RELATIONSHIP BETWEEN SELF EFFICACY AND COGNITIVE STYLE AMONG B.ED STUDENT-TEACHERS

BY

YAMINI.V.M

REG.NO:20PED005

A THESIS SUBMITTED TO THE

AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND

HIGHER EDUCATION FOR WOMEN

COIMBATORE-641043

In partial fulfillment of the requirements for the degree of

MASTER OF EDUCATION

MAY 2022

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Under the Guidance of

Mrs.K.DEEPA

Assistant Professor

Department of Education

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CERTIFIED AS BONAFIED RESEARCH WORK

S.S. Mangai
31/5/22

Signature of the Head of the Department

K. Deepa

Signature of the Guide

ACKNOWLEDGEMENT

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The investigator expresses her in sight and humble gratitude to **God Almighty**, the guiding light of her life for granting the grace and abundant blessings and peace of mind to complete the research successfully.

The investigator wishes to express her sincere gratitude to **Dr.T.S.K.Meenakshi Sundaram, the Managing Trustee**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for providing the opportunity and exposure to world knowledge.

The investigator thank **Dr.S.P.Thyagarajan, Chancellor,** Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for providing all the facilities to do the research.

The investigator expresses her reverential gratitude to **Dr.V.Bharathi Harishankar, Vice Chancellor,** Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her support and encouragement.

The investigator wishes to record her profound sense of gratitude to **Dr.S.Kowsalya, Registrar,** Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for supporting her to complete the research smoothly.

The investigator owe noble indebtedness to **Dr.(Mrs.) G.Victoria Naomi, Dean, School of Education,** Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her constructive criticism, enlightened guidance and support in organizing the study smoothly.

The investigator thanks **Mrs.S.S.Manimozhi, Head, Department of Education**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for providing all the facilities and support to do the research.

The investigator would like to expresses her heartfelt thanks to her guide **Mrs.K.Deepa, Assistant Professor,** Department of Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her unflinching and incessant guidance, constant encouragement, heartfelt inspiration and support rendered throughout the study.

The investigator grateful to all her Faculties in the Department of Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, who have rendered help when ever required.

The investigator wishes to acknowledge the help rendered by her parents, and friends for their motivation and support to complete this work.

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INTRODUCTION

1.1 INTRODUCTION:

"Teaching is more than imparting knowledge. It is inspiring change."

- William Arthur Ward

Teachers' self-efficacy has progressively gained an important role in school psychology research as a result of its implications for teaching effectiveness, instructional practices, and for students' academic achievement. Considerable research has shown that teachers with high levels of self-efficacy experience higher levels of job satisfaction, lower levels of job-related stress and face less difficulties in dealing with students' misbehaviors.

Teacher carries multilayer effect. The cognitive style influences their teaching-Learning process and classroom behavior which determines the classroom culture and student teacher learning. In the context of Globalizations and Information age the speed of social change and knowledge construction has taken enormous change in the field of Education. The concept of constructivist class room will only work when it will initiate from the teacher education programme.

Teacher training programs provide necessary tools and hands-on-experience that are required to be a successful teacher in future. Often, in teacher training courses, content knowledge, technologies, need of students and other skills directly related to teaching is given importance. But skills required to perform tasks which are not directly related to teaching are ignored. These skills may include multi-managing, planning and organization of the classroom and learning

environment as well as organization of various co-curricular activities etc. The present study investigates the Relationship between self-efficacy and cognitive styles of B.Ed. student-teachers. This study is focused on to know whether there is any correlation between self-efficacy and cognitive style among B.Ed student teachers by using variables and survey method.

1.2 THEORETICAL AND CONCEPTUAL FRAMEWORK

Concept of Self-Efficacy

Self-efficacy refers to the belief in one's capabilities to achieve the goal. Student-teachers having a sense of efficacy are more likely to face challenges and difficult tasks and are intrinsically motivated. These students will put efforts in order to meet their commitments. Students recover quickly from setbacks, and ultimately try to achieve their personal goals. Students with low self-efficacy cannot be successful and thus try to make less effort and may face challenging tasks. Bandura suggested that one's perception of self-efficacy, that is, his/her efficacy expectation, is the key factor in determining whether that person will engage in a certain behavior. Given sufficient incentive and pre-requisite sub-skills, self-efficacy judgments determine a person's choice of activities and environmental settings, the amount of effort they expand, and their persistence in the face of obstacles and aversive experiences. On the lines of Bandura's definition of self efficacy, student-teacher self-efficacy can be defined as judgment of his/her capabilities to bring about desired result of his/her own commitment and learning. In general, self-efficacy is a learner's self-constructed judgment about his or her ability to execute certain behaviors or reach certain goals. Self-efficacy is a person's judgment about his or her ability to effectively perform a task, reach a goal, realization about the consequences of the actions and overcoming obstacles for achieving the desired out comes required to deal with prospective situations. Self-Efficacy provides the base for

human motivation: well being and personal accomplishment. Self-Efficacy beliefs help to determine the outcomes one expects.

Confidence individuals anticipate successful outcomes. Efficacy beliefs also help to determine how much effort people will expend on an activity, how long they will preserve when confronting obstacles and how flexible they will be in the face of unfavorable situations. The self-efficacy lies at the center of psychologist Albert Bandura's social cognitive theory. The theory emphasizes the role of observational learning, social experience and a reciprocal determinism in the development of personality. Bandura mentioned that a person's attitudes, abilities and cognitive skills is known as the self system. This system plays a major role in how we perceive situations and how we behave in response to different situations. Self-efficacy is an essential part of this self system.

Bandura's suggestion about Self Efficacy:

According to Bandura, perceived self-efficacy is people's judgments of their capabilities to organize and execute courses of actions required to attain designated types of performances. It does not consider the skills one has but with the judgments of what one can do with whatever skills one possesses. In other words, self-efficacy is a person's belief in his or her ability to succeed in particular situations. According to Ramachandran, Bandura had described these beliefs as determinants of how people think, feel and behave. According to him, schools or colleges in which staff members collectively judge themselves capable of promoting academic success imbibe their schools with a positive atmosphere for development that promotes academic attainment regardless of whether they serve predominantly advantaged or disadvantaged students and are able to do so as the student-teachers have high Self-Efficacy. Self-efficacy mediates between an individual's ability and their purposive action. Perceived self-efficacy influences the course of action adopted,

effort invested, endurance and resilience in the face of obstacles and failures, coping and the level of compliments. The people with high self-efficacy tend to be future oriented take effective course of actions and in turn self-efficacy is enhanced. In its role as a mediator between task capability and actions, self-efficacy is dependent on ones beliefs in their capabilities to perform in ways that give them some control over events that affects their lives. In other words, we can say that how people behave can often be better predicated by the beliefs they hold about their capabilities, which is called Self Efficacy. Beliefs than by what they are actually capable of accomplishing for these self-perceptions help determine what individual with the knowledge and skills.

