Chapter 3

Research Design

3.0 Introduction

The previous chapter discussed the theoretical underpinnings in the context of reflective practice in pre-service teacher education with the focus on narratives. This chapter begins with a rationale for the study (3.1), followed by the description of the preliminary study and the research questions for the main study (3.2 & 3.3). The research methodology of the main study and the profile of research informants are presented in the subsequent sections (3.4 & 3.5), later it discusses the design of research tools used for the purpose of data collection for the main study; and their administration (3.6). The process of analysis and interpretation of data is presented (3.7) followed by an overview of the chapter (3.8). Thus, it prepares the ground for the presentation and interpretation of the data in the following chapter.

3.1 Rationale for the study

With the growing emphasis on reflective approach, suggesting that quality of learning should be assessed with reference to teacher empowerment through reflection, the quality of teacher development practices became a major concern in recent educational research. Reflective practice in teacher education is a pedagogical approach that encourages autonomous learning, which aims to develop students’ understanding and critical thinking skills, i.e., reflective practice
in teaching refers to the process of examining one’s way of imparting knowledge and encouraging learning in the classroom and determining what works best for the students.

Thomas & Packer (2013: 4) stated that reflection practiced in pre-service teacher education just involves listing of ideas rather than connecting them logically to behavioral change, and called it unproductive. Concepts of reflection and reflective practice are essential components of many courses in contemporary teacher education. Teacher educators value opportunities to reflect and thus implant these in the courses. Elliot (2014: 105) stated that she contends along with Ottesen, that there is, “a huge potential for expanding reflection in teacher education” (Ottesen, 2007: 43) but, in order to effectively do so, she suggested that it might be helpful to first clarify our understandings around a) what we are asking teacher candidates to do in the name of “reflection” and b) why we are asking them to reflect. In order to identify the ‘potential for expanding reflection’ in pre-service teacher education, first, it is important to identify the opportunities available to reflect in pre-service teacher education and to explore the ways in which those opportunities are being used to develop reflection. This study, firstly, tries to explore teacher trainees’ understanding of the word reflection, and to identify the opportunities available for reflection in teacher education.

From the literature reviewed, it is evident that a narrative perspective has far greater consequences if it can be made an intrinsic part of pre-service teacher education (Doyle and Carter, 2003), therefore, the main aim of the study was to
identify the opportunities to develop reflective practice in pre-service teacher education and possibilities to use ‘Narratives’ maximize reflection.

First a preliminary study was conducted to gain familiarity with the context of the study, to examine the research issues, and to select appropriate tools for the research.

3.2 Preliminary study

In preliminary study was conducted in three phases. In the first phase, pre-service teacher education syllabus and curriculum of five universities in India were studied. The universities were selected based on the regions they are located in. The English methods syllabus of the English and Foreign Languages University, and Osmania University from the south region (Hyderabad - Telangana); Shivaji University and Mumbai University from the west region (Kolhapur & Mumbai - Maharashtra); and Guru Gobind Singh Indraprastha University from the north region (Delhi) were reviewed. The syllabus of these universities were available on the internet, hence they were selected.

In the second phase, online focus group discussion and informal interviews were conducted. An online focus group discussion was conducted on LinkedIn. 9 teacher trainees, 9 teachers and 3 teacher educators participated in the focus group discussions.

In the third phase, 6 teacher trainees from Osmania University and The English and Foreign Languages University (3 each) were informally interviewed. Six B.Ed classes were also observed.
Syllabus of various universities was reviewed to discover the components of pre-service teacher education in India and if guidelines laid by NCTE were followed while designing the curriculum. Interviews and discussions were carried out to understand what teachers and teacher trainees think about the learning they acquire in pre-service teacher education.

The following questions guided the study:

- What are the different components of pre-service teacher education curriculum in India?
- What do student teachers think they learn from pre-service teacher training?
- According to teacher trainees and teacher, does formal teacher education help one in becoming a better teacher? If yes, How?

