CHAPTER - III

REVIEW OF RELATED LITERATURE

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3.1 Introduction

Review of related literature is an important pre-requisite of actual planning and execution of any research work. Only the knowledge of the past will help us to equip for the present. In this sense, review of related literature allows the researcher to acquaint himself/herself with current knowledge in the area in which he is going to conduct his research. The purpose of the review of literature is to build up the context and background of research as well as to provide a basis for deep insight and clear perspective of the overall field. In the present study, the investigator scanned the relevant studies relating to the objectives of the study. The adequate sources of related information enable the researcher to have a clear picture of various aspects of the problem area to carry out the work successfully.

The studies reviewed are arranged under the following heads:

- Studies related to reflective practices
- Studies related to journal writing
- Studies related to critical incidents in teaching
- Studies related to portfolio writing
- Studies related to teacher development

3.2 Studies Related to Reflective Practices

There is considerable literature on the application of reflective practices in education. Reflective practice is a meaningful and effective professional development approach a way of thinking that fosters personal learning, behavioral change, and improved performance. Through systematic inquiry and analysis, it is a way for individuals to create meaningful and end writing change by changing themselves. As a basic learning strategy, reflective practice is relevant for any type of organization and in any walk of life. The investigator for the purpose of the study has traced various literature and research reports in this area. An effort has been made to document only those studies or review in close proximity with the present study.

Sarah (2014) examined teachers’ perceptions and engagement in reflective activity as part of an ICT professional development programme. Reflective entries
are drawn from a series of blogs that are analysed qualitatively using Hatton and Smith’s three levels of reflection-on-action. The findings suggest that each level of reflective action plays a different role in enabling teachers to transform their ICT pedagogical beliefs and practices. Each role is defined and illustrated suggesting the value of such activity within ICT professional development, consequently reshaping what constitutes effective professional development in ICT.

Simon (2013) conducted a study on the transcription, autonomy and reflective practice in language development among a class of L2 students who were required to transcribe and reflect upon spoken performances. The study focused on students’ perceived output or noticing of weaknesses in their speaking skills as evidenced through transcription activities. The findings show that the transcription and reflective practice can help to support the development of noticing, arguably a key element in the autonomous acquisition of new language and language development.

Vaughan (2012) reported the effectiveness of various strategies to help pre-service teachers develop reflective practices in the teaching and learning process. The study revealed that strong reflective practices are evident in peer coaching and professional development activities and also evidenced that pre-service teachers’ evaluations and final class responses tend to favour the use of reflective practices in their daily practice.

Chen, Wei, and Liu (2011) attempted to explore whether learners reflection levels can be improved if teaching strategies are adapted to with learners thinking styles in an online environment. These teaching strategies namely; constructive, guiding, and inductive were designed match with the thinking styles. An online reflection learning system was subsequently developed to reflect this scenario. The results revealed that reflection levels of the fit group had outperformed the non fit group.

Barbara (2008) developed a model of reflection from experience gained from teaching and training reflective writing to students and practitioners within librarianship. It was tested using data gathered from the reflective journals of 22 MA Librarianship students, who submitted 116 reflective journal entries from October 2007 to May 2008. The model has three core process elements: a consideration of the
situation (S); consideration of the evidence used during the practice of reflection (E); and action (A) needed as a result of what has been learnt from the reflective process. These outcomes, identified as change or the need for change are integrated into the “SEA-change” model. Reflection is discussed in relation to teachers applying a progressive ‘de-scaffolding’ approach to learning support in order to facilitate student autonomy.

Jukka, Husu, and Sanna (2008) reported that the student teachers were challenged by the procedure of guided reflection in their teaching practicum and focused that they experienced professional growth to a greater extent. Student teachers were found to question their own practices identify social and cultural constraints; and also vision their work in to the future.

According to Sheric (2008) reflective practice is one mode that can empower teacher to develop the process of intuition, contemplation, visualization and imagination and thereby re invasion of their practices in new days.

A qualitative study was conducted by Constance (2008) on elementary school teachers to gain insight in to the relationship between reflective training, instructional practice and student classroom behaviour. The study revealed four positive outcomes of the reflective model adopted for the study. They were in enjoyment of collaborative engagement and reflective critical dialogue, development of curriculum materials aligned with teachers’ collective classroom complexities, positive effect of seeing and doing reflection in practice, and positive student classroom outcomes.

Jennifer, William, Gail, and Jo (2006) opined that engaging in reflection is beneficial not only for students but also for entire faculties. The time and effort invested in reflection yield a harvest of greater student learning higher teacher morale, enhanced feelings of efficacy, and a more collaborative personal community.

Kinchole (2004) reiterated that collaborative reflective practices could engage a greater variety of perspectives for addressing the many challenging and complex dilemmas of practice. It was also observed that reflection becomes embedded in the practice repertoire of educators, isolation is reduced and relationships are strengthened (cited in Jennifer et al., 2006).
Cooner and Tochterman (2004) experimented with guided story telling as a mode of initiating reflection for action. They found that guided story telling was an effective way to understand varied perspectives, to prompt inquiry and to foster new insights and learning. Similarly various studies of reflective practice revealed that it promotes a professional community focused on increasing student learning (Dufour, 2005; Fullan 2000).