Definitions of Self-Efficacy

According to Albert Bandura, self-efficacy is “the belief in one’s effectiveness in performing specific tasks. People, who regard themselves as highly efficacious act, think and feel differently from those who perceive themselves as inefficacious. They produce their own future, rather than simply foretell it.” Self-efficacy theory is an important aspect of Bandura’s social cognitive theory, which suggests high inter-relation between individual’s behavior, environment, and cognitive factors. According to Mahatma Gandhi, “If I have the belief that I can do it, I shall surely acquire the capacity to do it even if I may not have it at the beginning”. According to Kathy Kolbe, "Belief in innate abilities means valuing one's particular set of cognitive strengths. It also involves determination and perseverance to overcome obstacles that would interfere with utilizing those innate abilities to achieve goals."According to Napoleon Hill, “Strength and growth come only through continuous effort and struggle.

The Role of Self-efficacy

Individuals can identify goals they want to accomplish, things they would like to change and things they would like to achieve, but these plans into actions is not so simple. Bandura and others have found that individual's self-efficacy plays an important role in how goals, tasks and challenges are faced. People with a strong sense of Self-Efficacy

1. View challenging problems

2. Form a strong commitment to their interests and activities3. Develop deep interest in the activities in which they will participate4. Recover quickly from disappointments. People with a weak sense of Self-Efficacy 1. It's a belief that difficult tasks are beyond their capabilities 2. Avoid challenging tasks3. Quickly lose confidence in personal abilities4. Focus on personal failing and negative outcomes.

1.3 EFFECT OF SELF-EFFICACY

Individuals are likely to engage in certain behavior when they believe they are capable of executing those behaviors successfully. This means that they will have high self-efficacy. In layman's terms self-efficacy could be looked as self confidence towards learning how self-efficacy affects behaviors.

a) Joy of activities: Individuals choose activities in which they feel they will be successful in doing

b) Learning and achievement: Students with high self-efficacy tend to be better students and active more.

c) Efforts and persistence: Individual will tend to put more effort end activities successful in achieving. In general student-teachers typically have a good sense of what they can and cannot do. Therefore they have correct opinions about their own self-efficacy.

1.4 SOURCE OF SELF-EFFICACY

Self-efficacy beliefs begin to form in early childhood as children deal with a wide variety of experiences, situations and tasks. However, the growth of self-efficacy does not stop in adolescence stage, but continues, to evolve throughout life as people acquire new skills, understanding, and experiences. According to Bandura, there are four major source of self-efficacy.

1. Mastery Experiences: The most effective way of developing a strong of efficacy is through mastery experiences. Performing a different task successfully though strengthens our Self Efficacy. Failing to deal with a task can undermine and weaken Self-Efficacy.

2. Social Modeling:

Witnessing other people compete a task successfully is another important sources of self-efficacy. People similar to oneself succeed by sustained effort raises beliefs of the observers that they also possess the capabilities to master comparable activities to succeed.

3. Social Persuasion:

Bandura also asserted that people could be made to believe that they have the skills and capabilities that would make them successful. Getting verbal encouragement from others helps people overcome self-efficacy doubt and instead focus on giving their best effort to the task at hand.

4. Psychological Responses: A person's responses and emotional reactions to situation also play an important role in self-efficacy. Moods, emotional states, physical reactions, and stress levels can all impact how a person feels about their personal abilities in a particular situation. By learning how to minimize stress and elevate mood when facing difficult or challenging tasks, people can improve their sense of self-efficacy.

1.5 DOMAINS OF SELF-EFFICACY

Self-efficacy regulates functioning through four processes:

a) Cognitive

b) Motivational

c) Choice

d) Emotional processes

a) Cognitive Process: These impact on choice of strategies development of rules for predicting and influencing events and efficiency and effectiveness in problem solving and decision making. Cognitive processes include one's ability to exercise control over one's thoughts and mental process.

b) Motivational: Perceived efficacy is crucial for the development and regulation of motivation. Cognitive motivation based on goals intentions is mediated by three types of self influences. Self-evaluation perceived self efficacy for goal attainment, and ongoing adjustment of personal standard. Among these three mediators of motivation, self-efficacy has a causal influence on motivation.

c) Choice behavior: Perceived self-efficacy influences choice of goals activities directed to attaining the goal, the amount of effort expended and perseverance in the face of obstacles. High goals and greater commitment to attaining them.

d) Emotion: Self-efficacy beliefs impact on both the types and intensity of emotion, with low self-efficacy to attain a goal leading to despondency. Lack of self-belief in controlling disturbing thoughts results in negative affect states leading to poor self-efficacy, lowered performance and further despondency. Emotional efficacy can be measured through measurement of cognitive and behavioral self-efficacy for controlling, cognitive self-regulation and for performing pleasant or mastery- related behaviors.

Self-Efficacy in the Educational Context

Performance attainments, enactive attainments, various experiences, verbal persuasion, physiological states are the major sources of self-efficacy information, self-efficacy research in academic setting has focused primarily in the areas of its link with related psychological constructs of academic motivation and achievement.

Verbal persuasion:

According to Redmond (2010), self-efficacy is also influenced by encouragement and discouragement pertaining to an individual's performance or ability to perform; such as a manager telling an employee, "You can do it. I have confidence in you." "Using verbal persuasion in a positive light leads individual's to put forth more effort; therefore, they have a greater chance at succeeding." However, if the verbal persuasion is negative, such as a manager saying to the employee, "This is unacceptable! I thought you could handle this project" can lead to doubts about one self-resulting in lower chances of success. "Also, the level of credibility directly influences

the effectiveness of verbal persuasion; where there is more credibility there will be a greater influence. In the example above, a pep talk by a manager who has an established, respectable position would have a stronger influence than that of a newly hired manager. Although verbal persuasion is also likely to be a weaker source of self-efficacy beliefs than performance outcomes, it is widely used because of its ease and ready availability (Redmond, 2010)."