3.2.1 Findings of the preliminary study

The second chapter of the National Curriculum framework for Teacher Education on ‘Curricular areas of initial teacher preparation’ has suggested 4 unit plans per subject. The weightage for the areas was given according to the NCTE guidelines. The NCERT proposed three areas for one year pre-service teacher education programmes till the academic year 2014 -15 in the Curriculum Framework for Teacher Education in India. They are:

- (a) Pedagogical theory (20%)
- (b) Working with community (20%) and
(c) Content-cum-methodology and practice teaching including related practical work (60%)

However, the weightage for pre-school, primary and secondary teacher education programmes were the same. In case of higher secondary and collegiate courses, the weightage was 30% for pedagogical theory, 20% for working with community, and 50% for content-cum-methodology and practice teaching including related practical work.

As per the guidelines laid by NCTE, the course content should include:

- a) *Foundation Courses*, emphasizing mainly the philosophical and social perspectives, and psychological bases of education at the stage concerned;
- b) *Stage-relevant specializations*, emphasizing understanding of the professional functions of the teacher in a general way relevant to the stage and competencies and skills of teaching relevant school subjects.
- c) *Field Work or Practicum*, emphasizing application of theory in classroom teaching and in the practical activities involving students, parents and the community.

After the review of the syllabi it was observed that the teacher education curriculum consists of courses in content to be taught and in foundational disciplines that most likely contain information about basic processes involved in teaching and schooling, e.g. learning, motivation, social expectations, organizational and administrative arrangements, historical perspectives, and the like. The course of study also includes methods, i.e. specifications and procedures
for conducting lessons and prescriptions about how to solve common problems that teachers face in the classrooms.

It was also observed that all the universities developed their syllabus according to the above mentioned guidelines laid by NCTE; however, the activities and tools used in the course were different. For example, the practicum component of the teacher education programme is conceptualized in three phases’ i.e., peer teaching and block teaching at EFL University, while at Shivaji University the phases are micro teaching, classroom teaching and simulation teaching followed by internship and action research.

Focus group discussion on the topic, ‘Pre-service Teacher Education and its significance’ was conducted online and 21 teaching professionals participated in the discussion. The sample included 9 teacher trainees, 9 teachers and 3 teacher educators, who voluntarily participated in the discussion. Informal interviews were conducted with 6 teacher trainees in the last phase. To maintain the authenticity of the data collected, some of the statements made by the participants are quoted while presenting the results.

**On syllabus and curriculum**

All participants agreed that different universities in India follow similar syllabus but the teaching methods are different. Teacher trainees from various universities across India stated that Community work and Practicum were mandatory and they had to submit records and reports after these phases.
On ‘learning’ in pre-service teacher education

Teacher trainees stated that they learn theories and the importance of those theories during the programme, however, they raised a concern that they did not get an opportunity to apply the learning. They stated that they were given assignments, and teacher trainees had to complete them and submit them. It was assumed that teacher trainees thoroughly understood and learnt the concepts, on submission of the assignments. One of the teacher trainees stated, “I know reflection is important, I can define reflection. I have submitted my assignments on reflection. Still, I don’t know how to reflect”.

Novice and experience teachers stated that learning in teacher education is more effective when it is guided by someone who knows how (to learn). Many believed that learning is an unending process which does not end on the graduation day but is a lifelong process. On being reflective practitioners, teacher educators stated that the “actual learning” in teacher education begins when teacher trainees reflect on their learning and practices. Most of the teachers contended that experienced teachers know they can and must continue to learn if they are to be effective in helping their students learn.

On impact of formal teacher education

Novice teachers stated that the practice teaching as a teacher trainee was extremely useful, and stressed that there were many aspects to teaching that were not learned until one had one’s own classes. Teacher educators believed that learning is On-
going (professional development, in-service training) and many opined that it is very important to attend in-service training as well.

