CHAPTER 3
REVIEW OF RELATED LITERATURE

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3.1 INTRODUCTION

The review of literature is an essential part of a research project which is a careful examination of a body of literature pointing toward the answer to a research question. It is an evaluative report of studies found in the literature related to the area of study. A literature review is a select analysis of existing research which is relevant to the topic, showing how it relates to the preferred investigation. It explains and justifies how an investigation may help to answer some of the questions or gaps in a particular area of research. A literature review gives an overview of the field of inquiry. It gives an idea about what has already been said, who are the key writers, what are the prevailing theories and hypotheses, what questions are being asked and what methodologies and methods are appropriate and useful while approaching the topic of interest. In nutshell it gives a theoretical basis for the research and helps to determine the nature of research.

Various literatures and studies related to the present study were reviewed and the summary of the same are given under the following titles;

- Studies Related to Teacher Education  
- Studies Related to Emotional Competence  
- Studies Related to Creative Thinking  
- Studies Related to Locus of Control.

3.2 STUDIES RELATED TO TEACHER EDUCATION

Leaman and Flanagan (2013) proposed a teacher education pedagogy that may help to bridge the theory-into-practice gap for pre-service teachers. Emphasis was given to the use of authentic role-playing as situated learning (ARSL), a situated learning methodology that allow pre-service teachers to pause the interaction during
classroom role-playing in order to gain access to and demystify the complex, critical thinking used by expert teachers in their moment-to-moment practice.

Wiens, Hessberg, LoCasale and DeCoster (2013) administered the Video Assessment of Interactions and Learning (VAIL), a video-based assessment of teacher understanding of effective teaching strategies and behaviors, to preservice teachers. Results from this study demonstrated that a standardized assessment used previously with in-service teachers can be implemented in a teacher education programme. Analysis shows variability in preservice abilities to detect effective teaching strategies and behaviors that is partially explained by teacher education programme factors.

Wiens (2012) tried to find out the missing link between teacher education programme and student learning outcome. The author had an opinion that lack of comprehensive research in teacher education makes it difficult to understand the effects of teacher education programmes on student learning and methodological issues make it difficult for researchers to isolate the contributions of teacher education programmes to teacher learning.

Sage, Adcock and Dixon (2012) reviewed the literatures on humanistic teacher education and discussed humanistic teacher education dispositions and provided brief examples of how they have incorporated them in their work in teacher preparation.

Schuck and Buchanan (2012) developed an argument for the value of doubt in teacher education that grows out of the recognition of the complexity of teaching. They also indicated the challenges of fostering and nurturing doubt in teaching and teacher education and suggested that doubt is a necessary element of teacher education as its presence helps to prepare students for their careers as teachers in a complex and uncertain world.
Lew (2012) discussed the imperatives for teacher education in consideration of immigration and the extent of these imperatives being realized in United States of America. The author highlighted three related points that is imperative for teacher education in addressing the needs of immigrant children and families. They are examining how increases in immigration may change the meaning and significance of race and ethnicity in the classrooms and society at large, critically defining the policy term "integration" as applied to immigrant children in schools and asking how immigrant children's education is being driven by outcome questions that are increasingly used to evaluate teacher effectiveness and student learning.

Saigal (2012) examined the innovations in teacher support in Rajasthan's government schools through the quality education programme. Drawing on qualitative research of collaborative learning processes, the paper discussed two support strategies used by the programme, professional dialogic interactions and modeling of pedagogic strategies, which paralleled introductory or developmental phases within a "collaborative apprenticeship model" of teacher professional development.

Brownell, Griffin, Leko, and Stephens (2011) proposed a framework for conducting research on collaborative teacher education to justify collaborative teacher education programmes and improve the science of teacher education more broadly. The framework emphasised linkages among theory, innovation, and outcomes.

Van (2011) in a paper provided a brief overview of Canadian pre-service teacher education, a summary of new teacher induction and mentoring activities, and an outline of some issues and factors facing and influencing these teacher education programmes, including declining enrolment, emerging technologies and practices, and equity issues.
Phelan (2011) suggested a curriculum turn in teacher education field characterised by an attention to language, what it is up to and what it makes of aspiring teachers and their teacher educators, a focus on the fragility of human experience as it is lived in teacher education; and finally a search for new and provocative relations between the social and educational worlds.

Ell (2011) provided an overview of current structure of teacher education in New Zealand. This overview is set in a historical, cultural, political and professional context with a brief examination of aspects of these influences on the structure.

Harding and Parsons (2011) reviewed current practices in pre-service teacher education and suggested that radical improvements are possible and that, if practiced, would help to mediate many of the pressures faced by young teachers. The key suggestions include outlining the experiences of young teachers to consider how teachers might thrive in a difficult vocation, sharing recent research in the area of in-service teacher professional learning as a way to inform teacher education programmes and using these research findings to suggest possible changes and improvements to pre-service teacher education programmes.

Pugach, Blanton and Correa (2011) provided an analysis of how collaborative teacher education has developed in terms of practice, discourse, and the relationship between general and special education across three historical stages. It explores how collaborative teacher education between general and special education has been positioned over time in relationship to larger national reform efforts in teacher education.

Yadav (2011) compared the different issues of pre-service teacher education programmes in India, Sri Lanka, Bangladesh and Pakistan. One year duration of B.Ed.
programmes were found inadequate in India, Bangladesh and Pakistan and the respondents of these countries had an opinion that the duration should be increased to at least two years. It was also found that the course is more dominated in theory than practical in all the four countries.

Sert (2010) proposed a comprehensive framework for a conversation analysis informed English language teacher education programme in Turkey. The framework was constructed by reviewing recent studies in conversation analysis, critical reflective practice, teacher language awareness and language teacher education in general and aimed to solve current problems in English language teacher education in Turkey.

Reynolds and Brown (2010) investigated the role of teacher education in combating social injustice. The paper indicated key features of a teacher education programme that assist education for social justice, and linked these features to an innovative university teacher education programme to ascertain some of the practical difficulties in establishing such a programme.

Jones (2010) through an article challenged some of the taken-for-granted assumptions in teacher education such as students must be positioned as future teachers, reading educational research and texts should be a priority, writing assignments should be privileged and a cognitive approach to learning in teacher education should be privileged.

Sykes, Bird and Kennedy (2010) through an article presented a set of dilemmas that face the field of teaching and teacher education, arguing that an occupational analysis is needed to complement the more common institutional
analysis of teacher education. This analysis was also used to evaluate the prospects of the reforms that are currently dominant in the policy discourse of teacher education.

Bose (2010) highlighted the need to integrate technology in the instructional system of teacher education institutions of India. The article upholds the rationale for shifting towards ICT integration. It also clarifies the process of ICT integration and thereby underscores the difference between occasional use of ICT and ICT integration in the instructional system.

Sajan (2010) studied the teaching aptitude of student teachers with respect to their gender and academic achievement at graduate level examination. The results showed that majority of students have ample teaching aptitude. The female students are found to be significantly better than their male counterparts in teaching aptitude test and the academic achievements at graduate level examination have no substantial relation with aptitude in teaching.