Robbins (2004) found that a reflective assessment tool to support students to evaluate their learning progress had a strong positive effect on middle school students’ inquiry performance. They indicated that supporting students to reflect on and evaluate their learning progress affects students, especially low achieving students who lack the metacognitive monitoring and reflecting skills and ideas and classroom research modes.

Poole (2003) examined how a developmental growth model of the teachers’ preparation emphasizing self assessment and reflection is being implemented in liberal arts professional education sequence. They discussed how the effort offers opportunities for pre service teachers to self monitor and reflect on their belief and practices regarding teaching and learning in both entry-level and advance courses and in student teaching. Assessment tools used to evaluate pre service teachers’ progress in these classes were studied for their effectiveness in facilitating pre service teachers progress regarding skills, attitudes and attribute darned essential for professional success.

Vandergrift (2003) found that reflection on the process of language skills was beneficial for young learners. The reflective exercises included were prediction and evaluation. The results based on introspect data suggested that the activities sensitizd the learners to the listening process and developed their metacognitive knowledge.

According to Joyce and Showers (2002) peer coaching can serve as an effective tool that involves many type of interaction ranging from co-teaching to unit planning and the expansion and refinement of new skills.

Cochran-Smith and Lytte (2001) opined that in order to develop reflective skills among prospective teachers, it is essential that they take up an inquiry stance on
practice and work together in inquiry communities. That is prospective teachers should engage in self and peer evaluation. This according to the practitioners could build new forms of reciprocity between teachers and academics and other education stakeholders and groups involved in dialogues and collaborative work and ultimately improve their community skills.

Montalbano (2001) found that as teacher engaged in reflective practice, then understanding of themselves and their students enhanced with a subsequent change in their students efficacy in the classroom. Taylor and White (2001) found that reflection enhances the moral and ethical development among learners.

Florez (2001) Richert (1992), Beyer (1984), and noted that reflective inquiry brings flexibility in instructional settings by helping practitioners examine successes and failures in a constructive environment and promotes self awareness and knowledge through personal experience.

Leitch and Day (2000) opined that reflective practitioners should posses set of attitudes towards teaching practices based upon broader understanding of self internal conversation of the practitioners where he/she takes hold of the process or experience that has occurred, reframe it and tries to experience from a different perspective and improve or adjust previous experiences.

Zeichner and Liston (1996) have emphasized that when educational programs include reflective inquiry as part of their curriculum, those program seek to train student teachers who are willing and able to reflect on the origins and consequences of their actions. The student teachers would be helped to develop pedagogical habits and skills necessary for self directed growth and towards preparing them individually and collectively to participate as full partners in their making practices (cited in Richards, 2000).

Bright (1996) highlighted reflective practice serves as the foundation for continuous learning and more effective action in educational practice so that children are successful in school and in life (cited in Jennifer et al., 2006). Pope and Dericolo (1989) believed that reflection nurtures students’ constructive action.
Simmons and Schelk (1988) opined that a reflective teacher as one who makes instructional decisions consciously and tentatively, and critically considers a full range of pertinent contextual and pedagogical factors. He/she actively seeks evidence about the results and continues to modify these decisions as the situation warrens.

Schon (1987) opined that the professional schools must rethink both the epistemology of practice and the pedagogical assumptions on which the curricula are based and must accommodate the reflective practices as a key element of professional education.

Concozzeli (1987) pointed out the crucial role that reflection plays in professional development and opined that reflection enables professionals to integrate theories and practice. Usher and Bryant (1987) found that student learning is enhanced when teacher engage in reflective practice.

Cruikshank and Applegate (1981) observed that reflective practices in language classroom helps teacher trainers to think about what happened, and what else could have been done to reach their goals.

Dewey (1933) observed that the classroom practice of reflective practitioners reiterates emphatically that critical reflection has more impact on the quality of schools and instructions than the teaching techniques one uses.

The major benefits identified through a closer analysis of the studies conducted reveal that reflective practices can develop habits of continuous growth, integrate meaning and enhance prosperity for learning. In addition to this, it is the vital and largely untapped resources for significant and sustained effectiveness and can lead in to pathways of renewal and continuous improvement, it can lead learner to face constraints boldly and maximize meaning from life’s experiences. Though several studies have exploited the benefits of reflective practices in improving the learning conditions and professional knowledge of pre service teachers, very few studies have focused on using this as a tool for strengthening reflective skill of learners. This fact had urged the investigator to explore the scope of reflective practices in the teaching learning classroom in the Kerala set up where the majority
of teacher educands are believed to be unexposed to these capacitating practices in a structured manner.