One of the teacher trainees stated, “We learn many concepts and theories at the university; however, we soon forget those as the learning is always top-down. Teacher trainees are considered passive recipients and they are supposed to absorb as much knowledge as they can from the teacher educators and apply it in the classroom”. Most of the participants agreed to this.

### 3.2.2 Discussion on the findings of the preliminary study

The findings revealed that the present curriculum of teacher education at different levels - pre-primary, elementary and secondary education has foundation courses, include philosophical, sociological and psychological perspectives of education. The objective is that the teacher must have a conceptual understanding of the field of education, its significant concerns which are relevant for political, social and cultural development of the nation. Teacher education by and large, is conventional in its nature and purpose. The integration of theory and practice and resulting curricular response to the requirements of the school system still remains inadequate. Teachers are prepared in competencies and skills which do not necessarily equip them for becoming professionally effective. Organized learning experiences rarely contribute to enhancing teachers’ capacities for self-directed lifelong learning. Several of the skills acquired and methodologies learnt are soon forgotten.
According to Doyle and Carter (2003: 6) Teachers “are not physicians to apply methods invented by others to real or imagined ailments; they are special participants in curricular events which, as events, educate or miseducate.” Teacher trainees, most of the times, do not have an opportunity to relate a particular behaviour to the theory learned. Most teacher trainees view ‘practicum’ as an opportunity to apply the skills and ideas learned through classes. The student practicum allows the teacher trainees to relate to the real world application of their studies. The idea that more successful student teaching experiences lead to more effective teachers is a good illustration of the importance of student teaching or practicum component of pre-service teacher education. It is also during student teaching that a teacher trainee will either become enthusiastic about teaching or decide to pursue a completely different profession.

As mentioned earlier, the preliminary study was conducted to gain familiarity with the context of the study of the pre-service teacher education and to arrive at the research questions for the main study.

The insights from the preliminary study helped the researcher to fine tune the focus of the main study and clarify the research questions. Further, it reinforced the researcher’s belief that there is a need for greater awareness and necessity to practice reflection in pre-service teacher education.
Based on the literature reviewed and the findings from the preliminary study, the main study was designed to answer the following research questions:

3.3 Research Questions for the main study

1. What are the opportunities available to develop reflective practice in pre-service teacher education?

2. How are these opportunities being used to develop reflection in teacher trainees?

3. How can narratives be used to maximize reflection in teacher trainees in pre-service teacher education?

3.4 Research Methodology

As mentioned in Chapter 2, (Section 2.4), the context of the study is second language teacher education and the focus of the present study is on developing reflective practice. Two components were explored in the present study, they are to identify the opportunities available to reflect in pre-service teacher education and observe how those opportunities were being used to develop reflection. The sample consisted of three groups: Teacher trainees of English methods, English Language Teachers and Teacher Educators (ELT). To answer the research questions the study was planned as an open – ended exploratory study with teacher trainees and teachers. However, opinion of teacher educators, who participated in the online focus group discussions, presented a third dimension to the study.
Since this study was largely descriptive in nature, qualitative research method was followed. The strength of qualitative research is its ability to provide complex textual descriptions of how people experience a given research issue. It provides information about the ‘human’ side of an issue – that is, the often contradictory behaviours, beliefs, opinions, emotions, and relationships of individuals. Qualitative research, usually, is used to add new perspectives on phenomena about which much is already known, or to achieve more in-depth information that may be difficult to obtain quantitatively. A lot of literature is available on using narratives or other forms of narratives like journals, autobiographical writings, and diaries etc., as ‘tools for reflection’ in teacher education. This research aims to identify the opportunities available in pre-service teacher education to use ‘narratives’ to maximize reflection in pre-service teacher education in the Indian context. To achieve this, emphasis on description and explanation was needed (Myers, 2009).

