them up-to-date professional information. Mentee works in partnership with mentor to improve his teaching skills and to develop insight to solve professional problems. Mentor is an older and experienced teacher who guides the novice teachers during the initial years of career (Muchinsky, 2003). Blandford, (2000) says that identification of the professional and social training needs of a new appointee is challenging task. Few external factors e.g availability of accommodation, transport and access to sources may affect the mentoring process. Moreover, collaboration between senior and junior teachers naturally looks difficult. Therefore, strong planning is required to allot a mentor to a newly appointed teacher. Free mixing of seniors and juniors teachers in seminars may enable mentors to identify the training need of the mentees (Blandford, 2000). Experienced teachers may informally negotiate with junior teachers to identify their training need. Furthermore, mentoring relationship highly depends upon willingness of mentee to learn professional practices. If mentee does not intend to seek help, mentoring relationship will be useless. Learning mentors are rarely deputed by the teacher training institutions or by the laboratory schools. Prospective teachers can improve their teaching skills by seeking volunteer feedback from peers.

2.16.6 Video-Audiotaping

Videotaping is an easy and favorite technique to monitor own performance. Videotaping and peer observation are commonly used reflective practices among prospective teachers (Derya, (2008) Teachers can see how they started the lesson, how treated to the students and how they respond to students questions? Video-Audiotaping may prove more fruitful for prospective teachers enabling them to watch how he/she was teaching, how many students were chatting or

note passing during the lesson? So, Video-Audiotaping not only facilitates teachers to evaluate their own practices but also watch the practices of their students e.g how many students were not taking interest in lesson? How many students were facing difficulty to grasp the concepts? How their students were involved in lesson? Results of the study of Derya, (2008) revealed that videotaping is favorite self-evaluation strategy among prospective teachers but often teachers not evaluate the recordings. They can prepare a checklist to evaluate their own practices (Derya, 2008). Recording of lesson proceedings may provide valuable information to the prospective teachers to reflect on their class room practices. They can see the things happening in their class during the process of teaching but they were not aware (Tice, (2011). But normally teachers not see the recorded video with a different angle. Benefits and drawback of video-audiotaping are critically discussed below.

2.16.6.1 Benefits and limitations of Video-Audiotaping

Tice, (2011) has talked about the following benefits and drawback of video-audiotaping:

- Teachers can re-consider various aspects of their teaching e.g how much they talked?
- How they asked questions from students?
- And how they taught the contents?
- To what extent their instructions and explanations were clear to the learners?
- How much time they give out to their students for class participation and to raise questions and how did they respond to students' questions?
- Video recording expose various aspects teacher and student class room behaviour (Tice, 2011).

Teachers can observe their own movements, velocity of their voice in the classroom. Anonymity is a major concern of Audio-video taping. Teachers may

communicate the purpose of recording to their students. Audio-video recording is quite easy as compared to preparation of teaching logs and portfolios.

2.17 Student Professional Growth Portfolios

Portfolios contain the record of teaching related activities. Carefully developed portfolios serve as a tool to evaluate own teaching practices and contain authentic knowledge about achievements and failures of prospective teachers. Professional portfolios may indicate which lessons teachers need to learn (Chye, 2008). Portfolio is not a scrap book or merely a picture album rather it is a complete record of lesson planning and other necessary documents (Priest, 2010). Erginel, (2006) says that reflective journals and portfolios are better reflective practices. Portfolios are living documents, teachers may use Microsoft word and computer related technologies to develop and maintain digital portfolios. Prospective teachers may show reluctant behaviours to maintain portfolios in digital age.

2.18 Colleagues feedback

Generally, teachers share their class room experiences and problems with colleagues to seek advice or appreciation. Muskinsky (2003) has divided colleagues into following categories.

- **Information colleagues:** A colleague with whom we can only exchange information about our work.
- **Collegial colleagues:** A colleague with whom we have a moderate level of trust. We share self-disclosure to seek their emotional support and intimate discussions with them.
- **Special colleagues:** Special colleagues enjoy ideal relations with each other. They share all types of information in an informal way. Even they share personal dilemmas with-out any type of hesitation (Muchinsky, 2003).

Peale, (2009) says that colleagues and peers can provide valuable feedback to change the weakness in to strengths. But regretfully peers always appreciate each other and rarely criticize professional practices of each other. Peale has mentioned following rules to seek feedback from colleagues:

1. Before providing feedback teachers should have clear objectives.
2. Objectives should be made known to each other.
3. Prospective teachers can mutually decide the source of feed-back e.g online or in person.
4. They should have good working relationship with each other.
5. Feedback provider should be clear about the purpose of feedback.
6. Feedback seeker should view the feedback from different angles.
7. They should consider nature of mutual relationship before they seek feedback.
8. They should seek feedback only about professional matters.
9. Feedback provider should consider the job performance and personality of the feedback seeker separately (Peale, 2009).

Results of the study of Hajira & Shamsa (2012) revealed that university teachers get feedback from colleagues and attempt to learn from one another. They were fully motivated to collaborate with their colleagues and they want to have good relations with one another (Hajira & Shamsa 2012). Teachers rarely consider the professional feedback and personality of a colleague separately. Seeking feedback from junior colleagues may cause inferiority complexes. Collegial relationships and team work spirit may suffer due to continuous negative feedback. Masculinity factor may encompass in colleagues feedback and peer observation (Muchinsky, 2003). Moreover, colleagues may furnish biased comments. Teachers can find enormous developmental possibilities through collegial feedback culture.

2.19 Peer observation

Importance of peer observation can-not be overlooked in professional development of prospective teachers. Keeping all the classroom related matter confidential is a major barrier in establishing a peer observation culture in educational institutions (Spiller, 2011). Prospective teachers may prepare a schedule to observe the kind of material being taught, time management skills or interaction with students. They may decide in advance, what to observe and prepare observation schedules, goals, procedures and instruments to be used before starting observation. The teacher being observed would allow the observers to visit his/her class any time, meet the students after the class or meet with the parents. Anonymity is most important factor in peer observation. Besides colleagues feedback and peer observation, students feedback is another reflective practice.

2.20 Students' Feedback

Individual or collective students' feedback liberates teachers to make greater efforts to improve their teaching practices. Teachers may invite precise and useful feedback from their students to change the deficits of their practices in to the strengths. Junior grade students cannot discriminate between effective and ineffective teaching behaviours. However, senior grade students' feedback can be used as an instrument to evaluate teacher's performance. Students' feedback is an important reflective practice but it is difficult to measure the reliability and validity of the feedback (Peterson, 2000; Ghaye, 2011; Burniske & Meibaum, 2012). Generally, senior students demonstrate respect to their teachers and hesitate to pass any type of comments on their teacher's work. At school level, there is trend to grade teacher's performance on the basis of students' evaluation reports and evaluation reports.

Teachers can design various types of sheets to seek feedback from students. They can distribute small sheets in the beginning of class and collect back at the end. Students can be asked to fill out the feedback sheets in spare time. To peep in to the ideas of the learners they can be asked to furnish a comprehensive report at the end of semester. In Pakistan feedback sheets are used only at university level. But regrettably students' comments are not conveyed to the teachers. However, adverse commentary is confidentially reflected in the teacher's ACRs. Comments of the students should be necessarily conveyed to the teachers to enable them to amend their routines in future. Public sector schools seldom use feedback sheets. Teachers can reframe and change their practices in light of comments of majority of the students. Some benefits and drawbacks of students' feedback are discussed below.

2.20.1 Students' feedback benefits and limitations

Results of the study of Burniske, & Meibaum, (2012) indicate following benefits and limitations of students' feedback:

- a) Students are the direct recipients of instructions and extensively contact with their teachers on daily basis. Various demographics variables e.g socioeconomic status, age writing competencies directly affect students to furnish their feedback.
- b) Results of students' feedback may be misinterpreted or misused and cannot be used as a single reliable instrument for rating the teacher's performance. The correlation between students' results and rating remained widely inconsistent.
- c) Proper usage of students' feedback may enable teacher to improve their teaching and learning environment (Burniske, & Meibaum, 2012).

Student from same class may rate one teacher as good, average, effective or excellent. On the other hand students of another class will grade the same teacher

as an ideal teacher (Ferguson, 2010). Generally, students do not have knowledge about teaching strategies, standards, classroom management techniques, curriculum and do not understand responsibilities of their teachers. Elementary level students cannot discriminate between effective and ineffective methods of teaching (Worrell & Kuterbach, 2001; Goe et al., 2008). The earliest age by which learners can effectively rate their teachers is unresolved. Moreover, while furnishing feedback students may copy each other's comments.

Results of the study of Hajira & Shamsa revealed that university teachers made their self-evaluation after receiving the feedback from their students. University teachers attempt to understand the problems of their students and attempt to have good relations with their students (Hajira & Shamsa 2012). Students are the best source to furnish feedback; teachers may invite verbal or written feedback from their students. Moreover, teachers may seek feedback on a particular aspect of their teaching e.g on preparation or presentation skills. Review of literature exposed student learning journals as another form of reflective practices.

2.21 Reflective Learning Journals (RLJs)

RLJs provide a forum to the prospective teachers to record their experiences and feelings on periodical basis (Derya, 2008). Moon, (2003) has described the following modes of RLJs:

- a). Daily diary writing
- b) Autobiographical writings
- c) Recording of teachers responses
- d) Writings sessions at the end of training programme
- e) Professional development profiles (Moon (2003).

Usually a student learning journal works as a vehicle for reflection. Students learning journals focused on intentional learning whereas, research journals

exposed results of research studies (Moon, 2003). Reflective journals are also called learning logs. Teachers may record their observations and responses to various situations for RLJs. While writing diaries, many teachers do not write down the details of their responses along with reference materials e.g images, drawings. Publication of journal articles is a major trend among university academicians in Pakistan. But RLJs is not a popular trend among school teachers. Teachers may publish the results of action research. Few benefits of RLPs are discussed below:

2.21.1 Benefits of Reflective Journals

Moon (2003) has described the following benefits of RLJs:

1. Recording habit of own practices promote critical thinking and meta-cognition abilities among teachers.
2. Facilitates teachers to learn from experience of other teachers.
3. Published stories accelerate learning of teaching.
4. Teachers can improve their questioning skills.
5. Teachers can actively involve them in professional learning.
6. Enhance problem solving skills of teachers.
7. Motivate teachers for self-empowerment.
8. Teachers can modify their behaviour as professionals.
9. Teachers can improve their communication and interaction skills. And
10. RLJs promote action research among teachers (Moon,2003).

Teachers may avoid to pen down their unpleasant experiences. Speculation of event and honesty will be required to write down the details. According to Derya, (2008) journal keeping required self-evaluation and accurate rating but usually teachers not exactly rate their own teaching behaviors (Derya, 2008). Similarly, Hoekstra, et al. (2007) says that teachers need to rise following ten questions, whenever, they write for RLJs:

1. Which type of situation was prevailing?
2. How teacher did perceive that situation?
3. What teacher was expecting in that situation?
4. What did teacher think in the situation?
5. What were students doing?
6. Why students were doing so?
7. What was teacher doing?
8. What went well and wrong? (Hoekstra, et al, 2007)

Generally, teachers are not provided with opportunities to write for RLJs. Moreover, RLJs keeping not exists as a trend in our schools. Lateef, (2005) has mentioned following sources for reflective learning:

1. Reflective learning journals of logs
2. Reflective portfolios
3. Reflection on work experiences
4. Peer observation
5. Self-assessment and
6. Personal counseling for development at work. (Lateef, 2005).

2.22 Reflective diaries

Diary writing is a very common RP. But there is a deliberate difference between diaries and reflective diaries. Mostly teachers write diaries for personal use. According to Robson (2002) teachers may write diaries to record critical incidents occurred in classroom, personal thoughts perceptions and feelings about the events, their point of views on a particular issue. They may use such details to initiate RPs and action research (Robson, 2002). According to British Council report (2004) teachers may write objectives of the lesson, Expected Learning Outcomes, what was most difficult in lesson and what was most easy. Moreover, they may write the nature of problems (if any) their students faced during teaching learning process, new concepts learned from the lesson, types of

material students used to complete assigned activities, name of students who completed assignments, name of students who could not complete assignments, which parts of the lesson students enjoyed most and why? which part of the lesson was boring and why? Teachers efforts to create conducive learning environment and how they ensured students participation in the class? (British Council, 2004). Diary writing provides a chance to teachers to pen down all necessary details to reflect over their own feelings, reactions and observations. Completion of diaries on regular basis requires mammoth of time but busy schedule not allow them to complete diaries. Therefore, diary writing becomes a challenging job for teachers. They may be provided proper training and time to complete diaries. Robson, (2002) has documented the following advantages and disadvantages of writing diaries:

2.22.1 Advantages and limitations of diary writing:

Systematic recording of all the events occurred in the classroom and school is a difficult task, but diary writing reduced the risk of forgetting. Regular diary writing may provide a base for action research on striking events. Diary writing may provide a chance to teachers to monitor their personal thoughts, views, perceptions and feelings. However, lack of commitment and anonymity of the record are general limitations of diary writing. Diaries reflect individual thoughts of teachers therefore, teachers write down hints and avoid writing down details about events. According to Robson (2002) teachers do not complete diaries on regular basis. Teacher's diaries can be used for research purpose but results of such studies cannot be generalized (Robson, 2002). Moon, (2003) says that trend of reflective journals and reflective diaries is escalating but purpose of both is same. Diary writing helps teachers to integrate the learning material with

learning objectives. Moreover, they can learn the details about different modules and theories of teaching (Moon, 2003).

Hajira & Shamsa (2012) studied the current situation of reflective practices at higher education level in Pakistan. Results of the study revealed that university academicians considered that diary writing helps them in instructional process. They can keep and manage the record of students in a better way. But sometime they considered that diary writing is a time consuming process (Hajira & Shamsa 2012). Teaching load and shouldering of administrative duties rarely allow teachers to record minute details in diaries. Personal priorities of teachers are another factor in diary writing. Teachers adopt many types of reflective practices to reflect on educational theories, goals, and underlying approaches to find out a connection between their theoretical beliefs and practices. They can reflect on ethical, social and organizational contexts of their professional practice through various types of reflective practices.

2.23 Contexts of reflective practices

When routine actions do not meet the professional needs of teachers, they get awareness and make new decisions in accordance with contexts they are surrounded. They reflect on their teaching practice in various educational and social contexts to solve the problems associated with their practice. Many philosophers have mentioned following contexts for reflection in teaching learning process:

2.23.1 Subject matter context:

During the 21st century the major emphasis of teachers training programme is upon disciplinary knowledge. This orientation to teacher education have emphasized upon the role of teachers as subject specialists. Teachers may need

to reflect upon their understanding about subject matter to promote their understanding and to know their strengths and weaknesses about the subject matter (Soler, et al 2001). Subject matter context of reflective teaching emphasized upon better understanding of the subject through reflection. Teachers need to understand to what extent their own understanding are clear about the subject matter and how their own understanding affects the learning of their students.

2.23.2 Social efficiency context:

Teachers understand to what extent their adopted teaching strategies are suitable in the specific social settings. In this regard, they can consider the recommendations and suggestions made by the experts, philosophers and researchers. Social efficiency context of reflective practice enable teachers to take into account that which are desired competencies and skills to survive in that society? (Zeicher & Liston, 1996). The social efficiency context of reflective teaching stressed that teachers should use specific teaching strategies suggested by the researchers for that community. They reflect upon the application of teaching strategies and teaching methods to know its social effects on students.

2.23.3 Students development context:

Students' development context is the most sensitive aspect of reflective teaching. Teachers reflect upon developmental context of their students to know about the thinking patterns and interests of the students (Zeicher & Liston, 1990a). Perrone (1989) has mentioned three central descriptions associated with the developmental context of reflective practices (i) teacher as naturalist (ii) teacher as researcher and (iii) teacher as artist. 'Teacher as a naturalist' emphasized upon the importance of skills to prepare curriculum and teach according to patterns of

students' development (Perrone, 1989). The concept of teacher as a researcher emphasized upon the need to adopt experimental attitude towards own practices. While the third concept 'teacher as artist' emphasized upon the need that teachers should play their role to enable the student to become creative and fully functioning persons. Students' developmental context focused on the learning, development and understanding of the students.

2.23.4 Social reconstruction context:

Social reconstruction context emphasized upon the need that teachers should reflect upon the social and political contexts of the society. Their professional practices should contribute towards sustain social justice and equity in the society. Zinchner & Liston (2013) has talked about following contexts: To what extent their teaching matches with prevailing political context? and to what extent their class-room practices contribute to improve human conditions in society (Zeicher & Liston, 2013). Soler, et al (2001) have suggested following three contexts of reflective practices (i) content knowledge context (ii) Pedagogical knowledge context and (iii) Curricular knowledge context (Soler, et al, 2001). Social reconstruction context of reflective teaching motivates teachers to focus their attention to the inwardly and outwardly practices of the society. In other words teachers should teach according the social conditions of the society. Moreover, teachers also need to reflect upon the social conditions, general believes of that society eg equality, social justice or gender discrimination. Ghaye & Lillyman (2006) have stated following contexts of reflective practices:

1. Competency Based Perspective (CBP): Involvement of teachers in reflective practices to develop a particular professional skill.

2. **Personality Perspective (PP):** Teachers should reflect upon their practices that to what extent they are teaching to develop the personality of their students.
3. **Experiential Perspective (EP):** Teachers should reflect upon their practices that to what extent their own experiences differ from other teachers. Teachers travel around the professional experiences of their colleagues. They should have enough ingenuousness to learn from the experience of their colleagues.
4. **Transformatory Perspective (TP):** Teachers asked difficult questions to challenge their status quo and try to remove the barriers involved in their professional development (Ghaye & Lillyman, 2006).

The ultimate objective of reflective practices is development of professional skills. Dewey and Schon stressed upon the exploration of experience through self-reflection. But Ghay and Lillyman focused on the exploration of the experience of other teachers. Exploration of experience of senior colleagues and peers is possible through reflective learning journals. Understanding of experience not improves practice until teachers become well aware about the barrier involve in their professional development. Teachers never perform their duties in isolation. As professionals, they perform in different contexts which influence their practice. They may reflect about various contextual elements influencing their practices e.g educational plans, policies, culture, customs and traditions etc. They may reflect upon their personal manners, positions, professional targets and performance targets or other such factors influencing their practices.

2.24 Action research

Many philosophers consider that action research is a reflective practices to solve professional problems of teachers (Hitiva & Goodyear, 2004 & Pollard, 2008).

Hall, (1997) reflective teaching practice and reflective practice are synonymous

concepts to solve practical problems. Teachers can systematically study their actions and the effects of their actions on learning of their students through action research. Teachers collect data about their actions and analyze it to study the effects of their actions on their student in a classroom context (Derya, 2008). Hativa & Goodyear have mentioned two types of reflective practices, strategic reflection and epistemic reflection. Strategic reflection is used to generalize the knowledge and epistemic reflection to get cognitive awareness about an event. Epistemic reflection focused to improve the actions of teachers in a particular situation (Hative & Goodyear, 2004). TTIs may launch professional development programmes focusing on action research. Regrettably, TTIs ignore the vitality of action research to understand the classroom problems. Teaching Learning Academy (TLA) of General Teaching Council (GTC), United Kingdom see action research as crucial source for professional development of teachers. GTC provides scholarships to the teachers to carry out detailed action research on a specified range of issues related to the teaching learning process. In addition GTC has set a tradition to publish a summary of the experiences of senior teachers. GTC, has established an institution namely ARRT “Access to Research Resources for Teachers” which is an open research repository to promote action research in Northern Ireland (Pollard 2008). Similarly we may set a tradition to award scholarships to school teachers to carry out action researches. Results of such researches may be published carefully for professional learning of prospective teachers.

2.25. Steps in Reflective Practice

Reflective practice is an intentional thoughtful activity to explore experience. In this regard teachers consciously go through various stages to explore their

experiences to have a clear understanding of the event. Jasper (2003a) has mentioned following steps of reflective teaching:

1. Selection of an experience
2. Observation and explanation
3. Analysis of the experience.
4. Interpretation
5. Discovering alternatives.
6. Outlining actions.

Sr.	Steps	Description
1	Identification of the scenario	<ol style="list-style-type: none"> 1. Observation of lesson 2. Scenarios out the class room 3. Interaction with students 4. Interaction with parents 5. Interaction with colleagues
2	Apparent consequences of the behaviour	<ol style="list-style-type: none"> 1. Identification of the consequences 2. Identification of the watershed moments 3. Reorganization of the emotional consequences of actions 4. Identification of the feelings associated with an event e.g. happiness, disappointment, angry, self-awareness or disappointment
3	Setting targets for professional practices	<ol style="list-style-type: none"> 1. Targets selection 2. How they will change their practices? 3. Which strategies they will apply?
4	Making overt references for professional standards	<ol style="list-style-type: none"> 1. Lesson planning according to students learning style 2. Dealing with non-confrontational situations. 3. Adopting proactive attitude in seeking advice and guidance from senior colleagues (Dixie, 2009).

Generally, teachers tend to get credit for their right actions and attempt to stay away from events which make them un-comfortable. In contrast reflective teachers select painful and pleasant experiences for reflection. Reflective teachers observe all the details of an event analyze and discover alternatives to modify their professional behavior in future (Jasper, 2003a). Psychologically it is difficult for teachers to recall painful events and reflect on their failures. Beginner teachers specially may avoid to blame themselves. They may need

encouragement and motivation to select a painful experience for reflection.

Dixie, (2009) has elaborated the process of reflective practice as under:

Table 11: Process of reflective practice

Reflective teaching process involves looking back the teaching process to determine what teachers have achieved and what they failed to achieve (Ghaye, 2011). Reflective teaching process involves teachers to re-consider, analyze, explain and inform themselves about their practices. They establish a relationship between past concrete experiences with the present experience to resolve professional uncertainties and make a clear understanding of their own practices. Reflective teachers develop a comprehensive understanding of their own practices and link up theories with practice (Jasper, 2003). Bound et al (1998) has mentioned following three stages of reflective teaching:

Stage 1: Returning to experience:	Stage 2: Attending the feelings:	Stage 3 Description of the experience:
Replaying the experience to identify emotional reactions	Getting awareness about feelings and emotions associated with the experience	As clear as possible chronological description of the events
Identifying the salient features of the event/experience	Retaining positive emotions and feeling	Description of the event without making judgments and interpretations
Identifying the reaction towards all the elements of the event to note down the feelings	Recognizing and removing the negative emotions and feelings which may place a barrier in professional learning	Making judgments and interpretations of the event tend to blind teachers towards some necessary features of the event
Observing positive and negative feelings about the experience during event and after the event	Failure to noting the positive and negative feeling about the experience undermined the value of reflective practices	Mere recalling of the event without its description may lead towards false perceptions

(Boud et al, 1998)

Often teachers asked to their students “what they were doing” & “how they were doing” and advise students “think before they speak” and to pay attention to their work. Reflective teachers ask same questions from them. They have concern about their words, actions and the reactions of their actions. Cartel, etal (2009) have described the following steps to involve in reflective practices:

1. **Knowing yourself:** Reflective teachers attempt to understand their own self. Why few activities of their students delight them? How their beliefs and values influence their current practices? And how they respond to their feelings?
2. **Seeing teaching in students perspectives:** About which things students are excited? What they are trying to accomplish? Which ideas children intend to explore?
3. **Evaluating physical, social and emotional environment:** How do teaching learning schedules and routines influence learning experience of children? How do routines, schedules and materials support or bound the children’s play?
5. **Exploring multiple points of views:** Teachers attempt to know how family background and culture might influence students learning? What questions they could ask from the learner’s family?
6. **Searching out opportunities for future actions:** Finally teachers consider which values, philosophy, and desired outcomes do they want to influence their responses in future? Which type of vocabulary, material and activities they need to strengthen their practice in future (Cartel, etal (2009).

Busy schedules rarely allow them to recapture the details and see their teaching practices in students perspectives (Zeichner & Liston 1996; Farrell, 2004; Larrivee & Cooper, 2006). Reflective practices based on foreseeing consequences and seeking alternatives. Reflective teachers compare and contrast their own teaching practices with other teachers (Roth, 1989). However, students’ feedback can bequeath appropriateness and effectiveness of teaching

methodology. Narrow mindedness and rigidity are major barriers in searching out new opportunities for professional learning. Many philosophers have talked about pre-requisite qualities of reflective teachers. During the teaching process teachers perform hundreds of activities and take thousands of actions. Which actions and activities of teachers required reflection is a sturdy question? Pollard, (2005) has mentioned following activities which required reflection during the teaching process:

1. Aims of education documented by the state.
2. Professional competencies of teachers set by the state and institution.
3. Teacher's aims for students learning.
4. Who is best teacher in students' perceptions and why?
5. Relationship between home, playground and classroom and how it affects students learning?
6. Which type of feelings students' have about the school?
7. Teacher's own priorities and tasks.
8. Identification of the needs of the learners.
9. Identification of overt and covert tactics to control students.
10. Environment of the classroom.
11. Fair ways of acting in the classroom.
12. Feelings of students about curricular activities.
13. Uses and abuses of intelligence.
14. Influences of society and culture on learning of students.
15. Factors influencing learner's engagement in learning.
16. Exercises and activities students completed in classroom.
17. Understanding national curriculum and.
18. Knowledge about subject matter (Pollard, 2005).

Jasper, (2003a) has mentioned following events to start reflective practice:

- a. Practices which have gone well.
- b. Practices which have gone wrong.
- c. Achievements which made them happy.

- d. Things which make them un-comfortable.
- e. Any part of the event which made them sad.
- f. Observations and comments made by the experts on their practices.
- g. Nature of their relations with colleagues and.
- h. Nature of their relations with students (Jasper, 2003a)

Pollard has attempted to count many routine actions of teachers to start reflective practice, but has not included the relationship of teacher with colleagues, students and parents. Teachers can understand students' capacity and inclination to understand the knowledge through reflective practices. However, it is difficult for teachers to evaluate learner's day to day curricular experiences to start reflective practices. Next part of the review deals with professional identities of reflective teachers. Teachers cannot expect different results until they do not change their practices. Reflective teachers are thoughtful and attentive to their practices to recognize the uncertainties of their practices. They critically look back at their class room practices and incidents occurred in the classroom to learn how to embark upon a similar situation in the class room in future (Moon 2000, Ferguson, 2011). Teachers may consider how they can improve their practices to get a rid of from bad practices and to get better results from their practices. Characteristics of reflective teachers appeared in relevant literature is discussed below.

2.26 Characteristics of Reflective Teachers

Reflective teachers critically evaluate their practices and attempt to learn professional skills from routine experiences. Many philosophers have talked about three major characteristics of reflective teachers; (i) responsibility (ii) open mindedness and (iii) wholeheartedness (Dewey, 1938; Schon, 1987; & Stanly, 1998). Open-mindedness and wholeheartedness are essentially required to take

the responsibility of actions (McGregor & Cartwright, 2011). Reflective teachers continuously evaluate their experiences in a deliberate way to make it meaningful. They examine their professional beliefs, values, actions and assumptions. Carter, et al, (2009) has mentioned the following pre-requisite qualities to become a reflective teacher:

1. Taking notes of the important events to reflect what went wrong?
2. Taking colleagues and students feedback.
3. Thinking about the reactions of actions beforehand.
4. Understanding student's behaviours through action research.
5. Reading more professional literature to understand the learners.
6. Sharing of notes and learning material with students.
7. Exploration of opportunities for learning (Carter, et al, 2009).

Reflective teachers actively consider the consequences of their professional actions and take the responsibility of their actions. Dewey, 1933; Zeichner & Liston 1996; Farrell, 2004; and Larrivee & Cooper, 2006 have talked about following characteristics:

2.26.1 Open mindedness

Open mindedness is pre-requisite characteristic to deviate from routine actions, to identify and acknowledge professional mistakes (Dewey, 1933). Open mindedness empower teachers to attentively listen the viewpoints of students, colleagues and parents. Absence of open mindedness may lead teachers to blame the institution or students for professional mistakes (Zeichner & Liston 1996; Larrivee & Cooper, 2006) Bolton, (2010) says that if 90% students of a reflective teacher fail in a test. The teacher will not blame the students, rather he/she will reflect that weather learning material was difficult and will question the

appropriateness of teaching method (Bolton, 2010). Reflective teachers question their teaching practices before accusing the study habits of their students.

2.26.2 Responsibility

Responsibility refers careful consideration of the consequences of decisions made by the teachers, especially those which directly affect the learners (Dewey, 1933). Reflective teachers take the responsibility of their decisions regarding selection of curriculum, instructional process, selection of instructional strategies and management of class. Reflective teachers acknowledge the impact their decisions on the lives of their students in foreseen and unforeseen ways and own all their positive and negative actions (Larrivee & Cooper, 2006).

2.26.3 Courageousness

Reflective teaching is impossible without courageousness (Zeichner & Liston 1996 & Weli, 2004). Willingness, flexibility, thorough analysis and social awareness are necessarily required to become a reflective teacher (Pollard 2005). Reflective teaching is not merely thinking about planning and presentation of lesson. It is thinking about all the aspects of teaching and objective examination of own thoughts and actions which may require courageousness.

2.26.4 Wholeheartedness

Wholeheartedness refers enthusiasm and positive attitude to learn new practices. It refers to commitment of teachers to take the responsibility of their professional actions (Dewey, 1933; Farrell, 2004; Larrivee & Cooper, 2006). Reflective teachers wholeheartedly attempt to achieve the desired goals and objective of teaching process. According to Zeichner & Liston, (1996) open-mindedness and responsibility are the central components of the professional life of reflective teachers which enable them to examine their own assumptions, beliefs and

results of their actions (Zeichner & Liston, 1996). Wholeheartedness enables teachers to explore the negative feelings associated with the experience (Bolton, 2010). Larrivee and Cooper, (2006) have also mentioned following attributes reflective teachers:

1. Returning to the experience to learn.
2. Taking feedback from students.
3. Keeping one-self open to alternatives.
4. Taking responsibility for self-learning.
5. Showing commitment to bring improvement.
6. Striving to align behaviour with provided values (Larrivee & Cooper, 2006).

Lateef (2005); Larrivee and Cooper, (2006) have mentioned almost similar characteristics. Reflective teachers adopt a journalist approach and raise questions starting with where, when, what, who, how and why (Jasper 2003a). They keep them aware about their limitations, qualities, strengths and weaknesses. Self-awareness, critical analysis, ability to synthesis, ability to make judgments and ability to evaluate own actions are fundamentals characteristics of the reflective teachers (Bulman & Schutz 2004). Results of 22 studies revealed that reflective teachers attempt to achieve the target of 'standards based teaching' and make better judgments (Pollard, 2007). Reflective teachers interrelates the theory and practice, generate knowledge through action research and work with evidences (Ghaye and Lillyman, 2002). Reflective teachers can meet the learning needs of learners in a better way and continue to grow as professional throughout their careers (Larrivee & Cooper, 2006).

2.26.5 Attributes and attitude of non-reflective versus reflective teachers

Larrivee and Cooper, (2006) have added the seven major discrepancies between the behaviour of reflective teachers and non-reflective teachers:

Sr.	Non reflective teachers	Reflective teachers
1	React to a new situation without conscious consideration of the alternatives.	Spend a lot of time to think about classroom interactions and always consider the alternatives.
2	Never consider the intended as well as the unintended consequences of their actions.	Always consider the intended as well as the unintended consequences of their actions.
3	Attempt to settle down the issues too quickly on the basis of only one explanation of the situation which leads towards a narrow range of potential solutions.	Attempt to settle down the issues slowly on the basis of many explanation of the situation which leads towards a wide range of potential solutions.
4	Never thoughtfully reconsider everything which happened in the classroom with an eye toward improvement	Always thoughtfully reconsider everything which happens in the classroom with an eye toward improvement.
5	Respond to the new situation without connecting it to similar past events	Respond to the new situation connecting it to other similar past events
6	Non reflective teachers view class and other circumstances are beyond their control. They see themselves as victims of circumstances.	View class and other circumstances are within their control. They do not see themselves as victims of circumstances.
7	Adopt teaching methods, theories or strategies without questioning and travelling around the alternatives	Adopt teaching methods, theories or strategies through questioning and always travel around the alternatives
8	Attempt to enforce pre-set standards without restructuring the standards on the basis of learners' responses	Attempt to restructure the standards on the basis of learners' responses
9	Fail to recognize dilemmas and have little thrust for improvement	Try to recognize dilemmas and have large thrust for improvement (Larrivee & Cooper, 2006 p-5-9)

Reflective teachers possess certain qualities and attributes which distinctly differentiate them from non-reflective teachers. Reflective teachers take inquiry stance to understand the things and not argue to defend their position. They always explore opportunities for their professional learning (Larrivee & Cooper, 2006). Inquiry stance is an exceptional approach which never allows teachers to

present a uniform description of the event due to individual difference. Osterman & Kottkamp, (2004) have explained the following qualities of reflective teachers:

1. Reflective teachers don't have all the answers and not afraid to admit.
2. They have confidence in their abilities to accept challenges.
3. Adopt a non-defensive approach to manage things.
4. Feel secure enough to make their thinking public.
5. Possess all the qualities of good listener.
6. See things from as many perspectives as possible.
7. Care about the feelings of others.
8. Take the responsibility of their all actions.
9. Assume the responsibility of their own learning.
10. Attempt to learn from their mistakes (Osterman & Kottkamp, 2004).

Many educationists have talked about various qualities of reflective teachers. Reflective teachers remember the details of an even to reflect over the gaps and weaknesses. Whenever, they encounter a problem they largely attempt to find out the solution through self-reflection and attempt to find out solutions in the light of their personal experiences. Next part of the review deals with teaching practicum and its significance in prospective teacher's professional development.

2.27 Teaching practicum and professional development

Teaching practicum is a necessary component of B.Ed programme, where prospectus teachers are provided with a chance to put in to practice what they have learned during training. It is joint responsibility of teacher training institutions, cooperating school administration and teachers of the selected school (HEC, 2006). It was believed that good teachers are born but now there is a slogan that good teachers are not born but they are trained. Teaching practicum provide opportunities to student teachers to learn professional skills (HEC,

2010). Generally, prospective teachers are engaged in teaching practicum to provide them a chance to learn teaching skills e.g preparation and presentation of lesson, test construction and class room management. Teaching practice provides a forum to the prospective teachers to demonstrate the skills, attitudes, theories and a repertoire of teaching techniques, methods and strategies. Teachers are born in teacher training institutions, but they are developed in the classrooms therefore, vitality of teaching practice to integrate the theory and practice cannot be overlooked. According to Mriza (2009) prospective teachers are engaged in teaching practicum to achieve following objectives:

1. To understand the characteristics of student according to their ages.
2. To develop sympathetic and caring attitude towards students, regardless of their ages, abilities, needs, potential and family backgrounds.
3. To identify the learning needs of the students.
4. Familiarity with administrative structure of education system.
5. To conduct and implement results of action research.
6. To identify the gaps of teaching practice in light of various teaching theories.
7. Learning to put into practice various learning theories.
8. To reflect over the appropriateness on their own teaching styles.
9. Effective usage of variety of teaching technologies.
10. To develop learning activities for various groups of students according to their age, gender, abilities and social norms.
11. To search out teaching materials and resources matching with situation.
12. To understand the social functions of the school.
13. To uphold classroom discipline through various classroom management strategies.
14. To learn effective techniques to motivate the learners and.
15. Learn to explore their own experiences through a variety of reflective practices to improve their classroom room practices (Mriza, 2009).

During early days of teaching prospective teachers can develop an album of the effective teaching principles. Initially, they will face difficulty to put effective teaching principles into practice but with the passage of time they may follow such principles mechanically (Beerens, 2000). Teaching practicum is a necessary component of all teacher education programmes, where prospective teachers got practical experience of teaching to learn professional skills (Vince, 2001). Prospective teachers should question their own teaching practices during teaching practicum. Prospective teachers may struggle to develop an autograph's album of the effective teaching principles.

2.27.1 Reflective Practices During Practicum

Role of reflective practices for the professional development of prospective teachers during teaching practicum is similar to the role of blocks to construct a building (Vince, 2001). PTs may attempt to design their practice in the light of text books they were taught and understand a range of classroom matters through reflective practices (Mok 2010). Cohen (2007) says that prospective teachers can understand the learners, local resources, curricula, assessment & evaluation methods, pedagogy, planning, discipline and motivation techniques through reflective practices (Cohen et al, 2007). A critical analysis of various responsibilities of prospective teachers during teaching practicum is discussed below.

2.27.2 Practices of prospective teachers during practicum

Prospective teachers perform various responsibilities during teaching practicum. Mriza (2009) says that prospective teachers need to shoulder following responsibilities during teaching practicum:

1. They should wear appropriate dress.

2. Usage of respectful language at all times.
3. Learn to act as a professional.
4. Obey the rules and code of ethics of the cooperating school.
5. Respect the authority of the head of the cooperating school.
6. To ensure 100% attendance during teaching practice.
7. Follow the rules related to students' health, safety and security.
8. - Volunteer participation in co-curricular activities and functions of the school.
9. To maintain detailed portfolios of all activities
10. Carry out guided observations and action research assignments in consultation with the cooperating school teacher.
11. To manage time to discuss the problems regarding lesson planning, classroom discipline maintenance with the teachers of cooperating school and practicum supervisor (Mriza, 2009).

Moreover, prospective teachers should learn about the types of school record, dealing with parents, relations with school councils and leading community members. Houston & Warner, (2000) says that regretfully prospective teachers not ensure 100% attendance during practicum. Neither school principal nor practicum supervisors attempt to motivate prospective teachers to ensure 100% attendance during practicum. They are not provided with opportunities to involve in reflective practices and mentoring to polish their teaching skills (Houston & Warner 2000). Results of the study of Korthagen, (2001) revealed that prospective teachers demonstrate different attitude during practicum and when they join education department as a professional teacher. So much so pre-service education disappeared during the first year of their professional life and they regard teaching theories as being incompatible with their class room practices. Teachers who struggle to implement the learned theories were de-motivated and discouraged by the colleagues (Korthagen, 2001). When teachers join teaching as

profession, they observe the teaching style of their senior colleagues or attempt to copy teaching styles of their own teachers instead of developing their own unique teaching style. They even forget the details and remember the major concepts of the renowned theories. Transition from training to practical professional life creates many uncertainties for novice teachers. During practicum school administration may depute senior teachers as mentors to guide the prospective teachers and to achieve the following objectives:

- To identify the personal, professional and developmental training needs of the prospective teachers.
- To arrange orientation sessions and meetings with senior teachers.
- To ensure that prospective teachers understand the existing rules and regulations.
- To facilitate the prospective teachers about accommodation, transport and other social needs.
- To provide them access to local materials and.
- To introduce them with external networks, groups, advisors and other concerned external agencies (Blandford, 2000).

Mentoring duties should be assigned to expert and professionally strong teachers; otherwise student teachers may suffer in inferiority complex. They might be informed that mentor or evaluation committee has no hidden objectives except to assess their training needs (Sotto, 2004). During teaching practicum, majority of teachers walk into the class-rooms, ask few questions from their students give them learning material and attempt to explain the difficult concepts of the lesson. Fear of class room discipline forces prospective teaches to copy the practices of their own teachers. Discipline problem may take different forms in different classes. Somewhere students simply talk loudly and ignore the presence of their teachers. In some classes teacher hate shouting but students' shout loudly and

ignore teacher's presence. The major challenge for prospective teachers is to cope with disturbance created by the students sitting on back benches. Maintaining class discipline is difficult task for prospective teachers they need to learn discipline maintain strategies like a chemical formula (Sotto, 2004). Prospective teachers need to adopt a critical approach to apply the theories and strategies in practical classroom situations. They need to clearly understand their own teaching style, grading policies, seeking feedback from students, guidance & counseling services, searching out extra learning materials coordination with colleagues and school staff and acquisition of laboratory skills. Teaching practice is just like a house job, prospective teachers should involve themselves in all the activities performed at school. Cohen, (2007) says that during teaching practicum, prospective need to have mastery over following practices:

1. Profession related practices
2. Knowledge related practices
3. Teaching related practices
4. Monitoring & Assessment related practices

2.27.2.1 Professional Related Practices

Prospective teachers need to understand and observe the following professional related practices during teaching practice:

1. Observation of professional code of conduct.
2. Respect the learners belonging from various religious, social, cultural and ethnic groups.
3. Treat the students consistently with love & respect
4. Dealing with the learners according to their growth & developmental needs.
5. Demonstration of positive behaviour, attitude and values.
6. Identification of the role of parents in teaching learning process
7. Effective communication with parents.

8. Contribution to the corporate matters of the school.
9. Understanding the contribution of supporting staff and other professionals in teaching learning process.
10. How to evaluate own teaching performance as a teacher?
11. Taking responsibility of own professional development? and
12. Follow statutory frame works?

2.27.2.2 Knowledge related practices

Prospective teachers are expected to learn about following knowledge related practices during practicum:

1. Understanding the aims, goals and principles of learning.
2. Understanding the subject matter.
3. Seeking sufficient knowledge about major religions
4. Seeking knowledge about history, geography, physical & health education.
5. Knowledge about the national curriculum of core subjects.
6. Knowledge about national qualification frameworks.
7. Knowledge about intellectual, physical, social, cultural, emotional, and linguistic factors affecting the development and learning of the students.
8. Knowledge about the effective usage of ICTs.
9. Knowledge about seeking advice from seniors and specialists.

2.27.2.3 Teaching Related Practices

Prospective teachers are expected to acquire knowledge about following teaching related practices:

1. How to use teaching learning objectives to plan and sequence a lesson?
2. How to play their role as a facilitator in learning process?
3. How to set challenging teaching learning objective, relevant to all learners of the class?
4. How to acquire knowledge about the current and past achievements of the learner?
5. How to search and select resources for effective lesson planning?
6. How to take part and contribute in team teaching?

7. How to plan co-curricular opportunities for students' e.g visits to museums etc.

2.27.2.4 Monitoring & Assessment Related Practices

Importance of knowledge about monitoring and assessment cannot be overlooked. Prospective teachers are required to have knowledge about following aspects of monitoring and assessment related practices:

1. Understanding the importance of assessment & evaluation in teaching learning process.
2. Understanding the appropriate usage of assessment and evaluation strategies.
3. How to use the results of monitoring & assessment to plan and improve their own teaching skills?
4. How to give constructive and immediate feedback to the learners?
5. How to involve learners in assessment and evaluation programme?
6. How to invite feedback from students to improve teaching practices?
7. Accurate evaluation of learner's progress in accordance with national curriculum objectives? (Cohen et al, 2007).

Cohne et al (2007) have taken a detailed account of all the practices necessary for professional growth of prospective teachers. However, they have much focused on the professional related practices and over looked personal development areas of prospective teachers. Most practices mentioned by Cohne et al (2007) matches with the training areas mentioned by Mirza (2009).

2.27.2.5 Professional Identities of Prospective Teachers

Prospective teachers join TTIs to identify themselves as professional teachers. But their professional success resolute with broad number of variables e.g type of personality, institutions attended, their own expectations, academic potential of their students, type of cooperating school and type of subject matter they

taught. According to Leaman, (2008) results of various studies exposed that students appreciate the following personality traits of the prospective teachers:

- i. Sense of humor
- ii. Being up-date
- iii. Caring attitude
- iv. Respect to their students
- v. Being firm with rules and
- vi. Friendly attitude

Prospective teachers need to identify themselves with bankers who review their whole day business before going home. Bankers make judgments to identify the imbalance of cash, achievement of branch targets and satisfaction level of the customers. Similarly teachers can recall their day to day teaching practices to understand the gaps and deficiencies of their day to day practices. Students preferred humor as necessary trait of their teachers' personality. Rationally, humor has many benefits, even boring subject can be taught to the students without getting them bore. Prospective teachers should avoid smoking, drinking, playing pool, reading sexy fiction or even convening together with a prospective wife (Meyer & Manning, 2007). Prospective teachers should understand what they are doing and what they might do. They ought to constantly think about the role they will play in future. They should learn to develop idyllic relations with their colleagues and students. They should learn how to deal with the cognitive and emotional needs of their students. They should think how they can cultivate ever-deepening relationship with their colleagues and students. Principles of teaching practicum appeared in relevant literature are critically discussed below.

2.28 Teaching Practicum Principles (TPPs)

Prospective teachers should demonstrate good qualities related to hand, head and heart during teaching practicum. Hand qualities include admirable handwriting & drawings. While, heart qualities include sympathy, love and affection. Whereas, head qualities include; intelligent, creativeness, and through knowledge of subject matter (Mohanty, 2003). They should have a deep sense of reasoning to decide about right and wrong and demonstrate non-violence attitude with learners to unlock the doors of knowledge. Pollard, (2007) has mentioned following principles of teaching practicum:

1. Effective teaching practicum highly depends upon the knowledge of subject matter.
2. Ability to recognize the prior learning experiences with current learning experience.
3. Teaching practicum should be consistent with policy frameworks.
4. Engagement of the learners in constructive learning activities.
5. Perspective teachers should pass on knowledge and values to the learners and.
6. It should be based on scaffold learning approach (Pollard, 2007).