### 3.3 Studies on Journal Writing

Journal writing is a popular technique for encouraging student teachers and is often used to comment on reactions to events, reflect on present experiences and feelings and connected what is being studied in one class with another class or with life outside the classroom to reflect on their professional practices. It is an instructional tactics offered in our classrooms are far from the dynamics of potential learning. In this scenario, the investigator has made an effort to trace out some of the research reports in close proximity with this study.

Poldner, Van der-Schaaf, Simons, Van Tartwijk, and Wijngaards (2014) found that students’ reflective essay writing can be stimulated by the formative assessments provided to them by their teachers. Such assessments contain information about the quality of students’ reflective writings and offer suggestions for improvement. A quantitative content analysis procedure (QCA) was used to assess the level of argument and content of 34 student teachers’ reflective writings over the course of two semesters. The study showed that the mean argument levels of students’ reflective essays differed between the two consecutive semesters. The results indicated that it is important to encourage students to focus on the content of the justification, dialogue and transformative learning in their reflective essays. It was concluded that QCA can be used as a procedure for teacher educators to formatively assess their students’ reflective writings, reliably and validly.

Cohen-Sayag and Fischl (2012) conducted a study on reflective writing in pre-service teachers’ training and examined changes in levels of pre service teachers’ reflective writing and tried to identify links between these changes and their success in teaching. Participants were two groups of pre-service special education teachers that taught in two different special education settings: learning difficulties classes and multiple and profound intellectual disabilities classes. Journal entries analysis referred to three reflective levels of explanations, as descriptive, comparative and critical. The results indicated that both groups improved in descriptive levels of explanations, but only one group improved in higher levels of reflective (comparative
and critical) explanations. Differences between the two groups were explained in context of different settings in field experience, lack of former knowledge and experience in one group, participants’ characteristics and different supervisor’s responses to the journals. These differences explain the higher levels of reflective thinking in one group. It is revealed that these results point towards a professional developmental relation between reflective writing and teaching during teacher education process.

Ryan (2011) made an investigation on the significance of reflective skills as a means of improving students’ lifelong learning and professional practice in higher education. It was observed that a functional-semantic approach to language systemic functional linguistics (SFL) can be used to develop a shared language to explicitly teach and assess reflective writing in higher-education courses.

Lai and Calandra (2010) examined the effects of computer-based scaffolds on novice teachers’ reflective journal writing. This study employed an explanatory mixed methods design to examine the effects of two computer-based scaffolds on novice teachers’ reflective journal writing. Quantitative results indicated that the computer-based scaffolds significantly enhanced the participants’ reflective journal writing as well as the length of their written artifacts. It was also found that there was a positive relationship between the highest level of reflection and the length of journal writing.

Lee (2010) examined the effectiveness of interactive online journal writing on physical education teacher candidates’ reflection, and to explore the content and functions of such reflection during field experience. Four participants selected from a pool of students enrolled in pre-student teaching field experience were asked to select a journal partner to form reflection dyads, write journal entries, and provide responses to their partner’s journal. Participants reported that interactive online journaling facilitated their reflection in terms of (a) accessing each other’s context, (b) obtaining a critical friend who asked in-depth questions, (c) offering additional ideas and suggestions, and (d) providing confidence and social support. It was observed that reflective online journaling helped participants to connect their
educational context with practice, evaluate their practice, and implement changes for their future work.

McGuire et al. (2009) examined whether educators in professional programs are challenged to utilize pedagogical approaches that best prepare students with knowledge, values, and skills for professional practice. It was found that reflective process becomes a core skill for functioning effectively in a diverse and complex practice environment.

Data were collected using questionnaires and focus group interviews. Findings revealed that the students viewed reflective practice as a form of learning that provided them with an opportunity to express them, and keep a record of their learning experiences for reflection. Factors that motivated them included feedback and guidance from their preceptors, and having group discussions. Factors that inhibited the reflective practice included not sure of what need to be entered in the reflective journals, language and time constraints as well as personal attitude.

Degago (2007) investigated the value of writing reflective journals for student teachers during practicum placement. The author invited 10 pre service education degree teachers to write a weekly reflective journal throughout their four weeks practicum teaching. It was found that the student teachers benefitted immensely from their experiences of writing reflective journals for the purpose of reflecting on their practical experiences. They reported that the activity helped them improve their teaching experiences and deepen their understanding of the complexities involved in learning to teach.

Bolton (2005) recognized that writing for professional development is a significant one in promoting reflective journals’ and reached the conclusion that working reflectively with the whole self entails harnessing artistic talents alongside other talents.

Reid (2004) investigated and critiqued some possibilities of practitioner inquiry, especially forms of inquiry involving professional writing. In contrast to the familiar deficit constructions of individual teachers needing injections of knowledge, Reid envisions teachers as reflexive inquirers into professional practice who question their routine practices and assumptions.
Tillman (2003) conducted a case study of a mentoring triad involving a first-year, African American teacher, her mentor, and her principal, noting the use of reflection and reciprocal journaling to reflect on and dialogue about the challenges of teaching in a large urban high school.