3.4.1 Methodological Triangulation

Triangulation of data refers to the process of authentication of data collected through various means for the purpose of maintaining validity and reliability. Lynch (1992) views that there is a need for triangulation for substantiation of findings by using data from different sources, collected by different methods and different people. Confirming data from one source by cross-referencing to another i.e., by triangulating, produces credible results. Moreover, in social sciences triangulation techniques are more useful to map out or explain fully the richness
and complexity of human behaviour by studying it from more than one standpoint. Also it is a powerful way of demonstrating concurrent validity particularly in qualitative research (Campbell and Fiske, 1995, cited in Cohen, Manion and Morrison, 2007).

With reference to the discussion above related to validity and reliability, the present study used methodological triangulation, that is, it used different methods for reliability of data. Questionnaires, informal interviews and focus group discussion were used to collect data for this study and the data collected was triangulated. These tools were selected for their suitability in eliciting the required data. The rationale for selection of each of the tools and their construction and administration are described in section 3.6 in this chapter.

In the next section the profile of the research informants is described

3.5 Profile of the Research Informants for Main Study

As mentioned in section 3.4, the research informants consisted of three categories–

- Teacher trainees
- Teachers
- Teacher educators

The main study was also conducted in 3 phases, in the first phase, 42 teacher trainees of English methods (B.Ed participants) from two universities in Hyderabad, namely; English Foreign Languages University and Osmania University were chosen. The universities were chosen for their proximity and
accessibility (convenience sampling) to the researcher. While the English and Foreign Languages University conducted specialized English B.Ed programme (as described in chapter 1), Osmania University provided general B.Ed programme, where English was Method -2. Questionnaires were distributed to 60 teacher trainees, out of which 42 responded. Therefore, 42 teacher trainees became a part of the sample for the study.

In the second phase, 12 teacher trainees, 6 teachers and 3 teacher educators participated in the focus group discussions. The discussions were conducted online based on specific issues which were included in the questionnaire. The participants volunteered to participate in the study.

In the third phase, 3 teacher trainees from the questionnaire sample, 3 teacher trainees (teachers now) who had participated in the preliminary study, and 3 teacher educators who participated in the focus group discussions were interviewed informally for the main study, totalling to 9 interviews. The number of interviews was limited to 9 for two reasons. One, the participants were not available for telephonic or face-to-face interview. Two, the 9 interviews yielded almost similar responses, new ideas or perspectives were not emerging (theoretical saturation), therefore, more number of interviews were not conducted. It was important to interview teacher (teacher trainees who participated in the preliminary study) to know teacher training helped them in becoming reflective practitioners. Teacher trainees and teacher educators were selected based on their
responses given on the questionnaires and focus group discussions respectively, to
seek clarity (wherever needed) and more information on various themes.

Therefore, the sample size for the main study was 54 teacher trainees (42 in
Questionnaire 42+ 12 in focus group discussions = 54), 9 teachers (6 in focus
group discussions + 3 from in interviews) and 3 teacher educators (who
participated in focus group discussions), totalling to 66 participants.

3.6 Tools of Research for Main Study

The tools used to get information for this study will be discussed in this section.
As mentioned earlier, the tools used for collecting data for the study were,
questionnaire, informal interviews and online focus group discussions.

3.6.1 Questionnaire

This study largely intended to explore teacher trainees’ understanding of reflection
and their opinion on the tools of reflection used in pre- teacher education; therefore, questionnaire became an essential tool for this study. Since
questionnaire is versatile, and allows the collection of both subjective and
objective data through the use of open or closed questions, it was used to obtain
data on opinion, beliefs, and preferences of the respondents. The questionnaires
also provided the baseline data which helped in choosing and designing the other
research tools for the study. Another reason for using questionnaires was that it
could be used to corroborate the findings with other data collection strategies
employed.
**Process of designing the Questionnaire**

The concepts from similar research conducted in recent times were borrowed and the initial questionnaire was developed to answer the research questions of the present study. The initial questionnaire was shared with two peer participants in the English and Foreign Languages University, Hyderabad. Changes were made based on the critical comments on the structure, content and format of the questionnaire in the pre-final draft. The pre-final draft was then shared with two Ph.D participants from Osmania University. Finally, changes were made to the final draft of the questionnaire as per the comments. The final questionnaire was piloted with one teacher trainee (who was not a part of the sample) to find if there was any ambiguity in language. The baseline data helped in identifying issues and rectifying them. A few linguistic changes were brought about.