Prospective teachers should align the teaching with learning objectives and instructional process. They should reflect upon students' feedback to take decisions and to design courses (McAlpine et al, 2007). Prospective teachers should consider that teaching practicum is not a mere formality, rather it is a process to learn professional skills. Chickering & Gamson (2011) has mentioned the following principles of effective teaching practicum:

1. **Contact with learners:** Prospective teachers ought to have a contact with their students inside and out of class to identify and fulfill the cognitive needs of the learners.

2. **Active engagement of learners:** Prospective teachers should ensure active participation of the learners in the teaching learning process to relate the current learning experience with past learning experiences.
3. **Effective time management:** Energy and time are equally important during teaching practicum. During practicum, learning about effective time management techniques is a critical task for prospective teachers. They should learn effective time management skills by allocating realistic amount of time for each activity.
4. **Respect to diversity:** Students have different talents and styles of learning. Students who perform excellent in exam may show very poor performance in the lab. Students rich in hands on experiments may not do so well with theories. Therefore, prospective teachers should learn to respect to diversity during teaching practicum (Chickering & Gamson 2011).

During teaching practicum prospective teachers should learn to adopt friendly attitude with learners (Leaman, 2008; Maeyer & Manning, 2007 & Pollard, 2007). They should learn that how they can ensure active engagement of their students in to learning process, how they can collect evidences of learning and how they can welcome the curiosity of the learners (Sheikh, 2010). Prospective teachers should learn how to use various learning materials during practicum to honour the diversity of learning styles, abilities & disabilities of their students. They should understand how to care the students belonging from multi-cultures and how to provide positive reinforcement to the students.

2.29 Common mistakes of Prospective Teachers

Prospective teachers commit many mistakes during teaching practicum. Chye (2008) has mentioned the following general mistakes of prospective teachers.

Content related mistakes	Too much or too less focus on contents
	Absence of sequence in contents
	Failure to mention clear definitions

	Failure to assess previous knowledge and competencies of students
	Quoting irrelevant and inappropriate examples
	Failure to link various sections of lesson
Presentation related mistakes	Failure to gain students attention in the beginning of lesson
	Absence of eye contact
	Failure to understand facial expressions and body language of students
	Speaking very loudly
	Attempt to make lesson too much difficult for students
	Attempt to make lesson too much easy
	Speaking very at low velocity
	Self-dialogue during presentation of lesson
	Jumbling and slipping of information
	Illustration of contents already illustrated in the text or notes
	Inappropriate usage of AV Aids
	Failure to ensure visibility of White/Black board to students
	Not giving enough time to student to note down tables, pictures or diagrams
	Usage of difficult language and terms
	Drawing inappropriate conclusions
Mistakes related to Time management	Failure to start lesson on time
	Cramming too much during the lesson
	Insufficient time to take students questions
	Failure to manage time to review the major concepts at the end of lesson (Ghye, 2008).

2.30 Teacher's Professional Development in Pakistan

Quality of learning is contingent with the quality of teachers. Government of Pakistan has recognized that professional trained teachers can play vital role to convert the raw talent of students into productive citizens. According to UNESCO report (2006), Government of Pakistan has taken a number of initiatives to start various programmes for professional development of teachers. But primary focus of all the educational policies of Pakistan remained to enhance

the access to education (UNESCO, 2006). Since 1947 Government of Pakistan has taken several measures for the professional development of teachers. A critical analysis of various national educational policies is outlined below.

2.30.1 Review of Previous Educational Policies

Professional development of teachers remained a vital component of all educational policies in Pakistan (Guskey, 2010). It was concluded in 1959 Commission report that “No system of education is better than its teachers”. The NEP, 1979 was specifically concerned with governance and strengthening the structure of TPD. The policy provided to establish an Academy of Educational Planning and Management for professional development of teachers. Policy acknowledged the confusion between roles of various bodies providing in-service teacher training and provided to formulate a committee to resolve the confusion. Policy provided to set up admission committees in Teacher Training Institutions to select only those candidates who were committed to the Ideology of Pakistan (GOP “NEP, 1979). In Pakistan all policy documents, commission reports, plans and many reforms agendas have serious concerns with professional development of teachers. PDPs have been launched through formal or informal modes (Dash, 2010).

Teacher is fundamental factor to implement the all reforms at gross root level. Policy document (1998-2010) discouraged the practice of appointment of teachers under political influence. The policy provided a detailed mechanism to the National Institute of Teacher Training (NITE) to train teacher educators. The policy also provided to offer incentives to teachers working in rural areas to improve the quality of teaching (GoP, 1998-2010). During 2002-2006 Education

Sector Reforms (ESR) were launched to implement the mechanism of NEP, 1998-2010. The ESR document (2003) provided to upgrade the qualification mechanism for teachers and to establish 500 Teachers Resource Centers (TRCs) for the professional development of teachers. Three hundred TRCs were established at tehsil level for the professional development of teachers, with the cost of Rs. 2500 million. Moreover, it was decided to establish National Education Assessment System (NEAS) to standardized evaluation of education system (GoP, 2006). All policy documents developed in Pakistan provided directions about TPD, but provinces accorded very little importance to TPD in the past. Now provincial governments have focused their attention upon TPD and quality of education, perhaps under the pressure of donors (UNESCO, 2006).

2.30.2 Measures to Improve TPD in Pakistan

Federal Ministry of Education and provincial ministries of education are collaborating with UNESCO, UNICEF, World Bank and USAID to strengthen the professional development framework for secondary school teachers. National Professional Standards have been developed to advance the professional competencies of teachers. NPS is not merely a static report but a dynamic document which has been dispatched to the provinces for implementation (GoP, 2009). Professional development through mentoring and reflective practices is also emphasized in the NPS. Higher Education Commission has recently revised the curriculum for B.S, B.Ed (Hons.) M.Ed programmes. Revised curriculum consists of compulsory courses, professional courses, foundation courses and content courses. One (3credit hours) course titled “Critical Thinking and Reflective Practices” has been specifically included in the revised curriculum.

The same course has also been included in the ADE (Associate Degree in Education) programme. Major objectives of the course include:

- To enable prospective teachers to develop the habit of critical thinking.
- To enable them to apply critical thinking in different situations.
- To understand the concept of reflective practices.
- To use reflective practices as a tool for professional development.
- To use reflective practice as a tool of inquiry into teaching practice.
- To enable teachers to raise thought provoking questions.
- To enable prospective teachers to adopt a critical approach (HEC, 2010).

Prospective teachers should be involved in reflective writings, reflective discussions, mentoring and action research for professional development. Involvement of prospective teachers in reflective practices can greatly reduce their fears of isolation. Professional development of teachers can play central role to achieve the target of quality education in Pakistan. There are 275 TTIs offering 'certificate, diplomas and degrees' to pre-service and in-service teachers. These institutions are functioning under the umbrella of Bureau of Curriculum and Extension and Provincial Institutes of Teacher Education. Moreover, 300 teacher training resource centers are established in various districts of Pakistan (UNESCO, 2009). Thus, Government of Pakistan has started various programmes for the professional development of teachers in collaboration with local and international NGOs.

2.30.3 TPD Challenges and Opportunities

Since 1947 many measures have been suggested to improve the teacher education in Pakistan. But regretfully still the teacher education system of

Pakistan is facing many challenges According to UNESCO report (2008) key issues regarding teacher professional development needs to address include: (i) Absence of professional standards (ii) absence of research based accreditation & certification (iii) absence of linkages between teacher training institutions and universities departments of education (iv) TTIs lag behind in developing core competencies among prospective teachers (v) lack of effective monitoring and evaluation system in TTIs (vi) absence of defined career path (vii) low budgeting for professional development programmes (viii) lack of capacity utilization and (ix) absence of licensing system (UNESCO, 2008). The same report recommend following strategies to overcome the shortcoming: (i) preparation of workable strategic plan and policies for CPD (ii) launch of accreditation and certification schemes (iii) developing academic linkages (iii) merit based recruitment and retention of teachers (iv) development of proactive curriculum (v) improving teachers resource management skills (vi) involvement of teachers in group activities (vii) accurate record keeping of teachers qualifications and trainings and (viii) systematic follow up after trainings (UNESCO, 2008). More than 309,083 teachers (173,767 male & 135,316 female) are working throughout the country at various levels (GoP, 2009). 26% teachers of the teacher workforce are untrained and 37% school teachers are having PTC & CT certificate. The picture of professional qualification of elementary and secondary level teachers is very dismal, where only 21% teachers are having B.Ed or M.Ed degrees (GoP, 2007) Maximum standards about teacher training, classroom environment, assessment, evaluation, guidance and counseling should be developed and implemented on board. Wages of teachers should be increased to attract the intellectual towards

teaching profession. Moreover, teachers should be provided with better working environment and incentives.

Success of PDPs depends upon its evaluation and feedback which is ignored. Similarly teachers are not encouraged to develop professional learning communities. Teachers work is not acknowledged and celebrated (OECD, 2009). The quality, efficiency and equity in education system depend in large upon the quality of motivated, highly skilled, well-resourced professional teachers. They are most significant resource to raise the standards of education at all levels. Therefore, efficient monitoring and continuous professional development of teachers seems necessary. Teachers are not motivated to learn effective usage of information and communication technologies.

TPD is facing many challenges inconsistent policies, scarcity of resources, financial constraints, less motivated student teachers, outdated curriculum and lack of professionally trained master trainers are major challenges. According USAID, report (2006) Pakistan need to address following issues of TPD programmes: (i) lack of incentives, (ii) inefficient accountability system (iii) lack of motivation and (iv) little hope of career track need to be addressed. Moreover, the infrastructure of Provincial Institutes of Teacher Education (PITEs) needs improvements to launch of PDP programs and to impart quality teacher education (USAID, 2006). Many other factors eg poor quality of textbooks, unattractive learning material, inadequate assessment system, incompetent teachers, irregular supervision, lack of classroom-based support for teachers, inadequate resources for critical teaching and governance of TPD programmes are included among the challenges of TPD in Pakistan (World Bank, 2006). Entire system of education revolves around the personality of teachers. Highly

qualified, motivated and committed teachers can change the destiny of a nation. Therefore, TTIs are greatly responsible to produce highly skilled, professionally competent, motivated and committed teachers. Application of and reflective practices, action research and critical thinking should be emphasized during practicum and practical teaching.

2.30.4 TPD a Provincial Responsibility in Pakistan

Since 2009 all provincial governments of Pakistan are responsible for the professional development of pre-service and in-service teachers (Gop, 2009). Diversified system of teacher education exists among all the provinces of Pakistan. Prominent dissimilarities exist in course contents, course duration, scheme of studies and nomenclature of the teacher training programmes. Sarhad University of Science and Technology is offering B.Ed week-end programme. University of Sargoodha and University of Karachi are offering B.Ed programme through a wide range of private affiliated institutes. Many universities are offering teacher training through distance learning. Many TTIs and universities have started B.Ed four year programmes, while many other are offering B.Ed one year and one & half year. At the time of appointment equal weightage is given to the candidates who acquired professional degree through distance mode or from formal system. More interestingly duration of programmes through distance mode or through formal system is almost same.

In Baluchistan and Sindh Government Colleges of Elementary Education (GCEEs) are working under the umbrella of Bureau of Curriculum. In KPK, 20 Provincial Institutes of Teachers Education (PITEs) are working under the supervision of Directorate of Curriculum and Teacher Education (DCTE). PITEs are providing pre-service and in-service teacher education to primary level

teachers in KPK. In Punjab, Government Colleges of Teacher Education (GCTEs) are responsible for the professional development of teachers. GCTEs are working under the administrative control of Directorate of Staff Development (DSD). Moreover, 270 (227 public & 43 private) Teacher's Professional Development Institutions (TPDIs) are working throughout the country (GoP, 2009). Each province of Pakistan is responsible to plan and execute professional development programmes for teachers. System of teacher's professional development programmes vary from province to province in Pakistan. Some issues of PDP are discussed below.

2.30.5 Issues related to professional development programmes

Professional development of teachers is a continuous process. Blandford, (2000) has highlighted following major issues of PDPs in Pakistan:

- Diversified learning styles of teachers.
- Widely divergent organizational climates.
- Lack of commitment and enthusiasm among teachers.
- Absence of effective communication and professional learning groups.
- PDPs are not toggled with day to day responsibilities (Blandford, 2000).

In America participation of school teachers in Baker Days (five days teacher training in an academic year) is mandatory since 1985. American government conducted a study in 1994 to study the impact of Baker Days on the professional development of teachers. The effect was limited due to ineffective management of schools and disastrous management of professional development programmes. Moreover, professional development programmes failed due to lack of motivation and commitment of teachers (Blandford, 2000). Motivated and committed teachers can widen their understandings about teaching methods and

strategies in better way as compared to non-motivated and non-committed teachers.

2.30.6 Major challenges

Teachers may face various types of difficulties during the process of reflective practices. A foremost challenge is 'self-criticism' teachers may avoid criticizing their own practices. They may need enthusiasm and motivation to involve in reflective practices. Schon has not mentioned how to overcome the functional and cultural barriers, which is pertinent to become a reflective teacher. Ghaye, (2011) has mentioned following challenges of reflective practices:

- Reliability of feedback received from students and parents.
- Resources are not available to teachers (eg recording devices)
- Teacher cant mange time to initiate reflective practices.
- Teacher's practice to complete similar tasks in past.
- Comprehension of theories leading towards better practices.
- How efficiently teachers can learn new and different ways of working (Ghyae, 2011).

Unfortunately teachers seldom invite feedback from students, peers and parents regularly. Secondly, individual differences exist in cognitive abilities of rural and urban areas students. Aged teachers may face difficulties when they are asked to learn and implement new theories.

2.30.1 Objectives of PDPs

Teacher's professional development is not an event rather it is a process having many objectives. Blanford (2000) has mentioned the following objectives of PDPs for teachers:

- To enable teachers to understand and adopt new teaching strategies.
- To motivate teachers to evaluate their teaching practices.
- To modify and change the class room behaviour of teachers.

- To enable the teachers to concentrate upon the academic needs of the learners.
- To enable teachers to carry out action research and implement the findings in classroom.
- To empower teachers to maintain good practices and get a rid of unwanted practices.
- To provides a chance to the teachers to interact with teacher's community and external agencies.
- To provide them a chance to know the most recent trends and issues of discipline they taught.
- To motivate them to confer critical consideration to raise the standards of teaching.
- To enable them to widen their understandings about the usage of ICTs.
- To facilitate them to recognize the diverse talents and capabilities of the learners.
- To enable them to identify the special needs strengths and weaknesses of the learners.
- To make them able to evaluate, assess and report the performance of learners in an improved way.
- To enable teachers to give due consideration to the social, moral, spiritual, cultural and developmental needs of the students.
- To enable the teachers to develop and maintain better working relationship with colleagues, supporting staff, parents, students, and with members of external agencies/councils (Blandford, 2000).

Objectives of professional development programmes for teachers vary from programme to programme e.g to understand professional values desired for teaching profession; to understand teaching principles; to understand subject matter. Wideen etal (2002) has mentioned three important objectives (i) transformation of knowledge and skills about teaching (ii) transformation of abilities necessarily required for teachers to adjust with socio, political and

cultural changes and (iii) to enable teachers to reflect over their practices (Wideen et al, 2002). The foremost objective of all PDPs for teachers is to improve learning outcomes of students (Guskey, 2003). Special professional development programmes may be designed to raise the morale of teachers and they should be realized they need to show commitment to observe professional values. OECD, (2009) has mentioned following objectives:

- a. To update teachers subject knowledge in the light of contemporary researches.
- b. To enable teachers to adopt new teaching methods and strategies.
- c. To enable them to contribute for the development of school.
- d. To enable teachers to exchange information and expertise with their colleagues and.
- e. To help out the weaker teachers to become more competent (OECD, 2009).

While designing a PDP, planners and coordinators need to raise the following questions:

- a. Are the contents of the programme are well-researched?
- b. What results of the current researches say about the selected contents?
- c. Does the programme focus on pedagogy along with contents?
- d. Which are common misconceptions of the teachers about that area?
- e. Are the contents suitable to all participants? (OECD, 2009)

Professional development programmes should be aimed to fulfill the learning needs of the learners. Contents of professional courses should be quite relevant to the learning needs of learners. According to the results of a survey, conducted by the OECD in Australia, Brazil, Belgium, Denmark, Malaysia, Malta, Ireland, Korea, Mexico, Norway, Poland, Portugal, Slovak Republic, Spain, Turkey and Netherland titled "Teaching and Learning International Survey" (TALIS), the teachers who have participated in more professional development programmes

feel that they are better equipped with necessary knowledge to deal with challenges of teaching (OECD 2009).

Results of the study of Wenglinsky (2000) revealed that professional development programmes are directly linked with academic achievement of the learners. A grade level students of the teachers who attended professional development programmes were 107% ahead of their peers in math and 40% ahead in higher-order thinking skills. The teachers who attended PDPs their students were 44% ahead in laboratory skills in science subject (Wenglinsky 2000). Professional development programmes are designed for multi purposes but the decisive purpose of PDPs is to improve the learning outcomes of the students (Guskey, 2003). Results of the referred studies revealed that participation of teachers in PDPs boost up the level of achievement of their student. Participation in PDPs enhances teachers' content and pedagogical knowledge; further more enable them to perform their day to day responsibilities in a better way.

Professional development programmes for teachers are unavoidable to enable the teachers to cope with the professional challenges of the 21st century. Teachers need to learn usage of computer related technologies. Parents like to send their child to a doctor, who is expert, familiar with best medical practices, recognize the results of latest medical research and knows the application of latest medical technologies. Why they would trust a teacher for the education of child's education to a teacher who is not familiar with latest teaching strategies, and not knows the usage of instructional technologies (Pelgrum & Law 2003; Heather & Amy, 2012).

2.30.2 Teachers Deficit in the country

UNESCO, (2006) reports reflects that the quality and performance of teachers in Pakistan has been poor. The same shortcoming was highlighted by the Report of the 1959 National Commission on Education and all educational policies developed and implemented in the country. However, challenges persist and issues have worsened over the years. Government of Pakistan is focusing on system rather than the roots of the problem (UNESCO, 2006). The teacher education programmes being run by the Teacher Training Institutions are not of the capacity to significantly raise the level of knowledge and skills of teachers to have any measurable impact on the students learning. The curriculum of teacher education programs fails to develop in teachers the required pedagogical skills, subject knowledge, classroom delivery and questioning skills that would make these courses/programs worthwhile. Many studies have already been undertaken to look into teacher professional development in Pakistan. All of them have cited that teacher performance and quality is most notably affected by: educational qualification of teachers; recruitment on merit; adequate teacher performance monitoring system; incentives, up gradation of teacher skills and growth oriented career structure (UNESCO, 2006).

In spite of many negative aspects of the quality of teachers, there are many potential positive elements that can be used raise the quality. Infrastructure to impart teacher education already exists throughout the country. There are 184 teachers training institutions, of which 151 (82%) are in the public sector, whereas 33 (18%) are in the private sector. The total enrolment at teachers training institutions stage is 0.679 million of which 0.674 million (99%) are in public sector (Pakistan Education Statistics, 2010). The government of Pakistan

is well aware about the importance of effective teacher training system and considers it very important to up-lift the standard of education in the country. The total enrolment at teachers training institutions stage was 0.679 million out of which 0.674 million (99%) were in public sector whereas, 0.005 million (1%) were in private sector. The total male enrolment in the teachers training institutions was 0.451 million (66%), whereas, the female enrolment was 0.228 million (34%) during 2010. The total teachers in the teachers training institutions were 3,620, out of which 3,343 (92%) are in public and 277 (8%) are in private sector (Pakistan Education Statistics, 2010).

Moreover, there are 135 universities providing educational services in both public and private sector of education. Out of 135 universities 76 (56%) are working in public sector, whereas 59 (44%) are working in private sector (Pakistan Education Statistics, 2010). Along with 184 teacher training institutions almost 26 universities have department of education. All these departments of education of universities are directly contributing to the Teacher Training by imparting academic and research services.

In Pakistan public sector education system is using services of 0.68 million teachers, while six years back the system had the services of 0.649 million teachers. Present statistics are indicating that over this time period, 4.56% more teachers are added to the education system. Government of Pakistan (2010) shows that a decline of 6.74% has been observed in male teachers while in case of female teachers an increase of 3.88 has been observed. The census for the year of 2005-06 shows that there has been an increase of 8.6% in the number of teachers at middle level public schools. In 2005-06, there were 59,851 male and 54,225 female teachers serving in public sector middle level schools. Whereas,

the current census shows that during 2010 the number of male teachers has increased to 61,826 and that of female teachers is 62,977. An increase of 3.19% in male teachers and 13.90% in female teachers has been observed over the time in number of middle school teachers (Pakistan Education Statistics, 2010). During 2008, total enrollment of prospective teachers in Pakistan was 651,822, this figure increased to 665,036 during 2009, and during 2010 this total enrollment at TTIs was 678,700. In addition to teacher training institutions, enrollment trend at universities department of education was, 2008 (52,833), 2009, (57,780) and (63,557) during 2010 (Pakistan Education Statistics, 2010). Almost 1.6 million teachers are required in the country by 2015 to achieve the target of universal primary education.

Teacher workforce data by level of education reveals that 1.35 million teachers are serving in the country, 3807 are employed are pre-primary level, 399,517 (29%) are serving at primary schools, 313797 (23%) are serving at lower secondary level, 418,376 (31%) are providing their services at secondary level, 59,097 (4%) are serving to intermediate and degree colleges. Presently average student teacher ratio at primary level is 1:38. Whereas, international research studies have documented that 1:25 teacher student ratio is a key indicator of quality education (National Professional Standards, 2009). Out of total teacher workforce in Pakistan i.e 1,356,802, 632,926 i.e (46.6%) teacher are serving in private sector. It is interesting to note that (71%) teachers serving in private set up are female. Majority of private sector educational systems have no system for training of teachers, only few private schools have developed their teacher training programmes (National Education Census, 2006). Only 21% teachers serving at private sector have acquired professional education up to B.Ed level.

Any how Government of Pakistan is committed to improve the teacher training system. Recently National Professional were set in the light of National Education Policy 2009 to assure the quality. Provincial departments of education are working in collaboration with NESCO, USAID, JICA, Word Bank and ADBP to strengthen the teacher education system in the country. Policy guide lines on quality of teachers are quite clear. The concerns of the state and all stake holders will ultimately raise the quality of teachers in Pakistan. A well thought out strategy and framework can address all challenges eventually.

2.31 Types of Professional Development Programmes

Formal PDPs include: workshops, conferences, seminars and visits to other educational institutions. While informal PDPs include: collaboration with peers, association with learning groups, group discussions, peer coaching and joint lesson planning (Guskey, 2003). Muchinsky, (2003) has categorized PDPs in to following four categories:

1. Professional knowledge development programmes: Programmes aimed to teach teaching of professional skills to the teachers.
2. Declarative knowledge development programmes: Programmes aimed to transform knowledge about teaching profession.
3. Knowledge compilation programmes: Such programmes purposed to involve teachers in preparation of reports, chapters or research projects.
4. Procedural knowledge programmes: Programmes aimed to transform knowledge about teaching methods and strategies (Muchinsky, 2003).

According to a report of OECD 2009, there are following types of PDPs:

- a) Academic development programmes.
- b) Courses, conferences, workshops and seminars,
- c) Professional visits.
- d) Teaching networks.
- e) Individual research.

f) Collaborative research and.

g) Mentoring (OECD, 2009).

Teachers always need to keep them update about various changes taking place regarding teaching technologies, techniques, methods and strategies. Participation in PDPs may enable teachers to refine their existing skills. Furthermore, participation in professional development programmes may help them to polish their decision making, guidance, counseling and evaluation skills. Rayn & Cooper (2004) has mentioned following three stages of professional development of teachers:

Imitative Maintenance Stage: Teachers go through the motions prescribed by someone else in a mechanical way. They are concerned with class-room discipline and keeping their students busy. Teachers robotically follow pre-set patterns e.g patterns set out in provided curriculum or mentioned in the textbooks. They rigidly follow given instructional material to guide their own actions. At imitative-maintenance stage teachers cannot cope with special circumstances.

Limited Reflection Stage: At second stage teachers reflect upon what they are doing in classrooms, but their reflection lies within a narrow range. They got awareness to deal with unique situations and attempt to go beyond the rigid curricular guides. At this stage their adaptations are few and more likely their thinking revolves around the instructional edges. They hardly demonstrate innovative attitude, but attempt to deviate from provided patterns. For example if teacher noticed obvious boredom among students and attempts to provide supplementary materials.

Generative-creative stage: At this stage teachers have wide view about teaching profession and they can focus on the individual learning needs of the learners. They attempt to adopt variety of instructional approaches to deliver the contents and follow students centered methods of teaching. At this stage their expectations from students are higher and they go beyond the prescribed tests and examinations to assess their students. They attempt to engage their students in a best way in accordance with their mental growth through diagnostic

approach of teaching. They do not merely transmit knowledge, but generate knowledge. They can motivate their students for learning by providing them creative learning environment (Rayn & Cooper 2004).

Rayn & Cooper have not mentioned the duration of three stages of professional development. Teachers may attain the third stage very quickly and adopt diagnostic approach from the day one of their teaching career. Reading professional literature programme may include presentation of research papers in seminars, conferences or workshops. Moreover, PDPs can be divided in to PDPs for elementary teachers, PDPs for secondary teachers, PDPs for higher secondary and PDPs for territory level teachers. Effectiveness of all PDPs depends upon proper application of acquired knowledge in real life situation and effective evaluation.

2.32 Theories of Professional Development

Many theorists have attempted to understand that how teachers learn new techniques of teaching and adopt professional values e.g John Holand's theory of career development, Pearsons's theory of vocational guidance, Schon's theory of professional learning through reflective practices and Benners theory of professional development. Many other theories e.g content theory, process theory and theory of content and process are concerned with professional development of teachers. Few theories are discussed below:

2.32.2 Professional Learning Through Reflective Practices

Many theorists believed that Schon's theory of professional learning through reflective practice based on the Dewey's theory of experiential learning. Concept of reflective learning is sited within the older convention of experiential learning (Osterman & Kottkamp, 2004). Schon has perceived problem as a discrepancy between intention and action. Human beings learn everything through experience excluding reflexive actions. Besides learning through

reflective practices, teachers learn professional skills through books, radio and television programmes and through websites.

Donald Schon defined problem as “puzzling occurrence” with which individual try to deal, but real world do not lend them clear solutions. To deal with such situations teachers require some inventing and improvising approach (Schon, 1983). A problematic situation stimulates teachers for further inquiry, motivating them to develop a deeper understanding of the situation at hand and to search out better solutions (Larrivee & Cooper, 2006). The old saying that experience is the greatest teacher tells only half the story. Experience is the starting point for learning, learning does not occur without reflection. Disturbing situation is a valuable stimulus for cognitive growth and behavioral change. Professionals learn if they reflect on their experiences.

2.32.3 Benner's Theory of Professional Development

Benner (1984) has mentioned five important stages of professional development of teachers: novice, advanced beginner, competent, proficient and expert stage.

The detailed description of the overt behaviour and expectations of the teachers as professionals is as under:

1. **Novice/New comer stage:** At this stage teachers have limited knowledge about teaching profession. They face difficulty to apply the teaching learning principles in formal educational settings. During the process of teaching they remain firmly bound to provided rules.
2. **Advanced beginner stage:** Teachers can apply the acquired knowledge to a wide range of situations. They do not follow restrictive guidelines for decision making.
3. **Competent stage:** At third stage of professionalism teachers can work independently in practical settings in normal circumstances. They have limited knowledge abilities to respond to un-expected situations. Generally at this stage they are accepted as professionals.
4. **Proficient stage:** At fourth stage of professional development, teachers develop the ability to predict and cope with potential professional problems.

5. **Expert stage:** At the last stage teachers can grasp the whole situation and they have adequate amount of knowledge to deal with un-expected situations (Benner, 1984).

The increasing level of competencies encouraged teachers to travel from novice stage to expert stage (Benner, 1984). How teachers can be evaluated during their journey from novice stage to expert stage. It is quite difficult to label the teachers in accordance with Benner's theory. Expert teachers may behave like a novice teacher. Since 1983 many research studies have been conducted to find out the role of reflective practices in teaching. A critical review of related studies is given below.

2.33 Review of Related Studies

Several studies have been conducted to look at the effects of reflective practices on the professional development of pre-service and in-service teachers. Findings of the study of Greenwood, 1998; Pedro, 2005; Bulman & Schutz 2004 are summarized here. Pedro, 2005 found that reflective practices affected the professional knowledge of prospective teachers. Findings of the study of Long & Stuart (2004) revealed that habit of reflective practices affected the decision making skills of science and mathematics teachers. Study of Roadman (2010) was guided by following four research questions: (i) How pre-service teachers engage themselves in reflective practices? (ii) What are the levels of reflective practices adopted by pre-service teachers? (iii) What did pre-service teachers learn about teaching through reflective practices? And (iv) How did reflective practices of prospective teachers affect their pedagogical skills? Results of the study of Roadman (2010) revealed that; (i) participation in reflective practices training programme affected the decision making skills of pre-service teachers and they applied teacher centered approaches (ii) teachers largely focused on

their professional actions to start reflective practices (iii) after training they were anxious about their class performance (iv) usage of reflective practices empower them to adopt student centered teaching approaches (v) They were able to see how their teaching increases the academic performance of their students (vi) Reflective practice affected their choices for presenting content and selecting strategies (vii) Teachers realized that they had broken down the material (not exposed to the students earlier) in to understandable segments and (viii) Teachers realized that they must be prepared and organized because they are responsible for teaching of so many pupils (Roadman, 2010).

Results of the study of Zengaro & Nejad (2007) revealed that reflective practices provided a new lens to the university teachers to observe their teaching practices and reflect over the learning experiences of their students. Egrinle (2006) found that pre-service teachers regarded self-awareness as fundamental quality which was developed through the reflective practicum course. Teachers agreed that they developed awareness towards their own actions through videotaping of lessons, microteaching assignments, reflective journals, video excerpts and peer feedback (Erginel, 2006). Results of the study of Myers (2009) conducted in U.K, revealed that during the last year of study; QTS student teachers are taught principles and procedures of reflective practices along with action research to enable them to investigate the effectiveness of their own teaching. To maximize their learning they are called upon to bring together all they have studied. Student teachers desire to better understand, analyze and evaluate the factors influencing their teaching practices through action research. On the basis of results they plan their future teaching practices. To a varying degree, student teachers agreed that they can change their teaching from surface to deep and from descriptive to

interpretive through reflective practices. With-in the context of action research, reflective practices work as a catalyst in professional development of prospective teachers (Myer, 2009). In contrast to refereed studies, results of many studies highlighted various drawback of reflective practices.

Reflective practices can be used within a range of professional education programmes but there is a lack of reliable methods to know that reflection has taken place, if it has occurred than at what level? It is also difficult to differentiate that reflective practices facilitate the teacher educator & mentors to develop professional skills (Gidman, 2003). Open and honest reflection may act as a barrier to the professional integrity and growth of teachers. Beginner teachers may pretend and play a game rather than truly reflecting on their professional practices (Hargreaves, 2004). Novice teachers often do not think about their day to day practices, therefore, reflection on action seems impossible. It is unwise, unnecessary and un-healthy for teachers to reflect on every action related to teaching process (Ghaye, 2011). Reflection always requires self-criticism, whereas, professional arrogance, fear of judgment, criticism and defensive attitude of teachers can work as a psychological barrier to become a reflective teacher. Prospective teachers can overcome these issues if teacher educators and mentors adopt reflective practices and play their role as a role model. Moreover, provision of opportunities for group or individual reflection can confiscate the hesitation of prospective teachers.

Table 10: Summary of Studies on Reflective Practices

Author/Research	Title of work/studies	Methodology	Major Focus	Major results
Osterman & Kottkamp, (1993)	Reflective Practice for Educators Improving Schooling Through Professional Development	Contrasting Approaches to Professional Development	Traditional Model of Teacher Education Versus Reflective Practice Model of Professional development	TM: Individual, molecular, cognitive RM: Collaborative, holistic, personal TM: Learner as subordinate RM: Learner as agent TM: Teacher as passive consumer RM: Practitioner as action researcher
Bound, (2011)	Reflective Practitioner Research for Professional Learning in CET (Centre for Research and Teaching)	A mixed methods approach	Identification of Teachers pedagogical beliefs	Reflective teachers were committed to deeply care about their learners.
Harnett, J. (2007)	Changing learning conversations: an action research model of reflective professional development	Action research approach	Learning conversations are pivotal in providing opportunities to develop students' Understanding	Reflective practices work as catalyst for improvement in professional practices of teachers. Teachers can make small but incremental changes in their interactions with students
Tate, S. (2011)	Using critical reflection as a teaching tool	Descriptive research	Critical reflection as a teaching tool	Reflective teachers can identify their own educational needs. They attempt to maintain professional standards. They can easily understand complex situations and can cope with work stress in a better way
Bughio, F.A. (2013)	Issues and Challenges in Doing Action research in a public sector university	Descriptive research	Action Research	Class size a major hurdle to take students feedback. Students continuously sit at back benches. Class size effect students' participation and students' teacher relationship. Meaningful interaction between student and teacher is missing. Majority of teachers not conduct action research. Majority of teachers not take students feedback.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

Chapter three covers research methodology, research design, research ethics, population, sample size, research instruments and time framework of the study. This chapter elaborates construction of research tools and establishing validity & reliability of the instruments. This chapter also describes various phases of data collection and data analysis. The purpose of this investigation was to study the reflective practices of prospective teachers and teacher educators. Researcher developed two questionnaires i.e (i) questionnaire for prospective teachers and questionnaire for teacher educators. Observation sheet was used to observe the teaching practices of prospective teachers during teaching practicum. To study the existing challenges and issues involved in reflective practices, researcher interviewed the heads of departments. This chapter is discussed under the following headings:

3.2 Research Method

This study formed mixed method in nature. Mixed method educational research deals with procedure for collecting, analyzing and mixing quantitative and qualitative data in a single study. Mixed method is relatively a new paradigm in educational research. This method is based on the idea of compatibility between

qualitative and quantitative method to be used in a single study. Mixed method studies attempt to legitimate the use of multiple approaches to develop deeper understanding of the phenomena to answer research questions (Pandya, 2010). Mixed method is best approach when qualitative or quantitative data is not enough to understand a research problem (Cresswell, 2011). Mixed method approach consists of merging, integrating and linking two strands of data to understand the research problem. Design and procedures of the study is discussed below:

3.3 Design and Procedure

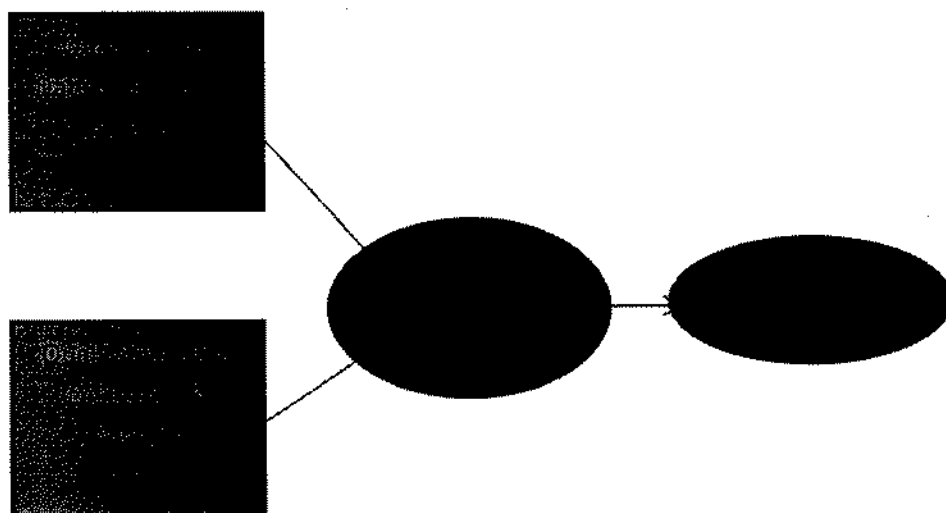
Many models and designs of mixed method approach have been discussed in existing research literature. Major mixed method designs include; Convergent Parallel Design, Explanatory Sequential Design, Exploratory Sequential Design and Embedded Design. In Convergent Parallel design first quantitative data is collected and then qualitative data is collected to make analysis. Explanatory Sequential Design consists of collection of quantitative data and making analysis: collection of qualitative data and making analysis. Exploratory Sequential Design consists of collection of qualitative data and making analysis; collection of quantitative data and making analysis. While, Embedded Design facilitates researchers to select quantitative or qualitative data first and go for analysis before during or after interpretation of data. Transformative Design consists of quantitative data collection & analysis followed by qualitative data collection and analysis. While in Multiphase Design at first stage qualitative study is conducted, followed by a quantitative study and finally third study is conducted through quantitative and qualitative methods together (Cresswell,

2011). This study followed Convergent Parallel Design, which is discussed below:

3.3.1 The Convergent Parallel Design

In convergent parallel design quantitative & qualitative data are collected concurrently. Both types of data are merged to understand the research problem. The basic rationale for this design is that qualitative data supplies strengths to balance the weaknesses of quantitative data and quantitative data provide strengths to the diffuseness of qualitative data, which provide more comprehensive understanding of the problem. If quantitative data does not provide detailed information of the phenomena then researcher can make profound observations of a few respondents or interview with few participants at the end of data collection. Qualitative data may strengthen the quantitative data. Therefore, the convergent parallel design was followed in the study. This design allows researchers to collect quantitative and qualitative data and make separate analyses of both type of data. Researcher can separately compare the results of both data sets. Description of quantitative and qualitative results path side by side is the most prevalent method in Mixed Method Research. Researcher present quantitative statistics and then illuminate qualitative quotes to confirm or disconfirm the statistical results. Researcher may treat quantitative or qualitative data equally or give priority to any set of data while making interpretation whether the results obtained from both types of data support or contradict each other (Cresswell, 2011). Graphic illustration of the adopted research design is given below:

Figure 10: Representation of Convergent Parallel Design



Cresswell, Educational Research 4th Ed. 2013, (page 571)

The major strength of this design is that it combines the advantages of each type of data. Quantitative data provides for generalizability, while qualitative data offers information about the context or setting (Cresswell, 2013).

3.4 Population

Population of the study consisted of 910 male and female prospective teachers enrolled in B.Ed Hons and B.Ed programme at (i) National University of Modern Languages, Islamabad (NUML), (ii) Arid Agriculture University Rawalpindi (AAUR) (iii) Federal College of Education, Islamabad (FCE) (iv) International Islamic University, Islamabad (IIUI) (v) Govt. College for Elementary Teachers, Islamabad (GCETI) (vi) Bilquis College of Education for Women Rawalpindi (BCEWR) (vii) Foundation University, Rawalpindi (FUR) (viii) Fatima Jinnah Women University, Rawalpindi (FJWUR) and (ix) Govt. College for Elementary Teachers, Rawalpindi (GCETR). In addition, all the teacher trainers/academicians, heads of departments, principals, directors and teaching

practicum supervisors of the selected Teacher Training Institutions formed the population of the study.

3.5 Sample

Universal sampling technique was applied to select the sample of the study from prospective teachers, teacher educators and heads of departments. Random sampling technique was applied to select the sample from prospective teachers for observation. Gay (2000) random sampling is the process of selecting a sample in such a way that all individuals in the defined population have an equal and independent chance of being selected for the sample. According to Kumar (2009) random sampling design tolerates each element in the population must have an equal and independent chance of selection in the sample.

3.5.1 Target Sample Size

The present study focused analyzing the role of RPs of Prospective Teachers on their professional development. Specified target sample groups were as follows: prospective teachers; teacher educators, head teachers, principals and heads of departments. Sample of the study comprised of 910 prospective teachers enrolled in B.Ed programme of teacher training institutions of Islamabad and Rawalpindi during 2011 & 2012. Moreover 160 teacher educators from NUML, AAUR, FCEI, IIUI, GCETI, BCEWR, FUR, FJWUR, GCETR and GECW were included in the sample. Furthermore, all the heads of departments, Chairpersons, principals, and directors of the above mentioned Teacher Training Institutions were included in the sample of the study. The actual number of respondent prospective teachers was 910 and the response rate was 87.91%. Likewise, the number of teacher's educators was 160 and the response rate was 87.5%. The number of heads of department, principles & directors was 09, the actual

respondent rate was 100%. Thus, the total number of respondent rate was 91.80%. Sample summary is tabulated below:

Table 12: Sample Summary of Teachers Educators

<i>Sr.</i>	<i>Institution</i>	<i>Professors</i>		<i>Associate Professors</i>		<i>Assistant Professors</i>		<i>Lecturers/ Instructors</i>		<i>Total</i>	
		<i>P*</i>	<i>S**</i>	<i>P*</i>	<i>S**</i>	<i>P*</i>	<i>S**</i>	<i>P*</i>	<i>S**</i>	<i>P*</i>	<i>S**</i>
1	NUML, Islamabad	04	04	01	01	04	04	13	13	22	22
2	PMASU, Rawalpindi	01	01	-	-	04	04	07	07	12	12
3	FCE, Islamabad	01	01	01	01	04	04	15	15	21	21
4	IU, Islamabad	01	01	01	01	06	06	09	09	17	17
5	GCET, Islamabad	-	-	-	-	01	01	13	13	14	14
6	BCE, Rawalpindi	02	02	03	03	09	09	23	23	37	37
7	FU, Rawalpindi	01	01	02	02	02	02	06	06	11	11
8	FJW, Rawalpindi	-	-	01	01	04	04	10	10	15	15
9	GCET, Rawalpindi	-	-	-	-	-	-	11	11	11	11
Total=		10	10	09	09	34	34	107	107	160	160

*P= Population

** S= Sample

Table 14: Sample Summary of Prospective Teachers

<i>Sr.</i>	<i>Institution</i>	<i>Sample</i>		<i>Total</i>	
		P	S	P	S
1	National University of Modern Languages, Islamabad	75	75	75	75
3	Arid Agriculture University, Rawalpindi	78	78	78	78
3	Federal College of Education, Islamabad	140	140	140	140
4	International Islamic University, Islamabad	20	20	20	20
5	Govt. Elementary College for Women, Islamabad	108	108	108	108
6	Bilquis College of Education for women Rawalpindi	365	365	365	365
7	Foundation University, Rawalpindi	35	35	35	35
8	Fatima Jinnah Women University, Rawalpindi	20	20	20	20
9	Govt. College for Elementary Teachers, Rawalpindi	69	69	69	69
P= Population		S= Sample		Total=	910

Table 15: Overall sample size

Target group	Population	Sample size
Prospective teachers	910	910
Teacher trainers	160	160
Head of departments	09	09
Total	1169	1169
***Gay, L.R (2000) page 125		

3.6 Delimitations of the Study

The study was delimited to:

1. Male and female prospective teachers enrolled in B.Ed programme during 2012 and 2013 at Teacher Training Institutions of Rawalpindi and Islamabad.
2. Study was delimited to prospective teachers, teacher educators and heads of the departments of the International Islamic University, Islamabad, National University of Modern Languages, Islamabad, Arid Agriculture University Rawalpindi, Federal college of Education, Islamabad, Govt. Elementary College for Women Islamabad and Bilquis College of Education for women Rawalpindi.
3. Study was delimited to the prospective teachers formally pursuing their B.Ed programme. Student teachers enrolled through distance mode were not included in the study.
4. Study was delimited to the male and female professors, associate professors, assistant professors, lecturers, instructors, practicum supervisors of teacher training colleges and universities departments of education.
5. Study was delimited to eight reflective practice i.e reflection in action, reflection on action, reflection for action, students feedback, colleagues feedback, peer observation and audio video recording.

3.7 Research Instruments

Two questionnaires were developed to collect quantitative data each from the prospective teachers and teacher trainers respectively. Researcher developed observation sheet to observe the prospective teachers during practicum and structured interview guide to interview the heads of the teacher training institutions.

3.7.1 Instrument construction

Selection or construction of research instruments is imperative phase of a study. Therefore, descriptors appeared in literature review matching with the title, objectives and framework of the study were compiled and categorized according to the research questions of the study to develop the instruments. Initially, many drafts of the questionnaire were discussed with supervisors. At second stage final drafts of instruments were distributed to three experts for expert opinion. Many items were edited and deleted in the light of expert's feedback and results of the pilot study. Both the questionnaires were developed on Likerts five point scale. Five options Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SDA) were used (Cresswell, 2011 p195). Questionnaire for prospective teachers comprised of 58 items and five open ended questions matching with research objectives, research questions and hypotheses of the study. Questionnaire for teacher educators consisted of 30 items and five open ended questions. Items included in questionnaires were set in accordance with variables of the study.

3.7.2 Validity & Reliability of Research Instruments

Reliability of the questionnaires was checked through SPSS version 16. Cronbach's alpha was applied to measure the reliability of the questionnaires. The reliability coefficient of the questionnaire for prospective teachers was measured Alpha .973 and Alpha .931 for teacher educators respectively. Validity of the questionnaires, observation and interview schedule was checked in consultation with experts. Moreover, researcher recorded the information on two recording devices. Where respondents did not provide consent for recording, necessary details were pen downed immediately after the observation. Keeping

in view the anonymity factor, video tape recorder and mobile device were used where applicable.