Oram, Minac, and Shirky (2001) pointed out that journal writing is a useful technique for in service and pre service education of teachers of English as a second language (ESL) as well as for teaching adult ESL learners. Journals help ESL teachers overcome isolation experienced in practice and help students acquire structural, communicative, and critical competence.

Boud (2001) found that journal writing promotes reflection on experience on three occasions: in anticipation of events, in the midst of action, and after events. Inhibitors of reflective journal writing include anticipation of the prospective audience and concerns about formal assessment in educational settings.

Hoban (2000) made a study on how pre-service teachers use a reflective framework to study the relationship between teaching and learning. After each class the students had to reflect on their experiences to study the relationship between teaching and their learning. There were three phases in using a reflective journal (i) analysis of experience, (ii) synthesis of reflections, and (iii) theorizing to identify a metaphor as representation of a relationship between teaching and learning. Students were then requested to deduce implications for their future role as classroom teachers although the pre service students claimed that using the framework was the hardest task they had attempted at university. They gained insights into how they learned which had implications for how they planned to teach.

Kembler et al. (1999) proposed a scheme for estimating the quality of reflective thinking in students writing in reflective journals using categories based on Mezirow’s work on reflective thinking. The method was recommended for both assessing students and evaluating courses in programmes which aim to develop reflective thinking.

Considerable research has been conducted on reflective journal writing and thinking process and highlighted the importance of journal writing in developing thinking process such as comparison, classification, interpretation, critical thinking
self evaluation. Journals serve as windows into our students thinking and learning and as a safe outlet for personal concerns and frustrations. These studies investigated the benefits of journal writing offers to accommodate diverse learning styles and encourage learner’s autonomy. Research studies proved that journal writing is an effective tool for practicing reflective inquiry, linking understanding with classroom practice and systematically reflecting on self-development and on actions within classroom and work contexts.

3.4 Studies on Critical Incidents in Teaching

Critical incident analysis provides a framework for looking in detail at a particular segment of our experience. It can be used as a heuristic to one’s own reflection or can be collaborated with someone else and ask them to take through the various stages of questioning. Adequate collection of critical incidents place categories of human behaviour on an empirical base thus providing for greater validity for any subsequent measuring instrument. In this context the investigator has made an effort to elicit some of the research reports in this area.

Shapira (2014) explored ethical dilemmas in critical incidents and the emerged responses that these incidents elicit and found that most teachers try to suppress these incidences because of the unpleasant feelings they evoke. Fifty teachers participated in the study. A three-stage coding process derived from grounded theory was utilized. The Taxonomy of critical incidents revealed a multifaceted model of ethical dilemmas, among them clashing with rules, standards, or norms in school, as well as a multitude of derived responses.

Cooper, Orrell, and Bowden, (2012) emphasized the use of the critical incident journal, as it helps students to describe their roles in the incidents.

Griffin (2010) studied the usefulness of Critical Incident Reporting (CIR) as an instructional tool to first increase objectivity and self-knowledge among practicum students and then to guide practices when those students became interns the following academic year. Analysis included 120 CIRs written by 15 practicum students and responses from ten of the same students on a follow-up questionnaire when they were interns. The use of CIR during students’ practicum year illuminated the types and qualities of experiences that affected pre-service school psychologists
most and how they processed those experiences within the context of CIR. Benefits of the CIR process included schema internalization that promoted objectivity and self-knowledge among interns, provision of a systematic framework for that process and generation of related data to inform training curricula.

Ahluwalia (2009) examined the concept of critical incident analysis in respect of improving the pedagogical practices in teaching dyslexic undergraduate biosciences students. It was opined that critical incident analysis is a well established pedagogical theory that allows reflection of a seemingly typical incident, so that changes and improvements can be implemented in teaching practices. In particular, it offers the opportunity to reflect upon these incidents and adopt different strategies by using the paradigms as described by Tripp and colleagues and uses these to foster improvement in teaching practice.

Farrell (2008) investigated whether the trainee teachers formally reflected on the critical incidents, it may be possible for them to uncover new understandings of the teaching and learning process. This investigation outlines and discusses how eighteen trainee teachers in an English language teacher education course in Singapore reflected on critical incidents that occurred while they were teaching. Results show that while analysing critical incidents can be useful for trainee teachers, language teacher educators should realize that classification of such incidents into neat categories may be problematic and that care should be taken when assigning a critical incident assignment.

Chen et al. (2008) examined the impact of critical incidents on learners’ satisfaction in e-learning. In particular, frequent occurrence of negative critical incidents has significant potential of negatively affecting satisfaction. The objective of the study was to assess the satisfaction with e-learning from a negative critical incidents perspective. Based on the results, the critical incidents that affect e-learning satisfaction are classified into four categories: administration, functionality, instruction and interaction. Of these, interaction and instruction are found to be the most important factors.