**Administration of Questionnaire**

The questionnaires were distributed directly to the teacher trainees. After that, instructions regarding the usage of 5 point scale (Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree) and open ended questions were given and doubts were clarified. The questionnaire was given to the teacher trainees, after speaking with them, and they were given one week to respond. For follow up, phone numbers were exchanged and calls were made to the respondents to increase the response rate.
Description of the Questionnaire

The questionnaire (appendix 3.1, p. 226) was designed and administered to gather data on teacher trainees’ beliefs and opinions on 5 broad topics:

- Reflection in pre-teacher education
- Learning reflection
- Tools of reflection used in pre-service teacher education
- Approaches to reflection
- Teacher trainees’ ability to use technology to be able to participate in collaborative reflection with other teacher trainees and teachers online (Digital Literacy).

The data was gathered to explore the opportunities available for teacher trainees in pre-service teacher education to reflect on their teaching and to observe how those opportunities were being used.

The questionnaire had two sections: General and Specific. The general section, with four questions, was used to build the profile of the teacher trainee in terms of their name, institution’s name, teaching experience and contact details.

Specific section of the questionnaire had 10 questions. There were six open-ended questions and four close ended question (e.g., Yes/No, putting tick marks, circling, preferential questions, Likert scale) and one open ended question where teacher trainees were asked to write a reflective narrative. These 10 questions were classified under seven specific areas.
I. Learning to reflect in pre-service teacher education: This section focused on teacher trainees’ opinion on learning to reflect in pre-service teacher education. This section focused on exploring the teacher trainees understanding of the verb ‘Reflection’ in pre-service teacher education and how they learnt to reflect. There were two questions with six sub-questions in this section.

II. Opportunities provided for reflective practice: The focus of this section was on identifying how the opportunities available to reflect in pre-service teacher education were being used to develop reflective practice. This section had two close-ended questions and two open ended questions.

III. Tools used for reflection: This section focused on teacher trainees’ beliefs and opinion on being practitioners of reflection. This section had one question with seven sub-questions which included both open and close-ended question. There was one sub question on using narrative forms for reflection like diaries, journals, logs etc.

IV. Approach: This section focused on teacher trainee’s approach to reflection. One question with sub points was set to know if teacher trainees preferred collaborative reflection, i.e., if they preferred reflecting alone or in a group, if they shared their stories with their peer and if that sharing helped them. There was one question with nine sub-questions with 5 point Likert scale responses (SA/A/N/D/SD) in this section.

V. Digital literacy: This section focused on identifying teacher trainees’ ability to use technology. One question with five point responses (5 – excellent, 4 – good, 3
– average, 2 – Poor, 1 – not at all) were set to know trainee teachers’ level familiarity in using internet and social networking. This was done to know if they participate in online discussions, webinars or blogging.

Reflective narrative: This section had one open ended question, where teacher trainees’ were asked to narrate their experience of reflecting for the first time. This was also done to know, through their narratives, if teacher trainees considered reflecting for the first time to be an enriching experience. This question helped to observe if teacher trainees were able to reflect effectively.