Personality Traits:

Personality is considered a fairly stable pattern of psychological behavior (thoughts, feelings, and actions) and influences how one will act in response to diverse circumstances (Quinn, Faerman, Thompson, and McGrath, 2003). Personality does not determine behavior; behavior arises in a context, such as work." According to Berenset. al.. (2001), "personalities reflect the requirements of the contexts as well as our innate tendencies and how we have adapted to these contexts over time". In other words, an individual's behavior is determined by the requirements of the situation. "Efficacy beliefs do not share the major properties ascribed to personality traits" (Bandura, 1997). While self efficacy is not considered a personality trait, it is considered a situation-specific construct. This is context dependent and functions as, a "cognitive mediator of action" (Bandura, 1982). "Self-efficacy is a related but subtly different personality characteristic. Self-assessments of ability contribute to self-efficacy but so does the individual's personality" (Griffin, et. al.., 2010). For example, an employee may have a high self-efficacy for performing a job, but due to a personality trait such as shyness has low self-efficacy for training a new employee to do the same job.

According to the self-efficacy theory, the employee would exert more effort on performing the job them self than on training a new employee on how to perform the job. Bandura (1977) upholds

that efficacy beliefs can be changed and that, “psychological procedures, whatever their form, serve as a means of creating and strengthening expectations of personal efficacy”. An efficacy expectation is defined by Bandura (1977) as, “the conviction that one can successfully execute the behavior required to produce the outcomes."

Self Efficacy theories:

a) Social Learning Theory:

Social learning theory explains the acquisition of skills that are developed exclusively or primarily within a social setting. How individuals either succeed or fail at interactions within group, and promote the development of individual emotional and practical skills as well as accurate perception of self and acceptance of others. According to this theory, people learn from their social setting trough observation, limitation, and modelling. Self-efficacy reflects in an individual understands of what skills he/she can offer in a social setting.

b) Social Cognitive Theory:

The theory of self-efficacy lies at the heart of Bandura‟s social cognitive theory, which lays emphasis upon the role of observational learning and social experience in the personality development. The social theory is that an individual’s actions and cognitive processes, in every situation are influenced by the actions that individual has observed in others. The self-efficacy is developed from experiences and self-perception and is influential in determining the outcome of many events, it is an important aspect of social cognitive theory. Self-efficacy shows the personal perception of external social factors. Bandura’s theory specifies that the people with high self-efficacy that is, those who believe they can perform well are more likely to view difficult tasks as something to be mastered rather than something to be avoided.

Meaning of teacher's self efficacy:

A teacher's perceived self-efficacy is a personality trait which helps him/her to succeed in enhancing his/her students' achievements, in setting high goals for himself/herself and in pursuing these goals vigorously. Self-efficacy beliefs determine how people feel, think, motivate and conduct themselves. Such beliefs influence their cognitive, motivational and affective processes. A strong sense of self-efficacy enhances a person's well-being in many ways. People with a strong sense of self-efficacy are ready to face challenges and do not shy away from encountering them. Such an efficacious outlook fosters deep interest in activities. Those with such an outlook set themselves challenging goals and maintain a strong commitment to them. Such an outlook produces positive results, reduces stress and lowers vulnerability to depression.

Types of self-efficacy

Behavioral Self-Efficacy:

Behavioral self-efficacy is the belief in one's capability as a teacher to perform specific actions to deal with specific teaching situations.

Cognitive Self-Efficacy:

Cognitive self-efficacy is the belief in one's capability as a teacher to exercise control over one's thinking in specific teaching situations.

Emotional Self-Efficacy:

Emotional self-efficacy is the belief in one's capability as a teacher to exercise control over one's emotions in specific teaching situations.

Cultural Self-Efficacy:

Cultural self-efficacy is the belief in one's capability as a teacher to perform specific actions in culturally appropriate ways in specific teaching situations.

Factors affecting Self-Efficacy:

According to Bandura the four main factors that affect Self-Efficacy of an individual are:

Attainment:

Attainment or success an individual experiences always has effect on their

Self-Efficacy. Success or Attainment increases the Self-Efficacy of an individual while failure reduces the Self-Efficacy.

Experience:

The experience one undergoes in everyday life influences the individual's Self-Efficacy very much. When one see others succeeding the individual himself/herself increases his/her own Self-Efficacy but when one see people failing Self-Efficacy decreases.

Social Persuasion:

Encouragement or discouragement from another person which a person receives is the social persuasion manifested. Encouragement increases the SelfEfficacy while discouragement decreases the Self-Efficacy.

Physiological factors:

In stressful situations, individuals exhibit certain physiological responses. At the same time excited situations also exhibit certain responses. These responses have great impact on the Self-Efficacy of an individual. People with high Self-Efficacy always tend to have normal physiological responses than others.

Effects of Self-Efficacy on human function:

Human Behavior:

Self-Efficacy affects human behavior to a great extent. People with high SelfEfficacy take up any task but people who have low Self-Efficacy avoids task. SelfEfficacy helps an individual himself to overestimate one's ability to complete any task but an individual with low Self-Efficacy discourages growth and skill development

Individual Motivation:

Self-Efficacy has both positive and negative impact on an individual. People with high Self-Efficacy take efforts for a longer period to achieve their goals/ tasks than those with low Self-Efficacy. When an individual has high Self-Efficacy he/she is highly motivated.

Thought patterns and responses:

The thought patterns and responses of an individual is largely influenced by Self-Efficacy. People with high Self-Efficacy always have better thoughts. They always believe their tasks to be simple even if its nature is not so. They get stimulated when they face obstacles in completing their task and take greater efforts.

Academic Performance:

Academic performance of the people with high Self-Efficacy is always higher than the people with low Self-Efficacy. People with high Self-Efficacy always have greater control over their own learning experiences.

1.6 CONCEPT OF COGNITIVE STYLE:

Cognitive style is used in cognitive psychology to describe the way individuals think, perceive and remember information. Cognitive style differs from cognitive ability, the latter being measured by aptitude tests. Cognitive styles refer to the preferred way an individual processes information. The individual differences in abilities which describe peak performance, styles describe a person's typical mode of thinking; remembering and problem solving. Cognition consists of mental processes that include awareness, perception, reasoning, and judgment. The main objective of education is development of student in relation with education, social and financial condition. Person can invent ways to face the problems of life by education. Therefore to reach higher level of success various cognitive style can be used. By the cognitive styles there is transformation of working style into self, leadership, decision making ability, adjustment which are slowly developed in trainee.

Models of information processing attempt to depict how learners mentally manipulate information. The way we process and respond to information varies considerably from one learner to another. Have you ever tried to complete a task with another student and found that it was difficult because the way each of you approached the task was completely different? You preferred to organize everything before you stated, while the other person through it was better just to begin with something interesting and work out what was missing along the way. You needed to write down

all the decisions that were made, while your partner was happy to remember everything without making notes. You worked steadily, finishing everything in plenty of time, while your partner preferred to work in bursts, often leaving everything until the last minute. These differences can be described as differences in cognitive styles. The term „style" to habitual patterns or preferred ways of doing something for example, thinking, learning and teaching.That are consistent over long period of time and across many areas of activity. Styles are not abilities, but rather choice and preference about how to use abilities.