Goodell (2006) made a study on how students learned to become mathematics teachers during the combined 15-week methods and field placement
course he taught. At the start of most weekly methods class meetings, groups of three or four students reported their critical incidents to each other, and then chose one incident to report to the whole class. Each student then submitted a written report of 10 critical incidents for grading. At the end of each semester, he administered a questionnaire about the usefulness of each of the elements of the course. It was found that the issues raised focused on four main areas: teaching and classroom management; student factors such as pre-requisite knowledge, understanding, resistance and motivation; issues concerning relationships with colleagues, students and parents; and school organizational issues such as policies and access to resources. Their learning about teaching for understanding focused on three broad areas: the conditions necessary to teach for understanding; facilitators of teaching for understanding; and barriers to teaching for understanding.

Amstrong et al. (2006) conducted a study to find out innovative candidate’s abilities as reflective practitioners. Elementary and secondary teacher candidates used their drawing of a critical incident first to analyze their own practice and then with others to construct deeper meaning. The teacher was a good way for them to perspective scenes and collaborates with others.

Lisa, Madeline, Sandy, and James (2005) used a qualitative research design utilizing the critical incident technique to identify effective critical incidents of individuals’ decision to enter the teacher education program. The panel of experts developed nine categories under which each response fell. The final categories for effective (i.e., helpful) critical incidents facilitating the decision to enter the teacher education program in rank order were as follows: (1) Loves Kids/Loves Teaching: An enjoyment of teaching and working with children; (2) Benefits of Profession: Rewards of teaching including the teaching work schedule; (3) Career Opportunities: Occupational prospects and job availability in the teaching profession; (4) Modeling: Positive examples of teachers and professors in the teaching profession; (5) Teacher Education Preparation: Professional training and experience in teacher education; (6) Personal Influences: Persuasion to enter the teacher education program through family, friends, and acquaintances; (7) Convenience: Ease of the program, location of the school, and times of the classes; (8) Previous Exposure: Prior contact and
exposure to the school setting and children; and (9) Non-discernable: Responses that were individual in nature and did not fit an established category.

Francis (1997) explored the meaning given to critical incident analysis by a teacher educator intent on building reflective practice in pre service teachers. Working from a belief that reflection will not necessarily enable teachers to see through the political, social and cultural ideologies embedded in their actions, it examines pre service teachers’ responses to a critical incident analysis task.

Brookfield (1996) investigated how a college teacher explains that weekly critical incidents questionnaire illuminate and what students think is significant in a class. According to Brookfield such questionnaire developing instructional problems, encourage students to be reflective learning support diversity in teaching.

Vispoel and Austin (1995) investigated that how a critical incident approach applied to understand students’ attribution beliefs. In this study, the critical incident methodology was used to study the attribution beliefs of 211 junior high school students in 4 subject areas. Results highlighted that the context specific nature of casual beliefs and their linkages to reported classroom achievement. External attributions were more likely to generalize across subject areas (SLD).

Webb (1984) examined the role of critical Incidents in teaching and administration in higher education. Critical incidents in college teaching and administration were studied, based on survey responses from 356 faculties at 31 urban institutions in various regions of the United States. The critical incidents were categorized according to specific headings: professional worth, institutional policies and procedures, faculty and administrative work style, job assignment, personal/interpersonal problems, and work quality. Critical incidents occurred among faculty and administrators, but they were experienced more often by faculty than by administrators. Also, the occurrence of critical incidents was more frequent among females than males. The critical incidents pertaining to professional worth had more positive than negative effects in teaching and administration, while those pertaining to faculty/administrative work style and institutional policies and procedures had more negative effects.
The aforesaid studies provide enlightening vision into the development and execution of critical incidents in teaching as an instructional strategy that has prominent implications in teaching and learning process. Research studies proved that critical incidents in teaching was an effective strategy for addressing varied learning styles, improved general classroom behaviour and made teaching learning experience more exciting that leads excellent way of embodying constructivist principles in classroom scenario. Students in critical incidents teaching environment have greater opportunity to improve their mental processing associated with communication and reasoning that initiate them for high academic achievement in their concerned disciplines.

3.5 Studies on Portfolio Writing

Portfolio is a purposeful collection of work showing reflection and documenting achievements over the course of time. It allows for the possibility of assessing some of the more complex aspects of learning constructs, rather than just the ones that are easiest to measure. Portfolio is one of the alternative methods in education used in the assessment of the students’ individual or group performance. Necessity of using portfolios has been emphasized by many researchers. Literature review and studies in close proximity to the present research are discussed below.

Ogan-Bekiroglu (2014) conducted a study on the quality of pre-service physics teachers’ reflections in their teaching portfolios and their perceived reflections. Reflective thinking in pre-service teachers’ portfolios was measured and compared with their perceived reflection. Data were collected through the participants’ portfolios and interviews. Their portfolios were evaluated based on the rubric developed by the researcher focusing on personal reflection, artifacts, professional development, and organization. Findings show that most of the pre-service teachers gained expertise in reflecting about their teaching skills in their portfolios. These findings also indicate that the instructor’s supervision and help throughout portfolio preparation may have assisted the pre-service teachers with creating more reflective portfolios.