3.8 Collection of Data

Data were collected by administering the research instruments. Initially researcher thought to collect data through electronic distribution of the questionnaires, but keeping in view problems and issues for electronic data collection, researcher personally visited all the selected teacher training institutions to collect data. Data collection consisted of following phases:

3.8.1 First phase

Researcher personally visited all the selected departments of education and teacher training institutions to distribute the questionnaires. After administration of questionnaires, researcher continuously visited all the institutions for 160 days to collect back the questionnaires. Some of the respondents filled out the questionnaires and returned immediately to the researcher. Many respondents were reminded and requested to return the questionnaire. Many prospective teachers and teachers were requested and reminded over telephone to return the questionnaire. Return rate in case of prospective teachers was 92% (Researcher received back 840 questionnaire out of 910). In case of teacher educator return rate was 87% (140 respondents out of 160 returned the questionnaire). Moreover, 11% prospective teachers and 21% teacher educators' provided no answer to open ended questions.

3.8.2 Second phase

Researcher visited the educational institutions to observe the reflective practices of the prospective teachers during the teaching practicum.

3.8.3 Third phase

Researcher visited the university departments of education and Teacher Training Institutions to interview the heads of the institutions. Prior permission was taken to interview the heads of TTIs. Many heads of departments rescheduled interview due to their other professional liabilities. Researcher again took telephonic appointment to know about their availability for interview. Six respondents could not offer their consent to record the interview.

3.9 Data Analysis

Data analysis consisted of following steps:

3.9.1 Cleaning the Data

Researchers visually inspected and thoroughly checked the filed questionnaires to scrutinize the inappropriate questionnaires. Incomplete questionnaires were not included in the analysis, 800 out of 840 questionnaires were found appropriate and provided the required data. The data collected through observation sheet was checked for clarification and explanation of short notes before analysis. Researcher listened the recorded interviews to have its crystal clarifications before analysis. Moreover, adequately filled out questionnaires were coded before feeding in to SPSS software version 16.

3.9.2 Data Feeding

Researcher developed data analysis sheet with the help of experts and data collected through questionnaires and observation sheet was fed in to SPSS Version 16 for analysis. The data collected through Interview was transcribed and fed in to Microsoft word.

3.9.3 Data Analysis

In order to provide answers to the research questions of the study following statistical analysis were made.

3.9.4 Descriptive Analysis

The descriptive statistics such as percentages mean and standard deviation were calculated to describe the responses of the respondents. Data collected through open ended questionnaire was coded and percentages of similar responses were calculated.

3.9.5 Correlation Analysis

To determine the strength and direction of the independent variables and dependent variables correlation analysis was made. Correlation analysis was used to study the multiple linear relationships of numerous independent variables (RIA, ROA, SF, CF, PO, AV & PP) with dependent variables (PD). According to Creswell (2011) plus one (+1) shows perfect while (-1) reflects perfect negative correlation, (-0.70) strong negative, (-0.50) moderate negative (-.30) weak negative correlations. While (+0.30) weak positive, (+0.50) moderate positive, (+.70) strong positive correlation. Correlation coefficients are calculated to understand the regression line or “best fit line” for all the points of scores and then subsequently move on towards regression analysis (Creswell, 2011 p.375). In non-experimental studies the predictor variables are rarely uncorrelated (Chatterjee & Hadi, 2012 p.64). Therefore, correlation was used to examine the direction of association between the variables.

3.9.6 Regression Analysis

Regression analysis was applied to the data to determine and predict the underlying relationships between the independent and dependent variables.

Individual responses of respondents may not completely convey participant's perspective or individual respondents may misunderstand certain questions. Therefore, responses to single item may not be reliable and may not reflect scores accurately. Researcher may add several questions or several responses together to compute variables before proceeding to regression analysis (Cresswell, 2011 p198). Therefore, data were computed in to different variables according to the nature of the study. The relationship between variables was formulated as a model $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p + \epsilon$. $\beta_0, \beta_1, \beta_2, \dots, \beta_p$ are constants referred to as model partial regression coefficients, while ϵ referred random error. For manipulation of data collected through questionnaires and observation sheet computer software SPSS version 16 was used. Data collected through interview was analyzed through content analysis and percentages were calculated. The Durbin-Watson test was applied through SPSS to see the auto-correlation among responses. Durbin statistics test is used to check the presence of serial correlation among the residuals that residuals are not correlated. The value of D.W ranges from 0 to 4. Value near to 2 indicates absence of auto correlation among the responses and value near to zero shows absolute auto correlation among the responses (Chatterjee & Hadi, 2012). Table 15 below shows the time frame work of the study

3.10 Research Ethics

Throughout the investigation, researcher had a concern with the safety of the respondents. Following research ethics were observed during data collection and report writing:

3.10.1 Anonymity

All the information provided by the respondents is kept confidential and it is used only for research purpose. Researcher ensured the respondents that provided information would be accessible to the researcher only. Researcher has not mentioned the names of the respondents anywhere through-out the research report.

3.10.2 Informed consent

Informed consent of the respondents was taken from the targeted sample before administration of the research instruments. Researcher informed the respondents in advance about observation. Moreover, researcher also ensured the respondents that obtained information would be used only for research purpose. Researcher telephonically obtained prior permission from the heads of the departments to conduct their interview.

3.11 Pilot study

Pilot study gives warning about shortcomings of instruments, methodology and other research related protocols. Therefore, instruments were piloted before the large scale study. Instruments were administered to a group of 20 prospective teachers and 10 teacher educators. Responses were sought on paper and discussed with supervisor. Researcher felt two potential problems during pilot study which needed to be addressed before large scale study. On prospective teachers side the researcher felt that language was ambiguous for respondents. The respondents were not clear about reflection in action, reflection on action etc. Therefore, researcher made simple language of those items in consultation with experts. Secondly, researcher felt that respondents did not respond to items in order, or they left few items unanswered. Researcher felt that both problems

might create trouble in analysis. Confusing times were excluded from instruments or replaced with other items. Few respondents highlighted spelling and proof reading mistakes which were removed. During pilot testing researcher also noted down the stamina and mood of the respondents. Respondents showed interest in the questionnaire and completed questionnaire from 15 to 20 minutes. Coleman & Briggs (2002) has stated that pilot study is testing of selected aspects of a study with the intension to improve deficiencies of research instruments. A way to pilot testing is to pass on the research instruments to experts for their comments. Researcher employed this method and handed over the interview guide to three experts for the pilot testing. Moreover, researcher conducted two pilot interviews. Interview questions were modified, which included omitting of questions, altering of words of the questions.

3.12 The Model

From the viewpoint of comparing various sets of variables, the analysis model of the present study is basically composed of the following variables; (1) Reflection in Action; (2) Reflection on Action (3) Reflection for Action (4) Students Feedback (5) Peer observation (6) Colleagues feedback (7) Audio-Video Taping and (8) Professional Portfolios. The role of these variables was studied on the professional development of prospective teachers. Major factors included in the study were relationship of prospective teacher with students; relationship with colleagues; discourteous attitude of students; unwanted practices; smooth rolling of lesson plan; classroom momentum; planning future teaching activities; overcoming professional weakness; understanding Para-language of class; incorporation of students, peers & colleagues feedback; unexpected class room situations; effectiveness of teaching methods; identification of talented and slow

learners; encouraging students attitudes; effective communication; lesson planning, searching out material skills; creative aspects of class work & homework. All the dependent variables contribute towards prospective teachers' professional development and are conceived from previous research literature.

Table 16-a: Item wise Description of Questionnaire for PTs

<i>Sr.</i>	<i>Variables</i>	<i>Item Nos.</i>	<i>Total</i>	<i>Percentage</i>
1.	DVIP (Demographic Variable Information)	I to xv	15	-
2.	Professional Development (PD)	Q6; Q10; Q14; Q21; Q24; Q27; Q35; Q39; Q49	09	16%
3.	Reflection in Action (RIA)	Q1; Q3; Q7; Q8; Q9; Q15; Q18; Q19; Q30; Q51	09	16%
4.	Reflection on Action (ROA)	Q2; Q4; Q13; Q17; Q22; Q34; Q41; Q42; Q56	09	16%
5.	Reflection for Action (RFA)	Q40; Q43; Q44; Q45; Q46; Q50	06	10%
6.	Students Feedback (SF)	Q5; Q23; Q25; Q26; Q38; Q54	06	10%
7.	Colleagues Feedback (CF)	Q12; Q31; Q32; Q33; Q47	05	8%
8.	Audio-Video Recording (AVR)	Q11; Q16; Q20; Q53; Q55	05	8%
9.	Peer Observation (PO)	Q28; Q29; Q37; Q52; Q58	05	8%
10	Professional Portfolios (PP)	Q24; Q36; Q48; Q57	04	6%

Above table explains the item wise description of the questionnaire used to collect data from prospective teachers. The data collected through questionnaire, interviews and observation was analyzed in accordance with the objectives and research questions of the study. Next chapter of the study deals with presentation and analysis of data.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

This chapter deals with presentation, analysis, interpretation and discussion about the quantitative data obtained through questionnaires and qualitative data obtained through observation and interview. The chapter consists of five parts. Part-A covers analysis of demographic data about respondents and descriptive characteristics of prospective teachers. Part-B deals with analysis of open ended questions. Part-C presents regression analysis. Part-D communicates descriptive analysis of questions. While, part-E covers analysis of qualitative data.

Statistical Package for Social Sciences (SPSS) version 16 was used to analyze the quantitative data. The questionnaires were analyzed one by one followed by interpretation of the statistical results. According to Creswell, (2011) descriptive analysis of the data is necessary before proceeding to sophisticated inferential statistics. Reliability of the questionnaires was checked through Cronbach Alpha while validity was checked in consultation with experts. Regression analysis was run to predict the role of reflective practices for professional development of prospective teachers. It was necessary to see whether or not prospective teachers involved in RPs and what seemed the outcomes. Descriptive analysis of data comprised of frequencies, percentages, means and standard deviations. For ascertaining the direction of variables, regression analysis was employed to the

data to predict the casual links between independent and dependent variables. Quantitative and qualitative analysis was made in accordance with the nature, objectives, research questions and hypotheses of the study. While executing the regression analysis the variables asked in the questionnaire were computed through SPSS version 16. Computed variables include Reflection in Action (RIA) Reflection on Action (ROA), Reflection for Action (RFA), Students Feedback (SF), Colleagues Feedback (CF), Peer Observation (PO) Audio Video Recording (AV), and Professional Portfolios (PP). Dependent variables include smooth rolling of lesson plan, development of pedagogical skill, relationship with students. According to Bryman & Cramer, (2001) one independent variable is rarely determined by one independent variable in social sciences researches hence researcher computed various variables in to one variable. Data collected through observation and interview was analyzed through content analysis and by calculating percentages. Detail of items concerned with variables used in research is as under:

Sr.	Variables Details	Questionnaire Items	Total
1	Professional Development	Q6; Q10; Q14; Q21; Q24; Q27; Q35; Q39; Q49	09
2	RIA=Reflection in Action	Q1; Q3; Q7; Q8; Q9; Q15;Q18; Q19	08
3	ROA=Reflection on Action	Q2;Q4; Q13;Q17;Q22;Q34;Q41;Q42;Q56	09
4	RFA= Reflection For Action	Q40;Q43;Q44;Q45;Q46; Q50	06
5	SF= Students Feedback	Q5;Q23;Q25;Q26;Q38;Q54	06
6	CF=Colleagues Feedback	Q12;Q31;Q32;Q33;Q47	05
7	AV=Audio Video Recording	Q11;Q16;Q20;Q53;Q55	05
8	PO=Peer Observation	Q28;Q29;Q37;Q52;Q58	05
9	PP=Professional Portfolios	Q36;Q48;Q57	03
10	Total=		58

4.2: Part-A:

Descriptive Analysis of Demographic Variables

Part-A of this chapter deals with descriptive analysis of the demographic variables. Details are as under:

Table 16-b: Summary of Gender of Respondents

Prospective Teachers			Teacher Educators		
Gender	Percentage	N	Gender	Percentage	N
Male	18.8%	150	Male	38.6%	54
Female	81.2%	650	Female	61.4%	86
N=800			N=140		

Table 16 shows the gender and total number of respondents. Data were collected from 800 Prospective Teachers PTs (female=650 male=150) and 140 Teacher Educators TEs (male=54 female= 86) respondents. Majority of the respondents were female by size of enrollment. Graphic representation of respondents of the study is as under:

Graph 1: Gender wise representation of respondents

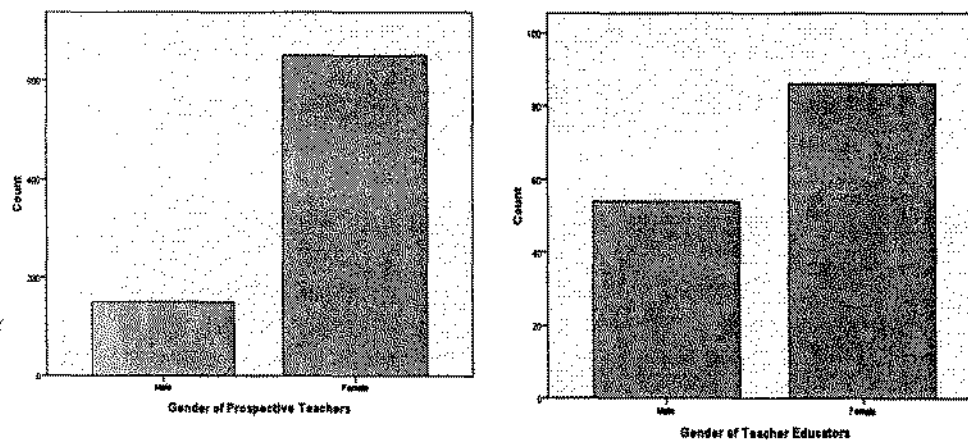


Table 17: Age Groups of the Respondents

<i>Prospective Teachers</i>			<i>Teacher Educators</i>		
<i>Age group</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Age group</i>	<i>Frequency</i>	<i>Percentage</i>
Below 20	89	11.1%	20-25	3	2.1%
20-25	536	67.0%	26-30	21	15.0%
26-30	120	15.0%	31-35	40	28.6%
31-35	13	1.6%	36-40	31	22.1%
Above 35	01	1%	41-45	24	17.1%
No Answer	41	5.1%	46-50	10	7.1%
			51-55	10	7.1%
			56-60	01	0.7%
N=800		100	N=140		100

Table 17 shows the age group of the respondents. Majority of prospective teachers (78%) formed a young group, 20 to 25 years old. While majority of teacher educators (67.8%) were middle aged, 31 to 45 years old, (5.1%) prospective teachers and (7.1%) teacher educators provided no answer about their age group. Graphic representation of respondents of the study is as under:

Graph 2: Age wise representation of Respondents

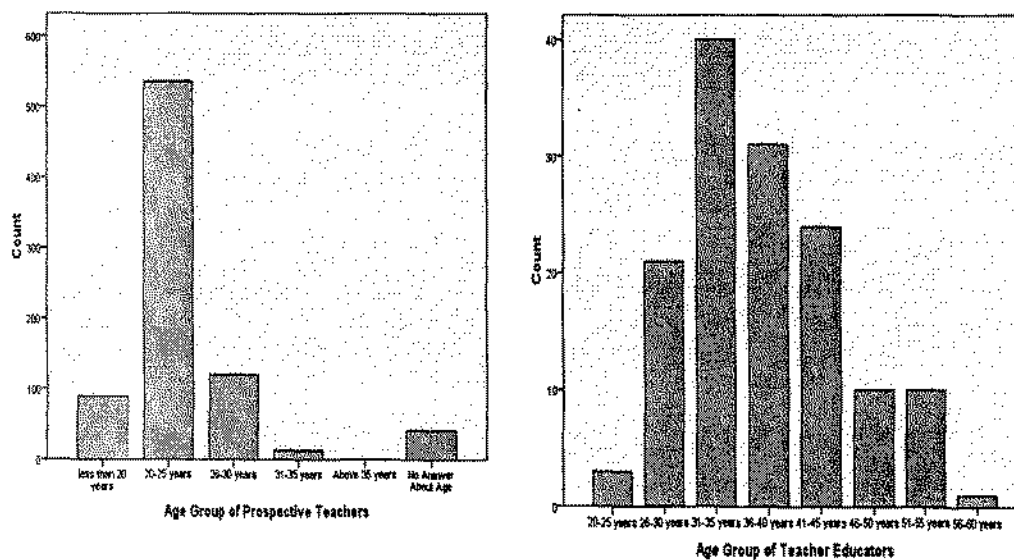


Table 18: Designations wise Summary of the Teacher Educators

<i>Designation</i>	<i>Freq.</i>	<i>Percentage</i>	<i>Designation</i>	<i>Freq.</i>	<i>Percentage</i>
Lecturer	93	66.4%	Associate Professor	8	5.7%
Assistant Professor	38	27.1%	Professor	1	0.7%

Table 18 shows the positions of the teacher educators. Majority of the teacher educators were lectures (66.4%) and (27.1%) were Assistant Professors, (5.7%) were working as associate professors and (0.7%) respondents were professors. Position wise graphic representation of respondents of the study is as under:

Graph 3: Designation wise representation of the Respondents

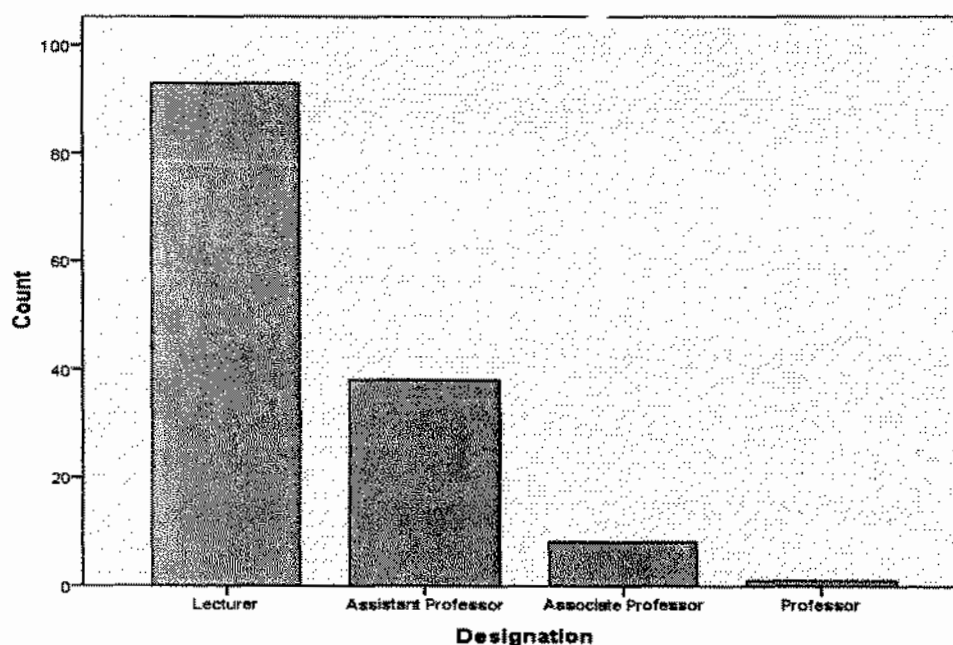


Table 19: Teaching Experience of Teacher Educators

<i>Experience</i>	<i>Freq.</i>	<i>Percentage</i>	<i>Experience</i>	<i>Freq.</i>	<i>Percentage</i>
Less than 5 years	34	24.3%	16-20 years	19	13.6%
6-10 years	52	37.1%	21-25 years	7	5.0%
11-15 years	27	19.3%	26-30 years	1	.7%

Table 19 displays that majority of the teacher educators (57.7%) were having (6 to 15 years) teaching experience. Whereas, (13.6%) were having (16 to 20 years) teaching experience and 5.7% were having (21 to 30 years) teaching experience. Academic qualifications of the respondents of the study are given below.

Table 20: Academic Qualifications of the Respondents

<i>Prospective Teachers</i>			<i>Teacher Educators</i>		
<i>Qualification</i>	<i>Freq.</i>	<i>Percentage</i>	<i>Qualification</i>	<i>Freq.</i>	<i>Percentage</i>
BS	35	4.4%	BS	04	2.9%
BA/B.Sc	515	64.4%	MA/M.Sc	36	25.7%
MA/M.Sc	239	29.9%	MS/M.Phil	71	50.7%
MS/M.Phil	11	1.4%	Ph.D	29	20.7.7%
N=800		100%	N=140		100%

Table 20 shows academic qualification of the respondents. (4.4%) were having BS qualification before they got admission to B.Ed programme, (68.8%) prospective teachers were graduates and (29.9%) were master degree holders. While, in case of teacher educators (2.9%) were B.S, (25.7%) were M.A/M.Sc or equivalent, (50.7%) were having MS/M.Phil qualification, while (20.7%) teacher educators were Ph.D holders.

Table 21: Professional Qualifications of the Respondents

<i>Prospective Teachers</i>			<i>Teacher Educators</i>		
<i>Qualification</i>	<i>Freq.</i>	<i>%</i>	<i>Qualification</i>	<i>Freq.</i>	<i>%</i>
PTC	42	5.2%	CT	01	0.7%
CT	56	7.0%	ATTC	01	0.7%
ATTC	16	2.0%	Dip Education	06	3.9%
Dip in Education	73	9.1%	B.Ed/ B.SEd	43	34.7%
No Prof. Qual.	613	76.6%	M.Ed/M.SEd	84	57.9%
			No Prof. Qual.	5	2.1%
N=800 100%			N=140 100%		

Table 21 shows professional qualifications of the respondents. Majority of the prospective teachers (76.6%) were graduates, (5.2%) were PTC, (7.0%) CT and (2.0%) ATTC when they were enrolled in B.Ed programme. While, majority of the teacher educators (57.9%) were having Master degrees in Education and (34.7%) were having Bachelor degrees in Education.

Table 21: Marital Status of the Respondents

<i>Prospective Teachers</i>			<i>Teacher Educators</i>		
<i>Marital status</i>	<i>Freq.</i>	<i>Percentage</i>	<i>Marital status</i>	<i>Freq.</i>	<i>Percentage</i>
Unmarried	705	88.1%	Unmarried	52	37.1%
Married	86	10.8%	Married	87	62.1%
Divorced	09	1.1%	Divorced	01	0.7%
	N=800	100%		N=140	100%

Table 21 displays marital status of the respondents. Majority of the prospective teachers (88.1%) were unmarried. While majority of the teacher educators (62.1%) were married.

Graph 4: Prospective Teachers Population Pyramid
Age Group of Prospective Teachers

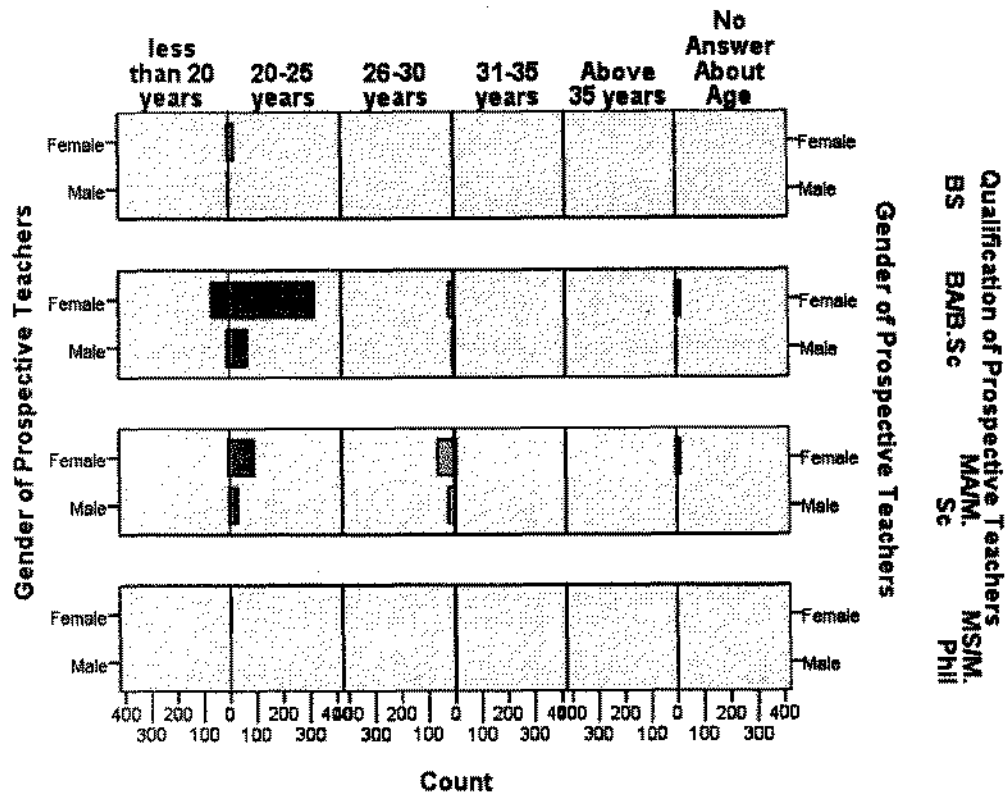


Table 22: Teaching Methods and Strategies of Teacher Educators

Method/ Strategy	LM	DM	GDM	AM	PRs.M	ABL	D&P	Q&A	PBL	TT	TB M	CSM	Mcrr.T	SCM
Never	3 (2%)	27 (19%)	10 (7%)	4 (2.9%)	10 (7%)	23 (16%)	72 (51%)	6 (4%)	60 (43%)	98 (70%)	8 (6%)	88 (63%)	97 (69%)	16 (11%)
Rarely	7 (5%)	62 (44%)	71 (51%)	36 (25%)	39 (28%)	48 (34%)	36 (26%)	34 (24%)	42 (30%)	35 (25%)	29 (21%)	38 (27%)	36 (26%)	38 (62%)
Sometime	01 (7%)	08 (6%)	04 (3%)	03 (2%)	05 (4%)	14 (10%)	09 (6%)	04 (3%)	02 (1%)	04 (3%)	03 (2%)	05 (4%)	05 (4%)	02 (1%)
Often	63 (45%)	38 (27%)	41 (29%)	56 (40%)	55 (39%)	41 (29%)	15 (11%)	54 (39%)	15 (11%)	3 (2%)	75 (54%)	7 (5%)	2 (1%)	77 (55%)
Always	66 (47%)	5 (4%)	14 (10%)	41 (29%)	31 (22%)	14 (10%)	8 (6%)	42 (30%)	21 (15%)	00	25 (18%)	2 (1%)	00	7 (5%)

Table 22 shows that 92% Teacher educators provided answer that they often used lecture method along with other teaching methods and strategies, 31% replied that they used Demonstration Method along with lecture method, 61% replied that they seldom used Group Discussion Method, 69% replied that they

often gave assignments and presentations to their students. Sixty one percent provided answers that they hardly applied Activity Based Learning method, 69% replied that they often used Question and Answer strategy during teaching learning process. Ninety eight percent replied that they never used Team Teaching method, 72% replied that they often used Text Book Method, 94% replied that they never use Case Study Method. Moreover, 60% teacher educators replied that they often advised their students to attend seminars and conferences. It indicated that TEs were well aware of the importance of participation in seminars and conferences.

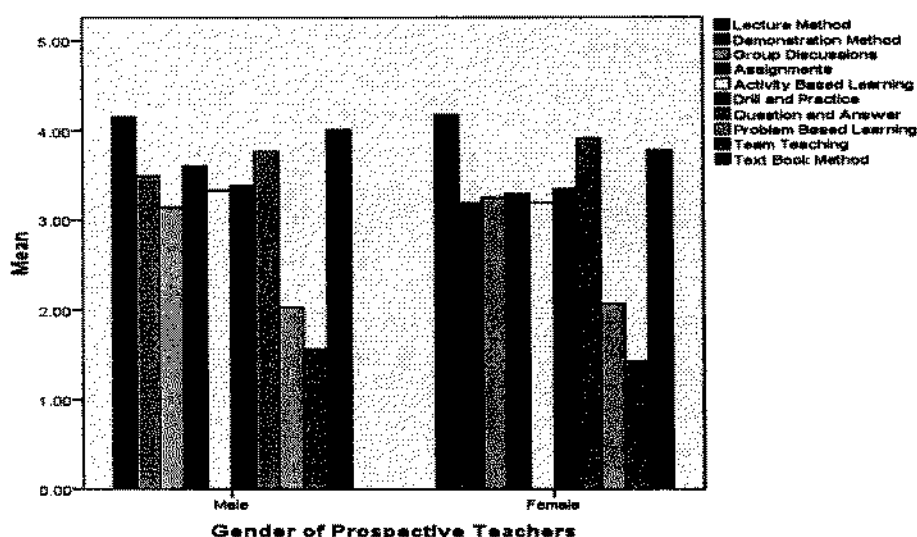
Table 23: Teaching Methods and Strategies used by Prospective Teachers

<i>Method/ Strategy</i>	<i>LM</i>	<i>DM</i>	<i>GDM</i>	<i>AM</i>	<i>ABL</i>	<i>D&P</i>	<i>Q&A</i>	<i>PBL</i>	<i>TT</i>	<i>TBM</i>	<i>Mcr.T</i>
Never	8 (1%)	28 (4%)	36 (5%)	34 (4%)	53 (7%)	59 (7%)	28 (4%)	430 (54%)	564 (71%)	83 (10%)	600 (75%)
Rarely	87 (11%)	273 (34%)	289 (36%)	256 (32%)	276 (35%)	213 (27%)	152 (19%)	165 (21%)	170 (21%)	50 (6%)	146 (18%)
Sometime	9 (1%)	68 (9%)	49 (6%)	55 (7%)	67 (8%)	72 (9%)	26 (3%)	23 (3%)	24 (3%)	32 (4%)	27 (3%)
Often	350 (44%)	332 (42%)	304 (38%)	302 (38%)	248 (31%)	295 (37%)	268 (34%)	87 (11%)	28 (4%)	395 (49%)	18 (2%)
Always	346 (43%)	99 (12%)	122 (15%)	153 (19%)	156 (20%)	161 (20%)	326 (41%)	95 (12%)	14 (2%)	240 (30%)	9 (1%)
N=800											

Table 23 shows that 87% PTs replied that they often used lecture method along with other teaching method and strategies. Fifty four percent provided answer that they often used demonstration method, 62% answered that they never used group discussions method in class, 51% replied that they often gave assignments and activities to their students during teaching practicum, 57% replied that used drill & practice method along with lecture method. Moreover, 75% PTs replied

that they often asked questions to their students, 68 % replied that they seldom involved their students in problem based learning, 94% replied that they never used team teaching and 97% PTs replied that they were not cognizant of technology of microteaching. Furthermore, 79% prospective teachers replied that they often used text book method during teaching practicum. Graphic representation of trends for using various teaching methods during teaching practice is as under:

Graph 5: Teaching Method Trends among Prospective Teachers



Comparison of Teaching Methods used by PTs and TEs

Comparison of results given in table 22 & 23 revealed that majority of teacher educators and prospective teachers used almost similar teaching methods and strategies. Majority of teacher educators (92%) and majority of prospective teachers replied that they more often used lecture method along with other teaching methods and strategies. 69% teacher educators and 57% prospective teachers provided answer that they often gave assignments to their students, 61% teacher educators and 59% prospective teachers hardly used activity based learning. Similarly, 69% teacher educators and 75% prospective teachers replied

that they often used question answer strategy, 73% teacher educators and 79% replied that they often used text book method. Likewise, 95% teacher educators and 92% prospective teachers replied that they never used micro teaching. 95% TEs and 93% PTs never used team teaching method. Item wise descriptive analysis of the questionnaire filled by prospective teachers is give below.

4.3 Descriptive Analyses of Questionnaire for Prospective Teachers

Descriptive statistics are used to calculate the frequencies, percentages, Mean and Standard Deviation to interpret the data. Item wise descriptive analysis of quantitative data collected from prospective teachers is as under:

Table 24: Prospective Teachers Involvement in Reflection In Action

<i>Statement</i>	<i>Responses</i>	<i>Freq.</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over students discourteous attitude during teaching process	Strongly Disagree	54	6.8%	3.63	1.25
	Disagree	152	19.0%		
	Undecided	43	5.4%		
	Agree	336	42.0%		
	Strongly Agree	215	26.9%		
	N=	800	100%		

Table 24 shows that 68.9% Prospective Teachers (PTs) agreed with the statement that whenever students demonstrated discourteous attitude they reflected over the attitude of their students. 5.4% were uncertain in their responses, while 25.9% PTs disagreed with the statement. The mean score was 3.63 and SD= 1.25.

Table 25: Planning Strategies to Overcome Students Discourteous Attitude

<i>Statement</i>	<i>Responses</i>	<i>Freq.</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I plan strategies to overcome students discourteous attitude during my lesson	Strongly Disagree	45	5.6%	3.58	1.27
	Disagree	185	23.1%		
	Undecided	58	7.2%		
	Agree	285	35.6%		
	Strongly Agree	227	28.4%		
	N=	800	100%		

Table 25 shows that 71.6% PTs agreed with the statement that whenever their students demonstrated discourteous attitude during class. They planed strategies to overcome discourteous attitude of their students, (7.2%) were uncertain in their responses, while 28.8% respondents disagreed with the statement. The mean score 3.58 and SD= 1.27 shows that majority of the PTs agreed that they involved in reflection in action to plan strategies to overcome students' discourteous attitude during teaching process.

Table 26: RIA to Overcome Unwanted Practices

<i>Statement</i>	<i>Responses</i>	<i>Freq.</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I attempt to overcome my unwanted practices (shyness, shivering, repetition of word & under-confidence) during teaching process	Strongly Disagree	43	5.4	3.73	1.21
	Disagree	134	16.8		
	Undecided	58	7.2		
	Agree	325	40.6		
	Strongly Agree	240	30.0		
		N= 800	100%		

Table 26 shows that 70% PTs agreed with the statement that they reflected over their unwanted practices (shyness, shivering, repetition of words and under-confidence) and attempted to overcome during lesson. 7.2% were uncertain in their responses, while 22.1% disagreed. The mean score 3.73 and SD= 1.21. Mean values 3.73 indicate that majority of PTs agreed that they attempt to overcome unwanted practices during lesson.

Table 27: RIA to Maintain Class-Room Discipline

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
When I teach to the students, I reflect over class room discipline to maintain class-room momentum	Strongly Disagree	49	6.1	3.67	1.20
	Disagree	130	16.2		
	Undecided	70	8.8		
	Agree	339	42.4		
	Strongly Agree	212	26.5		
	N=	800	100%		

Table 27 shows that 68.9% PTs agreed that they reflected over class room discipline to maintain class room momentum 8.8% were uncertain in their responses, while 28.3% of the respondents disagreed. The mean score 3.67 and SD= 1.20.

Table 28: RIA to Uphold Smooth Rolling of Lesson Plan

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think about smooth rolling of lesson plan during lesson	Strongly Disagree	39	4.9	3.62	1.28
	Disagree	190	23.8		
	Undecided	56	7.0		
	Agree	263	32.9		
	Strongly Agree	252	31.5		
	N=	800	100%		

Table 28 shows that 64.4% PTs agreed with the statement that they involved in reflection in action to uphold smooth rolling of lesson plan. 7.0% were uncertain in their responses, while 28.7% of the respondents disagreed. The mean score 3.62 and SD= 1.28 shows that majority of the PTs agreed that RIA contributes to uphold smooth rolling of lesson plan.

Table 29: Reflection in Action and Teaching of Controversial Contents

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
Whenever, I teach controversial contents in class I reflect over the contents before teaching	Strongly Disagree	74	9.2	3.40	1.28
	Disagree	164	20.5		
	Undecided	89	11.1		
	Agree	313	39.1		
	Strongly Agree	160	20.0		
	N=	800	100%		

Table 29 shows that 59.1% respondents agreed with the statement that they reflected over the controversy of contents before teaching of contents, 11.1% were uncertain in their responses, while 28.7% of the respondents disagreed. The mean score 3.40 and SD= 1.28. Mean values 3.40 indicated that majority of the responses existed in the category of agreement and strongly agreement.

Table 30: RIA to Devise Strategies to Maintain Classroom Discipline

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
During teaching process I plan strategies to maintain classroom discipline	Strongly Disagree	62	7.8	3.67	1.28
	Disagree	136	17.0		
	Undecided	50	6.2		
	Agree	309	38.6		
	Strongly Agree	243	30.4		
	N=	800	100%		

Table 30 reflects that 69% PTs agreed with the statement that they plan strategies to maintain classroom discipline during teaching process, which indicated that prospective teachers were involved in reflection in action, 6.2% were uncertain in their responses, while 24.8% of the respondents disagreed. The mean score 3.67 and SD= 1.28.

Table 31: RIA to Overcome Hesitation

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
When I ask questions from my students I reflect over my hesitation to overcome	Strongly Disagree	80	10.0	3.41	1.33
	Disagree	185	23.1		
	Undecided	49	6.1		
	Agree	299	37.4		
	Strongly Agree	187	23.4		
	N=	800	100%		

Table 31 shows that 60.8% PTs agreed with the statement that when they asked questions from their students they reflected over their hesitation and attempted to overcome their hesitation. 6.1% were uncertain in their responses, while 33.1% of the respondents disagreed with the statement. The mean score was 3.41 and SD= 1.33.

Table 32: RIA to Improve Pedagogical Skills

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over my practices to improve my pedagogical skills	Strongly Disagree	191	23.9	2.61	1.46
	Disagree	102	12.8		
	Undecided	58	7.2		
	Agree	260	32.5		
	Strongly Agree	189	23.6		
	N=	800	100%		

Table 32 shows that 56.1% PTs agreed with the statement that they reflected over their teaching practices during lesson to improve their pedagogical skills, 7.2% were uncertain in their responses, while 36.7% of the respondents disagreed. The mean score 2.61 and SD was = 1.46.

Table 33: RIA and Rectification of Professional Mistakes on the Spot

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect on my professional mistakes to rectify my mistakes on the spot	Strongly Disagree	61	7.6	3.55	1.28
	Disagree	165	20.6		
	Undecided	52	6.5		
	Agree	314	39.2		
	Strongly Agree	208	26.0		
	N=	800	100%		

Table 33 shows that 65.2% PTs agreed with the statement that they reflected over their teaching practices for identification and rectification of professional mistakes on the spot. 6.5% were uncertain in their responses, while 28.2% replied that they did not reflect over their teaching practices to rectify professional mistakes on the spot. The mean score was 3.55 and SD= 1.24.

Table 34: RIA to Identify Slow Learners

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I attempt to identify	Strongly Disagree	51	6.4		
slow learners and	Disagree	152	19.0	3.64	1.24
assign them easy	Undecided	50	6.2		
assignments	Agree	326	40.8		
	Strongly Agree	221	27.6		
	N=	800	100%		

Table 34 shows that 68.4% PTs agreed that they involved in reflection in action to identify slow learners, 6.2% were uncertain in their responses, while 25.4% respondents disagreed. The mean score was 3.64 and SD=1.24.

4.4: Descriptive Analysis Reflection on Action (ROA)

Table 35: ROA helpful to review shortcomings of lesson

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think reflection on	Strongly Disagree	36	4.5		
actions after class is	Disagree	101	12.6	3.87	1.11
helpful to review the	Undecided	36	4.5		
shortcoming of lesson	Agree	382	47.8		
	Strongly Agree	245	30.6		
	N=	800	100%		

Table 35 shows that 78.4% PTs agreed with the statement that reflection on action was helpful to review the shortcomings of lesson, 4.5% were uncertain in their responses, while 16.1% of the PTs disagreed. The mean score 3.87 and SD= 1.24 showed that majority the PTs reflected over their actions after class to review the shortcomings of lesson.

Table 36: ROA to find out Reasons of Students' Discourteous Attitude

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over students discourteous attitude after class to find out reasons	Strongly Disagree	77	9.6	3.67	1.28
	Disagree	111	13.9		
	Undecided	32	4.0		
	Agree	358	44.8		
	Strongly Agree	222	27.8		
	N=	800	100%		

Table 36 shows that 72.6% PTs agreed with the statement. This indicated that whenever students demonstrate discourteous attitude in class 72.6% PTs involved in reflection on action after class to find out the reasons of students discourteous attitude. 4.0% were uncertain in their responses, while 23.5% of the PTs disagreed. The mean score was 3.67 and SD= 1.28.

Table 37: ROA to Improve Relations with Colleagues

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over my relationship with colleagues	Strongly Disagree	84	10.5	3.53	1.30
	Disagree	133	16.6		
	Undecided	51	6.4		
	Agree	339	42.4		
	Strongly Agree	193	24.1		
	N=	800	100%		

Table 37 shows that 66.5% PTs agreed with the statement that they reflected over their relations with colleagues and attempt to develop better relations with colleagues. 6.4% were uncertain in their responses, while 27.1% of the PTs disagreed. The mean score was 3.53 and SD= 1.30.

Table 38: ROA to Know Professional Weakness

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over my	Strongly Disagree	40	5.0%		
class room practices	Disagree	132	16.5%	3.82	1.21
after class to know	Undecided	41	5.1%		
my professional	Agree	307	38.4%		
weakness	Strongly Agree	280	35.0%		
	N=	800	100%		

Table 37 shows that 73.4% PTs agreed that they reflected on actions after class to know about their professional mistakes. 5.1% were uncertain in their responses, while 21.5% of the PTs disagreed. The mean score was 3.82 and SD= 1.21.

Table 39: ROA and Effectiveness of Teaching

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over	Strongly Disagree	75	9.4%		
effectiveness of my	Disagree	125	15.6%	3.65	1.30
teaching after class	Undecided	36	4.5%		
	Agree	331	41.4%		
	Strongly Agree	233	29.1%		
	N=	800	100%		

Table 39 shows that 70.5% PTs agreed that they reflected over effectiveness of teaching after class. 4.5% were uncertain in their responses, while 25% of the PTs disagreed. The mean score was 3.65 and SD= 1.30. Mean value indicate that majority of the responses existed in the category of agreement and strongly agreement.

Table 40: ROA and Learning Outcomes

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over learning outcomes of lesson after class	Strongly Disagree	35	4.4%	3.91	1.11
	Disagree	95	11.9%		
	Undecided	35	4.4%		
	Agree	371	46.4%		
	Strongly Agree	264	33.0%		
	N=	800	100%		

Table 40 shows that 79.4% PTs agreed that they reflected over learning outcomes after class. 4.4% were uncertain in their responses, while 16.3% of the PTs disagreed. The mean score was 3.91 and SD= 1.11.

Table 41: ROA to Improve Relations with Students

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over my relationship with my students	Strongly Disagree	42	5.2%	3.73	1.19
	Disagree	132	16.5%		
	Undecided	55	6.9%		
	Agree	342	42.8%		
	Strongly Agree	229	28.6%		
	N=	800	100%		

Table 41 shows that 79.4% PTs agreed with the statement that they reflected over the nature of their relationship and attempt to develop good relations with students. 6.9% were uncertain in their responses, while 21.7% respondents disagreed. The mean score was 3.73 and SD= 1.19.

Table: 42: ROA to Solve Professional Problems

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think reflection on classroom practices after class contributes is helpful to solve professional problems	Strongly Disagree	57	7.1%	3.50	1.25
	Disagree	174	21.8%		
	Undecided	64	8.0%		
	Agree	319	39.9%		
	Strongly Agree	186	23.2%		
	N=	800	100%		

Table 42 reflects that 63.1% PTs agreed that reflection on action was helpful to overcome professional mistakes after class and it contributed towards their professional development. 8.0% were uncertain in their responses, while 28.9% respondents disagreed with the statement that they can find out the solutions of professional problems through ROA. The mean score was 3.50 and SD= 1.25. Mean values (M=3.50 & F=3.50).

Table 43: ROA to Know Strengths and Weakness of Teaching Method

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the strengths and weakness of teaching method after teaching my class	Strongly Disagree	81	10.1%	3.21	1.32
	Disagree	240	30.0%		
	Undecided	59	7.4%		
	Agree	269	33.6%		
	Strongly Agree	151	18.9%		
	N=	800	100%		

Table 43 shows that 52.5% PTs agreed that they reflected over strengths and weaknesses of teaching method after class. 7.40% were uncertain in their responses, while 40.1% respondents replied that they did not reflect over the strengths and weaknesses of teaching method after class. The mean score was 3.21 and SD= 1.32.

Table 44: ROA Teaching Fulfills Community Needs

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think after class that I am teaching to fulfill community needs	Strongly Disagree	99	12.4%	3.11	1.34
	Disagree	243	30.4%		
	Undecided	65	8.1%		
	Agree	255	31.9%		
	Strongly Agree	138	17.2%		
N=		800	100%		

Table 44 shows that 49.1% PTs agreed that think they reflected over the relationship of teaching with community needs. 8.1% were uncertain in their responses, while 42.8% respondents disagreed. The mean score was 3.11 and SD= 1.34 shows that majority of PTs not think that they are teaching to fulfill community needs.

Table 45: ROA and Encouragement of Positive Behaviours of Students

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect after class	Strongly Disagree	39	4.9%		
that I have	Disagree	132	16.5%	3.81	1.21
encouraged positive	Undecided	43	5.4%		
behaviours of my	Agree	316	39.5%		
students during class	Strongly Agree	270	33.8%		
	N=	800	100%		

Table 45 shows that 73.3% PTs agreed that they reflected after class that they have encouraged positive behaviours of their students during class. 5.4% were uncertain in their responses, while 21.4% respondents disagreed. The mean score was 3.81 and SD= 1.21.