3.6.2 Focus group discussion

A focus group discussion is an organized discussion between 6 to 8 people. Focus group discussions provide participants with a space to discuss a particular topic, in a context where people are allowed to agree or disagree with each other. The rationale for using focus group discussions is group dynamics. The theory is group discussions stimulate dynamic conversations, which leads to discovery, exploration, direction and depth about the topic. Focus group discussions, in this study helped in exploring a range of opinions and ideas on reflection in pre-service teacher education and tools of reflection. Focus group discussions were conducted further explore of beliefs, experiences and practices of participants. Data has been gathered from people with experience as practicing teachers from different countries for an outside perspective.
Process of designing and organizing the focus group discussions

Focus groups were designed, chiefly to supplement information received from other tools, and these discussions were semi-structured. Three online focus group discussions were conducted with 21 teaching professionals. The participants included 12 teacher trainees, 6 teachers and 3 teacher educators. Focus group participation was voluntary. Background information about the study, the purpose of the focus group, and instructions about the procedures that were followed were explained to all members of the focus group using a ‘Frequently asked questions’ section (Appendix 3.2). The participants of the focus group were first asked to consider a question, respond with their thoughts, feelings, experiences and suggestions, and then react to the responses given by the various members of the group. This way, a discussion was generated, resulting in a rich environment of thought and idea formation. The questions and points of discussion were set based on the areas or topics that were used in the questionnaire.

The focus group discussion began with an invitation to present some biographical information as an introduction of each participant. Then, a question from the current research was asked. The discussion and idea threads then evolved as the participants considered the question and responded with their thoughts, feelings, and experiences. They were then asked to also react to the responses given by the other participants of the group.
3.6.3 Interviews

Informal interviews were used as an additional tool to supplement and triangulate the data collected through questionnaires and focus group discussions. Informal interviews may be seen as an effective, informal conversation, initiated for a specific purpose as they focus on certain areas. The main objective was exchange of ideas and experiences and eliciting information. The interview protocol was piloted to check the duration of the interview. The topics or areas of discussion remained the same as questionnaires.

Process of designing and administering the interview protocol

The purpose of the semi-structured interview was to focus on the aspects which might have been overlooked in the questionnaire. This was a simple and informal discussion rather than a formal interview. After the analysis of the data from the questionnaires and focus group discussion, points for informal interview and possible questions for the participants to answer were identified and a set of conversation points were prepared. These issues and questions fell into the following categories: Reflection in teacher education, opportunities to reflect in teacher education, tools for reflection, learning to reflect, being digitally literate to reflect collaboratively, and using narratives to develop reflective practice. The interview questions (indicators only) that might be asked during the interviews were then formulated to reflect the discussion that evolved during the focus group phase of the study.
As mentioned already, three teacher trainees from the questionnaire sample, three teachers from the pilot study sample and three teacher educators, who participated in the focus group discussions, were informally interviewed. The interviews were more like conversations where the respondents were let to speak freely and share their opinion and beliefs on pre-service teacher education and reflection.

As mentioned earlier, the interviews were conducted after the administration of the questionnaire and focus group discussions which allowed probing for details and reasons behind answers that participants gave on the questionnaire and the focus group discussions. Interviews with teachers helped to capture different dimensions of the proposed phenomenon.

3.7 Process of analysis and interpretation of data

To analyse data from questionnaire, different techniques were used to interpret the questions. Y/N questions and preferential questions were quantitatively analysed and presented in percentage and values, and open – ended questions were analyzed using document analysis, where an attempt was made to find out broad patterns.

To analyse data from focus group discussions and interviews similar responses were grouped into categories and common patterns were identified which helped in deriving findings. To maintain the authenticity of the data collected, some of the statements made by the participants are quoted while presenting the results of interview data. Data collected through focus group discussions are presented in the form of Vignettes, based on Richards and Farrell’s (2005) approach.
The methods of data collection employed in the present study are depicted in the flowchart (fig 3.1) in the next page.

Figure 3.1, Summary of methods of data collection
3.8 Overview of the chapter

The chapter focused on the research procedure of the present study. It presented the rationale for the present study; the profile of the research informants was presented, rationale for using qualitative methodology was pointed out, the chapter then delineated the various research instruments employed for the purpose of data collection. The data gathered from each of the research tools (Questionnaires, focus group discussions and interviews) were cross examined through triangulation to arrive at more meaningful implication. The next chapter provides a detailed analysis of the data collected.