Alawdat (2013) examined the use of E-portfolios for ESL learners. The data were collected by reviewing empirical studies from 2010-12 in order to synthesize
meaningful information about E-portfolios for ESL/EFL acquisition. The findings revealed that there was a questionable attitude among educators the differences between using paper based portfolios and e-portfolios for writing development.

Lam (2013) studied how two groups of Hong Kong EFL pre-university students perceived and responded to two portfolio systems (with each group experiencing one portfolio system either working portfolio or showcase portfolio) in one academic writing course. The case study approach was adopted and data sources included semi-structured interviews, student reflective journals, classroom observations, and analysis of text revisions. Findings indicated that students from the showcase portfolio group (Group B) were less enthusiastic about the effectiveness of PA, and queried whether it could promote autonomy in writing, while the working portfolio group (Group A) was more receptive to the experience, and considered that a feedback-rich environment in the working portfolio system could facilitate writing improvement.

Chang (2012) explored reflective behaviours under a web based portfolio assessment for high school students in a computer course. This research attempted to categorize reflection in a Web-based portfolio assessment using the Chinese Word Segmenting System (CWSS). Participants were 45 eight-grade students from a junior high school taking a computer course. The study results indicated that the words used most often in reflective journals fell into cognition and evaluation categories in comparison to emotion and memory.

Sulzen (2011) identified evidence markers that characterize reflection in pre service teacher electronic portfolios. Such markers include openness to self-learning, willingness to self-critique, analytical detail of reflections, and taking responsibility for pupil learning challenges. Using these markers, a rubric was developed for assessing student teacher reflective ability based on evaluating his or her electronic portfolio. An experimental study using the rubric to rate student teacher portfolios found supporting evidence for reliability and validity of the rubric, and by implication, provided validation for the evidence markers.

Minott (2010) opined that teachers should examine and articulate their personal instructional theory because of two reasons. One, doing so brings an
awareness of personal instructional practices, and two, it is an important facet of the scholarship of teaching and learning. To achieve this aim the author provides evidence of how the process of constructing and reflecting on a professional portfolio brought an awareness of his personal theory about teaching, and displays practical examples of the extent to which the theory drove his instructional practices.

Fokiene and Sajiene (2009) studied the use of portfolio method in the process of assessment of non-formal and informal learning achievements (ANILA), with reference to the example of vocational teacher education. The objective of the study was to explore the use of portfolio method as an opportunity to monitor the professional development of vocational (VET) teachers as well as to foster discussion on ANILA methodologies, contributing to both reflective self-assessment and professional accountability.

Kathpalia and Heah (2008) found that educationists and writing practitioners consider reflection to be a defining feature of student portfolios. A writing portfolio without reflection is merely a collection of written work which does not contribute to real learning. Reflection in the portfolio approach happens when students examine their work against established criteria, analyse the effectiveness of their efforts and plan for improvement.

Zellers and Mudrey (2007) observe that for a learning portfolio, in order to reach its goals, students must learn the reflective process as early as possible. One of the great difficulties of using portfolios as pointed out by them is that portfolio changes the course of classroom by consuming too much of time for its preparation. For students to use portfolios well, teachers need to be taught how to assist their learners in preparing them without much difficulty.

De Rijdt, Tiquet, Dochy, and Devolder (2006) tried to find the effects of teaching portfolios in higher education by examining the attitude of teachers towards its use. The study showed that not very many teachers used portfolios but when used, they were stimulated to reflect on their own teaching and were able to actualize the learning content. They could improve upon their course material too.

Scholes et al. (2004) recognized that portfolios captured learning from experience, enabled an assessor to measure student learning, and acted as a tool for
reflective thinking. The data were gathered from 122 students and 58 nurse teachers who were interviewed about their perceptions of portfolio use. It was found that to achieve maximum benefit from the portfolios as a learning tool that linked theory and practice, there needed to be a clear fit between the model of portfolio and the professional practice that is to be assessed.

Barrett (2002) portfolios are a means to an end to support reflection that can help students understand their learning and to provide a richer picture of student work that documents growth over time.

Klenowski (2002) found that the portfolio served the purpose of formative and summative assessment. The formative function of the portfolio is met as student teacher reflects on his learning process, understand his strengths and weaknesses, dialogues with colleagues about his performance and set targets and as a summative tool. It gave an overview of the achievements of the student teacher with reference to criteria and standards.

Birgin (2003), Chen et al. (2000), Lusting (1996), and De-Fina (1992) opined that scoring portfolios can be a very time consuming task especially in a crowd classroom. They however suggest that the use of checklists, rubrics and digital portfolio reduce time for the assessment of it.

Carney (2001), Young (2001) and Quesada (2000) proved the use of electronic portfolios in higher studies to document ones learning and understanding.

Julius (2000) examined elemental studies perceptions of portfolios by collecting data from 22 students and their teachers from two third grade classrooms. Data collection included student and teacher interviews, observation of student - teacher conferences, portfolio artifacts, teacher logs and consultations with teachers. Portfolios were found to contribute to students’ ability to reflect upon their work and to the development of students, sense of ownership in the classroom.