Pantic and Wubbels (2010) examined teachers' perceptions of importance of competencies and explored their implications for teacher education. They identified four components underlying teachers' perceptions of competencies relating to values and child-rearing, understanding of the education system and contribution to its development, subject knowledge, pedagogy and curriculum as well as self-evaluation and professional development. Teachers perceived all but the second area of competence as very important.

Manivannan and Premila (2009) studied the application of principals of Total Quality Management (TQM) in teacher education institutions in India which exposed the tangibility of institutions in the perception of teachers based on eleven quality indicators, such as principal as leader, teacher quality, linkage and interface, students,
co-curricular activities, teaching, office management, relationships, material resources, examinations and job satisfaction. The findings focused the strong and weak areas of various teacher education institutions according to the quality indicators.

Khan (2009) examined the ICT curriculum in the teacher education programmes of Kerala in the context of globalization. The paper compared curriculum in India and other developed countries and it was found that the developed countries have a much more highly technological oriented curriculum than India. It is found that there exists a wide gap between the ICT curriculum and changing needs of the society when looking things in a global perspective.

Vavrus (2009) presented a critical teacher education multicultural curriculum based in the United States that included an autoethnographic narrative assignment as reflective space for teacher candidates to consider their identities as shaped by lived experiences with gender and sexuality. Patterns included gender identification, heteronormativity, patriarchy, sex education, schooling experiences, teacher complicity, and teacher identity effects and sense of agency along with implications for educating future teachers.

Ravindranath (2007) reviewed some exemplar experiences from India, seeks to examine the focus given to environmental education in teacher education and the challenges for teacher education in achieving the goals of sustainable development in the United Nations Decade of Education for Sustainable Development

George (2007) prepared a learning package for developing health awareness among student teachers at secondary level and it was found that the prepared learning
package is more effective than the conventional lecture method in developing health awareness among student teachers at secondary level.

Kumar (2006) studied the influence of institutional climate perception on teacher morale of teacher educators. The findings revealed that there is a significant relationship between teacher morale and institutional climate perceptions of teacher educators.

Lukose (2005) explored the perception and performance of student teachers at secondary level in the use of self-learning materials. The findings revealed that the general awareness of secondary level student teachers regarding self-learning materials was not adequate but their general opinion towards the use of self-learning materials was favourable.

Mathew (2003) investigated the feasibility of implementing modern instructional strategies in the institutions of teacher education in Kerala. The experimental study showed that teacher trainees who were subjected to modular and mastery learning strategies achieved significant improvement over those who were taught through conventional learning method.

### 3.3 STUDIES RELATED TO EMOTIONAL COMPETENCE

Whiteford, Walker and Berthelsen (2013) examined the relationship between special health care needs and social-emotional and learning competence in the early years of school. Children with special health care needs scored significantly lower on teacher-rated social-emotional and learning competencies prior to school compared to a control group of children without special health care needs. Multiple regression analyses indicated that being identified with a special health care need prior to school
predicted lower social-emotional and learning competencies in the early years of school.

O'Meara, Knudsen and Jones (2013) studied the role of emotional competencies in faculty-doctoral student relationships and found that emotional competencies displayed by both students and faculty were influenced by the programme structure and culture of the department, and facilitated positive student and faculty outcomes.

Brackett, Rivers, Reyes and Salovey (2012) had a study titled enhancing academic performance and social and emotional competence with the RULER feeling words curriculum. The experimental study revealed that students in classrooms integrating RULER had higher year-end grades and higher teacher ratings of social and emotional competence compared to students in the comparison group.

Denham, Bassett and Zinsser (2012) explored possible teacher roles in the development of young children's emotional competence and found that early childhood teachers lag behind as socializers of young children’s emotional competence.

Stefan and Miclea (2012) by comparing the social and emotional competence risk groups indicated that underdeveloped emotional competencies might have a prolonged negative effect on children's social skills, which increases as a function of higher risk status.

Kotsou, Nelis, Gregoire and Mikolajczak (2011) through an experimental study revealed that the level of emotional competencies increased significantly in the emotional competence enhancing intervention group in contrast with the control
group. These data suggest that emotional competencies can be improved, with effective benefits on personal and interpersonal functioning.

Wang, Young, Wilhite and Marczyk (2011) reported the development and validation of the Widener Emotional Learning Scale (WELS), a self-report measure, for assessing students' social and emotional competence in higher education. A cross-validation study of the WELS with the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) indicated that, the WELS assesses different aspects of emotional competence than the MSCEIT, in a manner that is consistent with the differences in the theoretical approaches underlying the two instruments.

Brown and Conroy (2011) provided a brief historical reflection on social-emotional competence intervention research along with their vision for future directions of intervention investigations for young children with developmental delays and difficulties.

Holeyannavar and Itagi (2011) revealed that age and work experience showed positive and highly significant relationship with the emotional competence whereas; negative and highly significant relationship was observed between the stressors and emotional competence of the primary school teachers.

Schultz, Richardson, Barber and Wilcox (2011) examined the effects of a social-emotional skills curriculum on the behavior of students in an early childhood programme. The results indicated that the social skills curriculum "Connecting with Others: Lessons for Teaching Social and Emotional Competence" was associated with positive changes in the children's behaviors.

Colle and Del (2011) investigated the relationship between patterns of attachment and emotional competence at the beginning of middle childhood. The
findings revealed that secure children produced the highest frequency of cognitive engagement strategies and disorganized children the lowest. Consistent sex differences were also apparent in the direction of a female advantage in emotional competence.

Brophy-Herb et al., (2011) found that maternal contingent responsiveness partially mediated the relationship between maternal emotion socialization of toddlers and toddlers' social-emotional competence. Effect size was strongest for the direct path between maternal emotion socialization and toddler social-emotional competence.

Kim, Pizzo and Garcia (2011) described a set of skills and competencies that young children can learn in preschool classrooms. The authors talk about both social and emotional competence and social and emotional learning.

Garner (2010) provided an interdisciplinary review of theory and research linking aspects of emotional competence to learning and school-related outcomes across childhood. Drawing upon work in developmental psychology, educational psychology, and teacher education, this review also discussed the role of teachers in socializing students' emotions and considers the strategies and the challenges they face in regulating their own emotions in the classroom context.

Nadeem, Maslak, Chacko and Hoagwood (2010) described current education policies as they relate to the promotion of social, emotional, and academic development and competence for young children. The article had a review of the limitations of existing resources available to educators to identify evidence-based programmes that support social, emotional, and academic competencies and
concludes with recommendations for better alignment between research and policy to support social, emotional, and academic competencies.

Denham, Bassett and Wyatt (2010) studied the gender differences in the socialization of preschoolers' emotional competence. The authors have found that mothers often take on the role of emotional gatekeeper in the family, and fathers act as loving playmates, but that parents' styles of socialization of emotion do not usually differ for sons and daughters. They also found that sometimes mother-father differences in emotional style actually seem to promote such competence, and girls seem particularly susceptible to parental socialization of emotion.