A cognitive style refers to the characteristics ways of thinking and perceiving that individuals use to process and remember information. Cognitive styles are linked to cognition and intelligence, to personality, and to the way we interact with others.

Definitions of Cognitive Style

Cognitive is of or pertaining to the process of perception, memory, judgment, and reasoning, as contrasted with emotional and volitional processes. Cognitive styles describe how the individual acquires knowledge (Cognition) and processes information.

Cognitive styles are related to mental behaviors which individuals apply habitually when they are solving problems. In general, they affect the way in which information is obtained, sorted, and utilized.

Cognitive style is usually described as a stable and persistent personality dimension. Which influences attitudes, values, and social interaction. It is a characteristic of cognitive processing which is particular to a certain individual or class of individuals.

According to Goldstein and Blackman, “A hypothetical construct that has been developed to explain the process of mediation between stimuli and responses. The term cognitive styles refers to characteristic ways in which individual conceptually organize the environment”.

According to Kirton , "Reaching out to people in the team and helping them be part of it so that they may contribute even if their contribution is outside the mainstream”. According to Brown and Brailsford, “A psychological construct relating to how individual process information”.

According to Witkin, Moore, Goodensough, and Cox, “The extent to which a person perceives part of a field as discrete from the surrounding field as a whole, rather than embedded in the field; or….the extent to which the person perceives analytically”. It was Alport, who introduced the term “Cognitive Style” Watkins used the term cognitive styles to describe the concept that individuals consistently exhibit.

Main features of Cognitive Style:

In the late 1950, Klein and Watkins’s ideas of bipolarity spawned a great deal of interest. Psychological pervasiveness (i.e. cutting across boundaries between intelligence and personality) was the second appealing feature of the construct. Watkins et al. (1954) and Klein’s (1951) studies showed a close connection between intelligence and personality. As a result, a tremendous number of studies on style started to appear in the literature, all of them aimed at identifying individual differences in cognition that were stable over time, value free and related to personality and social relationships. Along with field dependence–independence and leveling-sharpening, dozens of other style dimensions were proposed. One such dimension was impulsivity-reflectivity (called also ‘conceptual tempo’) representing a preference for making responses quickly versus pausing to decrease the number of errors in problem-solving situations (Kagan, 1958, 1966) and the

instrument most often used to measure impulsivity–reflectivity was the Matching Familiar Figures Test (Kagan et al., 1964). This test involves selecting the figure from among six similar variants that is identical to an original figure. Response time and error rates are measured and a median split criterion is used to classify individuals as 'reflective' if they make few errors and exhibit long response time and 'impulsive' if they make more errors but respond faster. Consistent with findings on field dependence independence and leveling-sharpening styles, the impulsivity-reflectivity dimension was moderately stable over time and across different contexts. Attempts to relate this dimension to personality and social variables were only partially successful.

Characteristics of cognitive style:

Kolb (1984) has specified converger, assimilator, diverger and accommodator cognitive styles. Their characteristics are defined as:

1. Converger: The convergent style is contingent primarily on the general learning dimensions of active inquiry and intellectual conceptualization. This style has excessive recompenses in decision making, traditional intelligence tests, practical applications of theories and problem solving. Facts are systematized in a way of hypothetical-deductive and insightful. Therefore, individuals with this style are grander in technical errands and difficulties and mediocre in social and relational staples.

2. Assimilator: The assimilative style hinges on largely on abstract conceptualization and insightful reflection. This style has prodigious gains in inductive intellectual, forming speculative facsimiles, and espousing altered explanation into an integrated entity. Alike to converge, people with this style incline to be more afraid about non-concrete concepts and less anxious about people. Still, persons with this style incline to attract attention more on the rational exactness and accuracy

of the concepts, rather than their actual values which they tend to elect to work in exploration and forecasting parts.

3. Diverger: The divergent cognitive style has the opposite learning returns over converger. This style principally proceeds with concrete practice and thoughtful surveillance. It has excessive benefits in artistic talents and attracts attentiveness of meaning and tenets. Hence, individuals with this style be liable to fuse concrete situations from different perceptions and arrange their associations into an expressive whole their application for variation of reflection instead by achievement, they are grander in making substitute principle and decision. They tend to be resourceful persons with feelings. They tend to select specific abundant drawings and mortalities.

4. Accommodator: The accommodative style has the reverse learning rewards over assimilation. This style hinges on mainly a active investigation and concrete practice. It has unlimited gains in exploiting stuffs, executing policies and fetching in novelerrands. Thus, individuals with this stylistic stress on menace taking, break pursuing, and accomplishment. They also tend to subconsciously explain difficulties in a trial- and error mode, dependent generally on other individuals for evidence rather than on their own intelligent. Hence, persons with this style tend to treat with people simply. They tend to specify in action-oriented trades, such as advertising and auctions.

Theories of Cognitive Style:

1. The Stimulus and Response Theory: - According to Watson (1962) rather than discussing cognition or thinking in terms of mental processes (which are not accessible to direct study), behaviorists emphasized the basic concepts of stimulus and response. According to this approach knowledge and skills are the results, that is, whenever a stimulus occurs; it provides the response with which it is associated.

2. The Motor Theory: - It was the one version of stimulus response theory in which all behavior was equated with the muscular or glandular activity. Most human thought was considered to involve some vocal activity: that is, thinking was viewed as talking to oneself. Muscular activity could be an incidental by product of thinking, or an overflow resulting from activities in brain that occur during thinking. The brain being so active during thinking that signals 'spill over' to the muscles through the motor path ways. Images and procedural knowledge, types of cognitive activities are very difficult, if not impossible, to verbalize and to incorporate into a motor theory. Finally, learning and thinking occur even when the body has been paralyzed by a drug, preventing any recordable muscular activity. Thus, motor theory cannot account for many things, we know about cognition.

3. Meditational Theory: - It was proposed by Maltzman (1955) as an alternative to motor theory. This theory suggests that important stimuli and responses could occur in the head without motor components. Meditational events or thoughts provide a connecting link between the environment and the way one responds to it. Messick (1976) defines in terms of consistent individual differences and maintains that cognitive structure mediates between environmental input and the organism's output. He adds that cognitive structures organise behavior as well as input.