Klenowski (2000) proved that lecturers gained understanding and important insights through their experience of using portfolio assessment.

Potter (1999), and Richter (1997) investigated the effect of portfolios on specific audiences in different areas, like in childhood classes, for children with
special needs and in elementary classrooms for science. Learners exposed to this strategy showed an increasing level of progress in their respective subjects.

Kinchen (2001), Klenowski (2000), and Schonberger (2000) have proved that portfolios could be effectively used in teacher education programmes to refine one’s teaching and presentation skills.

Loughran and Corrigan (1995) observed that portfolio helped student teachers’ understanding to evolve and unfurl into a meaningful whole during their pre service teacher education programme.

Nystrand, Cohen and Dowling (1993) found that reliability of portfolios could be significantly improved if raters scored each task in response to a prompt before moving to the next task and raters read several examples together to decide how they were to be rated.

Vavrus and Collins (1991) on the use of portfolios for assessment purpose in teacher education have found the experience of developing portfolio facilities the development of the following skills and understanding.

1. Higher order skills (problem-solving, analysis, synthesis, evaluation, creativity);
2. Self-assessment and critique of own work, teaching, and learning experiences;
3. Understanding of own learning processes;
4. Self-regulation and self-direction in own learning, reflectivity through examination of own beliefs and concepts;
5. Enhanced professional identity and skills;
6. Growth and Commitment to growth;
7. Personal control through taking responsibility and ownership own work;
8. Personal control through taking responsibility and ownership of own work;
9. Understanding the use of own strengths and successes (important for adult learners);
10. Appropriate professional behaviour through continuous learning (role modeling).

In addition, various studies have indicated that portfolios provide for real world applications and assessment, and that they contribute to outgoing professional development by fostering the development of reflection. Study conducted by Birgin (2003) revealed that portfolio gives more reliable and dynamic data about students for teachers, parents, and also the student himself. Seldin and Higgerson (2002) pointed out that the very process of creating the collection of documents and materials that comprise the portfolio stimulates the practitioner to ponder personal teaching activities, organize, priorities rethink teaching strategies and plan for the future. The portfolio is particularly effective tool for instructional improvement because it is grounded in discipline-based pedagogy. That is, the focus is on teaching a particular subject to a particular group of students at a particular time.

Richardson (2000) found that students were hesitant to make independent judgment largely because of the threat of grades. Scaffolding practical on-the job skills, and promoting job interview preparation; (Klenowski; 2000 Dollase, 1998).

Lincoln and Guba (1984) observed that the collection of evidences from different sources for preparing portfolios helps learners to see patterns and organize events in an impressive way so as to communicate their media clearly across others.

Portfolios provide collections of student evidence that show growth and development over time and allow students to examine their own work and reflect on their learning. The extensive review of the literature has revealed wide-ranging benefits for the use of portfolio as an assessment and learning tool for all levels of education.

3.6  Studies Related to Teacher Development

An important aim of the teacher education programme is teacher development. Teacher development is a process, not an event. It involves change overtime and is achieved in stages. The stages are related to teachers’ experience gained in instructional and management practices over their career. The stages are
also related to the degree of services and support a country’s level of economic and political development allows it to provide.

Teacher development is a key part of teaching, and it helps teachers to find ideas and inspiration for professional development. Constant professional development keeps teachers up-to-date on new research on how children learn, emerging technology tools for the classroom, new curriculum resources, and more. The best professional development is ongoing, experiential, collaborative, and connected to and derived from working with students and understanding their culture. Building teachers’ confidence in their understanding of nature and encouraging the use of field experiences with students are important factors in increasing environmental awareness in students. Literature review and studies in relation to the present research are discussed below.

Auhl and Daniel (2014) examined the development of the processes of critical transformative dialogues and their application in the professional development of pre-service teachers. Participants reported a growing understanding of the importance of a continuing critical dialogue, and an appreciation of the value that critical feedback has in developing professional skills. The findings of the study revealed the value of providing spaces for early engagement in the processes of critical transformative dialogue as part of professional preparation.

Prestridge (2014) observed that when used within professional development activity, reflection is fraught with issues associated with teacher confidence and skill in reflective action. Coupled with anxiety generally associated with technological competency and understanding the nature of blogging, constructive reflection is difficult for teachers. The study focuses on the reflective quality of school teachers' blogs. It describes teachers' perceptions and engagement in reflective activity as part of an ICT professional development program. Reflective entries are drawn from a series of blogs that are analysed qualitatively using Hatton and Smith's (1995) three levels of reflection-on-action. The findings suggest that each level of reflective action plays a different role in enabling teachers to transform their ICT pedagogical beliefs and practices. Each role is defined and illustrated suggesting the value of such activity
within ICT professional development, consequently reshaping what constitutes effective professional development in ICT.