Hessler and Katz (2010) examined association between emotional competence and adolescent risky behavior. Results suggested that children with poor emotional awareness and regulation were associated with greater behavioral adjustment problems and children's emotional competence may serve as a useful point of intervention to decrease risky behavior in adolescence.

Jennings and Greenberg (2009) proposed a model of the pro-social classroom that highlights the importance of teachers' social and emotional competence and well-being in the development and maintenance of supportive teacher-student relationships, effective classroom management, and successful social and emotional learning programme implementation. This model proposes that these factors contribute to creating a classroom climate that is more conducive to learning and that promotes positive developmental outcomes among students.

Rhoades, Greenberg and Domitrovich (2009) demonstrated that inhibitory control plays a significant role in the concurrent prediction of teacher ratings of
social-emotional competence above and beyond other variables associated with social-emotional competence.

Richardson, Tolson, Huang and Lee (2009) investigated whether a social skills programme, "Connecting with Other: Lessons for Teaching Social and Emotional Competence," would enable students with disabilities in inclusive classrooms to develop skills to facilitate socialization with peers with and without disabilities. The results of the study indicate reasonable assurance that the students did grow in the skill areas and were able to interact positively with their peers.

Begeer, Koot, Rieffe, Terwogt and Stegge (2008) reviewed recent empirical studies that examined the emotional competence in children and adolescents with autism spectrum disorders. Four aspects of emotional competence that are important to children's daily social functioning such as expression, perception, responding, and understanding were discussed, differentiating between mentally retarded and normally intelligent children and adolescents with and without autism spectrum disorders in natural and structured contexts.

Niles, Reynolds and Roe-Sepowitz (2008) studied whether the effects of Child-Parent Center (CPC) preschool programme participation on early adolescent social and emotional competency vary by sex of child, family risk status, parent education and family structure. Results indicated that most frequently detected differential effects were for family risk level and sex of child. Most children appear to benefit equally from participation in the CPC programme.

Kingston (2008) compared the emotional competence of first year undergraduates enrolled on a high or low drop-out rate course. The results indicate that typical high drop-out rate course participants have high self-esteem and a good
level of interpersonal skills, but are controlled by their emotions and exhibit an external locus of control. Typical low drop-out rate course participants have low self-esteem and a good level of intrapersonal skills, but have developed the ability to control their emotions and exhibit an internal locus of control.

Katz, Hessler and Annest (2007) examined emotional competence in children exposed to domestic violence. Children from homes with greater domestic violence were less aware of their own emotions and more emotionally dysregulated and it affects their social and emotional interactions at different stages of growth.

West and Albrecht (2007) explored the ways to build the emotional competency knowledge and skills of the early education workforce as an additional strategy for disaster preparation and recovery.

Beland (2007) described creative ways that high school teachers can integrate in the training of five key components of social and emotional learning such as social awareness, self-awareness, self-management, relationship skills, and responsible decision making--into curriculum and classroom practice.

Trentacosta, Izard, Mostow and Fine (2006) examined the relations between two aspects of emotional competence, emotion knowledge and emotion expression, and children's attentional competence during one school year. Multiple regression analyses examining predictors of peer nominations of emotion expression showed that attentional competence predicted peer nominations of happiness, sadness, and anger expression, and emotion knowledge predicted peer nominations of anger expression.

Denham (2006) suggested a battery of preschool social-emotional outcome measures, tapping several constructs central to emotional and social competence
theory, specifically emotional expression, emotion regulation, emotion knowledge, social problem solving, and positive and negative social behavior.

Ciarrochi and Scott (2006) studied the link between emotional competence and well-being. The results revealed that difficulty in identifying and describing emotions predicted increases in anxiety and decreases in positive affect whereas, difficulty in managing emotions predicted decreases in positive affect. Each emotional competence variable predicted unique variance after controlling for other significant variables.

Havighurst, Harley and Prior (2004) suggested a parenting programme for building preschool children’s emotional competence and following the programme for parents their children showed less emotional negativit and had significant reductions in difficult behaviours, especially those who had behaviour problems prior to their parents’ participation in the programme.

Vorbach and Foster (2003) examined emotional and social competence in early adolescence, focusing on the relationship between the ability to identify the emotions of another, emotion regulation, friendship quality, and peer-identified prosocial and overtly aggressive behavior. Findings indicated that many of the emotional competence scores were not significantly related to each other and different scores had different relationships with the criterion variables.

Denham et al., (2003) assessed preschoolers’ patterns of emotional expressiveness, emotion regulation, and emotion knowledge and found that emotional competence assessed at 3 to 4 years of age contributed to both concurrent and kindergarten social competence.
Lindse and Colwell (2003) found that emotion regulation and emotion understanding made unique contributions to teacher ratings of children's emotional competence with peers. High pretend play levels related to high emotion understanding for both boys and girls, and high emotion regulation and emotional competence with peers for girls only. Physical play related to boys', but not girls', emotional competence with peers.

Buckley, Storino and Saarni (2003) articulated the central role, that school psychologists can play in enhancing the emotional competence of students and provided an overview of the theoretical basis of emotional competence, as well as an exploration of the relevance of emotional competence for positive youth development.

Ciarrochi, Deane, Wilson and Rickwood (2002) explored the possibility that social support among adolescents explains the relationship between emotional competence and help seeking. Results revealed that adolescents who were low in emotional awareness, and who were poor at identifying, describing, and managing their emotions, were the least likely to seek help from nonprofessional sources and had the highest intention of refusing help from everyone.

Garner and Estep (2001) investigated linkages between aspects of emotional competence and preschoolers' social skills with peers, as well as parental emotion socialization practices as predictors of social skill and found that emotional competence variables were meaningfully related to the peer variables and that, for non-constructive anger reactions, maternal reports of anger explained unique variance.

Jagers (2001) described evolving efforts to promote African American children's social and emotional competencies, examining moral competence and
identifies various moral events, offering knowledge of moral emotions and moral self-efficacy as key constructs.

Marlow and Inman (2001) examined whether colleges of education were preparing teachers to educate students in ways that would maximize their ability to learn more effectively and were preparing future teachers to become competent and responsible citizens, sensitive to their role in a global community. Results indicated that social and emotional competence was not addressed in mission statements and admission policies, nor were there many explicit courses offered to teach social and emotional competence skills. Most respondents were interested in pursuing an increased emphasis on social and emotional competence education.

Hohr (2000) explored how fairy tales address socio-emotional challenges children face during their socialization and suggested that the combination of simplicity of form and complexity of content makes the fairy tale a powerful tool for perception of and reflection on emotions.

Saarni (1999) emphasized the cultural and gender context of emotional experience, and the significance of moral disposition and personal integrity for mature emotional competence and the links between emotional competence, socialization, and resilience in the face of stress.

Webster-Stratton (1999) presented activities to promote children’s social and emotional competence based on the empirically validated Dinosaur Social Skills, Problem-solving and Anger Management Curriculum.

Saarni (1999) presented a model of emotional competence that explores the factors and skills contributing to the development of a mature emotional response that supports an individual’s social goals and discussed one of the consequences of
emotional competence, the effective skill in managing one's emotions, which is considered critical to negotiating interpersonal exchanges.