4. Gestalt Theory; - It originated in Germany after the turn of the century by Gestalt Psychologists like Kohler (1947) and Lewin (1951) and was contemporary with behaviorism in U.S.A. Gestalt psychologists were concerned primarily with perception, but applied Gestalt theory to nearly all significant psychological problems. For them, thinking and problem solving are matters of "seeing" in the right way. Thus, their concerns about the perceptual processes strongly influenced their idea of cognitive styles as those dimensions that characterize a person's manner of perceiving, thinking and problem solving.

5. Hypothesis Theory: It views the organism as an active thinker. Various psychologists (Bruner et. al. 1961) are associated with this theory. In learning a task or solving a problem, the individual is seen as forming and testing hypothesis or ideas about what is happening and how to respond. Hypothesis theory suggests that we perform complex tasks such as problem solving by thinking out in advance various possible courses of action. We test these hypotheses systematically until the correct one is found. Information.

Processing Theory: It framed as under the early Influence of behaviorism, such mental concepts as memory and reasoning were considered unscientific and not proper fields for psychological study. Bieri (1971) noted that a process of information, transformation is a basic assumption of the cognitive theorist. He told that •A individuals learn strategies, programmes of other transformation operations to translate objective stimuli into meaningful.

Dimensions of Cognitive Style:

Theories of cognitive-styles were developed as a result of early studies conducted by Witkin, et, al; (1954;1962). These studies resulted in theories that generally assumed a single dimension of cognitive style with two extremes. The two extremes were described in general terms by Keen

(1973); Mikenney& Keen (1974) and Botkin (1974) as; Systematic Style and Intuitive Style. The systematic style is associated with logical, rational behaviour that uses a step-by-step, sequential approach to thinking, learning, problem-solving and decisionmaking. In contrast the intuitive-style is associated with a spontaneous holistic and visual approach. These two styles however did not reflect the entire spectrum of people's behaviour with regard to thinking, learning and especially problem solving and decision-making.

Therefore, a multi-dimensional model intended to reflect the entire spectrum was postulated (Martin, 1983). This model consisted of two continuum; i.e.; (1) High systematic to low systematic and (2) High intuitive to low intuitive. Ongoing observational studies, along with effects to develop measurement devices for assessing cognitive behavior, have resulted in an expanded version of the original model, which led to the development of five following styles

1. Systematic Style: An individual who typically operates with a systematic style uses a well defined step-by-step approach when solving a problem; looks for an overall method or pragmatic approach; and then makes an overall plan for solving the problem.

2. Intuitive Style: The individual, whose style is intuitive, uses an unpredictable ordering of analytical steps when solving a problem, relies on experience patterns characterized by un verbalized areas or hunches and explores and abandons alternatives quickly.

3. Integrated Style: A person with an integrated style is able to change styles quickly and easily. Such style changes seem to be unconscious and take place in a matter of seconds. The result of this "rapid fire" ability is that it appears to generate an energy and a proactive approach to problem-solving. In fact, integrated people are often referred to as "problem-seekers" because they

consistently attempt to identify potential problems as well as opportunities in order to find better ways of doing things.

4. Undifferentiated Style: A person with such a style appears not to distinguish or differentiate between the two style extremes; i.e.; systematic and intuitive and therefore; appears not to display a style. In a problem solving situation, he will exhibit receptivity to instructions or guidelines from outside sources. Undifferentiated individuals tend to be withdrawn, passive and reflective and often look to others for problem-solving strategies.

5. Split-Style: An individual with split style shows fairly equal degrees of systematic and intuitive specialization. However, people with a split style do not possess an integrated behavioral response; instead, they exhibit each separate dimension in completely different settings; using only one style at a time based on nature of their tasks. In other words, the consciously respond to problem-solving by selecting the most appropriate style.

Evaluation of cognitive style:

According to Witkin, et al.(1977) "Broad dimension of individual differences that extends across both perceptual and intellectual activities is known as "style" It is the characteristic approach the person brings with him to a wide range of situations, and because the approach encompasses both his perceptual and intellectual activties, we speek of it as his " cognitive style ".

Stratton (1991) explains it as:"Distinctive pattern of cognition which characterises individual's behavior.

Cognitive Styles: Career Differentiations

The concepts and methods derived from work on cognitive styles over the past two and a half decades are being applied at an ever increasing rate to research on problems of education. Among the cognitive styles identified to date, the field dependence independence dimension has been the most extensively studied and have had the widest application to educational problems. There is now a growing body of evidence on the role of cognitive style in career differentiation. One reason for the increasing interest in this issue is that, particularly because of their bipolar nature, cognitive styles provide an alternative to the usual abilities approach to career differentiation. The complementary use of information about abilities and cognitive styles seems likely to provide a rich and broad basis for making career decisions.

Cognitive styles: Vocational Interests

It has been found that:

(1) Field dependent persons frequently express interest in the welfare - helping - humanitarian domain, including social worker, minister, rehabiliation counselor and probation officer.

(2) Field dependent persons express interest into the" persuasive " activities", which inlove dealing with people i.e. personal director, community recreation administrator, Y.M.C.A. public administrator, city school - superintendent, and 'chamber of commerce director.

It has been found that a

(1) Field independent persons show interest in mathematician, physicist, chemist, biologist, architect engineer including health professionals such as physician, dentist, and psychiatrist.

(2) Field independent persons also show interest in practical domains, such as production manager, carpenter, forest service, farmer or mechanic.

(3) Field independent persons are also associated with artistic interest.

The relatively field - dependent persons, as a group, are likely to favor domains with a "people" emphasis that is, which involve interpersonal relations in daily ongoing activities-and for which analytical /structuring competence does not particularly matter.

1.7 NEED OF THE STUDY

Self-efficacy and cognitive style are very important essential elements. As B.Ed teacher trainees need to improve their self efficacy and cognitive style level to go further activity and ability to handle the task. This study is going to measure the self efficacy and cognitive style of B.Ed student teachers. If they are very good in their self efficacy and cognitive style they show effect in their work.

1.8 STATEMENT OF THE PROBLEM

Self efficacy and cognitive style are important for B.Ed student teachers to carry out their professional activities in an efficient manner and it would be good if there is positive relationship between Self efficacy and cognitive style. Hence the problem "Relationship between Self efficacy and cognitive styles among B.Ed teacher trainees" has been taken.