4.5: Descriptive Analysis Reflection for Action (RFA)

Table 46: Reflection for action to improve pedagogical skills

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
Before, teaching class I reflect about my actions beforehand to improve my professional skills	Strongly Disagree	42	5.2%	3.72	1.20
	Disagree	140	17.5%		
	Undecided	51	6.4%		
	Agree	334	41.8%		
	Strongly Agree	233	29.1%		
	N=	800	100%		

Table 46 shows that 70.9% PTs agreed that they involved in reflection for action to improve their pedagogical skills. 6.4% were uncertain in their responses, while 21.7% respondents disagreed. The mean score was 3.72 and SD= 1.20.

Table 47: RFA to Know Merits and Demerits of Teaching Method

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the merits and demerits of teaching method before application of the method	Strongly Disagree	71	8.9%	3.27	1.31
	Disagree	231	28.9%		
	Undecided	67	8.4%		
	Agree	267	33.4%		
	Strongly Agree	164	20.5%		
	N=	800	100%		

Table 47 shows that 53.9% PTs agreed that reflected over the merits and demerits of teaching before application of the method. 8.4% were uncertain in their responses, while 37.8% respondents disagreed that they did not reflect about the merits and demerits of teaching method before application. The mean score was 3.28 and SD= 1.31.

Table 48: RFA to Know Possible Reactions of Actions

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the possible reactions of my actions before taking action	Strongly Disagree	96	12.0%	3.10	1.32
	Disagree	249	31.1%		
	Undecided	61	7.6%		
	Agree	267	33.4%		
	Strongly Agree	127	15.9%		
	N=	800	100%		

Table 48 shows that 49.3% PTs agreed that they involved in RFA to know the reactions of their actions before taking action. 7.6% were uncertain in their responses, while 43.1% respondents disagreed that did not reflect over the reactions of their actions before taking action. The mean score was 3.10 and SD= 1.32.

Table 49: RFA to Know Difficulty Level of Classwork

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the difficulty level of classwork before I assigned work to my students	Strongly Disagree	88	11.0%	3.17	1.36
	Disagree	257	32.1%		
	Undecided	48	6.0%		
	Agree	249	31.1%		
	Strongly Agree	158	19.8%		
	N=	800	100%		

Table 49 shows that 50.9% PTs agreed that they reflected over the difficulty of class work beforehand to assign home work to their students. 6.0% were uncertain in their responses, while 43.1% respondents replied that they did not think about the difficulty level of class work when they assigned class work to their students. The mean score was 3.17 and SD= 1.35.

Table 50: RFA to Know Difficulty Level of Homework

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over difficulty level of homework before assigning homework to my students	Strongly Disagree	90	11.2%	3.15	1.34
	Disagree	245	30.6%		
	Undecided	66	8.2%		
	Agree	250	31.2%		
	Strongly Agree	149	18.6%		
	N=	800	100%		

Table 50 shows that 49.8% PTs agreed that they reflected over the difficulty level of homework before assigning homework to their students. 8.2% were uncertain in their responses, while 41.8% respondents replied that they did not reflect over difficulty level of homework before they assigned homework to their students. The mean score was 3.15 and SD= 1.34.

Table 51: RFA to know Creative Aspect of Homework

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over creative aspect of homework before I assign homework to my students	Strongly Disagree	81	10.1%	3.32	1.30
	Disagree	196	24.5%		
	Undecided	66	8.2%		
	Agree	303	37.9%		
	Strongly Agree	154	19.2%		
	N=	800	100%		

Table 51 shows that 57.1% PTs agreed that they involved in RFA to know the creative aspect of homework before they assigned homework to their students. 8.2% were uncertain in their responses, while 34.6% PTs replied that they did not think about the creative aspect before they assigned homework to their students. The mean score was 3.32 and SD= 1.30.

Table 52: RFA Reflection over Difficulty Level of Assignments

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
When I assign assignments to my students I reflect over the difficulty level of assignments beforehand	Strongly Disagree	48	6.0%	3.65	1.24
	Disagree	152	19.0%		
	Undecided	58	7.2%		
	Agree	311	38.9%		
	Strongly Agree	231	28.9%		
	N=	800	100%		

Table 52 shows that 67.8% PTs agreed with the statement that they reflected over the difficulty of assignment before allotment of assignments to students, 7.2% were uncertain in their responses, while 25% PTs disagreed. The mean score was 3.65 and SD= 1.24. Mean values (M=3.78 & F=3.81) indicated that female PTs involved more in RFA to identify talented students before giving assignments to their students.

4.6: Reflection through Audio Video Taping

Table: 53: Identification of Professional Weakness through Audio-Video Taping

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I record my lesson to reflect over my professional weakness after class	Strongly Disagree	87	10.9%	3.38	1.29
	Disagree	151	18.9%		
	Undecided	91	11.4%		
	Agree	317	39.6%		
	Strongly Agree	154	19.2%		
	N=	800	100%		

Table 53 shows that 58.8% PTs agreed that they recorded their lesson to reflect over their professional weakness. 11.4% were uncertain in their responses, while 29.8% replied that they did not record the lesson to reflect over their professional weaknesses. The mean score was 3.38 and SD= 1.29.

Table 54: Audio Video Recording is helpful to identify professional mistakes

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
Audio-video taping of lesson is helpful to identify professional mistakes	Strongly Disagree	112	14.0%	3.44	1.42
	Disagree	143	17.9%		
	Undecided	59	7.4%		
	Agree	253	31.6%		
	Strongly Agree	233	29.1%		
	N=	800	100%		

Table 54 shows that 60.7% PTs agreed with the statement that audio-video taping was helpful to identify professional mistakes. 7.4% were uncertain in their responses, while 31.9% PTs replied that audio or video recording was not helpful to identify technical errors. The mean score was 3.44 and SD= 1.42.

Table: 55 Audio-video Taping to improve teaching skills

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I can improve my teaching skills through audio videotaping of my lesson	Strongly Disagree	44	5.5%	3.79	1.22
	Disagree	132	16.5%		
	Undecided	38	4.8%		
	Agree	323	40.4%		
	Strongly Agree	263	32.9%		
	N=	800	100%		

Table 55 shows that 73.3% PTs agreed with the statement that they improved their teaching skills through audio-video recording of lesson. 4.8% were uncertain in their responses, while 22% respondents disagreed that audio-video taping was not helpful to improve teaching skills. The mean score was 3.79 and SD= 1.22.

Table 56: Overcoming Intra-conflict through Audio-video Taping of Lesson

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I can overcome intra-conflict through audio recording of my lesson	Strongly Disagree	66	8.2%	3.28	1.24
	Disagree	203	25.4%		
	Undecided	101	12.6%		
	Agree	300	37.5%		
	Strongly Agree	130	16.2%		
		N= 800	100%		

Table 56 shows that 53.7% PTs agreed that they overcome intra-conflict through audio-video recording of lesson. 12.6% were uncertain in their responses, while 33.6% respondents disagreed that audio-video recording of lesson played no role to over-come intra conflict. The mean score was 3.65 and SD= 1.24.

Table: 57 Audio-Video-taping to Improve Communication Skills

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think I can improve my communication skills through Audio-Video taping of my lesson	Strongly Disagree	44	5.5%	3.75	1.21
	Disagree	135	16.9%		
	Undecided	41	5.1%		
	Agree	339	42.4%		
	Strongly Agree	241	30.1%		
		N= 800	100%		

Table 57 shows that 72.5% PTs agreed that audio-video recording of lesson was helpful to improve communication skills. 5.1% were uncertain in their responses, while 22.4% respondents disagreed. The mean score was 3.75 and SD= 1.21.

Table 58: Audio-video Taping and rectification of Professional Mistakes

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I record my lesson to rectify my professional mistakes	Strongly Disagree	46	5.8%	3.62	1.14
	Disagree	157	19.6%		
	Undecided	58	7.2%		
	Agree	333	41.6%		
	Strongly Agree	206	25.8%		
	N=	800	100%		

Table 58 shows that 66.4% PTs agreed that audio-video recording of lesson helped them to identify and rectify their technical mistakes. 7.2% were uncertain in their responses, while 25.4% respondents disagreed that they could not rectify their professional mistakes through audio-video recording of lesson. The mean score was 3.62 and SD= 1.14.

4.7: Descriptive Analysis Reflection through Students Feedback

Table 59: Allowing Students to Provide Feedback

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I allow my students to provide feedback	Strongly Disagree	72	9.0%	3.41	1.27
	Disagree	176	22.0%		
	Undecided	57	7.1%		
	Agree	336	42.0%		
	Strongly Agree	159	19.9%		
	N=	800	100%		

Table 59 shows that 61.9% PTs agreed that they invited feedback from students. 7.1% were uncertain in their responses, while 31% respondents disagreed that they did not invite feedback from their students during learning teaching process. The mean score was 3.41 and SD= 1.27.

Table 60: Overcoming Professional Shortcomings in Light of Student's Feedback

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I attempt to overcome my professional shortcomings in the light of feedback of my students	Strongly Disagree	79	9.9%	3.46	1.27
	Disagree	151	18.9%		
	Undecided	57	7.1%		
	Agree	351	43.9%		
	Strongly Agree	162	20.2%		
	N=	800	100%		

Table 60 shows that 64.1% PTs agreed that they gave importance to their students' feedback and attempt to overcome their technical gaps in light of students' feedback, 7.1% were uncertain in their responses, while 28.8% PTs consider that they could not overcome professional weaknesses in light of student's feedback. The mean score was 3.46 and SD= 1.27.

Table 61: Taking Students Feedback through Para-Language

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I understand para language of my students	Strongly Disagree	82	10.2%	3.67	1.31
	Disagree	106	13.2%		
	Undecided	54	6.8%		
	Agree	312	39.0%		
	Strongly Agree	246	30.8%		
	N=	800	100%		

Table 61 shows that 69.8% PTs agreed that they understood the facial expressions of students during teaching process. 6.8% were uncertain in their responses, while 23.4% respondents disagreed that they did not consider students facial expressions as students' feedback. The mean score was 3.67 and SD= 1.31.

Table 62: Designing Learning Activities in light of Students Feedback

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
When I feel that text book activities are difficult I design learning activities in light of students' feedback	Strongly Disagree	56	7.0%	3.59	1.22
	Disagree	145	18.1%		
	Undecided	63	7.9%		
	Agree	347	43.4%		
	Strongly Agree	189	23.6%		
		N= 800	100%		

Table 62 shows that 67% PTs agreed that when they felt that text book activities were difficult to design learning activities in light of students' feedback 7.9% were uncertain in their responses, while 25.1% PTs disagreed that they did not consider students' feedback to design learning activities. The mean score was 3.59 and SD= 1.22.

Table 63: Deviation from Lesson Plan in light of Students Feedback

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I deviate from lesson plan in the light of students' feedback	Strongly Disagree	44	5.5%	3.66	1.16
	Disagree	122	15.2%		
	Undecided	84	10.5%		
	Agree	358	44.8%		
	Strongly Agree	192	24.0%		
		N= 800	100%		

Table 63 shows that 68.8% PTs agreed that they deviated from lesson plan in light of students' feedback 10.5% were uncertain in their responses, while 27.7% PTs disagreed with statement. The mean score was 3.66 and SD= 1.16.

Table 64: Taking Students Feedback to Plan Teaching Activities

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I do plan future teaching activities in light of my students' feedback	Strongly Disagree	83	10.4%	3.39	1.33
	Disagree	179	22.4%		
	Undecided	63	7.9%		
	Agree	290	36.2%		
	Strongly Agree	185	23.1%		
		N= 800	100%		

Table 64 shows that 59.3% PTs agreed that they considered students' feedback to plan future teaching activities. 7.9% were uncertain in their responses, while 32.8% PTs disagreed. The mean score was 3.39 and SD= 1.33.

Table: 65 Students Feedback to Establish Good Relations with Students

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I take feedback to establish good relations with my students	Strongly Disagree	88	11.0%	3.51	1.32
	Disagree	138	17.2%		
	Undecided	48	6.0%		
	Agree	333	41.6%		
	Strongly Agree	193	24.1%		
	N=	800	100%		

Table 65 shows that 65.7% PTs agreed that taking students' feedback was helpful to establish good relations with students. 6.0% were uncertain in their responses, while 28.8% PTs disagreed that taking students' feedback during teaching was not helpful to establish good relations with students. The mean score was 3.51 and SD= 1.32.

4.8: Descriptive Analysis Reflection through Colleague's Feedback

Table: 66 Reflection through Colleagues Feedback

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I take feedback from my colleagues to improve pedagogical skills	Strongly Disagree	42	5.2%	3.73	1.21
	Disagree	137	17.1%		
	Undecided	59	7.4%		
	Agree	322	40.2%		
	Strongly Agree	240	30.0%		
		N= 800	100%		

Table 66 shows that 70.2% PTs agreed that they took colleague's feedback to improve their pedagogical skills. 7.4% were uncertain in their responses, while 22.3% PTs disagreed that they did not take colleague's feedback to improve pedagogical skills during teaching practicum. The mean score was 3.73 and SD= 1.21.

Table 67: Sharing of Classroom Experiences with Colleagues

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I share my classroom experiences with my colleagues to take their suggestions.	Strongly Disagree	36	4.5%	3.73	1.72
	Disagree	136	17.0%		
	Undecided	65	8.1%		
	Agree	338	42.2%		
	Strongly Agree	225	28.1%		
		N= 800	100%		

Table 67 shows that 70.3% PTs agreed that they shared class room experiences with peers to take their suggestions. 8.1% were uncertain in their responses, while 21.5% PTs disagreed. The mean score was 3.73 and SD= 1.21.

Table: 68 Observation of Colleagues Lesson to improve Teaching Skills

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I observe lessons of my colleagues to improve my teaching skills	Strongly Disagree	84	10.5%	3.52	1.25
	Disagree	115	14.4%		
	Undecided	63	7.9%		
	Agree	377	47.1%		
	Strongly Agree	161	20.1%		
		N= 800	100%		

Table 68 shows that 67.2% PTs agreed that they observed lessons of their colleagues to improve their pedagogical skills. 7.9% respondents were uncertain in their responses, while 24.9% PTs disagreed with the statement. The mean score was 3.52 and SD= 1.25.

Table: 69 Colleagues Feedback to deal with Unexpected Situations

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
Whenever, I face unexpected situation in class room I take feedback from my colleagues to find out solution	Strongly Disagree	37	4.6%	3.72	1.17
	Disagree	141	17.6%		
	Undecided	48	6.0%		
	Agree	359	44.9%		
	Strongly Agree	215	26.9%		
		N= 800	100%		

Table 69 shows that 71.8% PTs agreed that whenever, they faced any unexpected situation in classroom they shared with their colleagues to find the solutions. 6.0% respondents were uncertain in their responses, while 21.2% PTs disagreed. The mean score was 3.72 and SD= 1.17.

Table 70: Colleagues Provide Feedback in Professional Way

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
Whenever I seek feedback, my colleagues provide in professional way	Strongly Disagree	85	10.6%	3.15	1.33
	Disagree	253	31.6%		
	Undecided	63	7.9%		
	Agree	253	31.6%		
	Strongly Agree	146	18.2%		
		N= 800	100%		

Table 70 shows that 49.8% PTs agreed that whenever, they sought feedback their colleagues provide feedback in formal way. However, the degree of satisfaction of the feedback was fifty-fifty. 7.9% respondents were uncertain in their responses, while 42.2% PTs disagreed with statement. The mean score was 3.15 and SD= 1.33.

4.9: Descriptive Analysis Reflection through Peer Observation

Table 71: Reflection through Peer Observation

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I allow my peers to comment on my teaching competencies	Strongly Disagree	43	5.4%	3.67	1.55
	Disagree	126	15.8%		
	Undecided	67	8.4%		
	Agree	373	46.6%		
	Strongly Agree	191	23.9%		
		N= 800	100%		

Table 71 shows that 70.5% PTs agreed that they allowed peers to comment on their teaching competencies. 8.4% respondents were undecided. While 21.2% PTs disagreed. The mean score was 3.67 and SD= 1.55.

Table 72: Inviting Peers for Observation

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I invite my peers to observe my teaching practice	Strongly Disagree	35	4.4%	3.76	1.10
	Disagree	105	13.1%		
	Undecided	77	9.6%		
	Agree	382	47.8%		
	Strongly Agree	201	25.1%		
N=		800	100%		

Table 72 shows that 72.9% PTs agreed that invited their peers for observation during teaching practice. 9.6% respondents were undecided, while 17.5% PTs disagreed. The mean score was 3.76 and SD= 1.10.

Table 73: Incorporation Peer Comments into practice

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I do incorporate comments of my peers in to practice	Strongly Disagree	6.2	6.2%	3.71	1.21
	Disagree	15.8	15.8%		
	Undecided	7.1	7.1%		
	Agree	42.4	42.4%		
	Strongly Agree	28.5	28.5%		
	N=	800	100%		

Table 73 shows that 70.9% PTs agreed that whenever their peers passed comments about their technical gapes, they attempt to incorporate in to practice for professional development. 7.1% respondents were undecided. While 22% PTs disagreed that they did not incorporate peer comments into practice. The mean score was 3.71 and SD= 1.21.

Table 74: Peers feedback on Application of Teaching Method

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I invite my peers to provide feedback on my adopted teaching method	Strongly Disagree	55	6.9%	3.62	1.24
	Disagree	142	17.8%		
	Undecided	64	8.0%		
	Agree	330	41.2%		
	Strongly Agree	209	26.1%		
		N= 800	100%		

Table 74 shows that 67.3% PTs agreed that they invited peers feedback on application of teaching method. 8% respondents were undecided. While 24.7% PTs disagreed that they did not invite peer feedback on application of teaching method. The mean score was 3.62 and SD= 1.24.

Table 75: Learning about School Record from Peers

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I learn from my peers about school record during teaching practicum	Strongly Disagree	63	7.9%	3.51	1.26
	Disagree	158	19.8%		
	Undecided	67	8.4%		
	Agree	329	41.1%		
	Strongly Agree	183	22.9%		
		N= 800	100%		

Table 75 shows that 63% PTs agreed that they learnt about school records from peers 8.4% respondents were undecided. While 27.7% PTs disagreed that they did not ask from peers about school record. The mean score was 3.51 and SD= 1.26.

Table 76: Peer Observation contributes towards Professional Development

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think peer observation contributes towards my professional development	Strongly Disagree	95	11.9%	3.34	1.40
	Disagree	201	25.1%		
	Undecided	47	5.9%		
	Agree	249	31.1%		
	Strongly Agree	208	26.0%		
		N= 800	100%		

Table 76 shows that 57.1% PTs agreed that they considered that peer observation contributed towards their professional development. 5.9% respondents were undecided. While 37.0% PTs disagreed that they did not learn from peers. The mean score was 3.34 and SD= 1.40.

4.10: Descriptive Analysis Reflection over Portfolios

Table 77: Reflection over Portfolios to identify Professional Mistakes

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the portfolios to identify my professional mistakes	Strongly Disagree	70	8.8%	3.60	1.26
	Disagree	346	43.2%		
	Undecided	51	6.4%		
	Agree	204	25.5%		
	Strongly Agree	129	16.1%		
N=		800	100		

Table 77 shows that 41.6% PTs agreed that they reflected over their portfolios to identify their professional mistakes. 6.4% respondents were undecided. While, 52% PTs disagreed with the statement. The mean score was 3.60 and SD= 1.26.

Table 78: Portfolio a source of Guidance to Improve Pedagogical skills

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think portfolio is a source of guidance to improve my pedagogical skills	Strongly Disagree	70	8.8%	3.60	1.26
	Disagree	346	43.2%		
	Undecided	51	6.4%		
	Agree	129	16.1%		
	Strongly Agree	204	25.5%		
		N= 800	100		

Table 78 shows that 41.6% PTs agreed that portfolio formed a source of guidance to improve pedagogical skills. 6.4% respondents were uncertain. While, 53.0% PTs disagreed with the statement. The mean score was 3.60 and SD= 1.26.

Table 79: Portfolios contributes towards Professional learning

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think preparation of portfolios contributes towards learning of professional skills	Strongly Disagree	57	7.1%	3.67	1.26
	Disagree	289	36.1%		
	Undecided	77	9.6%		
	Agree	246	30.8%		
	Strongly Agree	131	16.4%		
		N= 800	100		

Table 79 shows that 47.2% PTs agreed that preparation of portfolio was a source of guidance to improve pedagogical skills. 9.6% respondents were uncertain. While, 43.2% PTs disagreed with the statement. The mean score was 3.67 and SD= 1.26.

Table 80: Portfolios are helpful for professional Development

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think preparation of portfolio is helpful for my professional development	Strongly Disagree	40	5.0%	3.70	1.11
	Disagree	385	48.1%		
	Undecided	78	9.8%		
	Agree	108	13.5%		
	Strongly Agree	189	23.6%		
		N= 800	100		

Table 80 shows that 47.1% PTs agreed that preparation of portfolio was helpful for their professional development. 9.8% respondents were uncertain. While, 54.1% PTs disagreed with the statement. The mean score was 3.70 and SD= 1.11

Part-B

4.11: Regression Analysis Questionnaire for Prospective Teachers

To run the regression analysis on the data, independent variables (Reflection in Action, RIA) and Dependent Variables (Smooth rolling of lesson plan) were input in to the SPSS for regression analysis. Detail of variables used in the analysis is given in Table 81 below:

Table 81: List of variables used in the model RIA and Smooth Rolling of Lesson Plan

Variables	Items
Dependent variable	Smooth rolling of lesson plan
	<ul style="list-style-type: none"> • Reflection in action is helpful for smooth rolling of lesson plan (q9) • Reflection in action is helpful to maintain class room momentum (q8) • Reflection in action is helpful to rectify professional mistakes on the spot (q39)
Independent variable	Reflection in Action (RIA)
	<ul style="list-style-type: none"> • I reflect over discourteous attitude of my students during class (q1) • I attempt to overcome unwanted practices (q7) • I plan strategies to overcome students discourteous attitude (q3) • I reflect over contents whenever I teach controversial contents (q15) • I reflect over class room discipline (q18) • I feel hesitation to respond to students questions (q19)

Table 81 shows the items used to compute variables. Correlation analysis was used to understand the line of best fit and to see the impact of multiple variables on dependent variable (Graph-3). Correlation helps out researchers to understand the regression line or “best fit line” for all the points of scores and then subsequently move on towards regression analysis (Creswell, 2011 p.375). Therefore, correlation coefficients between the items of Independent variables (RIA) and dependent variable (smooth rolling of lesson plan) have been estimated to examine the direction of association between the variables. Table 82 below shows the inter item correlation between explanatory variables.

Table 82: Inter item correlations between explanatory variables RIA

Variables	Q1	Q3	Q7	Q8	Q9	Q15	Q18	Q19	Q39
Q1. Reflection over Students Discourteous Attitude	1.000	.324**	.362**	.389**	.314**	.309**	.240**	.245**	.312**
Q3 Planning strategies to overcome discourteous attitude		1.000	.326**	.369**	.337**	.312**	.316**	.290**	.278**
Q7 Reflection to overcome unwanted practices			1.000	.682**	.690**	.382**	.361**	.406**	.339**
Q8 Reflection over classroom momentum				1.000	.617**	.342**	.335**	.397**	.275**
Q9 Reflection over smooth rolling of lesson plan					1.000	.333**	.316**	.351**	.316**
Q15 Reflection over controversy of contents						1.000	.456**	.457**	.303**
Q18 Reflection over classroom discipline							1.000	.408**	.281**
Q19 Reflection to respond students questions								1.000	.216**
Q39 Reflection to rectify professional mistakes									1.000

Q1= Reflection over students discourteous attitude. Q3= Reflection to plan strategies to overcome students' discourteous attitude. Q7= Reflection to overcome unwanted practices (shyness, shivering and repetition of words). Q8= Reflection to maintain classroom momentum. Q9= Reflection over smooth rolling of lesson plan. Q15= Reflection over teaching of controversial contents. Q18= Reflection to devise strategies to maintain classroom discipline. Q19= Reflection to overcome hesitation to respond students questions. Q39= Reflection to rectify professional mistakes on the spot

** . Correlation is significant at the 0.05 level (1-tailed). N=800

Table 82 demonstrates inter item Pearson's r correlation between the items related to RIA and PD (smooth rolling of lesson plan). Correlation coefficients r measures direction of the relationship between two variables on a scattered plot. The value of r is always between +1 & -1. The results given in Table 82 revealed

a moderate positive correlation between the response variables at 0.001 level of significance. Reflection over discourteous attitude of students ($r=.31$, $p<.01$), planning strategies to over-come discourteous attitude ($r=.27$, $p<.01$). Overcoming unwanted practices: ($r=.33$, $p<.01$), reflection over class room discipline ($r=.27$, $p<.01$), smooth rolling of lesson plan ($r=.31$, $p<.01$), reflection before teaching controversial contents ($r=.30$, $p<.01$) planning strategies to maintain classroom discipline ($r=.28$, $p<.01$) reflection over hesitation to respond students questions ($r=.21$). The highest correlation ($r=.690$, $p<.01$) existed between reflection over smooth rolling of lesson plan and overcoming unwanted practices which falls in moderate category. Table 83 below shows the descriptive analysis of reflection in action and smooth rolling of lesson plan.

Graph 6: Scattered Plot of Data RIA & PD

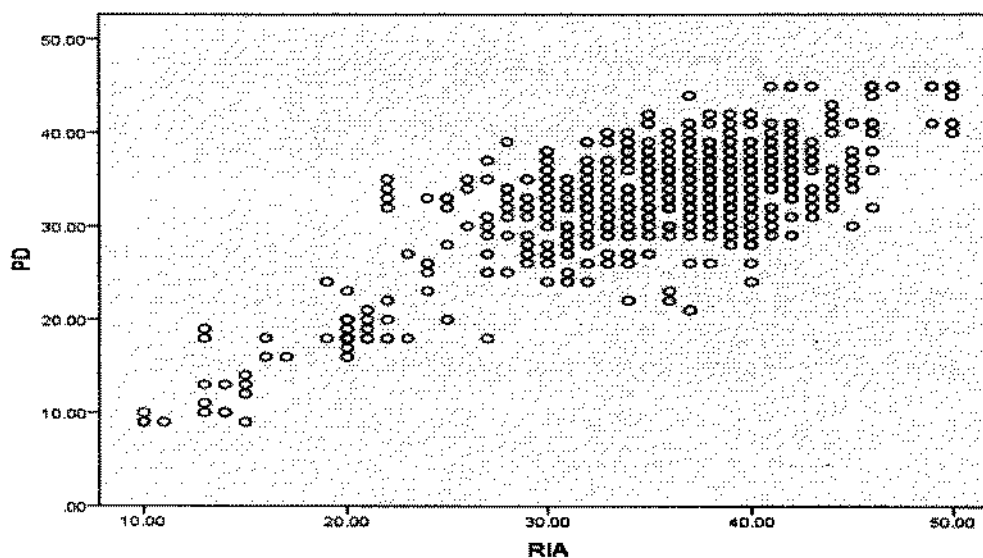


Table 83: Descriptive Statistics of Reflection in Action and Smooth Rolling of Lesson Plan

Variables	Mean	SD	N
Smooth Rolling of lesson plan	3.6008	.91745	800
Reflection in Action	3.5779	.87799	800
N=800 (male 150 female 650)			

Table 84: Model summary Reflection in Action and Smooth rolling of Lesson Plan

<i>Model</i>	<i>R</i>	<i>R²</i>	<i>Adjusted R²</i>	<i>SEE</i>	<i>Durbin-Watson</i>
1	.698a	.487	.487	.65727	1.514

a. Predictors: (Constant), RIA

b. Dependent Variable: PD

Table 84 shows the model summary of regression analysis of RIA and Smooth Rolling of the Lesson Plan. R^2 statistic measures the amount of variability in the dependent variable that can be explained by the independent variable. Value of adjusted R^2 is modification of R^2 that adjusts for the number of explanatory terms in the model. Value of ($R^2=.487$) indicates that nearly 49% of the total variability in the response variable (smooth rolling of lesson plan) is accounted by the predictor variable (RIA) which indicates that a moderate linear relationship existed between involvement of prospective teachers in RIA and smooth rolling of lesson plan. The model further shows that RIA contributed to smooth rolling of lesson plan. In other words, reflection of prospective teachers over students' discourteous attitude, reflection over unwanted practices (shyness, shivering and repetition of words), class room momentum, class room discipline and reflection over hesitation to respond students' questions nearly increased 49% chances that PTs could smoothly complete lesson plan. The proposed model ($R=.698$) predicts that involvement of PTs in RIA significantly relate with their professional Development. The Durbin Watson statistic has a value of 1.514 which ranged between (1.5 to 2.5). This implies that the residuals were independent and no auto correlation existed in the data.

Table 85: ANOVA Summary RIA and Smooth Rolling of Lesson Plan

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Regression	327.792	1	327.792	758.765	.000a
Residual	344.741	798	.432		
Total	672.533	799			

a. Predictors: (Constant), RIA
b. Dependent Variable: PD

Table 85 shows the summary of ANOVA. The value of F statistics is = 758.76 > table value 3.85 which was highly significant and shows that RIA affects the smooth rolling of lesson plan. Therefore H1 was accepted that there was significant relationship between involvement of prospective teachers in Reflection in Action (RIA) and smooth rolling of lesson plan.

Table 85: Summary of Coefficients RIA and Smooth Rolling of Lesson Plan

<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>	<i>Correlations</i>		
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>			<i>Zero-order</i>	<i>Partial</i>	<i>Part</i>
(Constant)	.991	.098		10.154	.000			
RIA	.730	.026	.698	27.546	.000	.698	.698	.698

a. Dependent Variable: PD

Table 85 shows the coefficients summary of the model. The coefficients of $\beta=.730$ has a t value of 27.54 (> 1.64) was significant at the 0.05 level (as also shown by the p-value of 0.000). Regression coefficients showed that reflection over students' discourteous attitude, unwanted practices (shyness, shivering and repetition of words), class room momentum and class room discipline significantly contributed to ensure smooth rolling of lesson plan. Therefore, it

was concluded that involvement of prospective teachers in reflection in action during lesson positively contributed towards smooth rolling of lesson plan.

Table 86: Model summary ROA to understand professional mistakes

<i>Model</i>	<i>R</i>	<i>R²</i>	<i>Adjusted R²</i>	<i>Std. Error of the Estimate</i>	<i>F</i>	<i>DW</i>
1	.753a	.567	.566	.65374	1043.932	1.616

a. Predictors: (Constant), ROA
b. Dependent Variable: PD

Table 86 shows the summary of ROA and understanding of professional mistakes. The R^2 value=.567 indicates that 'ROA' explain nearly 57% of the variation in the dependent variable 'understanding of professional mistakes'. In other words reflection of prospective teachers over students discourteous attitude, shortcomings of lesson, effectiveness of teaching, learning outcomes and reflection over weakness of teaching method increased 57% chances to understand professional mistakes. The Durbin Watson statistic has a value of 1.61 which ranged between (1.5-2.5). This shows absence of auto correlation of data. Summary of ANOVA values is given at table 87 below:

Table 87: ANOVA Summary ROA to Understand Professional Mistakes

<i>Model</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1 Regression	446.152	1	446.152		
Residual	341.047	798	.427		
Total	787.199	799		1043.932	.000a

a. Predictors: (Constant), ROA
b. Dependent Variable: PD

Table 87 shows the summary of ANOVA, F value=1043.93 > 3.85 was highly significant which showed that the independent variable (ROA) included in the model significantly contributed toward understanding technical mistakes.

Therefore H1 was accepted that there seemed a significant relationship between involvement of prospective teachers in Reflection on Action and understanding professional mistakes.

Table 88: Summary of Coefficients ROA understanding of Professional Mistakes

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	Correlations		
	B	Std. Error	Beta	t		Zero-order	Partial	Part
1 (Constant)	.342	.105		3.243	.001			
ROA	.919	.028	.753	32.310	.000	.753	.753	.753

a. Dependent Variable: PD

Table 88 shows the coefficients summary of ROA and PD. Value of $\beta = .919$ had a t value $32.31 > 3.85$ was highly significant. This shows that the independent variable (ROA) included in the model significantly contributed towards understanding professional mistakes.

Graph 7: Scattered Plot of Data ROA & PD

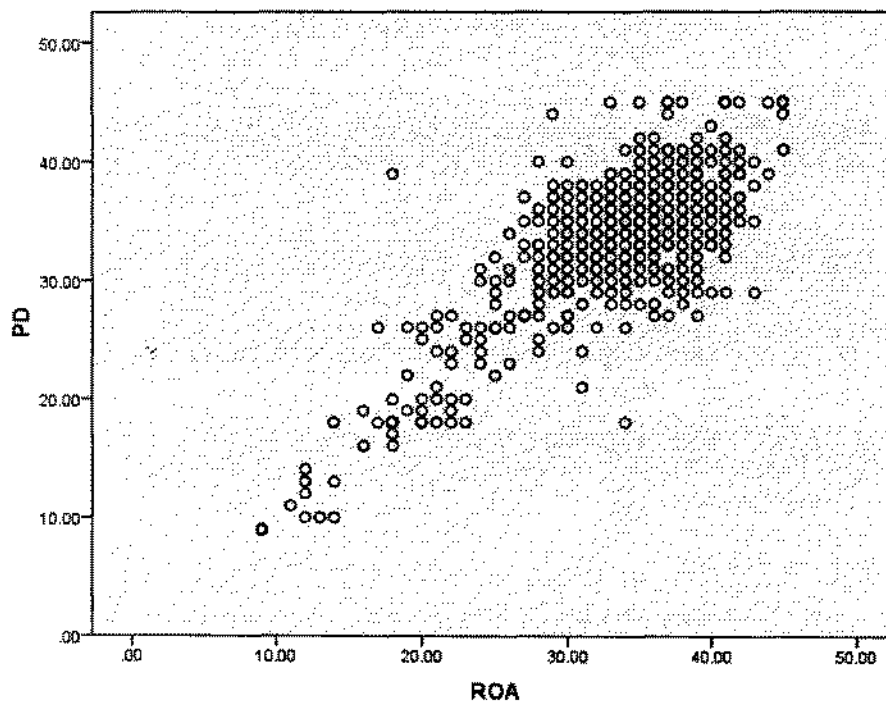


Table 89: Inter item correlations between RFA and Development of Pedagogical skill

Variables	Q40	Q43	Q44	Q45	Q46	Q49	Q50
Q40 Reflection over the merits and demerits of teaching method before application	1.000	.782**	.797**	.748**	.696**	.553**	.533**
Q43 Reflection over possible reactions of actions		1.000	.831**	.841**	.718**	.533**	.496**
Q44 Reflection over difficulty level of classwork			1.000	.834**	.779**	.557**	.517**
Q45 Reflection over creative aspect of classwork				1.000	.773**	.551**	.485**
Q46 Reflection over creative aspect of homework					1.000	.435**	.408**
Q49 RFA and development of pedagogical skills						1.000	.720**
Q50 RFA to become a professional teacher							1.000

** . Correlation is significant at the 0.001 level (1-tailed).

Table 89 shows that a moderate positive correlation existed between the response variables at 0.001 level. Reflection over merits and demerits of teaching method before class ($r=.53$, $p<.01$) Possible reactions of actions ($r=.49$, $p<.01$), reflection over difficulty level of class work ($r=.51$, $p<.01$). Reflection over creative aspect of class work: ($r=.48$, $p<.01$), reflection over creative aspect of homework ($r=.40$, $p<.01$), Development of pedagogical skills ($r=.72$, $p<.01$). Table 90 below shows the descriptive analysis of reflection in action and rectification of professional mistakes.

Table 90: Descriptive Statistics of RFA and Development of Pedagogical skills

Variables	Mean	SD	n
Development of Pedagogical skills	3.6881	1.13480	800
Reflection for Action	3.2781	1.12893	800

Table 91: Model summary RFA and Development of Pedagogical skills

Model	R	R ²	Adjusted R ²	SEE	D.W
1	.638a	.407	.406	.63513	1.26

a. Predictors: (Constant), RFA
b. Dependent Variable: PD

The value of $R^2=.407$ at table 91 indicates that nearly 40% of the total variability in the response variable (development of pedagogical skills) was accounted by the predictor variable (RFA) which indicated a moderate linear relationship between RFA and PD. The model shows reflection of prospective teachers over the merits and demerits of teaching method before application, reaction of actions, difficulty level of work and reflection over creative aspect of homework significantly contributed development of pedagogical skills of the prospective teachers. The DW value= $1.26 < 1.20$ shows absence of auto correlation of data.

Table 92: ANOVA Summary RFA and Development of Pedagogical skills

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1 Regression	221.124	1	221.124		
Residual	321.906	798	.403		
Total	543.030	799		548.161	.000a

a. Predictors: (Constant), RFA
b. Dependent Variable: PD

Table 92 shows that F value= $548.16 > 3.85$ was highly significant which shows that the independent variable (RFA) included in the model affect the dependent variable (development of pedagogical skills) of the prospective teachers. Therefore, H1 was accepted that Reflection-for-Action (RFA) was a significant predictor of professional development of prospective teachers during practicum.

Table 93: Summary of Coefficients RFA and Development of Pedagogical skills

<i>Model</i>		<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>		<i>Correlations</i>		
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>	<i>Sig.</i>	<i>Zero-order</i>	<i>Partial Part</i>
1	(Constant)	2.099	.069		30.413	.000		
	RFA	.466	.020	.638	23.413	.000	.638	.638 .638

a. Dependent Variable: PD

Table 93 shows the summary of coefficients of RFA and Development of Pedagogical skills. The coefficients of $\beta = .466$ has a *t* value of 23.41 (> 1.64) which shows that it was significant at the 0.05 level (as also shown by the *p*-value of 0.000). Therefore, it was concluded that RFA positively contributed toward development of pedagogical skills of PTs. In other words, reflection over merits and demerits of teaching method, possible reactions of actions, and reflection over creative aspect of class work & homework would correspond 0.46 change in development of pedagogical skills of PTs. One unit increase in RFA results would equally correspond 0.466 unit increase in PD.

Table 94: Inter item correlations SF and relationship with students

<i>Variables</i>	<i>Q5</i>	<i>Q23</i>	<i>Q25</i>	<i>Q26</i>	<i>Q38</i>	<i>Q54</i>
Q5 Allowing students to provide feedback	1.000	.178**	.283**	.362**	.315**	.293**
Q23 Understanding Para-language of students		1.000	.341**	.372**	.289**	.289**
Q25 Planning new activities in light of students feedback			1.000	.472**	.410**	.393**
Q26 Deviation from lesson in light of students feedback				1.000	.453**	.374**
Q38 Planning teaching activities for future in light of students feedback					1.000	.463**
Q54 Taking feedback to establish good relations with students						1.000

** . Correlation is significant at the 0.01 level (1-tailed).

Table 94 shows a moderate positive correlation between the response variables at 0.001 level. Allowing students to provide feedback ($r=.29$, $p<.01$) understanding Para language of class ($r=.30$, $p<.01$), planning new teaching activities in light of students feedback ($r=.39$, $p<.01$), deviation from lesson in light of students feedback: ($r=.34$, $p<.01$), planning future teaching activities ($r=.40$, $p<.01$), taking feedback to establish good relations with students ($r=.46$, $p<.01$) shows that students feedback and relationship of prospective teachers were correlated. Table 95 below shows the descriptive analysis of SF and relationship with students.

Table 95: Descriptive Statistics SF and relationship with students

<i>Variables</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>n</i>
Students feedback	3.4500	1.13346	800
Professional Development	3.5838	.87636	800

Table 96: Model summary SF and Relation with students

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R²</i>	<i>SEE</i>	<i>DW</i>
1	.579a	.336	.335	.92440	1.528

a. Predictors: (Constant), SF
b. Dependent Variable: SF_PD

Table 96 shows the model summary of SF and relationship with students. The value of $R^2=.336$ indicates that nearly 34% of the total variability in the response variable (Relationship with Students) is accounted by the predictor variable (SF). This indicated a weak positive linear relationship between SF and relationship with students. The model shows that allowing students to provide feedback, understanding Para language of students, deviation from lesson plan if students did not grasp the contents and planning teaching future activities in the light of students' feedback significantly contributed toward establishment of good

relations with students. The DW value=1.52 > 1.20 shows that no auto correlation existed in the data.

Table 97: ANOVA Summary SF and Relationship with Students

<i>Model</i>	<i>Sum Squares</i>	<i>of df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1 Regression	344.603	1	344.603	403.278	.000a
Residual	681.897	798	.855		
Total	1026.500	799			

a. Predictors: (Constant), SF

b. Dependent Variable: SF_PD

Table 97 shows that F value=403.28 > 3.85 was highly significant which shows that the independent variables (SF) included in the model affected the dependent variable (relationship with students). Therefore H1 was accepted that Students feedback was a significant reflective practice for professional development of teachers.

Table 98: Summary of Coefficients SF and PD

<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>		<i>t</i>	<i>Sig.</i>	<i>Correlations</i>		
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>				<i>Zero- order</i>	<i>Partial</i>	<i>Part</i>
1 (Constant)	.764	.138			5.552	.000			
SF	.749	.037	.579		20.082	.000	.579	.579	.579

a. Dependent Variable: SF_PD

Table 98 shows the summary of coefficients Independent variable (SF) and dependent variable (Relationship with Students). The coefficients of $\beta = .749$ has a t value of 20.08 (> 1.64) which shows that it was significant at the 0.05 level (as also shown by the p-value of 0.000). These values showed goodness of fit of independent variable with dependent variable. Therefore, it was concluded that student feedback positively contributed to establish good relations with students during teaching practice.

Table 99: Inter item correlations between CF and Solutions of unexpected Situations

Variables	Q12	Q31	Q32	Q33	Q47	Q10
Q12 Sharing classroom experiences with colleagues	1.000	.345**	.413**	.346**	.188**	.416**
Q31 Colleagues feedback to improve teaching skills		1.000	.362**	.273**	.261**	.419**
Q32 Colleagues feedback to find out solutions of unexpected situations			1.000	.695**	.483**	.435**
Q33 Sharing unexpected situations with colleagues				1.000	.497**	.399**
Q47 Colleagues provide feedback in professional way					1.000	.302**
Q10 Colleagues feedback to improve pedagogical skills						1.000

** . Correlation is significant at the 0.001 level (1-tailed).

Table 99 reflects that strong and moderate positive correlation existed between the response variables at 0.001 level. Sharing class room experiences with colleagues ($r=.41$, $p<.01$) Colleagues feedback to improve teaching skills ($r=.41$, $p<.01$), Colleagues feedback to find-out solutions of unexpected situations occurred in the classroom ($r=.43$, $p<.01$) sharing unexpected situations with colleagues: ($r=.39$, $p < .01$) and professional feedback from colleagues ($r=.30$, $p<.01$). Table 100 below shows the descriptive analysis of CF and Finding Solutions of unexpected situations.

Table 100: Descriptive Statistics CF and Solutions of unexpected Situations

<i>Variables</i>	<i>Mean</i>	<i>SD</i>	<i>n</i>
Professional development	3.7262	1.20753	800
Colleagues Feedback	2.9477	.73927	800

Table 101: Model Summary CF and Solutions of unexpected Situations

<i>Model</i>	<i>R</i>	<i>R²</i>	<i>Adjusted R²</i>	<i>SEE</i>	<i>DW</i>
1	.550a	.303	.302	1.00884	1.25
a. Predictors: (Constant), CF					
b. Dependent Variable: PD					

The value of $R^2=.303$ in table 4.88 indicates that nearly 30% of the total variability in the response variable (Finding out Solutions) is accounted by the predictor variable (CF) which indicates a weak positive linear relationship between independent and dependent variables. The model shows that when PTs shared their class room experiences and unexpected situations with colleagues and take colleague's feedback then there were 30% chances that PTs could cope with unexpected situations which occurred in the class during teaching practicum. The DW value= $1.25 > 1.20$ which ranged between (1.5- 2.5) shows presence of auto correlation among the responses of the respondents. Summary of ANOVA is given in Table 102 below:

Table 102: ANOVA Summary CF Solutions of unexpected Situations

<i>Model</i>		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	Regression	352.882	1	352.882		
	Residual	812.167	798	1.018		
	Total	1165.049	799		346.726	.000a
a. Predictors: (Constant), CF						
b. Dependent Variable: PD						

Table 102 shows that summary of ANOVA coefficients, F value= $346.72 > 3.85$ which was highly significant and shows that the independent variables (CF) included in the model affect the ability of PTs to deal with unexpected situation. Therefore, H1 was accepted that colleague's feedback was a significant reflective

practice for professional development of prospective teachers. Summary of the coefficients is given below:

Table 103: Summary of Coefficients CF and Dealing with Unexpected situations

<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>		<i>Sig.</i>	<i>Correlations</i>		
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>		<i>Zero-order</i>	<i>Partial</i>	<i>Part</i>
1 (Constant)	1.076	.147		7.337	.000			
CF	.899	.048	.550	18.621	.000	.550	.550	.550

a. Dependent Variable: PD

Table 103 shows the summary of coefficients of CF and ability to deal with unexpected situation which occurred in class. The coefficients of $\beta = .899$ has a t value of 18.62 (> 1.64) which shows that it was significant at the 0.05 level (as also shown by the p -value of 0.000). These values show goodness of fit of independent variable (Colleagues Feedback) with dependent variable (Dealing with Unexpected Situation). Therefore, it was concluded that colleague's feedback is a significant predictor of professional development of PTs.