Richardson and Evans (1997) explored methods for teaching social and emotional competence within a culturally diverse society and discussed culturally responsive education and the need for educators to focus on building social and emotional competence in children and adolescents.

Richardson (1996) developed ‘Connecting with others programme’, to provide lessons for teaching social and emotional competence for elementary school children based on transactional analysis, assertion training, and cognitive behavior modification.

Denham (1993) investigated preschoolers' understanding of three parental emotions: happiness, sadness, and anger and the relationships of these understandings to preschoolers' emotional competence. Results showed that children demonstrated coherent understandings that different parental emotions have differing causes and child responses, that children could suggest specific strategies to change parents' emotions. Children's beliefs about their parents' expressive patterns, and about their own reactions and interventions in response, were related to their emotional competence in the two settings.

Goodman (1993) examined relationships between maternal depression and children's self-concept, self-control, and peer relationships and found that multiple risk factors, such as the father's mental state and parents' marital status, rather than maternal depression alone, explained much of the variability in children's social and emotional competence.
Brar (1992) verified whether social and emotional competence depends on the intelligence and social maturity of young children and concluded that a child's level of intelligence and social maturity contributes significantly to social and emotional competency.

Denham (1985) showed that an aggregate of maternal emotional dialogue components, maternal current functioning, and/or prevalent maternal emotions were efficient predictors, in combination, of children's various emotions and of children's social-emotional competence.

Kohn (1975) identified two major dimensions of social-emotional competence, interest/participation versus apathy/withdrawal, and cooperation/compliance versus anger/defiance and suggested that interest/participation versus apathy/withdrawal is shown to be related to cognitive functioning and school achievement.

3.4 STUDIES RELATED TO CREATIVE THINKING

Hong, Peng O'Neil and Wu (2013) examined the effects of gender and item content of domain-general and domain-specific creative-thinking tests on four subscale scores of creative-thinking such as fluency, flexibility, originality, and elaboration. The results show that domain-general creative-thinking scores were not different across gender in any of the four subscales. In domain-specific creative thinking, female students showed dominance over males in the case of fluency, flexibility and elaboration whereas, significant difference was not found for originality. The findings on both gender and item effects support the contention that personal interest and life experience influence the generation of creative solutions.
Newton (2013) in an article draws on research to describe aspects of creative thought and problem-solving, moods and emotions, and some of their interactions. It uses these to construct a framework to help teachers of students at all levels plan for, think about, manage and mediate creative thinking in classrooms. The framework takes into account the flow of changing moods and emotions as tasks progress and accommodates individual thinking and collaborative group work.

Anwar, Aness, Khizar, Naseer and Gulam (2012) explored the relationship between creative thinking and academic achievements of secondary school students. Results revealed a statistically significant relationship between creative thinking and students’ academic achievements on different aspects of test of creative thinking as well as creative thinking and academic achievements.

Tabrizi, Talib and Yaacob (2011) studied the relationship between creative thinking and anxiety among adolescent boys and girls in Tehran, Iran aged 12 to 15 years. The findings showed a strong negative correlation between creative thinking and anxiety among Iranian adolescent students in Tehran’s secondary schools.

Siswono (2011) had a research on level of student’s creative thinking in classroom mathematics. The result of this research pointed out the five levels of creative thinking that are of level 0 to level 4 which has different characteristics based on fluency, flexibility, and novelty in mathematical problem solving and problem posing.

Shawareb (2011) examined the effect of early computer experience on creative thinking among Jordanian kindergarten children. The findings showed statistically significant differences between the experimental and the control groups on creative
thinking total score. All dimensions showed no significant differences between boys and girls, and no effect of interaction between group and gender.

Baum and Newbill (2010) highlighted a project focused on a virtual Native American village and the development of supporting instructional materials. The materials combine instruction on content-area material, technology and critical and creative thinking skills. The concept of critical and creative thinking skills was guided by a model that includes idea generation, reflective judgment, attitudes and dispositions and self-regulation. Through the process of designing instruction to teach critical and creative thinking skills, the investigators recognized that critical and creative thinking skills are essential in the design process.

Sak and Oz (2010) studied the effectiveness of the Creative Reversal Act (CREACT), a teaching technique developed based on the theory of the janusian process, on students' creative thinking. Comparison of pretest and posttest scores showed that the use of the CREACT improved students' creative performance significantly on the poem and story tasks, but had a low effect on their creative performance on the paradoxes task. Results show that the CREACT has potential as a new teaching technique for creative thinking.

Hsiao (2010) investigated the methods of enhancing kindergarteners' artistic creative thinking and expressive drawing through an activity that involved appreciation of picture books. With regard to differences in children's reading and drawing behaviours between the beginning and the end of the study, findings indicated a significant and positive change in children's reading and drawing behaviours at home.
Mihov, Denzler and Forster (2010) had a meta-analytic review of the literature to establish how creative thinking relates to relative hemispheric dominance. The analysis was performed on the basis of a non-parametric vote-counting approach and effect-size calculations of Cramer's phi suggest relative dominance of the right hemisphere during creative thinking. Moderator analyses revealed no difference in predominant right-hemispheric activation for verbal vs. figural tasks, holistic vs. analytical tasks, and context-dependent vs. context-independent tasks.

Karakas (2010) had an opinion that although creative thinking has traditionally been associated with the arts and humanities and critical thinking with science, even a brief examination of the evidence suggests the essential nature of both creative and critical thinking within each of the two cultures.

Koray and Koksal (2009) examined the effect of creative and critical thinking based laboratory method on prospective primary teachers' creative and logical thinking abilities. As a result of the investigation, it was determined that the experimental group was more successful than the control group in terms of the logical thinking ability and creativity.

Combs, Cennamo and Newbill (2009) tried to define critical and creative thinking in a way that would be useful for classroom teachers charged with developing such skills in their students. Based on an extensive literature review to distill critical and creative thinking skills into teachable components the authors developed a model of critical and creative thinking.

Houtz and Selby (2009) studied about problem solving style, creative thinking, and problem solving confidence. The findings show that there was no relationship between actual creative thinking production and problem solving style. However,
scores of orientation to change and ways of deciding were correlated significantly with the Torrance measure of resistance to closure.

Ngara (2009) presented the views on inspiring creative thinking among students through, the mbira metaphor, an informative and thought-provoking folktale originating from previous studies on Shona culture's views of giftedness. The recognition of the mbira folktale as a metaphor that has the potential to enrich gifted programming follows new thinking in research that values the contribution of sociocultural perspectives to our understanding of giftedness and creativity.

Koutsoupidou and Hargreaves (2009) reported the effects of improvisation on the development of children's creative thinking in music. Analysis revealed that improvisation significantly affects the development of creative thinking; in particular, it promotes musical flexibility, originality, and syntax in children's music-making.

Erdogan, Akkaya and Akkaya (2009) found that Van Hiele model based instruction has a significant influence on the creative thinking levels of sixth grade primary school students. After the instruction creative thinking levels of the experimental group showed a significant difference in total post test scores related to the sub-dimensions of creative thinking viz. fluency, originality, the titles being abstract, creative forces lists and creativity.