1.9 VARIABLES OF THE STUDY

Dependent variable:

Relationship between self-efficacy and cognitive style

Demographic Variables used in the study:

1. Gender
2. Age
3. Locality
4. Educational qualification
5. Family structure

1.10 AIM OF THE STUDY

To study the Relationship between self efficacy and cognitive style of B.Ed student teachers

1.11 OBJECTIVE OF THE STUDY

1. To find out the relationship between Self efficacy and cognitive style among B.Ed student teachers.

2. To measure the self efficacy of B.Ed student teachers based on following demographic variables.

   a. Gender
   b. Locality
   c. Age
   d. Educational Qualification
   e. Family structure

3. To measure the cognitive style of B.Ed student teachers based on following demographic variables.

   a. Gender

b. Locality

c. Age

d. Qualification

e. Family structure

1.12 HYPOTHESIS OF THE STUDY

1. There is no relationship between Self efficacy and cognitive style among B.Ed student teachers.

2. There is no significant difference in the mean score of Self efficacy among B.Ed student teachers based on the following demographic variables.

a. Gender

b. Locality

c. Age

d. Qualification

e. Family structure

3. There is no significant difference in the cognitive style among B.Ed student teachers based on the demographic variables.

a. Gender

b. Locality

c. Age

d. Qualification

e. Family structure

1.13 SIGNIFICANCE OF THE STUDY

In this study it has selected the subject of the study of Relationship between self efficacy and cognitive style of B.Ed student teachers.Teaching by its very nature involves solving is defined as problems that are complex, dynamic, and non-linear. Consequently teacher effectiveness is largely dependent on personal agency, or how teachers define tasks, employ strategies, view the possibility of success, and ultimately solve the problems and challenges they face. This concept of personal agency the capacity of teachers to be self organizing, self reflective, self-regulating and proactive in their behavior-that underlies the importance of self-efficacy as a critical component in teacher effectiveness. The link between personal agency and a teacher's efficacy beliefs lies in personal experience and a teacher's ability to reflect on that experience and make decisions about future courses of action.

This study will able to know the relationship between self efficacy and cognitive style of student teachers. Which the teacher's efficacy and cognitive style will correlate.

REVIEW OF LITERATURE

CHAPTER 2

REVIEW OF LITERATURE

2.1 INTRODUCTION

“An essential aspect of a research project is the review of related literature” - J.Mouly (1979)

Review of related literature is a very important step in research and it is very essential to help the investigator to know the extent of research that has been already done in the area of interest of the investigator. It helps the investigator to adopt the methodology for the present study.

2.2 STUDIES RELATED TO SELF-EFFICACY

Studies conducted in India

Devpura Vibha (2019): Conducted research on 'Student’s self-efficacy and learning outcomes.' Self-efficacy shows the confidence in the ability to exert control over one’s own motivation, behavior and social environment. It affects every area of human endeavor. Self-efficacy also influences academic motivation and learning outcomes of students. Students who have confidence in their capabilities engage in deeper processing of the material during learning, which in turn results in a better understanding of the material. The type of learning environment and teaching strategies can improve self-efficacy of students. A teacher can stimulate critical thinking and comprehension and thus increase students‟ self-efficacy through a variety of strategies. This paper highlights the relationship between students‟ selfefficacy, their learning outcomes and the role of teacher. This also suggests strategies for teachers to improve self-efficacy of struggling students.

Sanchita Srivastava and Purnima Singh (2016): Conducted research on Negative consequences due to stigmatization experienced by various stigmatized group have been a primary focus of stigma research. The negative impact of stigma on self esteem is most commonly reported in the case of various stigmatized groups. Research on physical disability, one of the „discredited" stigmas have not gained much attention amongst scholars in comparison to the research on other stigmatized groups. Furthermore, the negative impact on self related consequences of the physically challenged group and also the role of self-efficacy of physically challenged individual in determining its impact on self-esteem is also not explored much. The present study examined the perceived stigma experiences of 138 physically challenged individuals. The study tested the mediating role of self-efficacy between the negative relationship of perceived stigma and self-esteem. The significant mediation results emphasized the special need to study the significance of self-efficacy in the lives of physically challenged population.

Hurakadli B.M (2015): Conducted the research on relationship between attitude towards teaching profession and teacher's self-efficacy belief in this research studied with personal teaching efficacy of teachers own expectations that they will be able to perform the actions that leads to students learning and general teaching efficacy was the belief that the teacher populations ability to perform these actions was not limited by factors beyond school control. Teacher efficacy discussion usually centres on two categories of teachers. That is teachers with substantial confidence in their efficacy are described with terms such as confidence, a positive sense of teachers efficacy. The levels of confidence in their efficacy are often labeled as having less confidence, doubting their efficacy, having low teacher efficacy or having a less positive sense of teacher efficacy. In this research the survey methodology were used the total sample collected from 200 secondary school teachers.

Shaukat and Siddiquah (2007): Conducted an investigation on the changes in self efficacy of prospective teachers during a professional teacher training programme. Self-efficacy is the personal judgment or belief of how well one can execute the courses of actions required to deal with prospective situations. Researcher support that teacher's self-efficacy has been found to be one of the important variables related to positive teaching behaviors and students achievement. Teachers with high self efficacy work harder and persist longer even when students are difficult to teach. It was hypothesized that the professional teacher training program would bring positive changes in self-efficacy of perspective teachers. To test this hypothesis the researchers conducted a cross sectional study to investigate the changes in students during a professional teachers training program.

Jain, Bruce, Srivastav (2005): Investigated the effect of attribution feedback on self efficacy judgments among a sample of 192 eight grade students. Self-efficacy judgments were measured by the scale developed by Bandura. The result showed that improvement in self-efficacy judgments was significantly more for attribution feedback condition. When different feedback condition were compared, it was found that the effort feedback affected the self-efficacy judgments most positively, ability feedback was second and ability and effort was in the third position.

D"souza (2004): Conducted a study of science teaching self-efficacy and outcome expectancy beliefs of teachers in India. Elementary and primary school teachers in urban schools in India responded well to the science efficacy instrument. These responses were evaluated using preschool analysis and parametric tests. Statics person-item maps were evaluated. It was found that the two groups of teachers but the differential item functioning analysis found that teachers utilized several item in the scale differently. Parametric tests was suggested for self-efficacy and outcome

expectancy measures correlated highly for middle school teachers, for those that did not have a science degree and a written science curriculum. Significant predictors of self-efficacy were minutes per week science is taught, educational level, number of days in the school year, holding of a science degree, and presence of a science curriculum. From all of the analyses it was concluded that teaching experience is important, nut not necessarily enough to increase teachers outcome expectancy beliefs. The results of this study were expected to benefit educators and policy makers with respect to teacher education in India and around the world.

Srivastav (2003): Conducted a study of self-efficacy and self-esteem. A study conducted into the meditating role of self- esteem on self-efficacy and achievement in grade VIII children from middle class schools of Uttar Pradesh ranging from 12 to 14 years of age. It was found that high and medium self-esteem groups judged their efficacy as higher and performed better as compared to low self-esteem group.