Table 104: Inter item correlations between PO and Incorporation of Peers

Comments

Variables	Q 27	Q28	Q29	Q37	Q52	Q58
Q 27 I invite my peers to observe my teaching practice	1.000	.621**	.575**	.493**	.487**	.367**
Q28 I allow my peers to comment on teaching competencies		1.000	.566**	.479**	.532**	.433**
Q29 Whenever my peers pass comments I incorporate their comments in to practice			1.000	.509**	.498**	.386**
Q37 I invite peers feedback on application of teaching method				1.000	.580**	.562**
Q52 I asked my peers about maintenance of school record					1.000	.516**
Q58 Peer observation contributes towards my Professional Development						1.000

** . Correlation is significant at the 0.001 level (1-tailed).

Table 104 shows that a moderate positive correlation existed between the response variables at 0.001 level. Inviting peer for observation ($r=.367$, $p<.01$), allowing peers to pass comments ($r=.43$, $p<.01$), incorporation of peers comments ($r=.38$, $p<.01$) peers feedback on application of teaching method: ($r=.56$, $p < .01$), learning from peers about school record ($r=.56$, $p<.01$) and contribution of peer observation for professional development ($r=.51$). Table 4.86 below shows the descriptive analysis of PO and PD.

Table 105: Descriptive Statistics PO Incorporation of Peers Comments

<i>Variables</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>N</i>
Professional development	3.5519	1.03723	800
Peer Observation	3.6309	.97599	800

Table 106: Regression Model Summary PO and Incorporation of Peers Comments

<i>Model</i>	<i>R</i>	<i>R²</i>	<i>Adjusted R²</i>	<i>SEE</i>	<i>D.W</i>
1	.757a	.574	.573	.67777	1.686

a. Predictors: (Constant), PO

b. Dependent Variable: PD

Table 106 shows the regression model summary of PO and reflection over peer observation to incorporate peers comments in to teaching practices. The value of $R^2=.574$ indicated that 57% of the total variability in the response variable (PD) was accounted by the predictor variable (PO) which indicates a positive linear relationship between PO and PD. The model shows that when PTs invited their peers to observe the lesson, allow peers to pass comments on teaching method and incorporate peers comments. 57% variation was predicted in their professional development. Summary of ANOVA coefficients is given in Table 107 below:

Table 107: ANOVA Summary PO and Reflection over Peers Comments

<i>Model</i>		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	Regression	493.022	1	493.022	1073.261	.000a
	Residual	366.576	798	.459		
	Total	859.597	799			

a. Predictors: (Constant), PO

b. Dependent Variable: PD

Table 107 shows the summary of ANOVA coefficients, F value = 1073.26 > 3.85 which is highly significant and shows that the independent variables (PO) included in the model affected the Dependent Variable (incorporation of peer comments in to practice). Therefore, H1 was accepted that there was a relationship between peer observation and incorporating peers comments into practice. Summary of the coefficients of regression model is given below:

Table 108: Summary of Coefficients PO and PD

<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>	<i>Correlations</i>		
	Std.					Zero-		
	B	Error	Beta			order	Partial	Part
1 (Constant)	.630	.092		6.816	.000			
PO	.805	.025	.757	32.761	.000	.757	.757	.757

a. Dependent Variable: PO_PD

Table 108 shows the summary of coefficients of independent variable (PO) and dependent variable (PD). The coefficients of $\beta = .805$ has a t value of 32.761 (>1.64) which shows that it was significant at the 0.05 level (as also shown by the p -value of 0.000). These values show goodness of fit of independent variables with dependent variables. Therefore, it is concluded that prospective teachers were reflective over the comments of peers to incorporate into practice.

Table 109: Inter item correlations between explanatory variables PP and Teaching Skills

<i>Variables</i>	<i>Q36</i>	<i>Q48</i>	<i>Q57</i>	<i>Q24</i>
Q36 I learn through portfolios which of my teaching skills need improvement	1.000	.445**	.597**	.469**
Q48 Portfolio is a source of guidance to improve my pedagogical skills		1.000	.437**	.431**
Q57 Preparation of portfolios contributes towards learning of pedagogical skills			1.000	.452**
Q24 Preparation of portfolios is helpful for my professional development				1.000

** . Correlation is significant at the 0.01 level (1-tailed).

Table 109 revealed a moderate positive correlation between the response variables at 0.01 level. Professional learning through portfolios ($r=.46$, $p<.01$), Portfolio a source of guidance ($r=.43$, $p<.01$), development of pedagogical skills through portfolios ($r=.45$, $p<.01$). Table 110 below shows the descriptive analysis of reflection through portfolios to improve teaching skills.

Table 110: Descriptive Statistics Professional Portfolios and PD

<i>Variables</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>n</i>
Professional development	3.6625	1.02098	800
Preparation of Portfolios	3.4812	1.11156	800

Table 111: Regression Model Summary PP and PD

<i>Model</i>	<i>R</i>	<i>R²</i>	<i>Adjusted R²</i>	<i>SEE</i>	<i>DW</i>
1	.663a	.439	.439	.76505	1.634

a. Predictors: (Constant), PP

b. Dependent Variable: PD

Table 111 shows the regression model summary of PP and PD. The value of $R^2=.439$ indicates that nearly 43% of the total variability in the response variable (PD) is accounted by the predictor variable (PP). This indicated a positive linear relationship between PP and PD. The model further showed that when teachers reflected on portfolios, nearly 43% variation could be predicted in their professional development. Summary of ANOVA coefficients is given in Table 112 below:

Table 112: ANOVA Summary PP and PD

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Regression	365.801	1	365.801	624.975	.000a
Residual	467.074	798	.585		
Total	832.875	799			

a. Predictors: (Constant); PP

b. Dependent Variable: PD

Table 113 shows the summary of ANOVA coefficients, $F \text{ value}=624.97 > 3.85$ which is highly significant and shows that the independent variables (PP) included in the model affect the Dependent Variable (Professional Development) of the prospective teachers. Therefore, H1 was accepted that preparation of portfolios was a significant predictor for professional development of prospective teachers. Summary of the coefficients of PP and PD is given below:

Table 113: Summary of Coefficients PP and PD

<i>Model</i>		<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>
1	(Constant)	1.543	.089		17.346
	PP	.609	.024	.663	25.000

a. Dependent Variable: PD

Table 114 shows the summary of coefficients of independent variable (PP) and dependent variable (PD). The coefficients of $\beta = .609$ has a t value of 25.00 (> 1.64). This showed that it was significant at the 0.05 level (as also shown by the p-value of 0.000). These values showed goodness of fit of independent variables with dependent variables. Therefore, it was concluded that reflection over the material of portfolios was a significant predictor of professional development of PTs.

Table 114: Inter item correlations between explanatory variables AVR and PD

<i>Variables</i>	<i>Q 11</i>	<i>Q16</i>	<i>Q20</i>	<i>Q53</i>	<i>Q55</i>
Q 11 I think Audio Video recording of lesson is helpful to identify professional mistakes	1.000	.399**	.271**	.359**	.386**
Q16 I can improve my teaching skills through audio video-taping of lesson	.399**	1.000	.498**	.449**	.419**
Q20 I attempt to overcome intra conflict through audio video recording	.271**	.498**	1.000	.251**	.294**
Q53 Video-taping of lesson help me to improve my communication skills	.359**	.449**	.251**	1.000	.711**
Q55 I think audio video recording is helpful to rectify professional mistakes	.386**	.419**	.294**	.711**	1.000

Table 115 shows that a moderate positive correlation exists between the response variables at 0.001 level. Video recording helpful to identify professional mistakes ($r=.386$, $p<.01$), video recording and improvement of teaching skills ($r=.41$, $p<.01$), overcoming intra conflict through video-taping ($r=.294$, $p<.01$) Video recording and improvement in communication skills: ($r=.71$, $p < .01$).

Table 4.97 below shows the descriptive analysis of AVR and PD.

Table 116: Descriptive Statistics AVR and PD

<i>Variables</i>	<i>Mean</i>	<i>SD</i>	<i>n</i>
Professional Development	3.6131	1.10693	800
Audio Video Recording	3.5496	.95558	800

Table 117: Regression Model Summary AVR and PD

<i>Model</i>	<i>R</i>	<i>R²</i>	<i>Adjusted R²</i>	<i>SEE</i>	<i>D.W</i>
1	.599a	.359	.358	.88691	1.451
a. Predictors: (Constant), AVR					
b. Dependent Variable: PD					

Table 117 shows the regression model summary of AVR and PD. The value of $R^2=.359$ indicates that nearly 36% of the total variability in the response variable (PD) is accounted by the predictor variable (AV). This indicated a positive linear relationship between AV and PD. The model further showed that when teachers reflected on their practices through audio video recording then nearly 35% variation could be predicted in their professional development. Summary of ANOVA coefficients is given in Table 118 below:

Table 118: Summary of ANOVA Coefficients AVR and PD

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square F</i>	<i>Sig.</i>
1 Regression	351.296	1	351.296	
Residual	627.716	798	.787	
Total	979.012	799	446.595	.000a
a. Predictors: (Constant), AVRs				
b. Dependent Variable: PD				

Table 118 shows the summary of ANOVA coefficients, F value=351.29 > 3.85 which is highly significant and shows that the independent variables (AV) included in the model affect the Dependent Variable (Professional Development)

of the prospective teachers. Therefore, H1: was accepted that Audio-Videotaping of lesson and identification of mistakes were allied with each other. Summary of the coefficients of AV and PD is given below:

Table 119: Summary of Coefficients AV and PD

<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>Correlations</i>					
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>	<i>Sig.</i>	<i>Zero-order</i>	<i>Partial</i>	<i>Part</i>	
1 (Constant)	1.150	.121		9.529	.000				
AVRs	.694	.033	.599	21.133	.000	.599	.599	.599	

a. Dependent Variable: PD

Table 119 shows the summary of coefficients of independent variable (AV) and dependent variable (PD). The coefficients of $\beta = .694$ has a t value of 21.13.00 (>1.64) which shows that it is significant at the 0.05 level (as also shown by the p-value of 0.000). These values showed goodness of fit of independent variables with dependent variables. Therefore, it was concluded that reflection over AVR was a significant predictor of for the professional development of PTs during teaching practicum.

Part-C

4.12: Descriptive Analysis of Open Ended Questionnaire for Prospective Teachers

In order to get sense of the data collected through five open ended questions, researcher thoroughly read the responses. Researcher reviewed major themes to identify patterns and trends of the data. Descriptive statistics was applied to the data to calculate the frequencies, percentages, means and Standard deviation. Details are given in below tables.

Table 120: Reflective Practices of Prospective Teachers

<i>Sr.</i>	<i>Reflective Practice</i>	<i>Responses</i>	<i>Frequency</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Reflection on Action	Yes	469	59%	1.41	.492
		No	331	41%		
2	Videotaping	Yes	272	34%	1.66	.474
		No	528	66%		
3	Audiotaping	Yes	238	30%	1.70	.457
		No	562	70%		
4	Students Feedback	Yes	473	59%	1.41	.500
		No	327	41%		
5	Peer Observation	Yes	416	52%	1.48	.499
		No	384	48%		
6	Colleagues Feedback	Yes	298	37%	1.63	.483
		No	502	63%		
7	Self-Monitoring	Yes	199	25%	1.75	.433
		No	601	75%		
8	Portfolios	Yes	485	61%	1.39	.489
		No	315	39%		
9	Critical Thinking	Yes	287	36%	1.64	.480
		No	513	64%		
10	Reflection in Action	Yes	384	48%	1.52	.499
		No	416	52%		
11	Observation of Seniors	Yes	200	25%	1.75	.433
		No	600	75%		
12	No Reflective Practice	Yes	15	2%	1.98	.136
		No	786	98%		
13	No Answer	Yes	88	2%	1.89	.313
		No	712	98%		
			N=800			

Table 120 shows the responses of PTs about usage of reflective practices. 59% said that they reflected on their classroom actions after the class. 34% replied that they reflected over their practices through Audio Video recording, 59% replied that they took students feedback on their teaching, 52% replied that they involved in peers observation, 25% responded that they involved in self-monitoring to reflect over their practices, 61% replied that they prepared portfolios, 36% replied that they critically thought over their class room practices, 48% added that they involved in reflection in action (think what they were doing during process of teaching). 25% PTs replied that they observed and reflected on the practices of their senior teachers to improve their own teaching

skills, 2% replied that they used no reflective practice and 2% PTs provided no answer.

Table 121: Perceptions of Prospective Teachers about Benefits of Reflective Practices

<i>Sr.</i>	<i>Themes about Benefits of RPs</i>	<i>Responses</i>	<i>Frequency</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Development of Pedagogical skills	Yes No	547 253	68% 32%	1.32	.465
2	Good relations with students	Yes No	487 313	61% 39%	1.39	.488
3	Good relations with colleagues	Yes No	526 274	66% 34%	1.34	.475
4	Self-understanding	Yes No	459 341	42% 69%	1.43	.495
5	Awareness about professional weakness	Yes No	578 222	73% 27%	1.28	.448
6	Understanding learners	Yes No	489 311	61% 39%	1.34	.487
7	Professional Development	Yes No	607 193	76% 24%	1.24	.428
8	No importance	Yes No	23 777	3% 97%	1.97	.167
9	No Answer	Yes No	97 703	12% 88%	1.88	.327
	N=800	No	92	68%		

Table 121 shows perceptions of PTs about the benefits of RPs; 68% considered that involvement in RPs contributed towards development of their pedagogical skills, 61% replied that RPs contributed to develop good relations with students, 66% considered that they could develop better relations with colleagues through RPs, 42% replied that RPs helped to develop better self-understanding, 73% replied that RPs were helpful to identify professional weakness, 61% considered that reflective teachers could better understand their learners, 76% recognized that RPs contributed toward their professional development, 3% thought that RPs made no benefits, while 12% PTs provided no answer about the benefits of RPs.

Table 122: Common mistakes of Prospective Teachers During Teaching Practicum

<i>Sr.</i>	<i>Common Mistakes</i>	<i>Responses</i>	<i>Frequency</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Lack of confidence	Yes	328	41%	1.59	.492
		No	472	59%		
2	Lack of knowledge about teaching methods	Yes	427	53%	1.47	.499
		No	373	47%		
3	Fear to maintain discipline in class	Yes	335	44%	1.58	.493
		No	465	68%		
4	Language conflict with body language	Yes	288	36%	1.64	.480
		No	512	64%		
5	Improper start of lesson	Yes	327	41%	1.59	.491
		No	473	59%		
6	Improper end of lesson	Yes	334	42%	1.58	.493
		No	466	68%		
7	Failure to ensure students participation	Yes	335	42%	1.64	.491
		No	465	58%		
8	Failure to take student feedback	Yes	335	42%	1.84	.360
		No	465	58%		
9	Not discuss classroom problems with seniors	Yes	241	30%	1.70	.459
		No	559	70%		
10	Improper usage of Audio Visual Aids	Yes	252	32%	1.68	.464
		No	548	68%		
11	No mistake	Yes	37	5%	1.95	.210
		No	763	95%		
12	No answer	Yes	87	11%	1.89	.311
		No	713	89%		
13	Not understand students domestic problems	Yes	59	7%	1.92	.261
		No	741	92%		

N=800

Table 122 shows the responses of PTs about their own common mistakes; 41% PTs replied that during early days of practicum they experienced lack of confidence, 53% replied that they were having less knowledge about application of various teaching methods, 44% replied that they were afraid to maintain classroom discipline, 36% stated that they experienced conflict between language and body language, 41% replied that they could not start and end their lesson properly, 42% replied that they failed to ensure students participation and to take students feedback during early days of teaching, 70% seldom discussed classroom related problems with senior teachers, 07% reported that they failed to understand students' domestic problems during teaching practicum. While 5%

answered that they did not committed any mistake and 11% PTs provided no answer about their common mistakes.

Table 123: Importance of Reflective Practices in Teaching Process

<i>Sr.</i>	<i>Themes about Importance of RPs</i>	<i>Responses</i>	<i>Frequency</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Learn to criticize own work	Yes	382	48%	1.52	.500
		No	418	52%		
2	Adopt professional values	Yes	563	70%	1.30	.465
		No	237	30%		
3	Seek students feedback	Yes	502	62%	1.37	.484
		No	298	37%		
4	Helpful in making good decisions	Yes	413	52%	1.48	.500
		No	387	48%		
5	Learn to apply different teaching methods	Yes	448	56%	1.44	.496
		No	352	44%		
6	Self-awareness	Yes	425	53%	1.46	.499
		No	375	47%		
7	Deep understanding of teaching profession	Yes	576	72%	1.37	.483
		No	224	28%		
8	Evaluation of weakness and strengths	Yes	502	63%	1.84	.360
		No	298	37%		
9	Better understanding of subject matter	Yes	434	54%	1.45	.499
		No	366	46%		
10	Not Important	Yes	273	34%	1.65	.474
		No	527	66%		
11	No Answer	Yes	200	25%	1.75	.433
		No	600	75%		
N=800						

Table 123 shows the perception of prospective teachers about the importance of RPs in Professional Development. Almost 48% replied that they could learnt to criticize their own work, 70% perceived that RPs were important to adopt professional values, 62% perceived that reflective teachers could take students feedback, 52% thought that reflective teachers could make better decisions, 56% thought that RPs were important to apply different teaching methods in class, 53% replied that they got self-awareness, 72% replied that they could deeply understand teaching profession, 63% replied that they could evaluate their weaknesses through RPs, 54% told that they could better understand the subject

matter and 34% considered that RPs made no importance while, 25% provided no answer about the importance of RPs.

Table 124: Views of Prospective Teachers about drawbacks of RPs

<i>Sr.</i>	<i>Drawbacks</i>	<i>Responses</i>	<i>Frequency</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Time wasting	Yes	217	27%	1.72	.450
		No	583	72%		
2	Confusing process	Yes	226	28%	1.72	.450
		No	574	72%		
3	Difficult to criticize own work	Yes	149	19%	1.81	.389
		No	659	81%		
4	Students not provide correct feedback	Yes	141	18%	1.82	.381
		No	659	82%		
5	Cooperating school teachers not guide	Yes	230	29%	1.71	.452
		No	570	71%		
6	Peers not provide honest feedback	Yes	131	16%	1.84	.370
		No	669	84%		
7	Shy Feelings	Yes	124	16%	1.85	.362
		No	676	86%		
8	No drawback	Yes	287	36%	1.83	.370
		No	513	64%		
9	No answer	Yes	108	14%	1.85	.362
		No	692	86%		
N-800						

Table 124 reflects that 27% thought that RPs was time consuming and confusing activity. While 19% PTs considered that it was difficult to criticize own work through RPs, 18% considered that students provided no right feedback, 29% replied that cooperating school teachers did not guide them about usage of RPs, 16% considered that peers seldom provided feedback in professional way, 16% considered they did not involve in RPs because they felt shy. Overall 64%

replied that RPs carried no drawback, while 14% provided no answer about the drawbacks of RPs.

Part-D

4.13 Item wise Descriptive Analyses of Questionnaire for Teacher Educators

Descriptive statistics was used to calculate the frequencies, percentages and Standard Deviation to interpret the quantitative data. Item wise descriptive analysis of the questionnaire for Teacher Educators is given below:

Table 125: Involvement of Teacher Educators in Reflection In Action

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the attitude of my students during teaching process	Strongly Disagree	16	11.4%	3.62	.117
	Disagree	21	15.0%		
	Undecided	10	7.1%		
	Agree	45	32.1%		
	Strongly Agree	48	34.3%		
		N= 140	100.0%		

Table 125 shows that 66.4% Teacher Educators (TEs) agreed with the statement that they involved in Reflection in Action (RIA), whenever their students demonstrated discourteous in the class. 7.1% were uncertain in their responses, while 26.4% PTs disagreed with the statement. The mean score was 3.62 and SD= .117.

Table 126: RIA to Plan Strategies to deal with Students

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I plan strategies to overcome students' discourteous attitude during class	Strongly Disagree	18	12.9%	3.14	.117
	Disagree	39	27.9%		
	Undecided	21	15.0%		
	Agree	29	20.7%		
	Strongly Agree	33	23.6%		
		N= 140	100%		

Table 126 shows that 44.3% TEs agreed with the statement that they planed strategies during teaching process to overcome students discourteous attitude. This indicated their involvement RIA. 15.0% were uncertain in their responses, while 41% disagreed with the statement. The mean score was 3.14 and SD= .117.

Table 127: RIA to overcome Unwanted Practices

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over my class	Strongly Disagree	4	2.9%	4.07	.086
room practices to	Disagree	14	10.0%		
overcome unwanted	Undecided	4	2.9%		
practices during	Agree	64	45.7%		
teaching process	Strongly Agree	54	38.6%		
		N= 140	100%		

Table 127 demonstrates that 84.3% TEs agreed with the statement that they reflected over their unwanted teaching practices during lecture and attempt to overcome shyness, shivering and repetition of words. Nearly 3% were uncertain in their responses, while 12.9% disagreed with the statement. The mean score was 4.07 and SD= .086.

Table 128: RIA to Ensure Class room Momentum

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over classroom momentum to ensure proper start and proper end of my lecture	Strongly Disagree	4	2.9%		
	Disagree	15	10.7%	4.07	.089
	Undecided	4	2.9%		
	Agree	61	43.6%		
	Strongly Agree	56	40.0%		
		N= 140	100%		

Table 128 reflects that 83.6% TEs agreed with the statement that they reflected over the classroom momentum to ensure proper start and proper end of their lecture, 2.9% were uncertain in their responses, while 13.6% respondents disagreed with the statement. The mean score was 4.07 and SD= .089.

Table 129: RIA over professional mistakes

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over my professional mistakes during lecture	Strongly Disagree	4	2.9%		
	Disagree	15	10.7%	3.91	.115
	Undecided	15	10.7%		
	Agree	61	43.6%		
	Strongly Agree	45	32.1%		
		N= 140	100%		

Table 129 shows that 75.7% TEs agreed with the statement that they reflected over their professional mistakes during lecture, 15.0% were uncertain in their responses, while 13.6% disagreed with the statement. The mean score was 3.91 and SD= .115.

Table 130: RIA and Teaching of Controversial Contents

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
When I teach controversial contents I reflect over the contents before teaching	Strongly Disagree	15	10.7%	3.39	.115
	Disagree	33	23.6%		
	Undecided	9	6.4%		
	Agree	48	34.3%		
	Strongly Agree	35	25.0%		
		N= 140	100%		

Table 130 shows that 59.3% TEs agreed with the statement that they that reflected over the controversial contents before teaching the contents to the class. 6.4.0% were uncertain in their responses, while 34.3% disagreed. The mean score was 3.39 and SD= .115.

Table 131: RIA and rectification of Professional Mistakes

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think reflection in action is helpful to rectify professional mistakes on the spot	Strongly Disagree	24	17.1%	2.84	.113
	Disagree	47	33.6%		
	Undecided	15	10.7%		
	Agree	36	25.7%		
	Strongly Agree	18	12.9%		
		N= 140	100%		

Table 131 shows that 48.6% respondents agreed with the statement that reflection in action was helpful to rectify professional mistakes on the spot, 10.7% were uncertain in their responses, while 50.7% disagreed. The mean score was 2.84 and SD= .113.

4.14 Descriptive Analysis Reflection on Action

Table 132: Reflection over Shortcoming of Lecture after Class

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think reflection on	Strongly Disagree	4	2.9%	3.93	.938
my actions after	Disagree	12	8.6%		
class is helpful to	Undecided	6	4.3%		
review the	Agree	85	60.7%		
shortcomings of the	Strongly Agree	33	23.6%		
lecture		N= 140	100%		

Table 132 shows that 84.3% TEs agreed with the statement that reflection on actions after class was helpful to review the shortcoming of the lecture. 4.3% were uncertain in their responses, while 11.5% disagreed. The mean score was 3.93 and SD= .938.

Table 134: ROA to Find out Reasons of Students' Discourteous Attitude

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect on students discourteous attitude after class to find out the reasons of students discourteous attitude	Strongly Disagree	10	7.1%	3.48	1.29
	Disagree	35	25.0%		
	Undecided	6	4.3%		
	Agree	56	40.0%		
	Strongly Agree	33	23.6%		
	N=	140	100%		

Table 134 shows that 63.6% TEs agreed with the statement that whenever their students demonstrated discourteous attitude in the class they reflected over the attitude of their students after class and attempted to find out reasons of students' discourteous attitude. Nearly 4% were uncertain in their responses, while 32.1% disagreed. The mean score was 3.48 and SD= 1.29.

Table 135: ROA to Develop Good Relationship with Colleagues

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over my relationship with colleagues to develop good relationship	Strongly Disagree	11	7.9%	3.59	1.24
	Disagree	25	17.9%		
	Undecided	6	4.3%		
	Agree	66	47.1%		
	Strongly Agree	32	22.9%		
		N= 140	100%		

Table 135 shows that 69% TEs agreed with the statement that they involved in reflection on action to develop good relationship with their colleagues, 4.3% were uncertain in their responses while 25.8% disagreed. The mean score was 3.59 and SD= 1.24.

Table 136: Reflection to Overcome Weaknesses of Lecture

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I review my class room practices after class to reflect over weakness of my lecture	Strongly Disagree	4	2.9%	3.97	.978
	Disagree	13	9.3%		
	Undecided	5	3.6%		
	Agree	78	55.7%		
	Strongly Agree	40	28.6%		
		N= 140	100%		

Table 136 shows that 84.3 % TEs agreed with the statement that they reflected over their class room practices after class to review the weakness of their lecture, 3.6% were uncertain in their responses while 12.2% disagreed with the statement. The mean score was 3.97 and SD= .978.

Table 137: ROA and Learning Outcomes

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the student learning outcomes of my lecture after class	Strongly Disagree	9	6.4%	4.02	1.13
	Disagree	9	6.4%		
	Undecided	6	4.3%		
	Agree	62	44.3%		
	Strongly Agree	54	38.6%		
	N=	140	100%		

Table 137 shows that 82.9 % respondents agreed with the statement that they reflected over the student learning outcomes of their lecture after class, 4.3% were uncertain in their responses while 12.8% disagreed. The mean score was 4.02 and SD= 1.13.

Table 138: Reflection over Strengths and Weakness of Teaching Method

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over strengths and weakness of the teaching method I adopted to teach contents after class	Strongly Disagree	5	3.6%	4.00	1.04
	Disagree	14	10.0%		
	Undecided	4	2.9%		
	Agree	70	50.0%		
	Strongly Agree	47	33.6%		
	N=	140	100%		

Table 138 shows that 83.6 % respondents agreed with the statement that they reflected over the strengths and weaknesses of the teaching method they adopted to teach contents in the class after class. 2.9% were uncertain in their responses while 13.6% disagreed. The mean score was 4.00 and SD= 1.04.

Table 139: ROA and Professional Development

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think reflection on action is helpful to understand professional weaknesses	Strongly Disagree	8	5.7%	3.68	1.17
	Disagree	22	15.7%		
	Undecided	12	8.6%		
	Agree	63	45.0%		
	Strongly Agree	35	25.0%		
		N= 140	100%		

Table 139 shows that 70 % TEs agreed with the statement that they reflected on actions after class is helpful to understand professional mistakes. 8.6% were uncertain in their responses while 21.4% disagreed. The mean score was 3.68 and SD= 1.17.

4.15 Descriptive Analysis Reflection for Action (RFA)

Table 140: Reflection for Action before Taking Action

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the reactions of my actions before taking action in class	Strongly Disagree	8	5.7%	3.93	1.18
	Disagree	17	12.1%		
	Undecided	2	1.4%		
	Agree	62	44.3%		
	Strongly Agree	51	36.4%		
		N= 140	100%		

Table 140 reflects that nearly 82 % TEs agreed with the statement that they reflected on their actions before taking action in the class. 1.4% were uncertain in their responses while 17.8.4% disagreed. The mean score was 3.93 and SD= 1.18.

Table 141: Reflection over merits of Teaching Method before Application

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the merits and demerits of teaching method before application in the class	Strongly Disagree	9	6.4%	3.84	1.17
	Disagree	15	10.7%		
	Undecided	7	5.0%		
	Agree	67	47.9%		
	Strongly Agree	42	30.0%		
		N= 140	100%		

Table 141 shows that 77.9% respondents agreed with the statement that they reflected over the merits and limitations of teaching method before its application in the class room. 5.0% were uncertain in their responses while 17.1% disagreed. The mean score was 3.84 and SD= 1.17.

Table 142: Reflection over Difficulty level of Assignments

<i>Statement</i>	<i>Responses</i>	<i>F</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I reflect over the difficulty level of assignments before I assigned work to my students	Strongly Disagree	22	15.7%	2.92	1.34
	Disagree	49	35.0%		
	Undecided	3	2.1%		
	Agree	49	35.0%		
	Strongly Agree	17	12.1%		
		N= 140	100%		

Table 142 shows that 47.1% respondents agreed with the statement that when they gave assignments to their students they reflected over the difficulty level of the assignments beforehand. 2.1% were uncertain in their responses while 50.7% disagreed. The mean score was 2.92 and SD= 1.34.

Table 143: Reflection over Creative Aspect of Assignments Beforehand

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think about creative aspect of assignment before assigning to my students	Strongly Disagree	9	6.4%	3.44	1.25
	Disagree	36	25.7%		
	Undecided	9	6.4%		
	Agree	56	40.0%		
	Strongly Agree	30	21.4%		
		N= 140	100%		

Table 143 shows that 61.4% TEs agreed with the statement that when they gave assignments to their students they reflected over the creative aspect of the assignments beforehand, 6.4% were uncertain in their responses while 22.1% disagreed. The mean score was 3.44 and SD= 1.25.

Table 144: Reflection for Action and Professional Development

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think reflection for action (thinking before taking any action) contributes towards my professional development	Strongly Disagree	7	5.0%	3.93	1.20
	Disagree	14	10.0%		
	Undecided	8	5.7%		
	Agree	63	45.0%		
	Strongly Agree	48	34.3%		
		N=			
		140	100%		

Table 144 shows that 79.3% TEs agreed with the statement that reflection over reactions of actions, difficulty level and creative aspect of assignments contributed toward their professional development. 5.7% were uncertain in their responses while 15.0% disagreed. The mean score was 3.93 and SD= 1.20.

4.16 Descriptive Analysis Reflection through Students Feedback

Table 145: Reflection through Students Feedback

<i>Statement</i>	<i>Responses</i>	<i>F</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
When my students say that assignments are difficult I assign them easy assignment	Strongly Disagree	15	10.7%	2.92	1.27
	Disagree	53	37.9%		
	Undecided	19	13.6%		
	Agree	33	23.6%		
	Strongly Agree	20	14.3%		
	N=	140	100%		

Table 145 shows that 47.9% TEs agreed with the statement that when students provided them feedback that assignments were difficult, they reflected over students' feedback and assigned easy assignments to their students. 13.6% were uncertain in their responses while 48.6% disagreed. The mean score was 2.92 and SD= 1.27.

Table 146: Reflection over Para Language of Students

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I understand Para-language of my students through their facial expressions during teaching process	Strongly Disagree	6	4.3	3.75	1.15
	Disagree	24	17.1		
	Undecided	6	4.3		
	Agree	66	47.1		
	Strongly Agree	38	27.1		
	N=	140	100.0		

Table 146 shows that 74.2% TEs agreed with the statement that they reflected over the Para language of their students to understand students' facial expressions during class. 4.3% were uncertain in their responses while 21.4% disagreed. The mean score was 3.75 and SD= 1.15.

Table 147: Allowing Students to Provide Feedback

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I allow my students to provide their feedback on my teaching style	Strongly Disagree	5	3.6%	3.99	1.15
	Disagree	15	10.7%		
	Undecided	4	2.9%		
	Agree	69	49.3%		
	Strongly Agree	47	33.6%		
		N= 140	100%		

Table 147 shows that 82.9% TEs agreed with the statement that they took students' feedback during teaching process. 2.9% were uncertain in their responses while 14.3% disagreed. The mean score was 3.99 and SD= 1.15.

Table 148: Students Feedback and Deviation from Lecture

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
When I feel that my students are not fully involve in my lecture I deviate from the topic	Strongly Disagree	6	4.3%	3.90	1.14
	Disagree	17	12.1%		
	Undecided	7	5.0%		
	Agree	65	46.4%		
	Strongly Agree	45	32.1%		
		N= 140	100%		

Table 148 shows that 78.5% TEs agreed with the statement that whenever, they felt that their students were not fully involve in their lecture, they deviated from the topic. 5.0% were uncertain in their responses while 16.4% disagreed. The mean score was 3.90 and SD= 1.14.

Table 149: Planning future teaching activities in light of Students Feedback

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I plan teaching activities for future in the light of my students' feedback	Strongly Disagree	7	5.0%	3.86	1.09
	Disagree	12	8.6%		
	Undecided	5	3.6%		
	Agree	85	60.7%		
	Strongly Agree	31	22.1%		
	N=	140	100%		

Table 149 shows that 82.8% TEs agreed with the statement that when they planned teaching activity for their students they kept in view their students' feedback. 3.6% were uncertain in their responses while 13.6% disagreed. The mean score was 3.86 and SD= 1.09.

Table 150: Students Feedback and Professional Development of TEs

<i>Statement</i>	<i>Responses</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
I think reflection	Strongly Disagree	3	2.1%	3.99	1.01
over students	Disagree	17	12.1%		
feedback may	Undecided	3	2.1%		
contribute towards	Agree	72	51.4%		
my professional	Strongly Agree	45	32.1%		
development		N= 140	100%		

Table 150 shows that 83.5% TEs agreed with the statement that reflection over students' feedback contributed toward their professional development. 2.1% were uncertain in their responses while 14.2% disagreed. The mean score was 3.99 and SD= 1.01.

4.17 Descriptive Analysis of Open Ended Questionnaire for Teacher Educators

Part 4.17 deals with descriptive analysis of open ended questionnaire for teacher educators. Details are given in below tables.

Table 151: Reflective Practices of Teacher Educators

<i>Sr.</i>	<i>Reflective Practices</i>	<i>Responses</i>	<i>Freq.</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Reflection on Action	Yes	89	64%	1.36	.482
		No	51	36%		
2	Audio video recording	Yes	53	37%	1.62	.487
		No	87	63%		
3	Students Feedback	Yes	104	74%	1.25	.480
		No	36	26%		
4	Colleagues Feedback	Yes	47	34%	1.34	.476
		No	92	66%		
5	Self-Monitoring	Yes	93	34%	1.33	.473
		No	47	66%		
6	Seminars	Yes	110	79%	1.21	.411
	Conferences	No	30	31%		
7	Critical Thinking	Yes	92	66%	1.34	.476
		No	48	34%		
8	Reflection in Action	Yes	80	57%	1.43	.497
		No	60	43%		
9	Observation of Seniors	Yes	92	66%	1.34	.476
		No	48	34%		
10	Listening lecture on Youtube	Yes	46	33%	1.67	.446
		No	94	67%		
11	Writing experiences in Diaries	Yes	38	27%	1.72	.446
		No	102	73%		
12	Through Discussions	Yes	38	27%	1.72	.446
		No	102	73%		
13	No Reflective Practice	Yes	38	27%	1.72	.446
		No	102	73%		
14	No Answer	Yes	36	26%	1.74	.439
	N=140	No	104	73%		

Table 151 shows the responses of TEs about their involvement in various RPs, 64% reported that they reflected over their actions after class. 37% replied that sometimes they recorded their lectures to reflect over their own professional mistakes, 74% replied that reflected on the feedback provided by their students, 34% reported that they sometimes they took feedback from their colleagues for improvement, 34% said that they involved in self-monitoring and critical thinking to refine their own teaching skills, 79% TEs participated in seminars

and conferences to improve their professional skills. 57% replied that thought over their actions during teaching process, 66% TEs replied that they observed lectures of their seniors to refine their teaching skills. 33% replied that they watched lectures on Youtube, 27% replied that they considered through discussions as a reflective practice, 27% replied that they wrote their experiences in diaries, 27% said that they used no RP while 26% provided no answer.

Table 152: Perceptions of Teacher Educators about benefits of reflective practices

<i>Sr.</i>	<i>Themes</i>	<i>Responses</i>	<i>Freq.</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Development of Pedagogical skills	Yes	88	63%	1.37	.485
		No	52	37%		
2	Good relations with students	Yes	96	69%	1.31	.466
		No	44	31%		
3	Good relations with colleagues	Yes	89	64%	1.36	.483
		No	51	36%		
4	Self-understanding	Yes	57	41%	1.69	.466
		No	83	59%		
5	Awareness about professional weakness	Yes	93	66%	1.59	.493
		No	47	34%		
6	Understanding learners	Yes	66	47%	1.34	.473
		No	74	53%		
7	Professional Development	Yes	107	76%	1.53	.501
		No	33	24%		
8	Strengthen teaching	Yes	102	73%	1.24	.426
		No	38	27%		
9	Suitable learning environment	Yes	65	46%	1.25	.435
		No	75	54%		
10	Self-development	Yes	49	35%	1.53	.500
		No	75	54%		
11	No importance	Yes	14	10%	1.90	.301
		No	126	90%		
12	No Answer	Yes	29	21%	1.79	.407
		No	111	79%		
			N=140			

Table 152 is related to the views of teacher educators about the benefits of RPs. 63% reported that involvement in RPs was helpful to develop pedagogical skills; 69% answered that through RPs they developed better relations with students. Similarly 64% replied that they developed better relations with colleagues; 41%

thought they could better understand themselves; 66% thought that they could identify their professional weaknesses through involvement in RPs. 47% thought that they could better understand learners, 76% teacher educators said that RPs contributed toward development of their pedagogical skills. 73% said that RPs strengthen teaching, 46% said that they could develop suitable learning environment. 35% replied that RPs contributed toward their self-development. 10% considered that RPs carried no benefits. 21% respondents made no answer about the benefits of Reflective Practices.

Table 153: Common mistakes of Teacher Educators

<i>Sr.</i>	<i>Themes</i>	<i>Responses</i>	<i>Freq.</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Lack of confidence	Yes	37	26%	1.74	.443
		No	103	74%		
2	Lack of Knowledge about teaching methods	Yes	40	29%	1.71	.453
		No	100	71%		
3	Fear to maintain discipline	Yes	34	24%	1.76	.430
		No	106	76%		
4	Language conflict with body language	Yes	29	20%	1.79	.406
		No	111	79%		
5	Improper start of lecture	Yes	61	44%	1.56	.498
		No	79	56%		
6	Improper end of lecture	Yes	58	41%	1.59	.494
		No	82	59%		
7	Failure to ensure students participation	Yes	44	31%	1.69	.466
		No	96	69%		
8	Failure to take students feedback	Yes	47	34%	1.66	.473
		No	93	66%		
9	Not discuss classroom problems with seniors	Yes	58	41%	1.59	.494
		No	82	59%		
10	Improper usage of ICTs	Yes	51	36%	1.63	.483
		No	89	64%		
11	Lack of tolerance	Yes	46	32%	1.67	.471
		No	94	68%		
12	Authoritative Behaviour with students	Yes	44	32%	1.69	.466
		No	96	68%		
13	Not relate teaching with real situation	Yes	31	22%	1.78	.417
		No	109	78%		
14	Over confidence	Yes	28	20%	1.80	.401

		No	112	80%		
15	Not fully prepare lectures	Yes	28	20%	1.80	.401
		No	112	80%		
16	Ignore Individual differences	Yes	54	39%	1.80	.401
		No	86	61%		
17	Adopt insulting behaviour with students	Yes	30	21%	1.61	.489
		No	110	79%		
18	Not provide sufficient explanations	Yes	32	22%	1.78	.411
		No	108	78%		
19	Gap exists between theory and practices	Yes	36	26%	1.74	.438
		No	104	74%		
20	Repetition of words	Yes	25	18%	1.82	.384
		No	115	82%		
21	Discuss students behaviours with colleagues	Yes	30	21%	1.79	.411
		No	110	79%		
22	Rely only on lecture method	Yes	39	27%	1.72	.450
		No	102	73%		
23	Not plan lectures before time	Yes	38	27%	1.73	.446
		No	102	73%		
24	Not think their mistakes will shift to PTs	Yes	31	22%	1.79	.417
		No	109	88%		
25	Digression in lecture	Yes	33	23%	1.76	.426
		No	107	77%		
26	Not motivate students	Yes	37	26%	1.73	.443
		No	103	74%		
27	Not establish rapport with students	Yes	30	21%	1.79	.411
		No	110	79%		
28	Start irrelevant discussion in class	Yes	32	23%	1.77	.421
		No	108	77%		
29	Absence of humor	Yes	26	18%	1.81	.390
		No	108	82%		
30	Not focus on creativity	Yes	11	8%	1.92	.270
		No	129	92%		
31	Not initiate action research	Yes	28	22%	1.80	.401
		No	112	88%		
32	No answer	Yes	30	21%	1.78	.412
		No	110	78%		
			N=140			

Table 153 shows responses of TEs about their own common mistakes; 26% TEs replied that sometimes they experienced lack of confidence, 29% replied that had less knowledge to apply various teaching methods, 24% replied that sometimes they failed to maintain class room discipline, 20% replied that sometimes they experienced language conflict with body language. Nearly 40% replied that

sometimes they could not start and end their lecture in proper way, 27% did not prepare their lecture before time, 27% relied only on lecture method, 31% replied that sometimes they failed to ensure students participation in their lecture, 26%, replied that they could not motivate their students, 18% replied they did not shared jokes with students, 23% made irrelevant discussions during their lecture, 21% could not establish rapport with their students, 21% discussed about students behaviour in front of colleagues, 32% TEs replied that sometimes they showed lack of tolerance and adopted authoritative behaviour in class and 39% TEs ignored individual differences. Nearly 22% TEs considered that they should initiate action research to understand class room problems and their professional mistakes.

Table 154: Perceptions of Teacher Educators about Importance of RPs

<i>Sr.</i>	<i>Themes</i>	<i>Responses</i>	<i>Freq.</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Learn to criticize own work	Yes	96	69%	1.31	.466
		No	44	31%		
2	Helpful to adopt professional values	Yes	32	23%	1.23	.421
		No	108	77%		
3	Seek feedback from students	Yes	102	73%	1.27	.446
		No	38	27%		
4	Helpful in making good decisions	Yes	91	35%	1.35	.479
		No	49	65%		
5	learn to apply different teaching methods	Yes	93	64%	1.34	.474
		No	47	36%		
6	Self-Awareness	Yes	95	68%	1.32	.469
		No	45	32%		
7	Deep understanding of teaching profession	Yes	85	61%	1.39	.490
		No	55	39%		
8	Evaluation of own weaknesses	Yes	79	57%	1.44	.498
		No	61	43%		
9	Better understanding of subject matter	Yes	53	38%	1.62	.487
		No	87	62%		

10	Students take more interest in lecture	Yes	77	55%	1.45	.499
		No	63	45%		
11	Make teachers flexible	Yes	48	33%	1.34	.476
		No	92	66%		
12	Teachers become more responsible	Yes	49	35%	1.35	.478
		No	91	65%		
13	Can learn time management	Yes	87	38%	1.35	.478
		No	53	62%		
14	Teachers become critical thinkers	Yes	90	64%	1.38	.481
		No	50	36%		
15	Reflective Teachers can achieve lesson objectives	Yes	33	24%	1.76	.425
		No	107	76%		
16	No answer	Yes	27	19%	1.81	.396
		No	113	81%		
N=140						

Table 154 shows the responses of TEs about the importance of RPs. Nearly 69% TEs thought that they criticized their own work through RPs, 23% replied that RPs were helpful to adopt professional value, 73% reflective teachers took feedback from their students. 35% replied that reflective teachers took better decisions, 64% replied that RPs could apply a variety of teaching methods in class, 68% thought that RPs were important to get self-awareness, 38% thought that RPs were helpful to understand the subject matter, 57% TEs replied that they could evaluate their own weaknesses, 55% reported that students of reflective teachers took more interest in their lecture. Nearly 33% opinioned that reflective teachers become more flexible and 35% replied that they could become more responsible 38% reported that they could learn better time management skills through RPs. 64% expressed that if teachers involved in RPs they can become critical thinkers.