Doppelt (2009) assessed creative thinking in design-based learning. The findings show that pupils learned to document their design process and their projects demonstrated various levels of creative thinking skills.

Kampylis (2009) revealed that teachers’ practices are influenced mainly by inconsistent implicit theories and by widespread misconceptions about creativity. In addition several factors inhibit teachers in fostering students’ creative thinking, such
as inadequate initial teacher education and in-service training and lack of time and means.

Roskos-Ewoldsen, Black and Mccown (2008) investigated age-related changes in creative thinking. The findings revealed that there were age-related declines on both phases of the creative invention task, but not on the Torrance test of creative thinking. These declines were noted by both the younger and older raters. After adjusting for working memory capacity, however, age-related differences on the creative invention task were not significant.

Almeida, Prieto, Ferrando, Oliveira and Ferrandiz (2008) tested the construct validity of Torrance test of creative thinking based on data collected in Spain and Portugal. According to this, those cognitive functions supposedly present on a subject's performance are not so strong as to explain the variance in scores. Elaboration factors assume some variance explanation, but the main factors are identified with the products in each subtest, suggesting the importance of format, content and demand on TTCT specific tasks.

Glassner and Schwarz (2007) reported rich bonds between creative thinking and antilogos evaluation and between their developments. The study showed that effective antilogos evaluation involves both critical and creative thinking. The conclusion is that antilogos evaluation is archetypical in the sense that tasks involving both critical and creative thinking must be of argumentative in nature.

Ebrahim (2006) compared the creative thinking and reasoning abilities of deaf and hearing children. The canonical correlation analyses revealed one significant dimension in both deaf and hearing children. The multivariate analysis of variance
revealed that there are some similarities and differences between the deaf and hearing samples regarding creative thinking abilities.

Memmert (2006) proved the influence of a diversified sport enrichment programme on the development of creative thinking in team ball sports among gifted children. A contrast between a gifted control group and a non-gifted treatment group showed significant improvement in the creative performance of the gifted children.

Kim, Cramond and Bandalos (2006) conducted confirmatory factor analyses for both the two-factor model and one-factor model of creativity to determine which fit the data better. The findings indicated that the structure of Torrance test of creative thinking scores is consistent with a two-factor theory. It also indicated that model parameters for gender groups are more invariant than for grade levels in determining the fit of the model.

Aslan and Puccio (2006) developed and tested a Turkish version of Torrance's tests of creative thinking on adults. Analysis of the scores showed a high degree of correspondence between the English and Turkish language versions. A cross-cultural comparison was made to data previously collected in the United States. A number of significant differences emerged between the Turkish and United States samples, such as Verbal Fluency, Verbal Originality, and Abstractness of Titles.

Lee (2005) investigated the relationship between creative thinking ability and creative personality of preschoolers. The results revealed that the imagination factor and fluency factor in the language domain of creative thinking ability were related significantly to four factors of creative personality – curiosity, independence, run-a-risk, and task commitment.
Cramond, Matthews-Morgan, Bandalos and Zuo (2005) in an article updated the information about the Torrance Tests of Creative Thinking (TTCT) by reporting predictive validity. The results of the analyses of the 40-year follow-up on the TTCT resulting in a structural equation model, demonstrated the validity of the TTCT for predicting creative achievement 40 years after its administration.

Urban (2005) designed the Test for Creative Thinking-Drawing Production to mirror a more holistic concept of creativity than the mere quantitatively oriented, traditional divergent thinking tests. The drawing production is evaluated by means of a set of criteria, which at the same time represent the underlying test construct. The test has been normed with various age and ability groups.

Middleton (2005) in a paper creative thinking, Values and Design and Technology Education, explored a range of creative thinking strategies, and of their possible applications in design, and goes on to argue that the strategies and settings that promote creative thinking in design and technology make the area not only one that is suitable for addressing ethics and values, but that it may be one of the major reasons for including design and technology programmes in school curricula.

Clapham (2004) compared scores on two divergent thinking tests, the Verbal and the Figural Torrance Tests of Creative Thinking (TTCT), with scores on two creativity interest inventories. The results proved that creative interest inventories are not measuring the same construct as divergent thinking tests and that both are distinct from academic aptitude and achievement. They also support the contention that divergent thinking is multidimensional.

Rudowicz (2004) explored the applicability of the Test of Creative Thinking-Drawing Production (TCT-DP) in the Hong Kong Chinese cultural context. The
findings indicated that psychometric properties of the test were comparable to those obtained for European samples. However, the stability of Humor and Unconventionality "b" scales is very low. No sex differences were observed with regard to the test scores.

Bakr (2004) examined the efficacy of some proposed activities based on five strategies: brainstorming, attribute listing, morphological synthesis, SCAMPER and CoRT for developing creative thinking of English learners at the preparatory stage. Results indicated that the proposed activities increased students' creative thinking abilities like fluency, flexibility, originality and elaboration as well as academic achievement. It was also found that the proposed activities based on divergent thinking strategies were effective in improving English learners' creative thinking at the preparatory stage.

Minton (2003) compared the creative thinking abilities of students taking dance class to students not taking dance class in high school. Comparison of changes in both groups’ overall TTCT scores demonstrated no significant differences. However, significant differences were found between the two groups for originality and abstractness of title TTCT subscale scores. Weick (2003) in an article titled Out of context: Using metaphor to encourage creative thinking in strategic management courses, showed how to foster creative thinking by using materials and exercises based on metaphor. It also explained how to use metaphor-based readings from nonbusiness sources and included a reading list and application examples.

Rothenberg (2002) tried to assess whether the capacity for creative thinking among medical students is related to academic advancement. The results showed a significant association between ranking in the upper half of the group and creative
thinking scores, indicating that creative thinking may be an asset in medical education for educationally disadvantaged students.

Shahrin, Toh, Ho and Wong (2002) examined the relationship between the creative thinking and scientific problem-solving ability of 13 to 14-year-old females. The students did well in the preliminary trialing stage and were more proficient in interpreting and performing process skills. The other three components, communication, planning, and reflecting, showed lower relative performance values.

Strom and Strom (2002) provided the recommendations for promoting students' creative thinking including better teacher training; use of cooperative teams; combining media tools and teacher instructional skills; detection of conditions that contribute to boredom; avoiding continuous classroom routines; encouraging students to take initiative for constructive use of unscheduled time; and providing opportunities for creative abilities.

Priest (2002) focused on ways to develop student creative thinking, improvisation, and composition skills in instrumental classes. The study provided suggestions, such as the importance of offering students creative opportunities, supplying examples, giving control to students, and encouraging expressive integrity.

Flack (2001) discussed how creative thinking can be encouraged in students through such classic tools as brainstorming and the productive thinking elements of fluency, flexibility, originality, and elaboration. It described how fairy tales can be used to foster these thinking skills and suggested classroom activities.