Research studies conducted abroad

Shi, Hong. (2018): The research conducted on self-efficacy and language strategy use of college-level English Language Learners (ELLs) at a south eastern university in the United States. It analyzed the relationship between self-efficacy and strategy use. An English Language Learning Survey was used to collect data from 198 college-level ELLs. Participants had positive self-efficacy toward their English learning and the most often used strategies were compensation, social and metacognitive strategies. Self-efficacy was positively correlated with cognitive, compensation, memory, metacognitive, and social strategy. The study suggested that teachers provide scaffolding for ELLs through strategy instruction. Teachers can teach self-regulated learning strategies and focus on ELLs' improvement and mastery of content to enhance their self-

efficacy, language proficiency and learning autonomy required for their academic courses learning.

Valencia-Vallejo, Nilson (2018): The research conducted on studies the Effect of motivational scaffolding on E-learning environments: self-efficacy, learning achievement, and cognitive style. Effects of scaffolding that favor on self-efficacy and improve learning achievement in students with different cognitive styles in the Field Dependence/Independence dimension, when they interact in an e-learning environment on mathematics. The research has an experimental design with two groups and a post-test. One group of students interacted with an e-learning environment that contained the motivational scaffolding within its structure and the other group interacted with a computational environment without the scaffolding. The results showed significant differences in learning achievement and academic self-efficacy attributable to the effect of the scaffolding. In addition, it was found that the interaction with the computational environment neutralized cognitive style effects.

Khan, Fleva and Qazi (2015),conducted a study on the role of self-esteem and general self-Efficacy in teachers‟ efficacy in Primary Schools. The sample consisted of 200 primary teachers who were employed in the government run schools of primary education. Three questionnaires were utilized- “teachers‟ efficacy scale” developed by Bandura, “general self efficacy scale” (Schwarzer & Jerusalem, 1995) and “self-esteem scale” (Rosenberg, 1965). The results indicated significant relationship between teachers‟ efficacy and general self-efficacy and self-esteem. It was found that low self-esteem and low general self-efficacy led to low teachers‟ efficacy and consequently substandard performance in the class. On the contrary, high teachers‟ efficacy was a reflection of high self-esteem and high general self-efficacy.

Aurah & McConnell (2014), in their study, examined and compared science teacher efficacy beliefs of elementary pre-service teachers in Kenya and U.S.A. by surveying 168 Kenyan and 189 US Pre-service teachers through a cross-sectional survey research design. Data were collected using STEBI-B scale, an inventory developed by Enochs and Riggs (1990), with a reported Cronbach's Alpha coefficients as 0.90 and 0.76 for Personal Science Teacher Efficacy (PSTE) and Science Teacher Outcome Expectancy (STOE), respectively.. The dependent variables were PSTE and STOE scores. The independent variables were participant gender and country of origin. Results indicate a significant interaction between gender and country. There was a significant main effect for country but not for gender. Results indicated a statistically significant difference in the PSTE with USA scoring higher on average and a significant difference in the STOE score with Kenya scoring higher. McKinnon & Lamberts (2014) conducted a study to determine if informal education institutions, such as science centers, could provide professional development that influences the science teaching self-efficacy beliefs of pre-service and in-service primary school teachers. A cohort of eight final-year pre-service teachers and 13 in-service teachers in Australia participated in this research over a period of 18 months. The results of this research showed that four hours of professional development workshops produced by science centers were capable of increasing the science teaching self-efficacy of all but three participants, with observable effects for at least 11 months after the completion of the workshops. The participants identified the workshops as a positive influence on their science teaching, and an important source of confidence and motivation.

Warkentin & Robert W (2014): This research conducted on the relationship between college students' study activities, content knowledge structure, academic self efficacy and classroom achievement. The theoretical model describes the components of academic studying focusing on

antecedents as well as the consequences of studying. This study uses correlation means to explore the relationship among student characteristics, study activities, and outcomes for 42 education majors. Study activities were assessed with a self-report questionnaire. Also determined were academic self-efficacy, success on a concept similarity rating task, prior academic ability (current grade point average), and results of an achievement criterion test. Students with a higher sense of academic self-competence reported more engagement in higher-level cognitive strategies, and more efficacious students tended to perceive the source of engagement in generative processing as coming from their own thoughts rather than an external prompt. However, cognitive strategies by themselves do not add much to test performance for students already possessing strong self-efficacy perceptions. Academic self-efficacy and internal consistency of students' knowledge structures were significant predictors of classroom achievement. Six tables and four figures present study findings.

Klessen, Bong and others (2009): Conducted a study about the validity of the teacher's sense of self-efficacy scale (TESE) in five settings Canada, Korea, Singapore and the United States. The second purpose was to establish the importance of the teacher self-efficacy construct across diverse teaching conditions. Multi-group confirmatory factor analysis was used to study the measurement invariance of the scale across countries, after which the relationship between the TSES and factors like job satisfactory was explored. The TESE showed evidence of reliability and measurement invariance across the five countries and the relationship between the TSES and job satisfaction was similar. This study on teacher's self-efficacy was a valid construct across culturally diverse setting and the teachers self- efficacy showed a similar relationship with teacher's job satisfaction in five contrasting setting.

Chan (2008): Conducted a study of emotional intelligence(intrapersonal and interpersonal) and general teacher self-efficacy to represent personal resource facilities active and passive coping in a sample of 273 chine's prospective and in-service teachers in Hong Kong. Intrapersonal emotional intelligence were found to predict the significance in active coping strategy, but teacher self-efficacy did not countries independently to the prediction of active coping even through there was some evidence that teacher self-efficacy might intelligence in the prediction of active coping, especially for the findings for preventive intervention efforts combat teacher.

Lancaster J and Brain (2008): Conducted research on the design of inclusive education courses and self-efficacy of pre-service teacher- students. This study examines whether participation in a 13 week undergraduate inclusive education course co varied with an improvement in the self-efficacy of pre-service elementary education teachers. We sought to determine whether self-efficacy was influence differentially by the type of field-based placement experience by students in the course. The results showed that on improvement in students in the inclusive education course although the field based placement did not differentially affect self-efficacy at a statistically significant level.