Diaz et al. (2014) conducted a collaborative action research process in preschool and primary education in Spain during a four-year period. The objective was to promote a level of reflection among the participants. The methodology used was a technologically mediated action research process. The essential need to prioritize the research and professional development of teachers in the innovative use of technology was recognized.

Bond (2013) conducted a study on Professional Learning Community (PLC) among pre-service teachers. The PLC model served as a framework for the implementation of this collaborative approach. The findings indicated that some aspects of the pre-service teachers’ PLCs worked well while others did not. The participants enjoyed meeting with classmates, offering emotional support, and sharing their experiences from the university course and cooperating teachers’ classes. However, they struggled with focusing attention on their high school students’ learning, selecting a PLC leader, managing their time, and offering constructive feedback to other group members. The results suggest that the Hord and Tobia model of PLCs is useful and deserves further consideration from teacher educators working with pre-service teachers.

Banegas, Pavese, and Sandra (2013) made a study on teacher professional development through collaborative action research and its impact on foreign English language teaching and learning. They implemented and evaluated the integration of content and language learning in their classrooms through the development of their own materials. The experience revealed a growth in professional development and how their motivation and autonomy influenced their students’ motivation and language development.

Strieker, Kent, and Karen (2012) investigated on the effects of job-embedded professional development on inclusion of students with disabilities in content area classrooms. This study explored the efficacy of a job-embedded professional development (JEPD) model in six schools (urban, suburban and rural) that had made a commitment towards including all students with significant disabilities in general
education core curriculum. For teachers and students to be successful, teachers need on-going professional development. Results are discussed for the six schools as well as for students identified as displaying behaviour disorders, autism or intellectual disabilities.

Cheng (2011) found that personal mastery and systems thinking are individual and collective level predictors respectively for teacher collective learning. Management strategies in cultural, policy and leadership domains are recommended to school administrators who wish to promote teacher collective learning as a means of coping with the changes generated by the curriculum reform.

Mari (2010) examined the impact of using reflective activities for making meaning of one’s teaching practice through an analysis of reflections written during pedagogical courses. The data were collected from 92 participants who participated in a pedagogical course offered to five cohorts from 2005 to 2007. Through analysis of academics’ reflections on metaphors and teaching cases their personal teaching theories and teaching challenges were revealed.

Keefer, Hui, and Ruffus Doerr (2009) made an attempt to document the collaborative development and reflection on teachers’ tools in a problem-based learning (PBL) programme. These results were then used to design materials and formats for the transmission of this teaching knowledge to less-experienced PBL teachers. The tools were developed using a problem-based model of teacher learning. They consist of a set of materials, including case examples and exemplars, reflections on cases, and scoring guides anchored to the video examples and presented in Web-based and CD-ROM formats.

Shawer, Gilmore, Joseph, and Susan (2008) conducted a study on student cognitive and affective development in the context of classroom-level curriculum development. The study examined the impact of teacher curriculum approaches (curriculum-transmitter/curriculum-developer/curriculum-maker) on student cognitive change (reading, writing, speaking, and listening abilities) and their affective change (motivation and interests). The study made use of the qualitative paradigm at the levels of ontology, epistemology (interaction with rather than detachment from respondents) and methodology (idiographic methodology and
Review of Related Literature

instruments). The results indicated that classroom-level curriculum development improved student learning and motivation; whilst curriculum-transmission did not result in significant student learning or increase their motivation.

Loreman and Chris (2007) made a study on the development of attitudes, sentiments and concerns about inclusive education in a content-infused Canadian teacher preparation programme. It was found that the model of delivery can be effective in improving attitudes towards inclusive education and increasing knowledge and confidence levels in teaching children with disabilities; however a significant reduction in concerns about inclusion, or an improvement in sentiments towards people with disabilities, is not evident. The need for teacher education programs to include opportunities for direct interactions with people with disabilities, and for opportunities to work towards resolving concerns about inclusive education was also recognized.

Amodeo (1981) revealed that the challenge to teacher development in the 1980s focuses on three areas: (1) multicultural education; (2) diagnosis and prescription based on learning styles, as well as on achievement level; and (3) awareness of the differences in function of the right and left hemispheres of the brain.

High-quality teaching is vital for student success. Explore elements of effective professional development and leadership critical for growing and supporting great teachers. It is a fact that great teachers help create great students. In fact, research shows that an inspiring and informed teacher is the most important school-related factor influencing student achievement, so it is critical to pay close attention to how we train and support both new and experienced educators.

3.7 Conclusion

Since the inception of reflective practices, various researchers have attempted to gain a better understanding of the process and how it can best contribute to teacher preparation. The concept of reflective practice centers on the idea of lifelong learning in which a practitioner analyses experiences in order to learn from them. However it is important to note that events experience and events retold hold their own importance. The realizations that emerged from a thorough analysis of the research reviews set the stage for framing the present study of its kind and for developing the
select strategies for promoting reflective practices among teacher educands at secondary level. The methodological approach adopted the analysis and interpretations done and findings and conclusions derived are outlined in the succeeding chapters.