Lawson (2001) presented a model of creative and critical thinking in which analogical reasoning is used to link planes of thought and generate ideas that are then tested by employing an "if/and/then" pattern of reasoning. It also presented data
suggesting that such thinking skills develop first in familiar and observable contexts before they can be used in less familiar and unobservable contexts.

Saeki, Fan and Van Dusen (2001) compared creative thinking of American and Japanese college students. The American students showed significantly higher scores on the Torrance Tests of Creative Thinking (TTCT) figural test than the Japanese students. No gender differences were found in either culture. TTCT performance did not correlate with performance on academic aptitude/achievement measures for either culture.

Meador (2001) in an article provided twenty principles to enable educators to identify meaningful creative activities for gifted students and avoid the superfluous “whistles”. According to him the activities should value creative thinking, make children more sensitive to environmental stimuli, encourage manipulation of objects and ideas, develop tolerance for new ideas, and teach how to test ideas.

Allegra, Chifari and Ottaviano (2001) in a paper titled, ICT to train students towards creative thinking described a three-year study at an Italian secondary school that examined the role played by information and communication technologies as cognitive tools. It also discussed the theoretical context of creativity, integrating ICT into the curriculum, and scaffolding.

Jeon (2000) investigated the effects of a creative thinking programme on Korean gifted and typical preschoolers. Compared to control group the programme participants including both gifted and typical preschoolers performed significantly higher on tests of cognitive ability and creative abilities of originality, imagination, and fluency.
Luftig (2000) investigated the effects of an arts infusion programme (SPECTRA+) on the creative thinking, academic achievement, self-esteem, locus of control, and appreciation of the arts by school children. The results reported that the children participated in the programme scored higher than the control group in creativity, self-esteem, and arts appreciation, while data for academic achievement were mixed.

Mooney, Fewtrell and Bligh (1999) in an article, cognitive process modelling: Computer tools for creative thinking and managing learning, described a suite of computer-based learning (CBL) programmes called Mind Tools that help to record, structure, and analyze information and manage learning.

Rodd (1999) described the Talents Unlimited Programme, implemented in an elementary school in southwest England, which provides a framework for developing creative and critical thinking skills. It also described an evaluation that found 5-year olds taught with this approach performed better on specific critical and creative thinking skills tasks than did peers.

Barak and Doppelt (1999) described the creative thinking in technology (CTT) programme in which creative thinking is presented as a synthesis between lateral thinking and vertical thinking. It analysed student projects in light of this definition of creativity, and explored the role technology can play in developing students' higher order thinking skills.

Matthias et al., (1996) showed that divergent thinking, considered the general process underlying creative production, can be distinguished from convergent, analytical thought based on the dimensional complexity of ongoing electroencephalographic (EEG) activity. Results indicate that the basic process
underlying the generation of novel ideas expresses itself in a strong increase in the EEG's complexity, reflecting higher degrees of freedom in the competitive interactions among cortical neuron assemblies. Frontocortical EEG complexity being comparable with that during mental relaxation, speaks for a loosened attentional control during creative thinking.

Ogletree (1996) conducted an international study to determine whether there is a significant difference between the creative thinking ability of Waldorf students and state school students in England, Scotland, and Germany. The findings suggested that Waldorf students were more creative than their state school peers. Particular credit for this was given to the maturational-readiness and nurturing curriculum of the Waldorf Schools, which includes: having the same teacher follow students from grades 1 to 8, de-emphasis on academic performance in early grades, use of art in instruction, and other teaching and curriculum considerations.

Berretta and Privette (1990) had studied the influence of play on creative thinking. Children who participated in flexible play experiences showed significantly greater creative thinking than children participating in the highly structured play experiences. No significant differences were found between boys and girls related to effects of flexible and structured play on creative thinking.

Dennis (1974) examined the relationship of bilingualism to the creative thinking abilities of Mexican youth. A multivariate analysis indicated that the main effect of language group was significant in favor of the bilinguals. Neither the main effect of sex nor the interaction effect was significant. Univariate analysis indicated that the dependent measures of verbal flexibility, verbal originality, figural fluency and figural originality were significant in favor of the bilinguals.
Crutchfield (1962) tried to throw some light on the particular processes through which conformity pressures on the individual do in fact produce their detrimental effects. The study pointed out that the conformity pressures tend to elicit kinds of motivation in the individual that are incompatible with the creative process. High susceptibility by the individual to conformity pressures tends to be associated with certain personality traits that are detrimental to creative thinking.

Taylor, Berry and Block (1958) enquired whether group participation when using brainstorming facilitate or inhibit creative thinking. The findings revealed that group participation while using brainstorming shows markedly inferior score with respect to mean total number of ideas produced, unique ideas produced and ideas produced differentially with respect to quality. In general group participation while using brainstorming inhibits creative thinking.

3.5 STUDIES RELATED TO LOCUS OF CONTROL

Keshavarz and Baharudin (2013) investigated the moderating role of father's education on the association between perceived paternal parenting styles and locus of control among Malaysian adolescents. Results revealed that there were significant negative relationships between fathers' authoritative parenting style and authoritarian parenting style with adolescents' internal locus of control. Furthermore, the findings indicated that father's high level of education moderated the relationship between perceived paternal authoritarian parenting and locus of control.

Joo, Lim and Kim (2013) investigated locus of control, self efficacy and task value as the predictors of learner satisfaction, achievement and persistence in an online university located in South Korea. The results revealed that locus of control,
self-efficacy, and task value were significant predictors of learner satisfaction, while self-efficacy and task value predicted achievement.

Fielding and Head (2012) investigated determinants of young Australians' pro-environmental intentions and actions. The results indicate that young people with higher environmental concern and knowledge, and a more internal locus of control in relation to the environment, reported stronger pro-environmental intentions and behaviour, and less environmentally harmful behaviour.

Demirkasimoglu, Aydin, Erdogan and Akin (2012) aimed to examine teachers' opinions about functions of school rules, reasons for rule-breaking and results of rule-breaking in relation to their locus of control, gender, age, seniority and branch. Teachers with internal locus of control find school rules more functional than externals and junior teachers find school rules more functional than senior teachers.

Nodoushan (2012) studied the impact of locus of control on language achievement. The results did not identified locus of control as a predictor of achievement. Results also indicated that factors like locus of control, if at all, interact with proficiency only at the advanced level.

Coyne and Thompson (2011) investigated maternal depression, locus of control, and emotion regulatory strategy as predictors of preschoolers' internalizing problems. Correlational analysis revealed that mothers reporting higher levels of depression were more likely to report experiential avoidance, feeling out of control in their parenting role, and internalizing symptoms in their children. Locus of control mediated the relationship between maternal depression and child internalizing symptoms.
Tull and Freeman (2011) revealed that student affairs administrators had a high preference for the human resource frame of reference and external chance locus of control. There were significant correlations between preferred frames of reference, locus of control, and administrator characteristics.

Tella, Tella and Adeniyi (2011) found that locus of control, interest in schooling and self efficacy jointly and relatively contribute significantly to the prediction of academic achievement of the Junior Secondary School Students.