Table 155: Perceptions of Teacher Educators about Drawback of RPs

<i>Sr.</i>	<i>Themes</i>	<i>Responses</i>	<i>Freq.</i>	<i>%</i>	<i>Mean</i>	<i>S.D</i>
1	Time wasting	Yes	43	31%	1.69	.463
		No	97	69%		
2	Confusing process	Yes	43	30%	1.69	.462
		No	97	70%		
3	Difficult to criticize own work	Yes	39	28%	1.72	.450
		No	101	72%		
4	Students provide biased feedback	Yes	31	22%	1.79	.417
		No	109	78%		
5	Lack of seminars and conferences on RPs	Yes	100	71%	1.29	.453
		No	40	29%		
6	Colleagues not provide professional feedback	Yes	29	21%	1.79	.407
		No	111	79%		
7	Shy feelings	Yes	25	18%	1.82	.384
		No	115	82%		
8	Lack of commitment	Yes	32	23%	1.69	.466
		No	108	77%		
9	Environment not suitable for RPs	Yes	92	66%	1.77	.421
		No	48	34%		
10	Absence of trend of RPs	Yes	92	66%	1.34	.476
		No	48	34%		
11	Seniors misguide	Yes	39	28%	1.34	.476
		No	101	72%		
12	Absence of reflective professional learning forums	Yes	106	76%	1.72	.450
		No	34	24%		
13	RPs may cause tension	Yes	34	24%	1.24	.430
		No	106	76%		
14	Absence of Reflective learning journals	Yes	87	62%	1.34	.474
		No	53	37%		
15	Cannot take Students feedback on daily basis	Yes	39	28%	1.76	.430
		No	101	72%		
16	Lack of awareness about RPs	Yes	83	66%	1.38	.487
		No	47	34%		
17	Colleagues not collaborate	Yes	76	54%	1.72	.450
		No	64	46%		
18	Lack of open mindedness	Yes	79	56%	1.44	.498
		No	61	44%		
19	RPs divert teacher's attention from class	Yes	59	42%	1.43	.497
		No	81	58%		
20	PTs are careless for own improvement	Yes	34	24%	1.58	.496
		No	106	76%		
21	No drawback	Yes	44	31%	1.68	.469
		No	96	32%		
22	No answer	Yes	34	69%	1.75	.430
		No	95	78%		
			N=140			

Table 155 reflects the responses of TEs about the drawbacks of RPs. Almost 31% TEs replied that involvement in RPs was time consuming activity and 43% considered that RP is confusing process. 28% TEs replied that it was difficult to

criticize own work, 22% considered that students provided biased feedback. 71% replied that there was lack of conferences and seminars on RPs, 21% expressed that colleagues did not provide feedback in professional way, 18% considered that shyness was factor to involve in RPs; 23% considered that teachers were not committed to involve in RPs, 66% considered that environment of TTIs was not conducive to involve in RPs and there was no trend of RPs in TTIs. 28% replied that when they invited feedback from seniors, there seemed tendency of misguidance. 76% replied that there was absence of reflective professional forums to promote culture for RPs, 24% TEs replied that involvement in RPs might cause tension. 62% replied that there was absence of Reflective Learning journals, 28% considered that it was difficult to invite students' feedback on daily basis, 66% replied that they were not well aware of the process of RPs. Nearly 54% replied that colleagues did not collaborate with each other to involve in RPs because there was a lack of open mindedness. 42% considered that RPs might divert teacher's attention from teaching and 32% replied that there was no drawback of RPs.

Part-E

4.18: Qualitative Data Analysis

Understanding and analyzing qualitative data formed a difficult part of the study. According to Powell & Renner, (2003) there is no single or best way to analyze the qualitative data. A systematic, disciplined and creative approach is required to understand the qualitative data. Qualitative data analysis depends upon the questions researcher want to answer, the needs of the users of the study, and resources available to the researcher. Content analysis is extensively used data analysis approach (Powell & Renner, 2003). At some points, it is really difficult

to analyze the thoughts, feelings or actions of the respondents in qualitative data analysis. Many statements of the respondents can never be judged true or false. Researcher had a concern about the confidentiality, privacy and anonymity of the respondents in qualitative data analysis (Cresswell, 2011). Good qualitative data analysis depends upon the understanding the data (Powell, Renner, 2003). Researcher listened the recorded interviews several times to understand the data before transcription. Researcher carefully transcribed the recorded interviews in to MS word and readout the data to develop themes and subthemes. Content analysis approach was used to understand and analyze the qualitative data. Percentages of the themes and subthemes were calculated to deduce the results of qualitative data.

4.19: Observation Results

Table 156: Involvement of PTS in Reflection in Action

<i>Major themes</i>	<i>Sub-Themes</i>	<i>Indicators observed</i>	<i>Percentages</i>
Reflection on Action	Reflection over Students Discourteous attitude	13 PTs (16%) frequently paid attention to students' discourteous attitude: whenever students chat during lesson, not listened teacher's voice; students were not looking at teacher or ignored teacher's presence. PTs stopped the lesson paid attention to students, forbade them and assigned work/activity to the students.	Yes 16% (N=13)
	Reflection over unwanted practices	07 PTs (9%) were aware about their unwanted practices and attempted to overcome, shyness, shivering, repetition of words, excessive use of supporting words, low voice, under-confidence. They paid attention to such practices and attempted to overcome during class.	9% (N=7)
	Reflection over Class room momentum (proper start and end)	08 PTs (10%) indicated behaviour that they were involved in RIA. They properly checked previously assigned homework, every student was involved in lesson; students were looking towards teacher's face; assigned classwork & homework to students; completed the topic, revised major themes gave proper time to the students to ask questions. Assigned homework and provided guidelines to complete homework. Teacher properly ended the class	10% (N=8)

	on time.	
Smooth rolling of lesson plan	36 PTs (45%) were having lesson plan. Announced the title and objectives of the lesson, highlighted the importance of topic, provided the background of previous knowledge, asked questions to test previous knowledge. Attempted to relate the topic with previous knowledge gave hints about previous knowledge and completed the lesson plan. At the end illustrated difficult concepts.	45% (N=36)
Class room discipline	They attempted to maintain classroom discipline: Attempted to keep students busy in their studies; Every time, noted note passing, chatting, whispering. Teacher's eye contact with students was normal and used whiteboard. When students were feeling tired, teacher noticed the language of class. Teacher asked the students lesson delivery.	
Overcoming hesitation to respond to students questions	19 respondents (24%) initially felt hesitation to respond to students' questions: voice of the teacher was very low. Encouraged students to ask questions. Nearly 10% PTs discouraged students to raise questions and ignored students' questions and not appreciated students' questions.	24% (N=19)
Reflection over Learning outcomes	15% (N=12) PTs invited students to draw a diagram on board; inquired about specific concept/formula; asked specific questions; asked students to explain, describe, demonstrate, calculate, compare or analyze.	15% (N=12)
Reflection over Professional mistakes	15% PTs were not aware when their students were unable to understand the contents and provided no example to clarify the concept	15% (N=12)

Table 156 reflects the observation provided emergent evidences that PTs were involved in RPs. Almost 16% PTs paid attention to students' discourteous behaviour and assigned activities to their students. 09% were aware of their unwanted practices and attempted to overcome. It can be established that majority of PTs were not aware about their unwanted practices. 45% PTs were concerned with smooth rolling of lesson plan and reflected over their practices to ensure class room discipline, 24% attempted to overcome their hesitation to

respond students' questions. 15% indicated behaviour that they were concerned with learning outcomes. Majority of PTs were not concerned with learning outcomes. While 12% PTs committed professional mistakes and started irrelevant discussions during the lesson. It can established that majority of PTs focused on teaching only.

Table 157: Involvement of Prospective Teachers in Reflection on Action

<i>Major Themes</i>	<i>Sub-Theme</i>	<i>Indicators Observed</i>	<i>Percentages</i>
Reflection on Action	Adopted teaching method was suitable.	41 PTs (51%) do not discussed about teaching method with peers or cooperating school teacher after class. Even during the lesson they not attempted to relate the contents with real life situation and do not gave examples from practical life.	51% (N=41)
	(ROA) Findings out reasons of students discourteous attitude after class	9 (11%) PTs discussed about students' discourteous attitude with colleagues after class; wrote to the head teacher; wrote on dairy to bring his/her parents. Asked that he/she would discuss with parents in PTM. Informed students that he/she would inform his/her parents over phone	11% (N=9)
	(ROA) Reflection over professional weaknesses after class	14 PTs (16%) showed lesson plan to the cooperating school teacher and inquired about the weaknesses of lesson plan. Discussed class room experience with peers. Asked from peers that the materials included in the lesson was attractive and interesting.	16% (N=14)
	(ROA) Reflection over effectiveness of teaching	18 (22%) PTs Teacher used model, charts, and diagrams to clarify students' concepts, provided feedback to their students. Guided students about completion of homework and arranged a small quiz at the end of lesson related to lesson.	22% (N=18)

Table 157 shows that 51% attempted to relate the contents with real life situation by giving practical examples, 5% attempted to find out the reasons of students discourteous attitude and wrote letters to the head of school. 16% discussed their

lesson plan with cooperating school teachers and 21% reflected over the effectiveness of teaching and arranged small quiz at the end of lesson.

Table 158: Observable indicators Reflection for Action

<i>Sr.</i>	<i>Major Theme</i>	<i>Sub-Theme</i>	<i>Indicators observed</i>	<i>Percentages</i>
1	Reflection for Action (RFA)	Reflection over merits and demerits of teaching method before application	15 PTs (19%) discussed about the merits of teaching method with cooperating school teacher, colleagues, peers, seniors about the merits and demerits of teaching method before application of teaching method.	19% (N=15)
		Reflection over difficulty level of classwork and homework beforehand	22 (18%) PTs reflected over the difficulty level of class work and home work beforehand. They asked students whether they could complete the classwork or homework. They verbally expressed in the class that work was difficult.	18% (N=22)
		Reflection over creative aspect of classwork & home-work	18 PTs (22%) reflected over the creative aspect of class work and home-work beforehand. Homework assigned to the students was not merely copying from text book or completion of exercises given at the end of lesson.	18% (N=22)
		Reflection over possible reactions of actions	38 (45%) PTs indicated behaviour that they were concerned with the possible reactions of their actions. They used the word that he/she did not want to discuss about this problem in class. Just gave verbal warning that he/she would discuss the matter with head teacher or will write comments for parents on diary. They were ready to punish, but did not punish them.	45% (N=38)

Table 158 shows that 19% PTs reflected over the merits or demerits of teaching method before its application in the class room. 81% PTs did not reflect over the difficulty level of home-work or class work beforehand, 48% reflected over the possible reactions of actions before taking action in the class. It can be

established that majority of PTs did not bother to involve in reflection for action to identify the merits or demerits of teaching method.

Table 160: Observable indicators Reflection through Audio-Video Recording

<i>Sr.</i>	<i>Major Theme</i>	<i>Sub-Theme</i>	<i>Indicators observed</i>	<i>Percentages</i>
1	Audio Video Recording	Availability of Recording Devices	Only in two schools recording camera was provided by the school and available in the class	3% (N=2)
		Audio Video Recording through Mobile phones	Prospective teachers requested to peer/friend/student to record the lesson with mobile phone camera.	28% (N=22)
		Reflection over class room practice through audio video recording	Teacher demanded copy of the recording from peer/friend at the end of class. They watched the video together. Discussed about recording. Reply the video in the class to observe presented lesson after class. Discussed about a previous recording after class. Peer appreciated the class room performance. Presenter asked peers to provide critical comments. Peers were not able to provide critical comments on the recording	5% (N=4)
		No recordings	65% teachers were not concerned with audio video recording of their lesson during teaching practicum	65% (N=52)

Table 160 shows that recording camera was available in only two class rooms, 27% PTs attempted to record the lesson proceedings through mobile phone cameras. Only 5% PTs indicated behaviour that they were reflecting on the recording of class room proceedings. 65% were not concerned with recording of lesson. It can be established that majority of PTs did not watch the recording of lesson to identify their professional mistakes.

Table 161: Observable indicators of Students' Feedback

<i>Themes</i>	<i>Sub-Theme</i>	<i>Indicators observed</i>	<i>%</i>
Students Feedback	Invited feedback from students during class	20 PTs (25%) invited students' suggestions, comments or feedback during the lesson or at the end of class. Used the sentence that students can express their opinion.	25% (N=20)
	Overcoming weaknesses in light of student feedback	6 PTs (8%) discussed about the comments previously passed by their students. (I remember your feedback). Used sentence that next time he/she would adopt another method or talked to bring improvement in future. Every time teacher noticed when students were talking to each other.	8% (N=6)
	Feedback through Para-language of students	Whenever students attempted to pass notes, use mobile phone 23 PTs (29%) noticed such activities of their students. When few students were not looking at teachers face, PTs invited their attention. When students attempted to ask a class mate about some concept. Teacher went to students' desk and attempt to help the students. Teacher used words that he/she know you do not understand. Teacher frequently asked whether they understood. Used sentence that I feel you do not understand.	29% (N=23)
	Planning future teaching in light of students feedback	25 PTs (31%) frequently asked to the students; Do you understand? Do you face any difficulty to understand? Whenever, students attempted to ask something about class mates, teacher went to the students and attempted to clarify students' concepts. Teacher noticed that students were not taking notes. Teacher stopped and gave explanations. Teacher promised in the class that next time, he/she would do something in different way. Teacher was keen to take more and more feedback and quoted about previous feedback of the students.	31% (N=25)
	Attempts to establish positive relations with students	46% PTs 38, repeatedly asked about names of student. Used sentence (please tell me your name) and used sentence (I wouldn't know your name) I forget your name. Students were afraid of teacher's arrival.	46% (N=54)
	Attempts to motivate students	34 PTs (42%) appreciated the performance of students. Teacher used words "good" "very good" "excellent" "outstanding" on students note books/workbooks. Appreciated the students who completed their homework. But they did not appreciated the attempts of students who tried to reply on teacher's questions but could not reply correctly.	42% (N=34)

Table 161 shows that 25% invited students' feedback during class, 29% reflected over students' feedback and attempted to overcome professional mistakes in light of students' feedback. Nearly 31% showed behaviour that they while planning teaching activities they took into account their students feedback. 46% were repeatedly asked about the names of their students during class. It can be established that majority of PTs did not (table 161).

Table 162: Observable indicators Reflection through Peer Observation

<i>Theme</i>	<i>Sub-Themes</i>	<i>Indicators observed</i>	<i>%</i>
Colleagues Feedback	Invited suggestions from colleagues for improvement	12PTs (15%) invited colleagues and peers for observation of lesson. Colleagues were looking at teacher's face during lesson and taking notes. In some cases school colleague suddenly came to the class and left the class after some time. Sometimes colleagues raised questions about lesson plan. Similarly PTs discussed about class performance after the class. Teacher appreciated and welcomed peers comments and admitted that he/she would incorporate. Colleagues and peers not handed over comments in writing to the prospective teachers.	15% (N=12)
	Sharing of class room problems and unexpected classroom situations with colleagues	32 (40%) PTs mutually discussed class room experiences after class and asked questions. Almost 28% talked about the practices of their own teachers and shared their own class room related experiences (stories) with each other. 09% PTs were looking quite frank and friendly and they appreciated the practices of each other. However, their attitude was not critical.	40% (N=32)
	Relationship with colleagues and professional learning	13 PTs (16%) were sitting together in the school staff room or outside. They mutually shared information regarding lesson preparation and presentation. They were working in group about any task assigned to them in addition to teaching. Nearly 19%	16% (N=13)
	Professional learning through peers observation	15 PTs (19%) mutually shared knowledge about maintenance of school registers	19% (N=15)

Table 162 shows that only 15% PTs were involved in peer observation, but 40% mutually discussed about class room related stories and attempted to learn professional skills each other. Only 09% PTs were looking friendly and mutually criticized each other. However, they did not hand over comments/criticism in writing to each other. Almost 19% mutually discussed about school record. It can be established that majority of PTs did not invited suggestions from peers and colleagues to improve their teaching.

Table 163: Observable indicators Reflection through Portfolios

<i>Themes</i>	<i>Sub-Themes</i>	<i>Indicators observed</i>	<i>%</i>
Professional Portfolios	Reflection and professional learning portfolios	Portfolio was available with 35 (44%) PTs and it was containing material about lesson plan, teaching methods. Students work or peers comments about lesson plan. Portfolio was containing pictures drawings and diagrams used by the teacher to describe the concept on board. No portfolios contained any extra material handed over to students.	44% (N=35)
		20% PTs showed their portfolios to school teachers or peers. School teachers and peers were more concerned with the arrangement of material in the portfolios instead of criticizing the teachers work e.g lesson plan. Even PTs did not invite their suggestions for improvement.	20% (N=16)
		Portfolio was not available with 35 (44%) PTs during observation	33% (N=49)

Table 163 reflects that only 44% PTs prepared professional portfolios. Portfolios contained material about lesson plan, pictures and diagrams. Only 20% PTs discussed with the cooperating school teachers and peers about portfolios. Most of the time school teachers provided their opinion about the arrangement of material of the portfolios. Even PTs did not include reflective notes in their portfolios for reflection. It can be established that majority of PTs did not reflect over their portfolios to identify their mistakes.

4.20: Results of the Interview

Data collected through interview was organized and coded before analysis. Researcher transcribed the data to conceptualize and describe the data to identify the themes and sub-themes. Percentages of the major themes were calculated to analyze the data. Question wise analysis of the interview questions is presented below:

Question 1: May you like to tell? Which reflective practices your institution encouraged to promote among prospective teachers during teaching practicum?

Table 164: Types of Reflective Practice Illustrated by Heads of Departments

[illegible]

Views of the heads of departments are shown in table 164. 55% head of departments said that they encouraged student teachers to involve in peer observation, colleagues feedback, prepare portfolios, diary writing and group dialogues. Heads of the departments did not talked about involvement of

prospective teachers in reflection in action, reflection on action, reflection for action and reflective learning journals.

Question 2: How do you see the role of Reflective practices in professional development of the prospective teachers?

Table 165: Importance of Reflective Practice Illustrated by Heads of Departments

<i>Broad Themes</i>	<i>Subthemes</i>	<i>Views and concerns</i>	<i>%</i>
Importance of reflective practices	-Self-criticism	-I think reflective practices are critical in refining prospective teacher's artistry in teaching skills.-Students' teachers can recognize their teaching skills.	6 (75%)
	-Self-evaluation		N=9
	-Disclosure of teaching	-Its good that prospective teachers can think about their own practices. -Student teachers can criticize what they have gone through. -RPs required disclosure of practices that is beyond the capacity of student teachers.-Young teachers can address their weaknesses.-Better understanding of own teaching style.-I think it is important tool to learn teaching skills.-RPs gives a chance to student teachers to rectify their professional mistakes. -Prospective teachers can confess their mistakes.- Involvement of prospective teachers in Reflective practices enable them to identify the problems associated with the teaching practice.- When prospective teachers reflect over their mistakes, surely they can rectify their mistakes and improve. - Reflective practices significantly contribute towards development of pedagogical skills. - Often it refers to discourses of competencies. -I think reflective practices refer to look at the environment properly.	
	-Identification of weaknesses		
	-Better understanding of teaching style.		
	-Discourse of competencies		
	-Rectification of professional mistakes.		
		-Its challenging in existing situation and cannot play a serious role to find out and apply alternative perspectives during practicum. - Functions of reflective practices not clearly defined. Prospective teachers are not motivated to initiate reflective practices	3 (25%) N=9

Views of the heads of departments are shown in table 165. Views of the heads of departments endorsed the importance of reflective practices for prospective teachers. This shows that heads of departments were well aware of the importance of reflective practices. Majority of heads viewed that reflective practices were vital for self-criticism, self-evaluation, disclosure of teaching,

Table 166 shows the views of the heads of departments about the role of SF in Professional Development of PTs. Majority of the heads of departments illustrated that Students' Feedback was helpful to reduce the gap between current performance and desired performance of PTs. They were of the view that SF is helpful to develop good relations with students, to make immediate judgments and adjustments in the classroom. Heads of departments pointed out that weightage should be given to students' feedback to evaluate the performance of PTs (Table 166).

Question 4: To what extent the feedback of cooperating school teachers contributes to the professional development of prospective teachers.

Table 167: Contribution of Cooperating School Teachers for Professional Development of PTs

<i>Broad Themes</i>	<i>Subthemes</i>	<i>Views and concerns</i>	<i>%</i>
Colleagues Feedback	Role of cooperating School Teacher in Professional Development of PTS	Cooperating school teachers give inadequate time to observe and provide feedback to trainee teachers. Cooperating school teacher have limited competencies to guide prospective teachers during practicum. Head teachers not ask cooperating school teachers to provide professional guidance to trainee teachers. Head teachers not understand the importance of teaching practicum. Evaluation of classroom performance of trainee teacher is not the preference of cooperating schools teachers. Cooperating school teachers consider that practicum supervisors are responsible, while practicum supervisors consider cooperating school teachers are responsible to provide professional guidance to trainee teachers. Cooperating school teachers focused on delivery of lesson rather than reflective practices. Head teachers should ensure a cooperative learning climate and should track data among collaboration among trainee teacher and class teacher. Performance of cooperating school teachers should be assessed in variety of ways (e.g trainee teachers work, lesson plans, assignments, in-person or video observations made by the class teacher. - Cooperating school teachers should provide a chance to trainee teachers to directly apply what they have learned. -Class teacher feedback may facilitate prospective teachers to reflect on their class room practices. -Regular involvement of class teacher in professional learning of trainee teacher can provide opportunities to the PTs to cover the gap between theory & practice.	6 (75%) N=9
		Cooperating school teachers regularly involve in professional learning of trainee teachers and provide opportunities to the PTs to cover the gap between theory & practice.	3 (25%) N=9

Table 167 presents the views of the heads of departments about the role of class teacher in professional learning of PTs. Views of the head of departments illustrated that majority was unhappy with the role played by the class teacher in professional development of trainee teachers. Heads of departments opined that class teachers gave inadequate time to guide the prospective teachers during practicum. Cooperating school teachers considered that they were not responsible to provide professional guidance to PTs.

Question 5: How do you think the role of peer observation in professional development of student teachers during teaching practicum?

Table 168: Views of the Heads of Department about Role of PO and PD

Following were the similar or identical responses of the 77% respondents.

<i>Broad Themes</i>	<i>Subthemes</i>	<i>Views and concerns</i>	<i>%</i>
Peer Observation	Role of peer observation in Professional Development of PTS	PTs who receive regular feedback from peers about their performance can judge their professional skills in better way.-Peers can provide feedback in low stress environment. -PO is a best practice it should be adopted at schools, colleges and even at universities. -PO offer insight to PTs regarding improvement in teaching and peers gain new ideas from each other, but peers not use it as in instrument for PD. Peer observation should be recorded. - Questions from peers during class can detract the presenter from lesson. But after class they not discuss what was observed. -Effective peer observation requires recording of lesson to accurately portray the teacher's behavior. Mostly peers not use instruments of observation e.g checklists, narratives questions or rating scales followed by written analysis.- checklist is a feasible option to reflect over peers comments.- Head teacher or promptly assign class to PTs. They cannot manage peer observation in a well-organized way.- Peers not provide clear explanations to each other. - Generally peers praise that teacher provided clear and elaborative answers to the students they not discuss about nonverbal behavior e.g standing gesture, eye contact or walking around. - PTs not reflect on peers comments to improve teaching skills. -PO is a nice way to learn and enrich teaching skills. -I strongly agree that PO may become a powerful tool for PTs professional development if trust relation is present. -Sensitivities may prevent peers to reflect their true feelings.	7 (77%) N=9
		- PTs not involve in peer observation they not know on which practices they will focus their training to involve in peer observers is necessary.-Mostly our students make videos but they not know the objectives. -During peer observation, mostly students remain confused why two teachers are together in a class, they should briefly explain to students, why the observer is present.	2 (33%) N=9

Table 168 outlines the views of the heads of departments about the role of peer observation in professional development of PTs. Views of the heads of department showed that 77% teachers regarded peer observation as in effective instrument for PD of PTs, but majority of heads of departments criticized the existing practices of peer observation. They emphasized that there was a need to use checklists and rating scales during teaching practicum to involve in peer observation.

Question 6: How do you grasp the role of sharing of classroom experiences with colleagues in the professional development of the prospective teachers?

Table 169: Views of the Heads of Department about Sharing of Classroom Experiences

Following were the similar or identical responses of the 75% respondents

<i>Broad Themes</i>	<i>Subthemes</i>	<i>Views and concerns</i>	<i>%</i>
Collective Reflective Practices	-Sharing of class room experiences	-Basically it is a process of self-observation and self-evaluation, colleagues can play a major role in. But creating a culture for purposeful conversation in schools is very necessary for the professional growth of prospective teachers. Teachers may be allowed to share their experiences with- out feeling any fear. Novice teachers can learn a lot from the experienced teachers through experience sharing sessions. Knowledge sharing secessions may be arranged even in staff room on daily, weekly or monthly basis. Prospective teachers should be directed to think about the opportunities to make the class room sharing sessions exiting. They are hardly directed to think how they can make a difference to the life every child who comes into their classroom. They are not directed to think how they can become life long learner. Senior teachers can understand the potential of prospective teachers. They may gain a deeper insight into young people's capabilities. Consultancy with students enables teachers to develop the capacity to see things from different angles, and develop a practical agenda for improvement. School can consult students in a variety of contexts and it is necessarily required to develop more partnership between teachers, staff and students e.g referendum to settle down key school matters or sharing data and asking them to provide feedback.	55.5% (5)
	-Sharing class room stories with peers	-Trainee teachers avoid sharing their class room experiences with senior teachers. Even some time they not share their class room experiences with friends. There is no practice to share class room experiences with seniors. Class teacher can provide guidance, coaching & counseling in a better way to the trainee teacher. When our student return from long	N=9

teaching practice we arrange sessions and ask our students to sit together and share their practicum experiences with other students. 11% (1). I think teachers already talk to their colleagues about classroom experiences. They might talk to a colleague that my lesson went well or my students did not understand or my students badly behave with me. Colleagues can help them out to cope with such class room issues.

-PTs think that sharing of class room experiences may devalue them. -Usually this practice not exists in our institutions. Colleagues share many experiences, but they never share some other experiences. Usually they discuss about success stories instead of sharing of problematic situations. -Instead of planning about future class room practices, they discuss what has already happened. 44.5% (4)
N=9

Table 169 presents that majority of the heads of departments described that classroom experiences sharing opportunities were vital for professional growth of teachers, but this reflective practice did not exist in our schools. Views of the heads of department further showed that 55% heads regarded class room experiences sharing as ineffective instrument for PD of trainee teachers. They emphasized that there was a need to arrange sessions for trainee teachers to provide them opportunity to share their class room experiences for powerful learning.

Question 7: How would you see the role of reflective learning journals in professional growth of the student teachers?

Table 170: Views of the Heads of Department about role of reflective learning journals

Following were the similar or identical responses of the 55% respondents

<i>Broad Themes</i>	<i>Subthemes</i>	<i>Views and concerns</i>	<i>Percentages</i>
Reflective Learning Journals	-Role of RLJs in prospective teachers professional development	-RLJs allow prospective teachers to record their thoughts and class room experiences. -may positively contribute towards professional development of prospective teachers. RLs are more likely to develop a deeper understanding of the teaching profession among prospective teachers. RLJs encourage trainee teachers to review, consolidate and evaluate their performance as a teacher. -RLJs can narrow the gaps between teaching theories and practices of student teachers. -Prospective teachers can get a clearer overview of their professional progress.	(3) 34% N=9

They can develop an insight of their own strengths and weaknesses as a teacher. They can realize the personal needs of their students. Prospective teachers can plan their teaching and can overcoming difficulties to learn professional skills. -Through RLJs can promote self-evaluation to improve oneself.

PTs are less motivated to maintain RLJs. They not know what they can achieve through RLJs. It's a new concept our students not understand. RLJs are widely used in abroad, but our students are not well aware about such journals. Simultaneous monitoring is required to promote/start RLJs. Our students do not feel free to express their ideas, thoughts, opinion or experiences. Students limit themselves to lesson plan, models, diagrams and pictures during practicum. Our B.Ed students cannot put their thoughts due to fear of good English writing. We need to spend more efforts to enable our students first to write their experiences. They not know about RLJs, if know about RLJs, they not know what to write. It may take a lot of time to start RLJs in our society. RLJs required regular writing, our students just focus on completion of their degree. Pattern of RLJs is an issue.

(6) 66%
N=9

Table 170 shows that 34% heads considered that RLJs could play a vital role in professional learning of prospective teachers during practicum. While 64% considered that our B.Ed students were less motivated to regularly write for such journals. Prospective teachers did not feel free to express their ideas and experiences on papers due to language mistakes and practice in expression. Moreover, prospective teachers delimited them to lesson plan, models, diagrams and portfolios. Majority of the heads showed their concerns to start RLJs.

Question 8: Which strategies your department/institution is using to enable the teacher educators to promote reflective practices during teaching process?

Table 171: Views of the Heads of Department to promote reflective practices

Following were the similar or identical responses of the respondents

<i>Broad Themes</i>	<i>Subthemes</i>	<i>Views and concerns</i>	<i>%</i>
Strategies to promote RPs	Time - Management	-We must spend significant time to promote reflective practices culture in our institutions. We ask our teacher educators to welcome students' comments. Usually we send two or more than two student teachers in one school and ask them to observe each other during class. When our students come back from teaching practice, we arrange a separate session and ask them to share their experiences. We teach to the students about reflective practices during course work. We ask our teachers to ensure students participation in lecture. Reflective learning is linked with reflective practices, we ask our teacher educators to take students feedback. Similarly we ask our visiting faculty to take students feedback. I always discuss with my colleagues, that our practices will shift to the student teachers, so we need to care our practices. We ask our student teachers to concentrate on students' verbal and nonverbal behaviour. I always asked the practicum supervisor to take qualitative feedback from class teacher and school head about their performance during practicum. I always ask my students to pay critical attention to the professional values and theories which guide their everyday actions during class. I asked students to sit with older teachers, but usually young teachers not feel easy with aged teachers. We ask our students to involve in group discussions.	45% (4)
	Peer Observation		N=9
	Students Feedback		
		-We are not interested to develop the ability among pre-service or in-service teachers to reflect on their practices. The current reforms to promote job-embedded professional development may provide a base to our teachers to adopt various reflective practices, currently our teachers or trainee teachers are not well aware about the concept of reflective practices. Higher Education Commission has included some material on reflective practices in the curriculum. But our teacher educators, principals need to rekindle a passion to promote professional learning through reflective practices. Only active and committed student teachers can involve in reflective practices. We need to set professional learning goals for our student teachers to teach them professional values. We ought to motivate our student teachers to adopt new approaches for professional learning. Student teachers are social beings, they derive meaning from being with other people, young teachers in particular. Success in their professional development is not a closed deal or a winning race but its more intangible. We need to produce teachers who can express themselves, think critically, and understand the important role they will play in the society after completion of their degree.	55% (5) N=9

Table 171 shows that 55% head of departments illustrated that teachers were not well aware about the concept and importance of reflective practices. Majority of respondents explained that student teachers are not motivated to learn and observe professional values. 45% respondents replied that teachers needed to understand the non-verbal behaviour of their student communication. Practicum supervisors needed to take qualitative feedback from students, head teachers and class teachers to promote culture of reflective practices.

Question 9: : To what extent the usage of reflective practices in teaching practicum can improve the pedagogical skills (e.g lesson planning skills, presentation skills, interaction with students, and evaluation skills) of the prospective teachers?

Table 172: Views of the Heads about the role of reflective practices to promote pedagogical skills of PTs

Following were the similar or identical responses of the respondents

<i>Broad Themes</i>	<i>Subthemes</i>	<i>Views and concerns</i>	<i>Percentages</i>
Role of Reflective Practices to promote pedagogical skills	Commitment and Interest level of students play a significant role to develop pedagogical skills.	-The success in professional development greatly depends upon interest level of student teachers. They can tailor the learning environment to meet the learning needs of every student. Usage of reflective practices during teaching practicum may enable prospective teachers to understand how they apply their professional knowledge in practical situation. RPs allows prospective teachers to take an in-depth look at their class room teaching practices and provides them an opportunity to consider how their practices affect students learning. Yes I agree that reflective practices you included in your thesis are vital for the professional learning of prospective teachers, but I would like to shed light on peer observation. I have personally used this method. However, I faced many problems when peer's feedback was not constructive enough. Sometime the observed teacher remained sensitive. I think it should be very clear that the purpose of peers feedback is to bring improvement in teaching practice. They can adopt good practices and modify their daily schedules to meet the learner's needs. Application of reflective practices inside or outside the class room can result in better lesson plans built upon students' strengths and interests. RPs allows teachers to meet the learning needs of every student. Reflection on what teachers have done in the classroom assists them to become aware of different teaching models and instructional formats. Teachers can determine which model was	33.3% (3) N=9

successful and which was not.		
A simple chat is enough to evaluate PTs performance.	-First, they must recognize their own values and personal beliefs about teaching. To become a reflective teacher they need to be open to changing their practices by taking a critical look at themselves and developing skills to become self-aware. Teachers not struggle to reflect on their day to day experiences. Finding time to reflect on lesson plan, presentation skills, relationship with students, and evaluation skills on day to day basis is tedious. Prospective teachers should reflect on the following questions at the end of the day: Did I use a motivating technique to motivate my students. How I get students' attention? Why some students were disinterested in class, what I can do increase their interest level. But usually our students' teachers not reflect over such aspects. Usually prospective teachers not observe their students a lot. Nothing can be more important than reflective practices to look and find out what you did, how you did it and how and what you need to do to make it better. But unfortunately we seldom reflect on ourselves. What you can do to motivate those teachers who say that teaching is a dead end job. You can never intrinsically motivate teachers. We teach our students to adopt critical approach and reflective practices, but such practices can't be applied with already overloaded teachers. When teachers not involve in reflective practices, how they can improve their pedagogical skills. Yes, your question is true but often teachers are too busy to involve in regular diary writing, or write for reflective learning journals. However, the idea behind your thesis is important. Teachers can't always reflect on their own teaching. Sometime a chat is enough to evaluate student teachers performance that how well or bad they teach during practice	66.6% (6) N=9

Table 172 presents that 66.6% head of departments illustrated that prospective teachers were seldom involved in reflective practices, because evaluation criteria seemed very simple. Sometimes a simple chat was regarded enough to evaluate the performance of student teachers during practicum. 22% respondents replied that reflective practices could contribute toward development of various pedagogical skills, but student teachers lacked commitment and in-depth look at their experiences, even they did not deeply observe their students.

Question 10: How would you think the role of audio video recording for the development of teaching skills during teaching practicum?

Table 173: Views of the Heads about the role of Audio Video Recording for Professional Development.

Following were the similar or identical responses of the respondents

<i>Broad Themes</i>	<i>Subthemes</i>	<i>Views and concerns</i>	<i>%</i>
Audio Video Recording	- Role of Audio Video Recording to develop pedagogical skills	- Video recording can be used as a tool to support TPD, specifically in helping prospective teachers to improve their pedagogical skills. Video recording of lesson provide opportunities to PTs to review, judge and evaluate their own classroom practices. Audio-Video Recording is a best tool for site based TPD. Audio-Video recording of lesson can meaningfully increase the usefulness of video for the professional development of prospective teachers. Yes we motivate our students to record their lessons and think over their weaknesses. Usually students record through mobile phones, I appreciate their efforts. Video recording of lesson demonstrates new modes of professional learning. Teachers can see their interactions, habits, and progress toward effective teaching. Student generated recordings can be used for the professional development of teachers, but teachers feel fear and not allow students to record their lesson.	22% (2) N=9
		- Regretfully audio video have not been effectively used in schools to support prospective teachers on site. TTIs and schools can create libraries of videos of best classroom practices for circulation and sharing among prospective teachers, but regretfully recording practice is not there, if students record lesson through self-efforts, follow up is not there to identify opportunities for professional learning. Video recording of class room activities is commonly used, but prospective teachers not watch the recordings in presence of expert teachers. Video recording have been available for several decades, but teachers not use it as a tool for their professional development. Political leaders do not feel fear to record their speeches, but our teachers who always feel fear to record their lessons. Audio Video recording is useless activity without stable electricity supply, I guess 70% school have not recording cameras. We need to show foreign produced videos to our students teachers to enable them to learn how they can record and how they can reflect over the recording. There should be big LCDs in schools to watch the recording. Head teacher can purchase recording cameras by fund raising or by individual purchase. Heads of cooperating school teachers may invite subject matter experts to evaluate the recorded videos.	78% (7) N=9

Table 173 shows that 78% head of departments illustrated that video recording was available now a days, but teachers hardly used it as a tool for their professional development. If students record their lessons, they did not watch the

recordings in presence of expert teachers to identify their mistakes. Majority of the respondents replied that 70-80% schools had no recording cameras. Student generated recordings could be used for the professional development of teachers, but teachers felt fear and not allowed students to record their lessons. Heads of cooperating school teachers might invite subject matter experts to evaluate the recorded videos of trainee teachers. Moreover, the exercise was time consuming and skill-demanded.

Question 11: How would you comment on the benefits and the drawback of usage of reflective practices in teaching training of prospective teachers?

Table 174: Views of the Heads about benefits and draw backs of reflective practices

Following were the similar or identical responses of the respondents

<i>Broad Themes</i>	<i>Subthemes</i>	<i>Views and concerns</i>	<i>Percentages</i>
Benefits of reflective practices	analysis and evaluation of classroom practices.	I think we can collect information about what goes on in the classrooms. We can use this information to analyze, evaluate and identify the practices of our teachers. This may then lead us to change and improve our teaching. Diary writing, peer observation, recording of lessons or students feedback all are reflective practices. All are beneficial for prospective teachers. If a lesson does not went well teachers can describe it and think about why it was not fruitful for the students. All RPs are quite useful and help student teachers to see what they have done and think how they did it? Going through RPs is useful. I believe all RPs are useful for professional depth and breadth. RPs provide critical lens to teachers to see their image as professional. Video recording gave opportunity to prospective teacher's opportunities to ask themselves questions. The questions about professional weakness then became the focus of attention of prospective teachers. Feedback from other people can help you to make better decisions. If a student is misbehaving in the classroom; teacher can think what he was doing, how he/she can overcome the challenging behaviour. Teacher can pose various questions to address the problem. We need to encourage our students to start RPs. Video recording of lesson can be useful in showing you various aspects of your own behaviour, where do you stand? How do you speak and how do you behave with your	55% (5)
	RPs provide critical lens to evaluate classroom practices		N=9
	-PTs can questions their skills		
	-RPs leads towards better decision making		

		students? Eventually they can improve their classroom practices.	
Drawbacks of reflective practices	<p>Absent of Collegial support</p> <p>Video recording increase anxiety level</p> <p>parental permission an issue</p> <p>lack of commitment</p> <p>lack of actions plans</p> <p>Practicum supervisors not evaluate portfolios</p> <p>absence of multi-source feedback</p>	<p>Collegial support is often absent. Teachers not think that colleagues are their intellectual neighbors or members of same community. Video recording of lesson can increase anxiety level of the student teachers. Students who perform poorly on video may feel more vulnerable. Time is another issue. Time will be required to setup, record, watch and analyze the video. Finding time to share classroom experiences with colleagues, taking students feedback or recording is inevitable in busy schedules. Parental permission to record the lesson is another issue, especially in case of females. Duration of video-audio recordings should be short and concise. Involvement in reflective practices is impossible without personal commitment of teachers. Involvement in RPs required focusing on thoughts and experiences. Our students teachers not dare to focus their thoughts on their experiences. Prospective teachers not develop their action plans to start RPs. No one is there to present good examples of RPs to student teachers. RPs required free expressions, but our students not express their feelings and thoughts freely. Many models of RPs are there, which model they will follow? A guided approach is required to reflect over portfolios, who is serious to guide PTs to start RPs during practicum. Multi-source feedback is required to involve in RPs, feedback trend is very fade with us still. The biggest drawback I think is process of RPs.</p>	<p>45% (4)</p> <p>N=9</p>

Table 174 shows that majority of the respondents agreed that reflective practices were beneficial for professional development of teachers. Almost 45% respondents considered that absent of collegial support, parental permission, lack of commitment, absence of action plans, absence of evaluation criteria were major limitations of reflective practices.

2.21 Summary of Data Analysis

The data were analyzed in accordance with the objectives and research questions of the study. The first objective of the study was to identify the reflective practices of prospective teachers and teacher educators. Descriptive analysis was run to study the involvement of prospective teachers in reflective practices. The

second objective was to see the role of reflective practices on the professional development of prospective teachers. Therefore, regression analysis was run to see the role of reflective practices on the professional development of prospective teachers. The relationship between items related to response variables was determined through Pearson correlation coefficients and simple regression was applied to see the role of reflective practices on the development of pedagogical skills. The third objective was to study the reflective practices of teacher educators. Therefore percentages, mean and standard deviation were calculated to understand the tendencies of the data. Data collected through observation and interview was coded in to themes and subthemes, percentages were calculated to infer the results.

CHAPTER 5

SUMMARY, FINDINGS, CONCLUSIONS & RECOMMENDATIONS

5.1 Introduction

This chapter deals with summary, findings, conclusions and recommendations of the study. The purpose of the study was to explore and investigate the individual and interactional reflective practices of prospective teachers and teacher educators. Major objectives of the study included (i) to investigate the reflective practices used by the prospective teachers during teaching practicum (ii) to find out the significance of reflective practices for professional development of the prospective teachers (iii) to analyze the role of reflective practices for the development of pedagogical skills of the prospective teachers and (iv) to investigate reflective practices of teacher educators. This investigation also explored the perceptions of prospective teachers and teacher educators about the benefits and limitations of reflective practices. Major research questions of the study included: (i) to what extent prospective teachers used reflective practices during teaching practicum? (ii) to what extent reflective practices influenced the professional development of prospective teachers? (iii) to what extent prospective teachers showed behaviours indicating their involvement in reflective practices? (iv) to what extent there were similarities between what prospective teachers said and what they actually practiced during teaching

practicum? (v) what were perceptions of the prospective teachers and teacher educators about benefits and limitations of reflective practices? (vi) to what extent teacher educators used reflective practices while teaching to the prospective teachers? (vii) to what extent reflective practices influenced the professional development of prospective teachers? The population of the study comprised of prospective teachers and teacher educators. A sample of 910 prospective teachers and 160 teacher educators was selected from Teacher Training institutions situated in Rawalpindi and Islamabad, Pakistan. Three research instruments were used to investigate the reflective practices of prospective teachers. At first phase data were collected through questionnaires, in second phase, researcher observed the prospective teachers during practicum. Finally researcher interviewed the heads of departments, principals and teaching practicum supervisors.

5.2 Summary

The major focus of the research was to study the reflective practices of prospective teachers. Chapter one dealt with introduction, statement of the problem, significance of the study, research objectives and research questions of the study. Second chapter of the study described relevant literature in detail and lighted previous research literature. Chapter 2 also described benefits and limitations of various dimensions of reflective practices. Brief history of diversified thoughts and various efforts made in Pakistan for the professional development of teachers were critically discussed in chapter two. Previous research studies on the connotation of reflective practices and professional development in relation to the present study were also discoursed in chapter two of the study. Details about population, sample of the study, research design,

research instruments and phases of data collection were mentioned in chapter three. The data were collected through questionnaires from a sample of 840 prospective teachers and 160 teacher educators from nine teacher training institutions situated in Rawalpindi and Islamabad districts of Pakistan. The sample of the study comprised of male and female prospective teachers and teacher educators. The relationship between various dimensions of reflective practices and professional development was determined by using quantitative data analysis. Reliability of the two questionnaires was checked through Cronbach alpha using SPSS version 16. The reliability coefficient of the questionnaires was measured Alpha .973 and Alpha .931 respectively which was found to be strong enough that questionnaires seemed to be suitable to apply. Validity of the instruments was determined by the experts' opinion. Chapter 4 deals with data analysis. Descriptive statistics was applied to data to calculate frequencies, percentages, mean and standard deviation to know the involvement of the respondents in reflective practices. Inter item correlation of explanatory variables used in the study was determined by Pearson correlation. Regression analysis was run to predict the role of various dimensions of reflective practices on the professional development of prospective teachers. Chapter 5 described summary, findings, conclusions, discussions and recommendations of the study.

5.3: Findings and Discussions

This study was designed to understand the reflective practices of prospective teachers and to see the role of various dimensions of reflective practices on the professional development of prospective teachers. Various research questions were raised pertaining to the involvement of prospective into reflective practices. Responses of the Prospective Teachers were analyzed through descriptive

analysis. Regression analysis was run to study the role of eight dimensions of reflective practices on the professional development of prospective teachers. Results revealed various reflective practices formed determinant predictors of the professional development of prospective teachers. Findings obtained from data analysis constituted:

5.4 General Findings

5.4.1 Finding 1: (Demographic information about Prospective Teachers)

Majority of prospective teachers (78%) formed a young group 20 to 25 years old. Sixty eight percent prospective teachers were graduates. While majority of teacher educators (67.8%) formed middle age group 31 to 45 years old, (50.7%) were having MS/M.Phil qualification. Almost 58% teacher educators were having 6 to 15 years teaching experience. Ninety two percent Teacher Educators replied that they mostly used lecture method along with other teaching methods and strategies, group discussion method (39%), assignments and presentations method (69%), ABL (39%), question and answer strategy (69%), Team Teaching method (2%), Text Book Method (72%), Case Study Method (6%) and 1% replied that they also used micro teaching. Moreover, 62% TEs replied that they often attended seminars and conferences for professional development (table 22).