Freed and Tompson (2011) explored parental locus of control and its correlates. Cross-sectional analyses indicated that external parental locus of control was associated with child externalizing behavior, maternal depression, less maternal education, lower income, and older maternal age. Longitudinal analyses showed that child age and externalizing behavior also predicted increases in external parental locus of control.

Bulus (2011) showed that mastery goal orientation was positively and avoidant goal orientation was negatively related with locus of control and academic achievement and a positive relationship was found between locus of control and academic achievement. It was also indicated that mastery and avoidance goal orientations were predicted by locus of control and academic achievement was predicted by goal orientations and locus of control together.

Roddenberry and Renk (2010) suggest that college students who endorse higher levels of stress will endorse higher levels of illness, higher levels of external locus of control, and lower levels of self-efficacy. Further, locus of control appears to be a partial mediator in the relationship between stress and illness.
Crothers et al., (2010) examined the relationship between educators' locus of control and job stress using samples from the United States and Zimbabwe. United States sample showed significant relationships in between teachers' external locus of control and the severity of the job stress that they experience, coupled with the perceived degree of organisational support received. However, this relationship between the locus of control and stress indices could not be identified for the Zimbabwean sample.

Becker, Ginsburg, and Tein (2010) indicated that child external locus of control mediated the associations between maternal and child anxiety as well as maternal control behavior and child anxiety. Maternal anxiety was not related to maternal control behavior and maternal external locus of control was not associated with child anxiety.

Burrell (2010) found that learning community had no significant influence on writing interventions and locus of control among college students. It was also noted that the sample had a higher levels of extrinsic locus of control.

Iskender and Akin (2010) examined the relationship of internet addiction, social self-efficacy, and academic locus of control. Results showed that internal academic locus of control predicted positive social self-efficacy. Internet addiction explained negative social self-efficacy and internal academic locus of control and positive external academic locus of control.

Stachowiak (2010) explored the relationships that existed between faculty members' locus of control and job satisfaction. The findings showed no relationship between job satisfaction and locus of control, since the internal control index
instrument that was used in the study did not demonstrate reliability in the statistical analysis.

Shogren, Bovaird, Palmer, and Wehmeyer (2010) analysed the development of locus of control orientations in students with intellectual disability, learning disabilities, and no disabilities. The result was that students with intellectual disability, at 8 years, tend to be more externally oriented than their peers with learning disabilities and no disabilities, and from 8 to 20 years, they do not significantly increase or decrease in their perceptions of their ability to exert control over their lives. It was also found that Students with learning disabilities and no disabilities tend to develop more positive orientations as they age.

Mills (2010) found that locus of control did not moderate the relationship between parenting style and student outcome. Another finding was that locus of control and gender was not significantly related.

Chang and Ho (2009) explored the effects of students' locus of control and types of control over instruction on their self-efficacy and performance in a web-based language learning environment. Results showed that students with an internal locus of control performed better on the test and the self-efficacy measure than those with an external locus of control. It was also found that students with an internal locus of control who learned from the learner-control version got the highest score on the test and the measure of self-efficacy, while students with an external locus of control who learned from the programme-control version received the lowest score on the test and the measure of self-efficacy.

Kormanik and Rocco (2009) examined the relationship between planned organizational change and locus of control through review of the literature. The
review includes literature from the disciplines of clinical and social psychology, adult development, education and learning theory, business and management, and human resource development. The discussion closes with implications for human resource development theory building, research, and practice.

Henderson (2009) showed a significant positive correlation between dysfunctional career thinking and locus of control, indicating the subjects with higher levels of dysfunctional career thoughts also had a more external locus of control. Cognitive information processing career intervention had increased locus of control.

Lloyd and Hastings (2009) found that parental locus of control was associated with both maternal positive perceptions and with maternal distress in the case of mothers of children with intellectual disability. Maternal positive perceptions were predicted by perceived control of the child and belief in fate or chance.

Deniz, Tras and Aydogan (2009) established that two sub-scales of the Emotional Intelligence viz. adaptability and general mood, significantly predicts the students' locus of control. Moreover, a negative correlation was found between emotional intelligence skills and locus of control.

Shepherd and Edelman (2009) investigated the interrelationship of social anxiety with the variables anxiety, depression, locus of control, ego strength and ways of coping in a sample of university students. There were high scores of social anxiety which were related to high scores on measures of anxiety and depression, low ego strength, external locus of control and emotion coping rather than problem focused coping.

Dilmac, Hamarta and Arslan (2009) found out that trait anxiety and the locus of control of negative self model and negative others model are positively correlated
among undergraduates. It was also found that the locus of control point averages of secure attachment undergraduates is expressively lower than those of preoccupied and fearful attachment undergraduates.

Merrell (2009) measured the effects of the Leadership Inspiration Facilitation Team (LIFT) programme on the life effectiveness and locus of control of a group of sixth grade students. The analysis showed no significant improvement in participants' composite personal effectiveness and locus of control scores, whereas the external locus of control showed a significant increase.

Bozorgi (2009) in a study revealed that locus of control and major of study were not an important factor in language achievement whereas language proficiency has a major role. It was also noticed that advanced proficiency students had somewhat lost their grade point averages. This indicated that other factors such as locus of control and/or major of study interacted with proficiency only at the advanced proficiency level.

Jemi-Alade (2008) found that locus of control were not significantly different between business administration and health care administration students as well as graduate and undergraduate students.

Fah (2008) showed that there were low to moderate, positive but significant correlation among science process skills, logical thinking abilities, attitudes towards science, locus of control, and science achievement among form four students from Malaysia.

Wu and Elliott (2008) investigated whether gifted and nongifted students' preferences for different types of reward were affected by differential locus of control. An interaction effect between ability and locus of control for chance rewards
indicated that the nongifted, moderate and nongifted, external students preferred chance rewards more than the other groups. Irrespective of ability level, however, the findings indicated that the higher the internality, the higher were the students’ preferences for the contingent (competition and performance) rewards.

Deming and Lochman (2008) attempted to discover how anger, locus of control, and impulsivity are related to aggression. Results indicated that anger and impulsivity were positively associated with aggression. Internal locus of control for success was negatively associated with aggression.

Fernandez, Vazir, Bentley, Johnson, and Engle (2008) indicated significant association between maternal self esteem and locus of control and home observation for measurement of the environment even after controlling for socioeconomic status and maternal education. The paper examines factors associated with maternal locus of control and self esteem, and argues that programmes and policies must consider maternal well-being in interventions for improving child development.

Beretvas, Suizzo, Durham and Yarnell (2008) conducted a reliability generalization study to explore variability in Rotter's Internality-Externality Scale (I-E) and Nowicki and Strickland's Internality-Externality Scale (NSIE) score reliability. Results indicated no statistically significant difference in the predicted internal consistency estimate for I-E Scale versus NSIE Scale scores.

Kesici (2008) explored the variations in democratic beliefs among teachers based on gender and locus of control. The results demonstrated that the level of adherence to democratic beliefs on the part of female teachers was significantly higher than those of male teachers, especially in terms of equality and justice.
Observance of democratic values was found to be significantly higher for teachers with internal locus of control than for those with external locus of control.