5.4.2 Finding 2: (Demographic information about Teacher Educators)

Eighty seven percent PTs were using lecture method along with other teaching methods and strategies: Demonstration Method 54%, Group Discussion Method (53%), Assignment method (51%), Activity Based Learning (51%), Drill & Practice (57%), Questions and answers (75%), Problem Based Learning (32%), Team Teaching (6%), Micro teaching (3%) and (79%) PTs were using Text Book Method during teaching practicum (table 23).

5.4.3 Findings Research Question No. 1: To what extent, prospective teachers use reflective practices during teaching practicum?

5.4.4 Finding 3:

Majority of PTs (68.9%) agreed that they reflected over the discourteous attitude of their students and plan strategies to overcome student's discourteous attitude during lesson (table 24 & 25). Majority of PTs (70%) replied that they reflect over and attempt to over their own unwanted practices e.g (shyness, shivering, under confidence and repetition of words) during lesson (table 26). Almost 69% PTs were involved in RIA to maintain class room momentum (table 27). Sixty percent were involved in RIA to maintain class room momentum and to uphold smooth rolling of their lesson plans (table: 28). Fifty nine percent reflected over the controversial contents beforehand, whenever they taught controversial contents in the class (table 29). Sixty nine percent PTs planned various strategies to maintain class room discipline (table 30). Almost 61% PTs replied that they felt hesitation to respond students' questions and attempted to overcome their hesitation during class (table 31). Nearly fifty six percent PTs replied that they reflected over their pedagogical skills and attempted to improve (table 32). Likewise 65% PTs replied that they attempted to recognize and rectify their professional mistakes on the spot (table 33). 68.4% replied that they reflected over the abilities of learners and attempted to identify slow learners to assign them easy assignments (table 34). *Majority of our student teachers plan their lessons carefully during practicum, they wrote diaries, plan everything, prepare portfolios but they did not know that they were doing reflective practices. I think its best thing but our student teachers not know the process of reflective practice. We motivate our students to involve in peer observation. Our student teachers always take feedback from students. Peer observation is best, because student teachers can talk together what they have done. -During teaching practicum*

prospective teachers made mistakes, they can reflect on their own mistakes and share their experiences to improve their teaching practices with peers. Many times it happened that they say oh/yeah same thing my friend discussed with me (table 164).

5.4.5 Finding 4:

Seventy eight PTs agreed that they involved in ROA to reflect over their class room practices, to review the shortcomings of lesson, and to identify their professional mistakes (table 35). Almost 73% PTs agreed that they reflected over student's discourteous attitude after class to find out the reasons (table 36). 66.5% PTs reflected over their relations with colleagues to develop better relationship with colleagues (table 37). 73.4% PTs agreed that they reflected over their professional mistakes after class (table 38). 70.5% PTs replied that they reflected over effectiveness of teaching after class (table 38), 79.4% PTs replied that they reflected on learning outcomes of lesson after class (table 40). 79% PTs reflected over the nature of their relationship with students (table 41). Almost 63% PTs agreed that reflection on class room practices after class was helpful for their professional development (table 42). 52.5% PTs agreed that they reflected over weaknesses of teaching method after class (table 43). 49% PTs agreed that they thought after class that they should teach to the students to fulfill the community needs (table 44). It indicate that majority of PTs never think that they should teach to their students to fulfill community needs. 73.3% PTs replied that they reflected after class that whether they encouraged positive behaviour of their students during class (table 45).

5.4.6 Finding 5:

70.9% PTs agreed that they reflected over their actions beforehand (table 46). 53.9% PTs reflected over the merits and demerits of teaching method before

application of the method in classroom (table 47). Nearly 49% agreed that they reflected over the reactions of their actions beforehand which indicated majority of PTs do not think over the possible reactions of their actions (table 48). About 50% said that they reflected over the difficulty level of class work and home work beforehand (table 49, 50). Almost 57% agreed that they reflected over creative aspect of the homework beforehand (table 51). 67.8% PTs reflected over the difficulty level of assignments whenever they allotted assignments to their students (table 52).

5.4.6 Finding 6:

Almost 58% PTs agreed that they recorded their lessons to identify their professional mistakes, 60.7% agreed that they could identify their professional mistakes through audio-video taping of lesson (table 53, 54). 53.7% PTs agreed that they overcame intra-conflict through audio-video recording of lesson (table 55). Nearly 53% agreed that audio video recording was helpful to improve communication skills (table 57). 66.4% PTs considered that audio-video recording of lesson helped them to identify and rectify their professional mistakes (table 58). *Audio video recording are not being effectively used by prospective teachers to reflect on their professional mistakes. TTIs and cooperating schools can create libraries of videos of best classroom practices for circulation and sharing among prospective teachers. Majority of student teachers record lesson through self-efforts, follow up is not there to identify opportunities for professional learning. Video recording have been available for several decades, but teachers not use it as a tool for their professional development. Political leaders do not feel fear to record their speeches, but our teachers who always feel fear to record their lessons. Audio Video recording is useless activity without stable electricity supply. More than 70% school were not having recording cameras. We need to show foreign produced videos to our students teachers to enable them to learn how they can record and how they can reflect over the*

recording. There should be big LCDs in schools to watch the recordings of prospective teachers. (table 173).

5.4.7 Finding 7:

Sixty one percent PTs replied that they took verbal feedback from their students about their teaching and plan teaching activities in light of their student's feedback (table 59, 60). Sixty nine percent PTs said that they reflected over the Para language of their students, understood the facial expressions of their students during teaching process and planned teaching activities accordingly. Whenever, students said that text book activities are difficult to understand, they designed new activities for their students. Likewise 68% said that they deviated from lesson plan in light of their student's feedback (table 61, 62 & 63, 64). 65.7% PTs agreed that they took feedback from their students because they wanted to develop good relations with their students (table 65). *Soliciting formative and summative feedback from students may help prospective teachers in many ways. One major benefit is that student's feedback builds a sense of good relationship between teacher and students. Obviously it provides a chance to prospective teachers to make immediate judgments and adjustments instead of waiting to make changes. But sometime it not allows you to have good relations with few students. Teachers not allow students to give suggestions to improve the course. Writing feedback on blackboard is probably best option and easy to use. PTs do not let students know, if they change their practices as a result of their feedback. Instead of providing feedback, students only appreciate the teacher and not carefully considered what they have said. Students remained confused that teacher has invited feedback or ask a question. Taking student's feedback can be challenging for PTs, they may elicit a psychological reaction to student's feedback. Generally students appreciate, because they know that teacher will carefully considered what they have said. School students cannot provide feedback even at university level students feel fear to criticize their teachers. Cooperating school teachers do not possess competencies to guide prospective teachers that how they can seed students' feedback during practicum. Teachers have inadequate time to ask students to provide formative or summative*

feedback. Criteria to evaluate student's feedback is not defined. Cooperating school teachers should know that they are best person to support trainee teachers in professional learning; they should guide trainee teachers about seeking students' feedback and more reflective practices (table 166).

5.4.8 Finding 8:

Seventy percent PTs agreed that sharing of class room experiences with colleagues improved their pedagogical skills (table 66, 67). Nearly 67% PTs agreed that observation of colleague's lesson was helpful for them to improve their teaching skills and colleagues feedback was helpful to find out solutions of unexpected situations occurred in the class (table 68, 69). Moreover, 42% PTs replied that their colleagues seldom provided feedback in professional way (table 70). This indicated that PTs were not satisfied with the feedback provided by practicum school teachers.

5.4.9 Finding 9:

Sixty nine percent PTs invited peers to observe their lesson, comment on their teaching competencies and they attempted to incorporate peer's comments into practice (table 71, 72 & 73). Sixty three percent PTs agreed that they discussed with their peers about school record and learned about school record from peers (table 75). Fifty seven percent PTs were agreed that reflection on comments of peers contributed toward their professional development (table 76). *Prospective teachers who received regular feedback from peers about their performance can judge their professional skills in better way. Peers can provide feedback in low stress environment. Peer observation is a best practice it should be adopted at schools, colleges and even at universities. Peers can offer insights to each other to improve teaching, but peers not use it as in instrument for professional development. Questions from peers during class can detract the presenter from lesson. Peers do not discuss after class what was observed. Effective peer observation requires*

recording of lesson to accurately portray the teacher's behavior. Mostly peers not use instruments of observation e.g checklists, narratives questions or rating scales followed by written analysis. Checklist is a feasible option to reflect over peers comments. Head teachers promptly assign class to prospective teachers during practicum, therefore they cannot manage peer observation in a well-organized way. Peers not provide clear explanations to each other. Generally peers praise that teacher provided clear and elaborative answers to the students they not discuss about nonverbal behavior e.g standing gesture, eye contact or walking around. Prospective teachers did not reflect on peers comments to improve teaching skills. Sensitivities may prevent peers to reflect their true feelings (table 168).

5.4.10 Finding 10:

Fifty two percent PTs disagreed with the statement that they reflected over their portfolios to identify their professional mistakes and preparation of professional portfolios was a source of guidance for them to improve their pedagogical skills (table 77 & 78). Almost 43% PTs disagreed that preparation of portfolios contributed to learning of professional skills (table 79). Likewise, 54.1% PTs disagreed that preparation of portfolios was helpful to their professional development (table 80). It can established that majority of PTs do not think that preparation of portfolios contribute towards their professional development during practicum.

5.4.11 Finding Research Question No. 2: What is the role of reflective practices for the professional development of prospective teachers?

Finding 11: RIA and smooth rolling of lesson plan

Value of $R^2 = .487$ indicated that about 49% of the total variability in the response variable (smooth rolling of lesson plan) was accounted by the predictor variable (RIA) which indicated that a moderate linear relationship existed between involvement of prospective teachers in RIA and smooth rolling of

lesson plan. The value of $F = 758.76 > 3.85$, $\beta = .730$ has a t value of $27.54 > 1.64$ significant at 0.05 showed that RIA significantly contributed toward smooth rolling of lesson plan (Table 84, 85 & 86). *Reflective practices are critical in refining prospective teacher's artistry in teaching skills they can recognize their teaching skill through reflective practices (table 165).*

5.4.12 Finding 12:

The value of $R^2 = .567$ indicated that 'ROA' explained nearly 57% variation in the dependent variable 'understanding of professional mistakes'. F value = $1043.93 > 3.85$ was highly significant. Similarly the value of $\beta = .919$ contained a t value 32.31 highly significant at .05 showed that the independent variable (ROA) included in the model significantly contributed toward understanding of professional mistakes. In other words, reflection of prospective teachers over student's discourteous attitude, shortcomings of lesson, effectiveness of teaching, learning outcomes and reflection over weaknesses of teaching method after class significantly contributed toward understanding of professional mistakes committed during lesson (table 86, 87 & 88).

5.4.13 Finding 13:

The value of $R^2 = .407$ indicated that nearly 40% of the total variability in the response variable (development of pedagogical skills) was accounted by the predictor variable (RFA) which showed a moderate linear relationship between RFA and Development of Pedagogical skills. F value = F value = $548.16 > 3.85$ was also significant. The value of $\beta = .466$ has a t value 23.14 significant at .05 level showed that RFA contributed toward development of pedagogical skills of prospective teachers. In other words, reflection over the merits and demerits of teaching method before application, reflection over reactions of actions,

difficulty level of work and reflection over creative aspect of classwork and homework beforehand significantly contributed professional development of prospective teachers during practicum (table 91,92 & 93).

5.4.14 Finding 14:

The value of $R^2=.336$ indicated that nearly 34% of the total variability in the response variable (Relationship with Students) was accounted by the predictor variable (SF) which indicated a weak relationship between SF and relationship with students. $F \text{ value}=403.28 > 3.85$. The value of $\beta =.749$ has a t value 20.82 significant at .05 level showed that that allowing students to provide their feedback, understanding Para language of students, deviation from lesson plan if students did not grasp the contents and planning teaching future activities in the light of student's feedback significantly contributed toward development of good relations with students (Table, 96, 97& 98).

5.4.15 Finding 15:

The value of $R^2=.303$ indicated that nearly 30% of the total variability in the response variable (Finding out Solutions) was accounted by the predictor variable (CF) which indicated that a positive relationship between colleagues feedback and professional development was existing. $F \text{ value}=346.72 > 3.85$. The coefficients of $\beta =.899$ has a t value of 18.62 (> 1.64) showed that it was significant at the 0.05 level. In other words, sharing class room experiences and unexpected situations with colleagues to took colleague's feedback increased 30% chances that PTs could cope with unexpected situations which occurred in the class during teaching process (Table, 101,102 & 103)

5.4.16 Finding 16:

The value of $R^2=.574$ indicated that nearly 57% of the total variability in the response variable (PD) was accounted by the predictor variable (PO) which indicated a positive linear relationship between PO and PD. F value=1073.26 > 3.85. The coefficients of $\beta =.805$ has a t value of 32.761 (> 1.64) showed that inviting peers to observe lesson, allowing peers to pass comments on teaching method and incorporating peers comments into practice significantly contributed toward professional development of prospective teachers (Table, 106,107 & 108).

5.4.17 Finding 17:

The value of $R^2 .439$ showed that linear relationship existed between PP and PD. F value=624.97 > 3.85 which was highly significant. The coefficients of $\beta =.609$ has a t value of 25.00 (> 1.64) showed that it was significant at the 0.05 level. Therefore, it is concluded that reflection over professional portfolios significantly contributed toward professional development of prospective teachers (Table, 113,114 & 115).

5.4.18 Finding 18:

The value of $R^2=.359$ indicated that nearly 36% variability could be predicted in the professional development of prospective teachers, if they reflected on the audio video recordings of their lessons. A positive linear relationship existed between AV and PD. F value=351.29 > 3.85. The coefficients of $\beta =.694$ contained a t value of 21.13.00 (> 1.64) significant at the 0.05 level. Therefore, it was concluded that reflection over AVRs significantly contributed toward the professional development of PTs during teaching practicum (Table, 117,118 & 119).

Finding Research Question No. 3: To what extent teacher educators' use reflective practices while teaching to the prospective teachers?

5.4.19 Finding 19: (Reflection in Action)

Mean value (3.62) showed that majority of Teacher Educators (TEs) agreed that during teaching to the prospective teachers they reflected over their own actions and paid attention to students discourteous during class (table 125). 44.3% TEs agreed that they planned strategies to overcome students discourteous attitude, which indicated their involvement RIA (table 126). Mean value (4.07) showed that 84.3% TEs agreed that they reflected over their unwanted teaching practices during lecture and attempted to overcome shyness, shivering and repetition of words (table 127). Mean value (4.07) showed that 83.6% TEs replied that they reflected over the classroom momentum to ensure proper start and proper end of their lectures (table 128). Mean value (3.91) showed that 75.7% TEs agreed that they reflected over their professional mistakes committed during lecture (table 129). Mean value (3.39) 59.3% TEs agreed that they reflected over the controversial contents beforehand, whenever they taught/discussed controversial contents to the students (table 130). Mean score (2.84) 57.7% showed that majority of TEs disagreed that RIA was helpful to rectify professional mistakes on the spot (table 131).

5.4.20 Finding 20: (Reflection on Action)

Mean value (3.39) 84.3% TEs replied that ROA was helpful for them to review the shortcoming of their lecture (table 132). Mean value (3.48) 63.6% TEs agreed they reflected over their students attitude whenever their students demonstrated discourteous attitude in the class and attempted to find out reasons of student's discourteous attitude after class (table 134). Mean value (3.59)

showed that 69% TEs were reflecting over their relationship with colleagues to develop good relationship with their colleagues (table 135). The mean value (3.97) 84.3 % TEs were reflecting over their class room practices after class to review the weakness of their lecture (table 136). The mean score (4.02) 82.9 % respondents agreed that they reflected over the student learning outcomes of their lecture after class (table 137). Mean value (4.00) 83.6 % TEs were reflecting over the strengths and weaknesses of the teaching method they adopted to teach contents in the class after class (table 138). Mean value (3.68) 70 % TEs agreed that reflecting over classroom practices after class was helpful for them to understand their professional mistakes (table 139).

5.4.21 Finding 21: (Reflection for Action)

The mean value (3.93) 82 % TEs agreed that they reflect on the reactions of their actions beforehand (table 140). Mean value (3.84) 77.9% TEs agreed they reflect over the merits and demerits of teaching method before its application in the class room (table 141). Mean value (2.92) 50.7% showed that TEs were undecided that when they gave assignments to their students they reflected over the difficulty level of the assignments beforehand (table 142).

Mean value (3.34) 61.4% TEs agreed that when they allotted assignments to their students they reflected over the creative aspect of the assignments beforehand (table 143). Mean value 3.93 (79.3%) TEs agreed that reflection for action (thinking about reactions of actions before taking action, difficulty level of assignments beforehand, thinking about creative aspect of assignments contributed toward their professional development (table 144).

5.4.22 Finding 22 (Reflection through Students Feedback)

The mean score (2.92) 48.6% showed that majority of TEs did not reflect over feedback provided by their students. When their students said that that assignment were difficult, they did not reflect over students feedback and assigned easy assignments to such students (Table,145). Mean value 3.75 (74.2%) TEs were reflecting over the Para language of their students during lecture through student's facial expressions. This indicated that majority of TEs took students' feedback through their facial expression (table 146). Mean value 3.99 (82.9%) showed that majority of TEs agreed that they took students' feedback during teaching process and allowed their students to provide feedback (Table, 147). Mean value 3.90 (78.5%) showed that majority of TEs reflected over the students feedback and whenever they felt that their students were not fully involved in their lecture, they deviated from the topic (Table, 148). Mean value 3.86 (82.8%) showed that majority of TEs agreed that when they planned teaching activities for future they kept in view of the previously provided feedback of their students (table 149). Mean value 3.99 (83.5%) showed that majority of TEs agreed that reflection over students' feedback contributed toward their professional development (table 150).

Findings Research Question No. 4: To what extent there are similarities between, what prospective teachers say and what they actually do during teaching practicum?

5.4.23 Finding 23

23.1) Reflection in Action

Mean values (3.73, 70%; 3.67, 68.9%; 3.62, 64.4%; 3.40, 59.1%; 3.67, 69%; 3.41, 60.8%; 2.61, 56.1%; & 3.55, 65.2%) table 26 to 33 revealed that almost

68% PTs agreed that they involved in RIA to reflect over their unwanted practices (shyness, shivering and repetition of words) to overcome their unwanted practices on the spot, to maintain class room momentum, attempt to ensure proper start and proper end of their lessons and 59.1% PTs agreed that they reflect over the controversy of contents before teaching controversial content to the students.

While results of observation revealed that only 16% reflected over student's discourteous attitude, issued warning to students, asked them to invite their parents and informed the students that they would write to the head teacher. Almost 9% attempted to overcome their unwanted practices. During start of lesson they were feeling shy but soon they developed self-confidence. 10% reflected over classroom momentum (proper start and proper end of lesson). 45% reflected over smooth rolling of their lesson plan and class room discipline, 24% attempted to overcome hesitation to respond to students questions, 28% reflected over student learning outcomes. And 36% were aware of their own professional mistakes (table 156).

23.2) Reflection on Action

Mean scores (3.87, 78.4%; 3.67 72.6%; 3.53 66.5%; 3.82 73.4%; 3.65 70.5%; 3.91, 79.4%; 3.73, 79.4%; & 3.50 63.1% table 35 to 42) showed that 70% PTs agreed that they reflected over their classroom practices after class to review the shortcomings of lesson, to find out the reasons of student's discourteous attitude, to improve relations with students & colleagues, to know their professional weaknesses and to know student learning outcomes.

While results of observation revealed that only 51% PTs indicated behaviour that they reflected over the suitability of teaching method after class, 7% attempted to

find out the reasons of students discourteous attitude, 16% PTs indicated behaviour that they were concerned to know their professional weaknesses after class. And 21% PTs reflected over the effectiveness of teaching after class (table 157).

5.4.24 Finding 24

24.1) Reflection for Action

Mean values (3.72, 70.9%; 3.28, 53.9%; 3.10, 49.3%; 3.17, 50.9%; 3.15, 49.8%; 3.32, 57.1%; 3.65, 67.8% table 46 to 52) showed that majority of PTs agreed that reflect over their class room practices beforehand. Results of observation revealed that 81% PTs did not reflect over creative aspect of classwork & homework before assigning work to the students. 19% reflected over merits and demerits of teaching method before application. 48% reflected over possible reactions of their actions (Table 158).

5.4.25 Finding 25: Reflection through Audio Video Taping of Lesson

Mean values (3.38, 58.8%; 3.44, 60.7%; 3.79, 73.3%; 3.65, 53.7%; 3.75, 72.5%; 3.62, 66.4% table 53 to 58) showed that 58.8 PTs agreed that they recorded their lesson to reflect over their professional weaknesses. 60.7% PTs agreed that they could identify their professional mistakes through audio-video taping of their lesson. 73.3% agreed that they could reflect on their teaching practices through audio video recording of their lesson. 53.7% PTs agreed that they could overcome intra-conflict through audio-video recording of lesson. 72.5% were agreed that video recording of lesson was helpful for them to improve their communication skills and 66.4% PTs agreed that audio-video recording of lesson was helpful for them to identify and rectify their professional mistakes committed during lesson. Results of observation revealed that 27% PTs

requested to peers/friends to record their lesson with mobile phone camera and 5% PTs reported the video after class and discussed their class room practices with peers to invite their critical comments on their teaching practice (table 160).

5.4.26 Finding 26: Reflection through Student's Feedback

Mean values (3.41, 64.1%; 3.67, 69.8%; 3.59, 67%; 3.66, 68.8%; 3.39, 59.3%; 3.51, 65.7%; table 59 to 65) showed that 61.9% PTs agreed that they invited feedback from their students, 64.1% PTs agreed that they attempted to overcome professional mistakes in the light of student's feedback, 69.8% agreed that they understand Para language through facial expressions of their students, 67% agreed that they planned learning activities in light of students' feedback, 68% PTs agreed that they deviated from lesson plan in the light of their students' feedback. 59% PTs consider students feedback when they planned teaching activities for future. 65.7% PTs agreed that they took feedback from their students because they wanted to develop good relations with their students.

Results of observation revealed that 25% PTs invited students feedback 8% attempted to overcoming weaknesses in light of student feedback, 29% were understanding Para-language of students, 31% 46 Planning future teaching in light of students feedback 42% were concerned to establish good relations with their students (table 161).

5.4.27. Finding 27: Reflection through Colleague's Feedback

Mean values (3.73, 70.2%; 3.73, 70.3%; 3.52, 67.2%; 3.72, 71.8%; 3.15, 49.8%; table 66 to 70) showed that 70.2% PTs were agreed that they shared their classroom related experiences with their colleagues and colleague's feedback was helpful for them to improve their pedagogical skills. Sharing unexpected

classroom situations with colleagues was helpful for them to find out solutions of unexpected situations.

Results of observation revealed that 15% PTs invited suggestions from their colleagues to bring improvement in their class room practices, 40% were sharing class room problems and unexpected classroom situations with their colleagues. 16% sit together after class and discussed about lesson preparation and lesson plan and 19% discussed about school record (table 162).

5.4.28. Finding 28 Reflection through Peer Observation

Mean values (3.67, 70.5%; 3.76, 72.9%; 3.71, 70.9%; 3.62, 67.3%, 3.51, 63%; 3.34, 57.1% table 71 to 76) showed that more than 70% PTs agreed that involved in peers observation, allowed peers to comment on their class room practices, invited peers for observation, and attempted to incorporate peer comments into practice. 67% PTs agreed that inviting peer's feedback was helpful for them to adopt a suitable teaching method, 57% agreed that peer observation contributed toward their professional development.

Results of observation revealed that 16% PTs invited their peers comments to improve their class room practices (table 162).

Findings Research Question No. 5: What are the perceptions of prospective teachers about benefits and drawbacks of reflective practices?

5.4.29. Finding 29 (Perceptions of PTs about benefits of Reflective Practices)

Sixty eight percent PTs replied that involvement in RPs might contribute toward development of their pedagogical skills, 61% replied that RPs might contribute to develop good relations with students, 66% replied that reflective teachers could develop better relations with their colleagues, 42% replied that RPs helped them to develop better self-understanding, 73% replied that RPs were helpful to

identify professional weakness, 61% replied that reflective teachers could better understand their learners, 76% replied that RPs might contribute toward their professional development, 3% replied that RPs have carried no benefits, while 12% PTs provided no answer about the benefit of RPs (Table 121).

29.2) Perceptions of PTs about drawback of Reflective Practices

Twenty seven percent replied that RPs was time consuming and confusing activity, 19% replied that it was difficult to criticize own work, 18% replied that students did not provide right feedback, 29% replied that cooperating school teachers did not guide them about usage of RPs, 16% replied that peers seldom provide feedback in professional way, 16% replied that they could not involve in RPs because they felt shy. Overall 64% replied that RPs contained no drawback, while 14% provided no answer about the drawbacks of RPs (table 124).

Research Question No. 6: What is the nature and extent of professional development of prospective teachers as a result of their involvement in selected individual and interactional reflective practices during teaching practicum?

5.4.30. Finding 30

30.1) Individual Reflective Practices: (Reflection in Action)

Almost seventy percent PTs replied that they reflected over their actions during class, 70% replied that whenever their students demonstrated discourteous attitude during class, they immediately planned strategies to over their student's discourteous attitude. 70% agreed that they reflected over their unwanted practices (shyness, shivering and repetition of words) and attempted to overcome on the spot. 68.9% agreed that reflected over their class room practices to maintain class room momentum. 64.4% replied that they reflected over their classroom practices to uphold smooth rolling of lesson plan. 59.1% PTs agreed

that they reflected over the controversial contents before teaching. 65.2% PTs agreed that reflection over classroom practices during class helped them out to identify and rectify professional mistakes on the spot (table 24-31).

30.2) Individual Reflective Practices: (Reflection on Action)

Seventy eight percent PTs agreed that they reflected over the shortcomings of lesson after class, attempted to find out reasons of student's discourteous attitude, 66.5% reflected over their relations with colleagues, 73.4% reflected over their professional weaknesses after class, 63.1% agreed that reflection on class room practices (ROA) after class was helpful for their professional development (table 32-45).

30.3) Individual Reflective Practices: (Reflection for Action)

Seventy percent PTs agreed that they reflected over their actions beforehand, 53.9% reflected over the merits and demerits of teaching method before application of that method, 49% reflected over the reactions of their actions before taking any action, 50.9% reflected over the difficulty level of class work, before they assigned class work to their students, 57.1% reflected over creative aspect of the homework before they assigned homework to their students (table 46-52)

30.4) Individual Reflective Practices: (Audio Video Recording)

Fifty eight percent PTs agreed that they can identify their professional weaknesses through audio video recording of their lessons, 72.5% agreed that they audio video recording was helpful to improve communication skills. 66.4% PTs agreed that audio-video recording of lesson may help them to identify and rectify their professional mistakes (table 53-58).

30.5) Interactive Reflective Practices: (Students Feedback)

Sixty one percent PTs agreed that they invited feedback from their students, 64.1% PTs agreed that they gave importance to student's feedback and attempt to overcome professional mistakes in the light of student's feedback, 69.8% PTs agreed that they understand the Para language of their students through their facial expressions. 67% PTs agreed that they planned learning activities in the light of student's feedback, 68% PTs agreed that they deviated from already planned lesson plan in light of student's feedback, 65.7% PTs agreed that taking students feedback was helpful to develop good relations with their students (table 59-65).

30.6) Interactional Reflective Practices: (Colleagues Feedback)

Seventy two percent PTs agreed that colleague's feedback helped them out to improve their pedagogical skills, 70.3% agreed that they shared their classroom experiences with their colleagues, 71.8% Prospective teachers thought that sharing unexpected classroom situations with colleagues was helpful to find out solutions (table 66-71).

30.7) Interactive Reflective Practices: (Peer Observation)

Seventy percent PTs agreed that allow their peers to comment on their teaching competencies, 72.9% agreed that they invited peers to observe their class room practices during practicum and attempted to incorporate peer comments. 63% agreed that they learnt from their peers about school record, while 57% agreed that peer observation contributed toward their professional development (table, 72-76).

Research Question 7: To what extent teacher educators' use reflective practices while teaching to the prospective teachers?

5.4.31. Finding 31: (Involvement of Teacher Educator in Reflection in Action)

Mean value 3.62 (64.4%) Teacher Educators (TEs) were agreed that they reflect over the discourteous attitude of their students during class, 44% agreed that they immediately planned strategies to overcome student's discourteous attitude during teaching process (table 125, 126). Mean score 4.07 (84.3%) TEs agreed that they reflected over their unwanted teaching practices during lecture and attempted to overcome (table 127). Mean value 4.07 (83%) TEs agreed that they thought about classroom momentum to ensure proper start and proper end of their lectures (table 128). Mean value 3.91 (75.7%) TEs agreed that they were aware of their professional mistakes they committed during lecture (table 129). Mean value 3.39 (59.3%) TEs agreed that they that reflected over the controversial contents before teaching controversial contents to the class (table 130). Mean value 2.84 (48.6%) respondents agreed that reflection in action was helpful for them to identify and rectify professional mistakes on the spot (table 131).

5.4.32. Finding 32: (Involvement of Teacher Educator in Reflection on Action)

Mean value 3.93 (84.3%) showed that majority of TEs agreed that reflection on actions after class was helpful to review the shortcoming of their lectures (table 132). Mean value 3.48 63.6% TEs showed that majority of TEs agreed whenever their students demonstrated discourteous attitude during class they reflected over the attitude of their students after class and attempted to find out reasons (table 134). Mean value 3.59 (69%) showed that majority of TEs agreed that they

involved in reflection on action to develop good relationship with their colleagues. In other words, majority of TEs consciously attempted to develop good relations with their colleagues (table 135). Mean value 3.97 (84%) showed that majority of TEs agreed that they reflected over their class room practices after class to review the weakness of their lecture (table 136). Mean value 4.02 (82%) showed that majority of TEs agreed that they reflected over the student learning outcomes of their lecture after class (table 137). Mean value 4.00 (83.6%) showed that majority of TEs agreed that they reflected over strengths and weaknesses of the teaching method they adopted to teach contents in the class after class (table 138). Mean value 3.68 (70%) showed that majority of TEs agreed that reflection on actions after class was helpful to understand professional mistakes (table 139).

5.4.33. Finding 33: (Involvement of Teacher Educator in Reflection for Action)

33.1) Mean value 3.93 (82%) TEs reflected over the reactions of their actions before taking any action in the classroom (table 140). Mean value 3.84 (77.9%) showed that majority of TEs agreed that they reflected over the merits and demerits of teaching method before application of the method in classroom (table 141). Mean value 2.92 (50.7%) showed that majority of TEs were uncertain that they reflected over the difficulty level of the assignments beforehand when they allotted assignments to their students (table 142). Mean value 3.93 (61.4%) showed that majority of TEs agreed that reflection for action may contribute toward their professional development. In other words, mulling over reactions of actions beforehand and thinking about difficulty level of assignment might contribute toward professional development of teacher educators (table 144).

5.4.34. Finding 34: (Reflection through Students Feedback)

Mean value 2.92 (47.9%) showed that majority of TEs were uncertain in their responses that they reflected over the feedback of their students whenever their students said that assignment topics were difficult (145). Mean value 3.75 (74.2%) showed that majority of TEs agreed that they reflected over the Par-language of their students through facial expressions of their students (table 146). Mean value 3.99 (82.9%) showed that majority of TEs agreed that they allowed their students to provide feedback (Table, 147). Mean value 3.90 (78.5%) showed that majority of TEs agreed that they deviated from the topic whenever they felt that students were not understanding their lecture (Table, 148). Mean value 3.86 (82.8%) showed that majority of TEs agreed that when they planned their lecture they kept in mind previously provided feedback of their students (table 149). Mean value 3.99 (83.5%) showed that majority of TEs agreed that reflection over students feedback could contribute toward their professional development (table 150).

5.4.35. Finding 35 (Reflective Practices of Teacher Educators)

Sixty four percent TEs replied that they reflected/thought over their actions after class. Majority of TEs reflected over their students' feedback, 34% replied that they sometimes they took feedback from their colleagues for sake of improvement, 34% replied that they involved in self-monitoring and critical thinking to refine their own teaching skills.

35.2) Seventy nine percent TEs replied that they participated in seminars and conferences to improve their professional skills, 33% replied that they watched lectures on Youtube, 27% replied that through discussions was also a reflective practice, 27% TEs wrote their experiences in diaries (Table 151).

5.4.36. Finding 36 (Perceptions of Teacher Educators about Importance of RPs)

Majority of TEs replied that RPs might help them to develop pedagogical skills, to develop better relations with their students and colleagues, to understand their own-self; to identify their professional weaknesses, to understand learners in better way. Majority of TEs thought that RPs could contribute toward their professional development. While 10% TEs replied that RPs have no importance (Table 152).

5.4.37. Finding 37 (Common professional mistakes of Teacher Educators)

Majority of TEs was well aware of their own professional mistakes; 26% answered that sometimes they experienced lack of confidence, 29% thought that they have less knowledge to apply various teaching methods in the classroom, 24% replied that sometimes they failed to maintain class room discipline, 20% experienced language conflict with body language. Forty percent did not start and end their lecture in proper way, 27% did not prepare their lecture before time, 27% thought that relying on lecture method was also a professional mistake, 31% thought failure to ensure students participation in class was a professional mistake, 26% thought that they did not motivate their students, 18% thought they did not share jokes with students, 23% replied that sometimes they held irrelevant discussions during their lectures, 21% attempted to establish proper rapport with their students, 21% discussed student's behaviour in front of colleagues, 32% TEs showed lack of tolerance and adopt authoritative behaviour in class, 39% TEs ignored individual difference. Nearly 22% TEs considered that should initiate action research to understand class room problems and their professional mistakes (Table 153).

5.4.38. Findings No 38.

Majority of the TEs was aware of the importance of reflective practices and associated the concept with self-criticism and critical thinking for self-evaluation and unperceived that reflective teachers take students' feedback, take prompt decisions, attempt to apply a variety of teaching methods (Table 154).

5.4.39. Findings No 39. (Perceptions of Teacher Educators about Drawback of RPs)

Major drawbacks of reflective practices included: time wasting and confusing activity, teachers faced difficulty to criticize own work, sometimes colleagues and student provided biased feedback, teachers were not trained to provide feedback in professional way, teachers were less committed to improve/change their practices, Teaching practicum supervisors were not expert in reflective practices, junior teachers felt hesitation when they invited feedback from seniors. Absence of reflective professional learning groups and absence of reflective learning journals was a major hurdle to promote reflective learning culture, there was no culture to seeking formative students' feedback, colleagues were not ready to collaborate with each other to involve in RPs and teachers were not open-minded to invite colleague's comments on their teaching style (Table 155).

5.4.40. Findings No 40

Heads of departments and teacher educators encouraged prospective teachers to involve in peer observation, colleagues feedback, prepare portfolios, diary writing and group dialogue, but not encouraged prospective teaches to involve in reflection in action, reflection on action, reflection for action and reflective learning journals.

5.4.41. Findings No 41

Results of the study revealed that teacher educators as well as prospective hold marginalized knowledge about reflective practices although they were using some of reflective practices during the teaching process.

5.5 Conclusions

Conclusion No. 1

Results of quantitative data revealed that majority of PTs responded that they reflected over their own actions and attempted to overcome their shyness, shivering and repetition of words through self-reflection. Similarly, majority of PTs reflected over the discourteous attitude of their students, whenever, students demonstrated discourteous attitude they planned strategies to overcome discourteous attitude of their students. Majority of PTs reflected over the controversy of contents, whenever, they were going to teach/discuss controversial contents to their students. Majority of PTs remained conscious of class room discipline and attempted to maintain class room momentum during practicum.

Conclusion No. 2

Majority of prospective teachers responded that they were involved in ROA to review the shortcomings of delivery of lesson, to identify their professional mistakes, to reflect over effectiveness of teaching and to identify weaknesses of teaching method. While results of qualitative data revealed that very few respondents reflected over their actions.

Conclusion No. 3

Majority of PTs failed to reflect over the reactions of their actions, merits and limitations of teaching method, difficulty level of homework and creative aspect of homework beforehand. Majority of respondents did not reflected over the merits and demerits of teaching method, and reactions of their actions beforehand which indicated that majority of prospective teachers were not concerned with the suitability of teaching method with contents and their actions

were not planned. Interestingly majority of respondents were concerned with the difficulty level and creative aspect of the homework beforehand whenever they allotted assignments or homework to their students.

Conclusion No. 4

Majority of PTs agreed that audio video recording of lessons may help them to reflect over their professional mistakes and to improve communication skills. Qualitative data revealed that only few respondents were serious to reflect over the recordings to identify their professional mistakes.

Conclusion No. 5

Majority of PTs were taking verbal feedback from their students during class and attempted to understand student's para language through the facial expressions and body language of their students. They attempted to develop good relations with their students and planned teaching activities in the light of their student's feedback.

Conclusion No. 6

Majority of PTs agreed that sharing of class room experiences with colleagues was helpful for them to find-out the solutions of unexpected situation occurred in class. Results of qualitative revealed that prospective teachers rarely approached their senior colleagues to share their class room experiences.

Conclusion No. 7

Majority of PTs reflected over the comments passed by their peers and attempted to incorporate comments into practice and agreed that reflection on comments of peers contributed toward their professional development.

Conclusion No. 8

Majority of prospective teachers were disagreed that they reflect over their portfolios to identify their professional mistakes during practicum. Similarly they do not think that preparation of portfolios contributed toward their professional development. It can be established that portfolios was not a source of guidance for them to identify professional mistakes or to improve pedagogical skills. There was a tilt toward disagreed that preparation of portfolios contributed to learning of professional skills during practicum. Perhaps majority of PTs were not aware that how they can reflect over their portfolios to identify their mistakes.

Conclusion No. 9

Involvement of prospective teachers in RIA significantly contributed toward smooth rolling of lesson. In other words, reflection of PTs over their student's attitude, planning strategies to overcome student's discourteous attitude, reflection over the controversy of contents before teaching lesson significantly contributed toward professional development of prospective teachers.

Conclusion No. 10

Reflection over student's discourteous attitude, shortcomings of lesson, effectiveness of teaching, learning outcomes and reflection over weakness of teaching method after class significantly contributed toward understanding of professional mistakes committed during the lesson.

Conclusion No. 11

Reflection of PTs over the merits and limitations of teaching method before its application in the classroom, reflection over reactions of actions, reflection over difficulty level of classwork & homework and reflection over creative aspect of

homework/classwork beforehand significantly contributed professional development of prospective teachers.

Conclusion No. 12

Reflection of PTs over student's feedback, understanding Para language of students, deviation from lesson plan when students failed to grasp the contents and planning teaching future teaching activities in the light of student's feedback significantly contributed toward professional development of prospective teachers.

Conclusion No. 13

Taking colleague's feedback nearly increased 30% chances that prospective teachers could find-out the solutions of un-expected class room problems. Colleague's feedback was a predictor of prospective teacher's professional development. In other words, sharing class room experiences with colleagues and discussions with colleagues about unexpected situations with colleagues contributed toward professional development of prospective teachers.

Conclusion No. 14

Peer observation increased 57% chances of prospective teacher's professional development. A positive relationship exists between peer observation and professional development. In other words, allowing peers to pass comments on teaching competencies and incorporation of comments in to practice significantly contributed toward professional development of prospective teachers.

Conclusion No. 15.

Reflection over the material of professional portfolios increased 43% chances for the professional development of prospective teachers and significantly contributed toward professional development of prospective teachers.

Conclusion No 16

Nearly 36% variability could be predicted in the professional development of prospective teachers, when they reflected on the audio video recordings of their lesson. A positive linear relationship existed between reflection through Audio Video Recording of lesson and professional development of prospective teachers.

Conclusion 17:

Majority of TEs reflected over their classroom practices during lecture and attempted to overcome unwanted practices. Majority of TEs respondents reflected over class room momentum to ensure proper start and proper end of their lecture. Majority of TEs reflected over the discourteous attitude of their students, but very few planned strategies to overcome students discourteous attitude on the spot. Majority of TEs were reflecting over their professional practices and were aware of their professional mistakes they committed during lecture. Similarly majority of TEs were reflecting over the controversy of contents beforehand.

Conclusion 18

Majority of Teacher Educators replied that they reflected over their classroom practices after class to review the weaknesses of lecture and to review the student learning outcomes. Sixty four percent TEs replied that whenever their students demonstrated discourteous attitude during class they reflected over students' discourteous attitude after class to find out the reasons of discourteous attitude. They agreed that Reflection on Action after class was helpful to review the shortcoming of their lecture (Finding 20).

Conclusion 19:

Nearly 82% TEs reflected over the reactions of their actions before taking any action in the classroom and 77.9% reflect over the merits and demerits of teaching method before application of the method in classroom. 51% TEs did not reflect over the difficulty of assignments beforehand when they allotted assignments to their students. 61.4% TEs reflected over the creative aspect of assignments beforehand when they allotted assignments to their students. 79.3% TEs thought that reflection for action could contribute toward their professional (Finding 21).

Conclusion 20

48.6% TEs did not reflect over the feedback of their students whenever their students expressed that allotted assignments were difficult. 74.2% TEs reflected over the Para-language of their class to take students' feedback through their facial expression. 82.9% TEs agreed that they allowed their students to provide feedback. 78.5% reflected over the feedback of their students and deviate from the topic when they felt that students did not understand their lecture. 82.8% TEs replied that when they planned teaching activities for future they kept in view of the previously provided feedback of their students. Similarly 83.5% TEs agreed that reflection over students' feedback contributed toward their professional development (Finding 22).

Conclusion 21

Seventy percent PTs ticked on agreed and strongly agreed categories that they reflected over their actions after class, but practically 51% PTs indicated behaviour that they reflected over the suitability of teaching method after class, 7% attempted to find out the reasons of students discourteous attitude, 16% PTs

indicated behaviour that they were concerned to know their professional weaknesses after class. And 21% PTs reflected over the effectiveness of teaching after class (Finding 23).

Conclusion 22

81% PTs did not reflect over creative aspect of classwork & home-work before assigning work to the students, 19% reflected over merits and demerits of teaching method before application, while 48% reflected over possible reactions of their actions beforehand (Finding 24).

Conclusion 23

During teaching practicum 27% PTs requested to their peers to record their lesson with mobile phone camera and 5% PTs replied the video after class to invite critical comments of their peers (Finding 25).

Conclusion 24

During teaching practicum 25% PTs invited students feedback, 8% PTs attempted to overcome weaknesses in light of student feedback, 29% PTs understanding Para-language of students, 31% planned future teaching activities in light of their students feedback and 42% reflected over their relationship with students and attempted to establish good relations with their students (Finding 26).

Conclusion 25

Almost 70% PTs agreed that they shared their classroom related experiences with their colleagues and colleague's feedback was helpful for them to improve their pedagogical skills. It was observed that 15% PTs invited suggestions from their colleagues to bring improvement in their class room practices, 40% were sharing class room problems and unexpected classroom situations with their

colleagues. 16% gathered together after class and discussed about lesson preparation and lesson plan and 19% discussed with colleagues about school record (Finding 27).

Conclusion 26

70% PTs thought that peer observation, allowing peers to pass on comments on their class room practices contributed toward their professional development but it was observed that practically 16% PTs invited their peer's comments to improve their class room practices (Finding 28).

Conclusion 27

Almost (72%) PTs were aware of the benefits of RPs and replied that RPs were beneficial to develop better relations with students and colleagues, self-understanding, understanding learners, and professional development. Nearly 27% PTs replied that RPs was time consuming and confusing activity, 19% replied that reflective practices involved self-criticism and it was difficult to criticize own work, 18% replied that reflective teachers invited feedback from their students but students provide no right feedback, 29% replied that cooperating school teachers seldom guide them about the usage of RPs, 16% replied that reflective practices required peer observation, but peers could not provide feedback in professional way, 16% replied that shy feeling was a hurdle for them to involve in RPs (Finding 29).

Conclusion 28:

Majority of PTs were involved in individual reflective practices (RIA, ROA, RFA and AVR). They reflected over their classroom practices before class, during class and after class. They agreed that individual reflective practice contributed toward their professional development. Similarly majority of PTs

agreed that interactional reflective practices (SF, CF, PO) contributed toward their professional development (Finding 30.1-30.7).

Conclusion 29

Majority of TEs was involved in RIA. They were reflecting over the discourteous attitude of their students and immediately planned strategies to overcome students' discourteous attitude. Majority of TEs reflected over their unwanted teaching practices during lecture and attempted to maintain classroom momentum proper start and proper end of class. Majority of TEs reflected over the controversial contents before teaching controversial contents to the class. Respondents agreed that reflection in action was helpful for them to identify and rectify professional mistakes on the spot (Finding 31).

Conclusion 30

Majority of TEs was involved in reflection on action. In other words, they reviewed the shortcomings of their lecture, attempted to find out reasons of students discourteous attitude, whenever their students showed discourteous attitude during class. Majority of TEs put efforts to establish good relations with their colleagues. In other words, majority of TEs consciously attempted to develop good relations with their colleagues. Conventionally, TEs mull over strengths and weaknesses of their class room practices after class. Majority of TEs agreed that reflection on action after class was helpful to understand professional mistakes (Finding 32).

Conclusion 31

Majority of TEs reflect over the reactions of their actions beforehand but not reflected over the merits and demerits of teaching method before application and

not thought over the difficulty level of assignments when they allotted assignment topics to their students (Finding, 33).

Conclusion 32

Majority of TEs invited feedback from their students, attempted to understand para-language of their students through student's facial expressions. Majority of TEs planned their lecture in view of their students' feedback and thought that taking students' feedback contributed toward their professional development, but they did not care about students' feedback when students said that allotted assignments were difficult (Finding, 34).

Conclusion 33

Majority of TEs was well aware of their own professional mistakes. Common mistakes of teacher educators included: lack of confidence, inadequate knowledge of application of various teaching methods, failure to maintain class room discipline, language conflict with body language, improper start and end of lecture, unprepared lectures, relying only on lecture method, lack of skills to ensure students participation, inattention to motivate students, lack of humor, starting irrelevant discussions during lecture, failure to establish proper rapport with students, discussing students' behaviour in front of colleagues, lack of tolerance, adopting authoritative behaviour with students (Finding 37).

Conclusion 34

Major drawbacks of reflective practices included: time consuming and confusing activity, teachers faced difficulty to criticize own work, sometimes colleagues and student provided biased feedback, teachers were not trained to provide feedback in professional way, teachers were not committed to improve/change their practices, Teaching practicum supervisors were not experts in reflective

practices, junior teachers felt hesitation when they invited feedback from seniors. Absence of reflective professional learning groups and absence of reflective learning journals was a major hurdle to promote reflective learning culture, there was no culture to seeking formative students' feedback, colleagues were not ready to collaborate with each other to involve in RPs, and teachers were not open-minded to invite colleagues' comments on their teaching style (Finding 39).

Conclusion 35

On the basis of qualitative and quantitative results it can be concluded that individual and group reflective practices can work as catalyst for the professional development of prospective teachers and teacher educators. Reflection in action, reflection on action, reflection for action, reflections through student's feedback, reflections through colleague's feedback, reflections through peer comments, reflections through audio-video recordings of lesson and reflections through professional portfolios can significantly contribute to develop the pedagogical practices of prospective teachers and teacher educators. Prospective teachers were involved in various types of reflective practices, but they were not aware about the various contexts of reflective practices. Teaching practicum supervisors and cooperating school teachers can play a vital role to train the prospective teachers about various milieus of individual and group reflective practices. Prospective teachers were quite naive about certain dimensions of reflective practices. Similarly the overall results within studied dimensions of reflective practice suggest that vast majority of prospective teachers do not exhibit the commitment to gather evidences of the gaps existing in their teaching practices from multiple sources of reflection. Therefore, the capacity and

commitment of prospective teachers to systematically evaluate their own teaching practices through reflective practices should be recognized as an essential component of their professional development during practicum.

5.6: Discussions

The results of this study collaborate with the findings of many other studies both in national and international contexts. Collin & Karsenti, (2011) found that interaction among student teachers significantly contributed toward professional development of students teachers. Results of the study of Roadman revealed that majority of the prospective teachers applied teacher centered approaches during early days of teaching practicum (ii) they largely focused on their actions (iii) they were anxious about their class performance (iv) usage of reflective practices empowered them to adopt student centered teaching approaches (v) They were able to see how their teaching practices increased the student's academic performance (vi) Reflective practices affected their choices for presenting contents and selecting teaching strategies (vii) Teachers realized that they had broken down the material (not exposed to the students earlier) into understandable segments and (viii) Reflective teachers realized that they must be well prepared and organized because they consider that they are responsible for the learning of their students (Roadman, 2010). Results of the present study revealed that there is an association between involvement of prospective teachers in reflection in action and class room momentum. Results of the present study also revealed that majority of teacher educators and prospective teachers involved in reflection in action, reflection on action, reflection through colleagues and students' feedback. Majority of the prospective teachers and

teachers educators agreed that reflective practices significantly contributed toward their professional development.

Results of the study of Bughio, (2013) revealed that majority of teachers is less motivated to adopt various reflective practices, teachers not involved students in selecting group leaders and doing group work in class. Absence of students' participation results in lack of confidence among student teachers.

Results of the study of Hajira & Shamsa (2012) revealed that university academia considered that involvement in reflective practices encouraged them toward instructional management. Results of the present study showed that majority of teacher educators considered that reflective practices may contribute toward their professional development. Results of the study of Peale, (2009) revealed that colleagues and peers always appreciate each other and rarely criticize professional practices, although they can provide valuable feedback to each other to change their weakness in to strengths. Results of the present study equally revealed that colleagues seldom provide feedback to prospective teachers in professional way. Results of the study of Derya, (2008) & Tice, (2011) revealed that audio-videotaping were favorite reflective practices among teachers. Results obtained through quantitative data of present study also revealed that 30% prospective teachers agreed that they sometimes recorded their lessons to reflect over their class room practices. While results of qualitative data revealed that recorded camera was available only in three percent classrooms. Twenty seven percent prospective teachers attempted to record their lessons and five percent showed behaviour that they have reflected over the recording after class.

Results of the study of Dixie (2009) also found that mostly RIA occurred when teachers faced anonymous situations. They become quite disturbed when things did not occur according to their plans (Dixie, 2009). Results of this study also indicated that whenever students demonstrated discourteous attitude majority of prospective teachers reflected over their class room practices on the spot. Results of the study of Ghaye (2011) showed that potential benefits of reflective practices included: (i) deeper understanding of own teaching practices (ii) greater awareness about professional abilities and disabilities and (iii) improvement in lesson planning & grading skills. But teachers forget some details to involve in ROA, if they successfully recalled all the details they raised erroneous questions (Ghaye, 2011). Results of the present study revealed that majority of prospective teachers and teacher educators considered that reflective practice was self-criticism to bring improvements in teaching.

Results of the study of Hajira & Shamsa (2012) revealed that university teachers got feedback from colleagues and attempted to learn from one another. University teachers were fully motivated to collaborate with their colleagues and they wanted to have good relations with one another. They provided guidance to their students in the classroom and after the class and attempted to have good relations with their students. University teachers also attempted to understand and solved the problems of their students (Hajira & Shamsa 2012). Students provided useful feedback about the effectiveness of teaching methods (Moore and Kuol, 2005). Results of the present study also supported that majority of teacher educators consciously attempted to develop good relations with colleagues and students.

Self-reflection facilitated teachers to learn: (i) How to slow down the influence of their own reasoning on their practices? (ii) Understanding of conscious ways to respond to the students (iii) Which personal beliefs influenced their relations with students? And (iv) Why they showed intolerance in specific situations? (Larrivee & Cooper, 2006). Results of the present study showed that teacher educators considered that they identify their professional mistakes through reflective practices. Results of the study of Bughio (2013) also discovered that class size was a major hurdle to take students' feedback, few students continuously sit at back benches, and teachers cannot remember all students' names due to large classes. Class size affected students' participation and student's teacher relationship. Majority of university teachers do not take students' feedback (Bughio, 2013). Results of the present study contrast with Bughio, (2013), perhaps both studies were conducted in different perspectives.

5.7: RECOMMENDATIONS

Following recommendations emerged from the findings and conclusion:

1. Study proves that reflective practices play a substantial role in professional development of prospective teachers and teacher educators. In order to make teaching learning process more effective, prospective teachers may be provided training to reflect upon their teaching strategies/classroom practices prior to class, during class and after the class. It is necessary that prospective teachers may be provided hands-on training about reflective practices during practicum. In this regard teaching practicum supervisors and cooperating school teachers may be trained about various types of reflective practices.
2. Prospective teachers may be trained to reflect over their lesson planning and delivery of lesson skills through their practical involvement in reflective

practices. They may be trained to reflect over their professional practices e.g how to develop good relations with colleagues and students. This could be achieved by organizing seminars, conferences and symposiums on the importance, tools, procedures and benefits of reflective practices. Concurrently, teacher educators and lab school teachers may be provided training about application of various dimensions of reflective practices.

3. There is an emerging need to provide training to the prospective teachers to enable them to get experience from the expertise of their colleagues, senior school teachers and peers by developing good professional relations with them. This could be achieved by including contents about colleagues' feedback. Moreover, prospective teachers may be trained and provided chances to sit together with colleagues to provide feedback to each other in professional way. Colleagues and peers feedback forms may be developed for this purpose.

4. In this technological age, video recording cameras can be used as an input tool and provided to the class rooms of all lab schools. Prospective teachers may be provided training to use cameras. Merely recording of the lesson is not sufficient to promote reflective practices. Rather, prospective teachers should be provided chances to sit together and watch the recorded lessons together to reflect over their professional mistakes. Prospective teachers may be given assignments to make audio video recordings of their lessons and observe their own mistakes. Prospective teachers may collect funds to purchase video cameras. Video recordings may be used for peer observation as well.

5. To foster the skills among prospective teachers to reflect upon their own performance they may be provided a manual with practical examples. Teaching practicum supervisors and heads of lab school may engage prospective teachers

in reflective practices by providing them self-assessment tasks. This could be achieved by developing a practical guide for reflective practices from the B.Ed curriculum. Head teachers and teaching practicum supervisors may arrange a meeting with trainee teachers to engage them in reflective practices. Curriculum designers and text book developers may consider the importance of reflective practices and develop a practical guide or manual for prospective teacher's reference. In addition, practical reflective activities may be included in the course reflective practice and critical thinking.

6. To make the teaching learning process effective, prospective teachers may be provided opportunities to reflect over the merits and demerits of teaching method beforehand (reflection for action). Prospective teachers need to be provided opportunities to criticize the teaching method before its application in the class room.

7. Prospective teachers may be provided opportunities to share their class room experiences with colleagues and senior school teachers to enhance their lesson preparation and presentation skills. Senior teachers and colleagues are expected to provide friendly environment to the prospective teachers so that they may feel free to share their experiences. If one teacher required feedback other teachers should provide in a professional way. Teaching practicum supervisors and cooperating school teachers may be trained as to how to motivate, encourage and provide feedback to the prospective teachers. Prospective teachers may be provided time and opportunities to reflect on their day to day experiences for development of their pedagogical skills. Departments of teacher education and teacher training colleges may provide video recorded lectures (DVDs) of senior

teachers to the prospective teachers to provide them opportunity to learn through the experiences of senior teachers.

8. Cooperating school teachers need to encourage prospective teachers to share and explore their class room experiences with senior teachers. Head teachers ought to arrange regular meetings of prospective teachers with senior teachers. One prospective teacher may be enjoined with a senior teacher, by asking the senior teacher to play his/her role as mentor to provide professional guidance. Technological tools, such as computers and other internet related devices may be integrated to enable them to learn from the experiences of veteran teachers. Powerful exchange of ideas may be built up in practicum.

9. Prospective teachers may be encouraged to write down their experiences at the end of every semester or academic year. Teachers educators and prospective teachers may be given opportunities where they can suggest their training areas and methods of training. Observation, peer observation should be a part of institutional culture. Teacher Educators may be encouraged to take their students feedback on monthly basis.

10. Prospective Teachers may not be assigned hectic velocity of work load during practicum rather they may be provided with opportunities to notice and think about what they have done. In this regard practicum supervisors and cooperating school teachers can play a vital role to assure that prospective teachers are involved in individual and interactive reflections.

11. Cooperating school teachers should be provided training about reflective practices so that they may guide the PTs about various dimensions of reflective practices during practicum.

12. Prospective teachers may be involved in reflective practices by selecting group leaders and they may be distributed for practicum to cooperating schools early enough so that they may plan activities before commencement of academic year.

13. University departments of education and teacher training institutions need to set up well-organized micro teaching labs to involve prospective teachers in reflective practices. The capacity and commitment of prospective teachers to systematically evaluate their own teaching practices through reflective practices may be recognized as an essential component of their professional development during practicum. It would be recommended that reforms should be incorporated in teaching practicum to adequately involve prospective teachers in reflective practices. Similarly they can be provided suitable environment particularly materials and mentor's support to learn the rudiments of reflective teaching during practicum.

5.8: Suggestions for future Research

Present study may provide a base to conduct further research studies on the notion of reflective practices. On the basis of experience researcher will suggest the following recommendations for future research:

1. The same study needs to be replicated with more cohorts of prospective teachers within teacher training institutions of various provinces of Pakistan. Further case studies are needed to study the reflective practices of prospective teachers and teacher educators.
2. Another avenue for future research could involve looking specifically at the professional & personal factors and how they influence reflective practices of teacher's e.g teaching experience and teachers' mood.

3. In this study regression model was used to understand the relationships between various dimensions of reflective practices and professional development of teachers. Likewise latest statistical techniques such as Structural Equation Modeling (SEM) can be used to capture the dynamics of relationships existing between reflective practices and professional development of teachers.
4. Empirical study is needed to deeply understand the role of reflective practices on the professional development of teachers. Research needs to be undertaken to understand the role of reflective practices of lab school teachers on the PD of prospective teachers.
5. Research study may be conducted to study the reflective practices of head teachers, college teachers and university academia. Similarly comparative study may be conducted to study the reflective practices of prospective teachers of various teacher training institutions.

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Questionnaire for Prospective Teachers

Dear students

Aslamoalikum

I am a Ph.D scholar at Department of Education, Faculty of Social Sciences, International Islamic University, Islamabad and conducting a study on reflective practices titled "**A Study of Reflective Practices for Professional Development of the Prospective Teachers in Pakistan**". You are hereby cordially requested to fill out this questionnaire. Data collected through this questionnaire will be strictly kept confidential and it will be used only for research purpose. Please return the completed questionnaire by hand or dispatch on the mailing address given below. Your cooperation will be highly appreciated.

Thanks

(Muhammad Zafar Iqbal)

Ph.D Scholar

Mailing Address:

Muhammad Zafar Iqbal

Room No. 107, Department of Education

Ph.D Scholar, Department of Education

H/10, campus, International Islamic University

Islamabad

Email: zafar.phdedu57@iiu.edu.pk

Email: zc4care@yahoo.com

PART-C

Please read the options given below:

(S.A) (A) (U.D) (DA) (SD)
Strongly Agree Un-Decided Disagree Strongly Disagree
Agree

Please read the following statements carefully and tick (✓) the option you consider as the best possible answer:

Sr.	Statements	SA	A	UD	DA	SDA
1.	Whenever a student demonstrates discourteous attitude in my class, I reflect over such attitude of my students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	I try to find out the reasons of discourteous attitude of the students after the class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I do plan strategies to overcome students discourteous attitude during teaching process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Reflection on actions after class is helpful to review the shortcoming of lesson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I allow my students to provide their feedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Students feedback is helpful to overcome shortcomings of my teaching style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	I can overcome my unwanted practices (shyness, shivering, repetition of word & under-confidence) during teaching process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	When I teach to the students, I reflect over class room discipline to maintain class-room momentum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I attempt to ensure smooth rolling of the lesson plan, ensuring proper start, proper development of thought and purposeful conclusions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Sharing of class room experiences with colleagues is helpful improve teaching skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Audio-video taping of lesson is helpful to identify professional mistakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	I share my class room experiences with colleague trainee teachers for their suggestions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	I reflect over my interaction with colleagues, peers & school staff to improve my relations with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	Reflection on my own actions is helpful to change the weaknesses in to strengths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15.	Whenever, I teach controversial contents in class I reflect over the contents before teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	I can improve my teaching skills through audio videotaping of my lesson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	I reflect over effectiveness of my teaching after class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	During teaching process I plan strategies to maintain classroom discipline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	During early days of the teaching practice, I feel hesitation to ask questions from the students and I myself attempt to finish the hesitation by asking questions repeatedly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	I feel an intra-conflict during my lesson which disturbs my words and body language.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	Audio Video Recording of lesson is helpful to understand my professional weaknesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	At the end of lesson, I reflect over the learning outcomes of my lesson.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	During the lesson, I take notice of para-language of my students by observing their facial gestures (e.g tired, excited, sleepy, bored, active, angry, confused, restless, or smiley).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	Preparation of Portfolios is better source to improve my teaching skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	During the process of teaching, where I feel the given activities in the textbook are difficult, I design new activities accordingly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26.	While teaching the students, wherever I feel that the students are unable to understand, I deviate from my lesson plan.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	Peer observation is a better source to improve teaching skills and it contributes towards professional development of prospective teachers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28.	During teaching practice, I allow my peers to comment on my teaching competencies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.	In the light of comments passed by the peers, I attempt to improve my teaching skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30.	I reflect over my practices to improve my pedagogical skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31.	I observe the lessons of my colleagues to improve my own teaching practices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32.	When I face un-expected situation in the class room, I reflect over the situation to find out the solutions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33.	When I face un-expected situation in the class room, I discuss about the situation with my colleagues to find out the solutions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34.	I keep myself aware about the nature of my relations with students and attempt to improve my relations with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35.	Through involvement in Reflective Practices I can solve all of my professional problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36.	Professional portfolios are helpful to me to reflect on my teaching skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37.	During the process of teaching, I allow my students to provide their feedback on my teaching skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38.	Students feedback is helpful to plan teaching activities for future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39.	Taking Feedback from colleagues is helpful to find the solutions of unexpected situations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40.	I think about the merits and demerits of the teaching method before its application in the class room.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41.	After the class, I review the strengths & weaknesses of my teaching methodologies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42.	I reflect over my teaching to confirm that I am teaching to fulfill community needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43.	I reflect over the possible reactions of my actions before taking action	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44.	I think about the difficulty level of class work or home-work, before I assign it to my students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45.	When I assign home work to the students, I have a concern about creative aspect of the work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46.	When I assign class work to the students, I attempt to ensure that assigned class work is creative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47.	Whenever I seek feedback, my colleagues provide it in a friendly and professionally manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48.	I attempt to improve my lesson planning skills (e.g searching out material, completion of teaching tasks on time).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49.	Reflection on merits and demerits of teaching method before application is helpful to improve my pedagogical skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

50.	Reflection on actions before taking actions is helpful to become a professional teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51.	I attempt to identify slow learners and attempt to assign them easier assignments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52.	I learn from my peers about school record during teaching practicum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53.	Audio-Video taping of lesson is helpful to improve my communication skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54.	Students Feedback is helpful to establish good relations with students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55.	While teaching to the students, I myself learn how to recognize and respond to the individual differences of the students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56.	I record my lesson to rectify my professional mistakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57.	Preparation of portfolios contributes towards learning of pedagogical skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58.	Peer observation contributes towards my professional development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part-D: Open ended questions: Please read the questions carefully and give a comprehensive answer: (if necessary please use the back side of paper)

1. Please mention the reflective practices you generally adopt during teaching practice -----

2. What is the importance of reflective practices in the teaching learning process?-----

3. Please mention common mistakes committed by the prospective teachers during teaching practice-----

4. Please mention the benefits of reflective practices-----

5. Please mention the drawbacks of reflective practice -----

*****THANKS*****

Questionnaire for Teacher Educators

Dear Sir/Madam,

Subject: **Data collection**

Aslamoaalikum

I feel pleasure to request to your good honour that I am pursuing Ph.D studies under Registration No. 57-FSS/PHDEDU/F09, from the Department of Education, Faculty of Social Sciences, IIU, Islamabad. Presently researcher is working on PhD dissertation titled **“A Study of Reflective Practices for Professional Development of the Prospective Teachers in Pakistan”**. Researcher is enclosing herewith a questionnaire in this connection. I shall be grateful if you could kindly fill up the same and return to me. I assure you that this information will be kept confidential.

With best regards

(Muhammad Zafar Iqbal)

Ph.D, Scholar

Department of Education

Mailing Address:

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Room No. 107, Department of Education

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H/10, campus, International Islamic University

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QUESTIONNAIRE FOR TEACHER EDUCATORS

Note: All the information regarding this questionnaire will be kept strictly confidential. It will be accessible to the researcher only. It will be used only for research purpose.

PART-A Demographic information: please tick (✓) the relevant box

Name of University/College/Institution-----			
Gender	Male <input type="checkbox"/>	Female <input type="checkbox"/>	
Age group	(20-25) <input type="checkbox"/> (26-30) <input type="checkbox"/> (31-35) <input type="checkbox"/> (36-40) <input type="checkbox"/> (41-45) <input type="checkbox"/> (46-50) <input type="checkbox"/> (51-55) <input type="checkbox"/> (56-60) (Above-60) <input type="checkbox"/>		
Experience in years	(0-5) <input type="checkbox"/> (6-10) <input type="checkbox"/> (11-15) <input type="checkbox"/> (16-20) <input type="checkbox"/> (21-25) <input type="checkbox"/> (26-30) <input type="checkbox"/> (31-35) (more than 35 years) <input type="checkbox"/>		
Qualification (Last degree)	B.S <input type="checkbox"/> M.A/M.Sc <input type="checkbox"/> M.S/M.Phil <input type="checkbox"/> PhD <input type="checkbox"/> others <input type="checkbox"/>		
Professional Qualification	PTC <input type="checkbox"/> CT <input type="checkbox"/> ATTC <input type="checkbox"/> B.Ed. <input type="checkbox"/> B.SEd <input type="checkbox"/> M.Ed <input type="checkbox"/> M.SEd <input type="checkbox"/> Others <input type="checkbox"/>		
Marital Status	Single <input type="checkbox"/>	Married <input type="checkbox"/>	Divorced <input type="checkbox"/>

PART-B Please tick (✓) the method/strategy you mostly use to deliver contents in the class

No.	Statements	Always	Often	Uncertain	Some time	Never
1.	Lecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Demonstration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Group Discussion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Assignment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Activity Based Learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Drill and Practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Question Answer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Any other (please write the name of method/strategy)					

PART-C

Please read the options given below:

(S.A) (A) (U.D) (DA) (SD)
Strongly Agree Agree Un-Decided Disagree Strongly Disagree

Please read the following statements carefully and tick (✓) the option you consider as the best possible answer:

<i>Sr.</i>	<i>Statements</i>	<i>SA</i>	<i>A</i>	<i>UD</i>	<i>DA</i>	<i>SD</i>
1.	I reflect over students attitude during my lecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	If students demonstrate discourteous attitude I attempt to find out reasons of student's discourteous attitude after class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I plan strategies to overcome student's discourteous attitude during lecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	I think reflection on my actions after class is helpful to review the shortcoming of lecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I allow my students to provide their feedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	I think students feedback contributes towards my professional development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	I reflect over my class room practices to overcome unwanted practices (shyness, shivering, repetition of words)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	I reflect over classroom momentum to ensure proper start and proper end of my lecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I reflect over my lecture to get awareness about the weaknesses during lecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	I take feedback from my colleagues to improve my pedagogical skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	I think about creative aspect of assignment before assigning to my students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	I think reflection in action is helpful to rectify professional mistakes on the spot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	I reflect over my relationship with my colleagues to develop good relationship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	I reflect over strengths and weakness of teaching method after class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15.	When I teach controversial contents I reflect over the contents before teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	If unexpected situation occurred in my class I discuss with my colleagues to take their suggestions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	I reflect over my class room practices after class to know my professional weakness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	I reflect over the possible reactions of my actions before taking action	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	I reflect over the merits and demerits of teaching method before application of teaching method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	I think reflection on action is helpful to understand professional weakness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	When I face surprising/unexpected situation in the class room, I discuss with my colleagues to find out the solution/s.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	I reflect over the learning outcomes after lecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	I understand para-language of students during teaching process (Facial Expressions of Student)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	I plan my lecture/teaching activities in light of my students feedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	When my students say that assignments are difficult I assign them easy assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26.	Whenever I feel that my students are not fully involve in my lecture I deviate from the topic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	I share my classroom experiences with my colleagues to take their suggestions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28.	In my opinion thinking before class (reflection for action) contributes towards my professional development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.	In my opinion thinking after class (reflection on action) contributes towards my professional development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30.	I reflect over reactions of my actions before taking action in class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part-D: Open ended questions: Please read the questions carefully and give a comprehensive answer: (if necessary please use the back side of paper)

1. Please mention the reflective practices you generally adopt during teaching -----

2. What is the importance of reflective practices in the teaching learning process?-

3. Please mention common mistakes committed by the teachers during the process of teaching -----

4. Please mention the benefits of reflective practices-----

5. Please point out the drawbacks of reflective practice -----

*****THANKS *****

Permission letter for Interview

Dear Sir/Madam,

Subject: **Data collection (Interview)**

Aslamoaalikum

Hopefully you will read this mail in the best of your health. Researcher is pursuing Ph.D studies under Registration No. 57-FSS/PHDEDU/F09, from the Department of Education, Faculty of Social Sciences, IIU, Islamabad. Presently researcher is working on PhD dissertation titled “**A Study of Reflective Practices for Professional Development of the Prospective Teachers in Pakistan**”. In this regard researcher intends to interview your good self. Researcher shall be grateful if you could kindly give time for interview. **I assure you that this information will be kept confidential and will be accessible to researcher.** Hopefully, you will reply back about your availability. Researcher shall be thankful for your cooperation.

With best regards

(Muhammad Zafar Iqbal)

Ph.D, Scholar

Department of Education

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INTERVIEW GUIDE

Name of Department/Institution (optional)		
Gender	Male	Female
Date of Interview		
Position of interview		
Time	Starting Time----	End Time-----
Disturbance if any		

Sir/madam

Thank you for talking time for this interview. My name is Zafar Iqbal, I am a Ph.D scholar at department of education, International Islamic University, Islamabad. As a part of my Ph.D thesis I am conducting a research study on reflective practices. Title of my research project is **“A Study of Reflective Practices for the Professional Development of Prospective Teachers in Pakistan”**. I want you to know that this interview will last for 30 to 40 minutes, but you can stop at any time or even refuse to response any question without ill feelings. Researcher assured you that all the information will be kept strictly confidential and it will be accessible to the researcher only. Higher Education Commission has included four chapters about reflective practices in the revised B.Ed curriculum. Key reflective practices include: critical reflection, portfolios, student's feedback, colleague's feedback, audio video recording of lesson and peer observation.

Interview Questions:

Question 1: May you like to tell? Which reflective practices your institution encouraged to promote among prospective teachers during teaching practicum?

Question 2: How do you see the role of Reflective practices in professional development of the prospective teachers?

Question 3: How do you think the role of student's feedback in professional development of the prospective teachers?

Question 4: To what extent the feedback of teachers of cooperating school contributes to the professional development of prospective teachers.

Question 5: How do you think the role of peer observation in professional development of student teachers during teaching practicum?

Question 6: How do you grasp the role of sharing of classroom experiences with colleagues or peers in the professional development of the prospective teachers?

Question 7: How would you see the role of reflective learning journals in professional growth of the student teachers?

Question 8: Which strategies your department/institution is using to enable the teacher educators to promote reflective practices during teaching process?

Question 9: To what extent the usage of reflective practices in teaching practicum can improve the pedagogical skills (e.g lesson planning skills, presentation skills, interaction with students, and evaluation skills) of the prospective teachers?

Question 10: How would you think the role of audio video recording for the development of teaching skills during teaching practicum?

Question 11: How would you comment on the benefits and the drawback of usage of reflective practices in teaching training of prospective teachers?

OBSERVATION FORM TO OBSERVE THE PROSPECTIVE TEACHERS
DURING TEACHING PRACTICE

Note: To keep the record of observation, researcher will fill out this information soon after the observation. Researcher will ensure the participants that all the aspects of the observation will be kept strictly confidential. It will be accessible to the researcher and only used for research purpose.

Self-evaluation evidence/information form:

School name									
Class level observed:									
Period	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th
Period	Started -----					Ended-----			
Date of observation:	Time started:					Time ended:			
	-----					-----			
Lesson plan:	Available					Not available			
Teacher was	Nervous Confident					Enthusiastic Lethargic			

Practices to be observed:

Reflection in Action		
1	Teacher showed a behaviour that he/she reflected over discourteous attitude of students	Yes/No
2	Reflection over unwanted practices	Yes/No
3	Reflection over class room momentum	Yes/No
4	Reflection over smooth rolling of lesson plan	Yes/No
5	Reflection over teaching of controversial contents	Yes/No
6	Reflection over class room discipline	Yes/No
7	Reflection over hesitation to respond to students questions	Yes/No
8	Reflection over learning outcomes	Yes/No
9	Reflection over discrimination on the basis of race, colour of students	Yes/No
10	Rectification of professional mistake on the spot	Yes/No

Reflection on Action		
1	Reflection over discourteous attitude of students to find out reasons	Yes/No
2	Awareness about professional weaknesses	Yes/No
3	Reflection over effectiveness of teaching	Yes/No
Reflection for Action		
1	Reflection over merits and demerits of teaching method before application	Yes/No
2	Reflection over difficulty level of classwork and homework before assigning to the students	Yes/No
3	Reflection over creative aspect of classwork & home-work	Yes/No
4	Reflection over creative aspects of class work before assigning to the students	Yes/No
5	Reflection over possible reactions of actions	Yes/No
Audio-Video Recording		
1	Audio Video Recording	Yes/No
2	Reflection over class room practice through audio video recording	Yes/No
Student's Feedback		
1	Student's Feedback	Yes/No
2	Overcoming weaknesses in light of student feedback	Yes/No
3	Understanding Para language of class	Yes/No
4	Feedback about difficulty level of text book/contents	Yes/No
5	Attempts to establish positive relations with students	Yes/No
6	Individual difference of students	Yes/No
Colleagues feedback		
1	Invited suggestions from colleagues for improvement	Yes/No
2	Observation of colleagues lessons	Yes/No
3	Sharing unexpected classroom situations with colleagues	Yes/No
4	Sharing classroom related problems with colleagues	Yes/No
5	Inviting feedback on teaching method	Yes/No
6	Colleagues provide friendly feedback	Yes/No

7	Relationship with colleagues was friendly	Yes/No
Reflection through Peer Observation		
1.	Teacher invited peers for observation	Yes/No
2.	Teacher appreciated and welcomed the comments passed by the peers	Yes/No
3.	Asked peers about maintenance of school record	Yes/No
Reflection through Portfolios		
4.	Portfolio was available and containing material about lesson plan	Yes/No
5.	Teacher talked with colleagues and peers about portfolios	Yes/No
6.	Prospective teacher invites peers/senior class teachers to observe lesson	Yes/No
7.	Prospective teacher is using audio recording devices to record the lesson	Yes/No
8.	Prospective teacher is using video recording devices to record the lesson	Yes/No
9.	Prospective teacher is designing activities for the students	Yes/No
10.	Teacher invited students to pass comments on his/her attitude or teaching style	Yes/No
11.	At the end of the class teachers ensures that learning objectives have been achieved	Yes/No
12.	Teacher ensures momentum & smooth rolling of the lesson plan	Yes/No
13.	Teachers personally attempts to rectify his/her own professional mistakes	Yes/No
14.	Teacher attempts to maintain appropriate discipline and handled misbehavior quickly (if any)	Yes/No
15.	Teacher maintains portfolio of his/her professional development	Yes/No
16.	Observer was distracted during lesson due to cell phone or other	Yes/No
17.	Disruptions occurred during observation due to announcements from headmaster/headmistress, someone at door, students noise or any other-	Yes/No
18.	Additional notes if any:----- -----	

Item wise Reliability of Questionnaire for Prospective Teachers

Item total Statistics

	Mean	Std. Deviation
Q1 Whenever students demonstrate discourteous attitudes I reflect over students attitude	3.6325	1.24775
Q2 I attempt to find out reasons of student's discourteous attitude after class	3.6712	1.27778
Q3 I plan strategies to overcome student's discourteous attitude during class	3.5800	1.27009
Q4 helpful to review shortcomings of lesson	3.8738	1.11663
Q5 I allow my students to comment on personality	3.4175	1.27386
Q6 I attempt to overcome personality shortcomings in the light of students feedback	3.4575	1.27484
Q7 I attempt to overcome unwanted practices during class	3.7312	1.20658
Q8 I reflect over classroom momentum	3.6688	1.20243
Q9 I think about smooth rolling of lesson plan	3.6238	1.27837
Q10 Colleague feedback improve my pedagogical skills	3.7262	1.20753
Q 11 Audio Video recording is helpful to identify professional mistakes	3.4400	1.42441

Q12 I share my classroom experiences with my colleagues to take their suggestions	3.7250	1.17200
Q13 I attempt to Improve my relations with colleagues, peers and school staff	3.5300	1.30239
Q14 I think reflection on action is helpful to understand professional weakness	3.8188	1.21665
Q15 When I teach controversial contents I think about it	3.4012	1.26778
Q16 I improve my teaching skills through audio video taping	3.7862	1.21960
Q17 I think about effectiveness of my teaching after class	3.6525	1.29860
Q18 I devise strategies to maintain classroom discipline during teaching	3.6688	1.27909
Q19 I feel hesitation when I attempt to response to students questions	3.4100	1.33196
Q20 I attempt to overcome intra-conflict through audio video recording	3.2812	1.23756
Q21 I record my lesson to understand professional weakness and strengths	3.3750	1.28508
Q22 I think about the learning outcomes after class	3.9175	1.11231
Q23 I understand para-language of students during teaching process (Facial Expressions of Student)	3.6675	1.31114
Q24 Preparation of portfolios is helpful for my professional development	3.7188	1.11634
Q25 when I feel text book activities are difficult I design easy activities	3.5850	1.22460

Q26 When I feel that my students are not fully involve in lesson I deviate from lesson plan	3.6650	1.15735
Q 27 Peer observation contributes towards my professional development	3.7612	1.10035
Q28 I allow my peers to comment on teaching competencies	3.6788	1.15530
Q29 whenever my peers pass comments I incorporate in to practice	3.7112	1.21128
Q30 thinking about my actions improves my pedagogical skills	2.6075	1.46069
Q31 Colleagues feedback results in improvement of my teaching skills	3.5200	1.25362
Q32 I attempt to find out the solutions of unexpected classroom situation through colleagues feedback	3.7175	1.17129
Q33 if unexpected situation occurred in class I discuss with my colleagues	3.5712	1.29403
Q34 I think how to improve relations with students after class	3.7300	1.19011
Q35 When I think about classroom practices after class it contributes to my professional development	3.5038	1.25677
Q36 I learn through portfolios which teaching skill need improvement	3.6062	1.26420
Q37 I invite peers feedback on application of teaching method	3.6200	1.23592
Q38 I plan teaching activities in light of students feedback	3.3938	1.33170
Q39 when I reflect over my professional mistakes I attempt to rectify on the spot	3.5538	1.28030

Q40 I think about the merits and demerits of teaching method before application	3.2775	1.31250
Q41 I think about the strengths and weakness of teaching method after class	3.2112	1.32432
Q42 I think that my teaching fulfills community needs	3.1125	1.34056
Q43 I think about the possible reactions of my actions before taking actions	3.1000	1.32370
Q44 I think about the difficulty level of classwork before I assign to the students	3.1650	1.35557
Q45 I think about creative aspect of classwork before assigning to students	3.1538	1.33879
Q46 I think about the creative aspect of homework before assigning to the students	3.3162	1.30417
Q47 when I seek feedback my colleagues provide in professional way	3.1525	1.32908
Q48 Portfolio is a source of guidance to improve my pedagogical skills	3.2925	1.35987
Q49 I think about my classroom practices before class it contributes towards improvement of pedagogical skills	3.7200	1.20454
Q50 I think about my class room practices to become a professional teacher	3.6562	1.24299
Q51 I think before class how to identify slow learners to assign them easy assignments	3.6425	1.24363
Q52 I asked my peers about maintenance of school record	3.5138	1.25570
Q53 Video-taping of lesson help me to improve my communication skills	3.7475	1.20854

Q54 seeking feedback from students is helpful to establish good relations with students	3.5062	1.31895
Q55 Audio Video taping is helpful to rectify professional mistakes	3.6200	1.22064
Q56 When students demonstrate positive behaviour I think after class how to appreciate	3.8075	1.20614
Q57 Preparation of portfolios contributes towards learning of pedagogical skills	3.6700	1.26218
Q58 Peer observation contributes towards my Professional Development	3.3425	1.40095

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1 Whenever students demonstrate discourteous attitudes I reflect over students attitude	201.3750	2052.047	.524	.411	.973
Q2 I attempt to find out reasons of student's discourteous attitude after class	201.3363	2068.279	.369	.313	.973
Q3 I plan strategies to overcome student's discourteous attitude during class	201.4275	2053.772	.499	.382	.973

Q4 helpful to review shortcomings of lesson	201.1338	2057.836	.531	.478	.973
Q5 I allow my students to comment on personality	201.5900	2056.447	.474	.382	.973
Q6 I attempt to overcome personality shortcomings in the light of students feedback	201.5500	2059.214	.449	.363	.973
Q7 I attempt to overcome unwanted practices during class	201.2763	2046.778	.592	.670	.973
Q8 I reflect over classroom momentum	201.3388	2051.466	.550	.634	.973
Q9 I think about smooth rolling of lesson plan	201.3838	2046.187	.562	.601	.973
Q10 Colleague feedback improve my pedagogical skills	201.2813	2042.986	.626	.666	.973
Q 11 Audio Video recording is helpful to identify professional mistakes	201.5675	2045.693	.505	.433	.973
Q12 I share my classroom experiences with my colleagues to take their suggestions	201.2825	2050.100	.578	.668	.973
Q13 I attempt to Improve my relations with colleagues, peers and school staff	201.4775	2058.335	.447	.457	.973

Q14 I think reflection on action is helpful to understand professional weakness	201.1888	2046.063	.593	.694	.973
Q15 When I teach controversial contents I think about it	201.6063	2048.059	.550	.499	.973
Q16 I improve my teaching skills through audio video taping	201.2213	2043.687	.614	.717	.973
Q17 I think about effectiveness of my teaching after class	201.3550	2061.586	.420	.488	.973
Q18 I devise strategies to maintain classroom discipline during teaching	201.3388	2053.754	.495	.494	.973
Q19 I feel hesitation when I attempt to response to students questions	201.5975	2052.256	.487	.573	.973
Q20 I attempt to overcome intra-conflict through audio video recording	201.7263	2054.577	.506	.562	.973
Q21 I record my lesson to understand professional weakness and strengths	201.6325	2059.624	.442	.412	.973
Q22 I think about the learning outcomes after class	201.0900	2036.322	.750	.677	.972

Q23 I understand para-language of students during teaching process (Facial Expressions of Student)	201.3400	2053.914	.481	.394	.973
Q24 Preparation of portfolios is helpful for my professional development	201.2888	2042.128	.688	.556	.972
Q25 when I feel text book activities are difficult I design easy activities	201.4225	2039.120	.653	.534	.972
Q26 When I feel that my students are not fully involve in lesson I deviate from lesson plan	201.3425	2040.328	.681	.561	.972
Q 27 Peer observation contributes towards my professional development	201.2463	2044.073	.679	.603	.972
Q28 I allow my peers to comment on teaching competencies	201.3288	2038.409	.701	.621	.972
Q29 whenever my peers pass comments I incorporate in to practice	201.2963	2036.046	.689	.568	.972
Q30 thinking about my actions improves my pedagogical skills	202.4000	2066.824	.330	.401	.973
Q31 Colleagues feedback results in improvement of my teaching skills	201.4875	2056.375	.483	.351	.973

Q32 I attempt to find out the solutions of unexpected classroom situation through colleagues feedback	201.2900	2030.639	.766	.767	.972
Q33 if unexpected situation occurred in class I discuss with my colleagues	201.4363	2031.388	.684	.609	.972
Q34 I think how to improve relations with students after class	201.2775	2027.242	.785	.757	.972
Q35 When I think about classroom practices after class it contributes to my professional development	201.5038	2035.875	.665	.622	.972
Q36 I learn through portfolios which teaching skill need improvement	201.4013	2032.979	.686	.652	.972
Q37 I invite peers feedback on application of teaching method	201.3875	2030.200	.728	.694	.972
Q38 I plan teaching activities in light of students feedback	201.6138	2033.176	.649	.588	.972
Q39 when I reflect over my professional mistakes I attempt to rectify on the spot	201.4538	2030.443	.700	.692	.972
Q40 I think about the merits and demerits of teaching method before application	201.7300	2030.723	.680	.820	.972

Q41 I think about the strengths and weakness of teaching method after class	201.7963	2031.219	.669	.835	.972
Q42 I think that my teaching fulfills community needs	201.8950	2032.497	.650	.864	.972
Q43 I think about the possible reactions of my actions before taking actions	201.9075	2032.282	.660	.837	.972
Q44 I think about the difficulty level of classwork before I assign to the students	201.8425	2030.020	.663	.845	.972
Q45 I think about creative aspect of classwork before assigning to students	201.8538	2032.443	.651	.830	.972
Q46 I think about the creative aspect of homework before assigning to the students	201.6913	2044.772	.563	.708	.973
Q47 when I seek feedback my colleagues provide in professional way	201.8550	2032.782	.653	.799	.972
Q48 Portfolio is a source of guidance to improve my pedagogical skills	201.7150	2030.249	.659	.764	.972

Q49 I think about my classroom practices before class it contributes towards improvement of pedagogical skills	201.2875	2026.425	.783	.762	.972
Q50 I think about my class room practices to become a professional teacher	201.3513	2028.080	.743	.702	.972
Q51 I think before class how to identify slow learners to assign them easy assignments	201.3650	2025.591	.766	.748	.972
Q52 I asked my peers about maintenance of school record	201.4938	2030.818	.711	.649	.972
Q53 Video-taping of lesson help me to improve my communication skills	201.2600	2028.085	.765	.756	.972
Q54 seeking feedback from students is helpful to establish good relations with students	201.5013	2039.775	.599	.487	.973
Q55 Audio Video taping is helpful to rectify professional mistakes	201.3875	2031.064	.730	.692	.972
Q56 When students demonstrate positive behaviour I think after class how to appreciate	201.2000	2026.263	.784	.785	.972

Q57 Preparation of portfolios contributes towards learning of pedagogical skills	201.3375	2034.259	.676	.617	.972
Q58 Peer observation contributes towards my Professional Development	201.6650	2029.337	.646	.627	.973

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.973	.974	58

Scale Statistics

Mean	Variance	Std. Deviation	No of Items
205.0075	2112.831	45.96554	58

Item wise Reliability of Questionnaire for Teachers Educators

Item Statistics

	Mean	Std. Deviation
Q1 I reflect over students attitude during teaching process	3.6286	1.38514
Q2 I attempt to find out reasons of student's discourteous attitude after class	3.4786	1.28896
Q3 I plan strategies to overcome student's discourteous attitude during class	3.1429	1.39150
Q4 I think reflection on actions after class is helpful to review the shortcoming of lesson	3.9357	.93847
Q5 I allow my students to provide their feedback	2.9286	1.27309
Q6 I think students feedback contributes towards my professional development	3.9929	1.01426
Q7 I reflect over my class room practices to overcome unwanted practices during teaching process	4.0714	1.03634
Q8 I reflect over classroom momentum to ensure proper start and proper end of lecture	4.0714	1.05696
Q9 I reflect over my lecture during lecture	3.9143	1.05589
Q10 I take feedback from my colleagues to improve my pedagogical skills	3.2143	1.36126
Q 11 I think about creative aspect of assignment before assigning to my students	3.4429	1.25962
Q12 I think reflection in action is helpful to rectify professional mistakes on the spot	2.8357	1.33363
Q13 I reflect over my relationship with my colleagues to develop good relationship	3.5929	1.24019

Q14 I reflect over strengths and weakness of teaching method after class	4.0000	1.04572
Q15 When I teach controversial contents I reflect over the contents before teaching	3.3929	1.36607
Q16 If unexpected situation occurred in class I discuss with my colleagues	2.8786	1.39613
Q17 I reflect over my class room practices after class to know my professional weakness	3.9786	.97794
Q18 I reflect over the difficulty level of assignments before I assigned work to my students	2.9286	1.34989
Q19 I reflect over the merits and demerits of teaching method before application of teaching method	3.8429	1.15846
Q20 I think reflection on action is helpful to understand professional weakness	3.6786	1.17692
Q21 Whenever I face unexpected situation in class room, I take feedback from my colleagues to find out solution	3.0071	1.17220
Q22 I reflect over the learning outcomes after class	4.0214	1.12824
Q23 SF I understand para-language of students during teaching process (Facial Expressions of Student)	3.7571	1.15598
Q24 I plan teaching activities in light of students feedback	3.8643	1.01932
Q25 When my students say that assignments are difficult I assign them easy assignments	3.9857	1.05929
Q26 when I feel that my students are not fully involve in my lecture I deviate from the topic	3.9000	1.11433
Q27 I share my classroom experiences with my colleagues to take their suggestions	3.9286	1.03634
Q28 I think reflection for action before class contributes towards my professional development	2.8929	1.33947

Q29 I think reflection on action contributes towards my professional development	3.9357	1.12019
Q30 I reflect over relations of my actions before taking action in class	3.9357	1.17657

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1 I reflect over students attitude during teaching process	104.5500	399.012	.451	.931
Q2 I attempt to find out reasons of student's discourteous attitude after class	104.7000	398.960	.491	.930
Q3 I plan strategies to overcome student's discourteous attitude during class	105.0357	396.869	.489	.930
Q4 I think reflection on actions after class is helpful to review the shortcoming of lesson	104.2429	399.250	.687	.928
Q5 I allow my students to provide their feedback	105.2500	397.987	.518	.930
Q6 I think students feedback contributes towards my professional development	104.1857	396.814	.694	.928
Q7 I reflect over my class room practices to overcome unwanted practices during teaching process	104.1071	397.751	.655	.928
Q8 I reflect over classroom momentum to ensure proper start and proper end of lecture	104.1071	396.470	.673	.928