McCabe et al., (2008) conducted a study on parental locus of control and externalizing behavior problems among Mexican American preschoolers. Results demonstrated that referred Mexican American parents exhibited a more external parental locus of control than non-referred Mexican American parents across a number of domains. Thus, similar to non-Hispanic Whites, preschoolers' behavioral problems are associated with an external parental locus of control among Mexican Americans.

McCormick and Barnett (2008) found that teachers' generalized beliefs about personal control may be related to career stages and school practices should nurture beliefs in personal control, rather than dependence on powerful others in the school setting.

Hamlyn-Wright, Draghi-Lorenz and Ellis (2007) found that locus of control was more external in parents of children with autism. Locus of control failed to mediate the relationship between stress and both anxiety and depression in parents of children with a disorder. This suggests that help for parents of a child with a disorder may be effective if focused on the sources of stress rather than perceived control over events.

Smith, Hume, Zimmermann and Davis (2007) in their study extended the examination of the global relevance of the locus of control variable to ethical decision making of university students in thirteen universities from eight countries. Results indicated considerable support for the global significance of locus of control differences in the ethical responses of the students.
Uguak, Bt. Elias, Uli, and Suandi, (2007) in a study indicated that majority of the students attribute their causes of success to internal elements. Based on correlation analysis, the result revealed that locus of control is significant and positively related to academic achievement satisfaction with moderate strength.

Estrada, Dupoux and Wolman (2006) showed a significant relationship between locus of control and both social adjustment and personal-emotional adjustment for both groups. Students with external locus of control tended to have higher adjustment scores than others. No differences were found in the locus of control orientation between students with and without learning disabilities, and in the personal-emotional adjustment to college life.

Flouri (2006) revealed that even though mothers' and fathers' interest in their children's education were not linked to educational attainment by means of their impact on children's self-esteem or locus of control, they were significant predictors of educational attainment especially in daughters.

Gifford, Briceno-Perriott and Mianzo (2006) indicated that first-year students who entered university with internal locus of control obtained significantly higher grade point averages than those with external locus of control. In addition, this study revealed that first-year students retained to their sophomore year demonstrated statistically higher grade point averages than those who were not retained.

Graffeo and Silvestri (2006) did not support the notion that students with internal locus of control were better students or had better health habits than those with external locus of control.

Guinn et al., (2006) in a study titled exercise, locus of control, behavior, and intention among Mexican American youth suggested that for boys and girls, current
exercise involvement had the greatest influence on intent to be physically active, and age had a mediating effect because of the increased importance of the powerful others exercise locus of control belief as one grew older.

Miksza (2006) explored relationships among impulsiveness, locus of control, sex, and music practice. Results indicated a significant relationship between subjects' locus of control and impulsiveness scores whereas no significant differences was found in impulsiveness, locus of control, or performance achievement by sex.

Anderson, Hattie and Hamilton (2005) revealed that there were statistically significant differences between schools for motivation and achievement and also a mediating effect between locus of control and school type, suggesting that interactional models are required in investigations of motivation and achievement. Furthermore, moderate levels of locus of control and self-efficacy appear to be more adaptive than either extremely high or low levels.

Galbraith and Alexander (2005) found that significant improvements in the reading scores of the children were concurrently achieved with improved self-esteem and locus of control scores, suggesting the usefulness of the teacher acting simultaneously as instructor, scaffold and iconoclast.

Wang (2005) in a multi-case study investigated the learning experiences of four college students identified respectively as internal and external locus of control. They were taking a basic educational technology course that supplemented classroom teaching with two course web sites. Four categories that characterized their learning experiences suggested some relationship between locus of control and learning experience.
Joshi (1992) studied classroom morale in relation to locus of control, creativity and parental encouragement of pupil in Hindi-medium and English-medium students. The findings show that the type of school and locus of control was not significant with respect to classroom morale. The combined interaction of type of school, locus of control and creativity had been found to be significant indicating that when they are taken together influences classroom morale.

Joshi (1985) in a study of creativity in relation to personality, locus of control, and alienation found that all the four professional fields taken for this study such as management, medicine, engineering and law were found to be significantly different on the various measures of creativity, personality, locus of control and alienation.

Mistery (1985) conducted a study on need achievement, job satisfaction, job involvement and a function of role of stress, locus of control and participation in academic climate of college and secondary teachers. The results revealed that no significant relationship was observed between locus of control and various dimensions of job satisfaction.

Purswani (1982) studied the effect of cue explication on adolescents differing in locus of control expectances suggest that the internals in comparison to the externals had greater incidence of internal control related behavior. The internals as compared to the externals felt less of imitation. They were also motivated more than the externals while working on the task.

3.6 CONCLUSION

The review of studies and literatures related to the present investigation was done in four parts by giving emphasis to the major areas of the study. The first part
dealt with the studies related to teacher education followed by literature review related to emotional competence, creative thinking and locus of control.

The studies related to teacher education throws light to different facets of that field. Several studies indicated the gaps in the policies, implementation and outcome of teacher education programmes across the world. The need for renovation in this field in accordance with the fast growing world was emphasized. Importance of effective integration of information and communication technology was pinpointed various investigations. New programmes and strategies for improving competencies of student teachers and integrating new thoughts to student teachers were also discussed. The need for giving emphasis to practical aspects than theories was highlighted by several authors. An interesting fact relevant to the present context noticed was the suggestion that, the duration of secondary level teacher education programme in India should be increased to at least two years.

Vast varieties of studies were conducted in relation with emotional competence. Most of the studies focused social and emotional competence together. The effect of social and emotional competence on different aspects of life and developmental stages were studied. The influence and relationship of different variables with social emotional competence were discussed in several investigations. Importance of emotional competence development in different level of education was highlighted in a number of studies. The need for integrating emotional competence education in teacher education programme was also identified. The studies reviewed included credible works of Saarni, Denham and Richardson in the research related to emotional competence.
The studies related to creative thinking were profound and it represents the importance of the concept. The major areas of the investigations included techniques for fostering, influencing factors, influence of socio-demographic variables and importance in the field of education, all related to creative thinking. Cross-cultural studies to find out difference in creative thinking were conducted by many researchers. A number of researches were reviewed which are related to the Torrance Test of creative Thinking. The biological changes happening in the brain during creative thinking and the area of brain related to creative thinking was also investigated. The role of ICT in developing creative thought was another area of importance.

Most of the studies related with locus of control considered it in Rotter’s unidimensional view. The studies considering Levenson’s three dimensional model was a few in numbers. A number of studies highlighted the role of parents’ locus of control orientation in the different aspects of behavior among children, with special emphasis to maternal locus of control. Some of the studies focused locus of control of differently able children. The relationship of locus of control with academic achievement was stressed in several studies.

Numerous studies related to emotional competence, creative thinking and locus of control were found. Studies connecting these variables with education context are plenty in number. But the investigator failed to find a lot of studies relating these variables with the field of teacher education. The studies trying to find out the influence of teacher education programme on these variables or other psycho-social variables were also not found. However the reviewed studies were of great help in giving directions to the conveyance of the present study.