Magrio C. and Sembrno J (2007): Conducted a study on the role of teacher efficacy and characteristic on teaching effectiveness, performance and use of learner centered practice. The study tested two models on the interaction of teacher variables using structure equations modeling. The first model the effect of teacher's personality was tested. In the secondary model, the effects of learner-centered practices a teacher's performance, effective teaching and teaching efficacy were included. 296 teachers from a community college were assessed by their students on their teaching inventory. The learner centered practice questionnaire was devised by the researchers and

the teachers assessed themselves using a good personality characteristics scale and the teacher efficacy inventory by Cilbson and Dembo. In the SEM analysis, the two models did not change on their measures of goodness of fit with RMSEA of 045 indicating that both models have a rather good fit. The research findings showed that the teacher practicing learner-centered approaches use their self-efficacy in order to be effective in teaching, but it was also found that being effective does not result in high teaching performance ratings. The use of learner centered practice was seen as effective but does not warrant having high rating based on student assessment.

Mogogwe and Olive (2007): Conducted a study on 480 students from primary schools, secondary schools, and a tertiary institution. A modified version of a strategy inventory for language learning developed on strategies and the Morgan .Jinks student efficacy scale developed by Junks and organ (1999) for collecting information on self efficacy were used in this study, finding of the research indicated that here is a significant and positive relationship between self-efficacy beliefs and over all use of language learning strategies for the students with three proficiency levels mentioned.

Skaalvik, Einar, Skaalvik, and Sidsel (2007): Conducted a study on the authors developed and factor analyzed the Norwegian Teacher Self-Efficacy Scale. They also examined relations among teacher self-efficacy. Participants were 244 elementary and middle school teachers. The analysis indicated that the conceptualization of teacher self-efficacy as a multidimensional construct. They found strong support for the teacher 6 separately, but correlated dimensions of teacher self-efficacy, which were included in the following subscales, like Instruction and adapting education to Individual Students, needs, motivation students, keeping discipline, co-operating with colleagues and parents and coping with changes and challenges. They also got support for 2nd -

order self-efficacy factor underlying the 6 dimension. Teacher self-efficacy was conceptually distinguished from perceived collective teacher efficacy and external efficacy and teacher burnout.

Hanif (2005): Conducted a study on role of self-efficacy in teacher stress and job performance of women school teachers. This research was conducted to identify levels and sources of teacher stress, relationship of teacher stress with teachers‟ job performance and self-efficacy of women school teachers and to find out the moderator's role of self-efficacy in teacher stress and job performance relationship. The research was carried with two independent samples i.e., teachers and students. Sample was comprised of 330 women secondary school teachers sample II was 990 students, randomly selected from the classes of sample. Results showed that teachers displayed moderate levels of stress, and highest scores were displayed on work related stressors. The significant negative correlation was found in between teacher stress and job performance and also between teacher stress and teacher efficacy. The moderated multiple regression analysis revealed that the high self-efficacy play's a moderator role in relationship of teacher stress and job performance.

Stellern Jain, Bruce (2005): Investigated the effect of attribution feedback on self efficacy judgments among a sample of 192 eight grade students. Self-efficacy judgments were measured by the scale developed by Bandura and Schunk. The result showed that improvement in self-efficacy judgments was significantly more for attribution feedback condition as compared to no attribution feedback conditions. When different feedback condition were compared, it was found that the self-efficacy judgments most positively, ability feedback was second and ability and effort was in the third position.

2.3 RESEARCHES STUDIES ON COGNITIVE STYLE

Studies conducted in India

Vidyanand S. Khandagale (2016): Conducted research on A Study of Cognitive Style among Teacher Educators Teacher educator carries multilayer effect. The cognitive style influences their teaching-Learning process and classroom behavior which determines the classroom culture and student teacher learning. In the context of Globalization and Information age the speed of social change and knowledge construction has taken enormous change in the field of Education. The concept of constructivist class room will only work when it will initiate from the teacher education programme. In the present study researcher had made an attempt to identify the cognitive styles of teacher educators based on Gender and Discipline. He conducted survey was conducted by providing Alert cognitive style scale and findings state that left brain is dominant for both the variables i.e. Gender and Discipline.

Varun M., ShobanaPriya S. (2016): Conducted research on a study on the relationship between field dependent-Independent Cognitive Style and Brain Dominance among college students, the study examined count the Gaze pattern of individual differing in FD-I cognitive style and finding revealed the difference in Blink count, Saccade count and Fixations. Cognitive style also termed as learning style has its implication in education among students and students differing in their hemispheric preferences has their own set of proficiency. The present study investigates the relationship between FD-I cognitive style and hemispherical preference among students pursuing majors that requires distinct capabilities. 45 participants of 15 from each department were selected randomly. Participants were administered with group embedded figure test and brain dominance inventory.

Finding indicates the discrepancy in distribution of FD-I cognitive style and brain dominance among students belonging to different majors. Equal distribution was found in cognitive style and brain dominance among CDF students. But in terms of mathematics department, field Independent S‟ outnumbered field department S‟ and those who were FI preferred hemispherical dominance is also right. Overall finding concludes that more than half of the students which belongs to FI cognitive styles and for the most part of they were right hemispheric dominant. Practical implication of the results was discussed.

Joshith V.P & Renjith J.S (2015): Conducted research on cognitive styles in relation pedagogic content knowledge among secondary school teachers, the aim of this study is to find out the effectiveness and adjustment among secondary school teachers with regard to gender, type of school, location of the school, discipline, marital status and experience in teaching profession. The study was carried out on a sample of 300 secondary school teachers. The results revealed that majority of the secondary school teachers showed a moderate level of cognitive style and pedagogic content knowledge. There is a positive correlation between cognitive style and pedagogic content knowledge among secondary school teachers.

Neeru Sharma (2015): Conducted research on scientific creativity in relation to cognitive style and achievement in subject of science of secondary school students, the main aim of this study the influence of cognitive style, achievement in science and their interaction on scientific creativity of secondary school students. The total 2015 students of classes IX and X (means age 14.8 years) studying in schools affiliated to central board of secondary education were taken as sample. Standardized tools, namely, group embedded figures test by Wikin, Oltma, Raskin, scientific creativity test by Mujumdar were used to collect dat. Marks of students from school records were

taken as measure of their achievement in science. The data were analyzed using 2x3 analysis of variance. Field independent student had significantly higher scientific creativity than field dependent students. Also, students with high achievement in science had significantly higher creativity than students with low achievement in science.

MaruJasvanti. (2014): Conducted study on a co-relation study of cognitive styles, career interest and academic performance of secondary school student. In this research has studied correlation between cognitive styles and career interest, academic performance of secondary school students 320 students were taken as a sample for this study.

PannuRrandep (2013): Conducted on the correlation of cognitive style, standard of living, sex and educational achievement in teenage students in this research. The sample was taken from higher secondary level of urban and rural areas. For this study 545male and 661 females were selected. Through research study according to sex and student cognitive style was seen that there is significant difference in students educational achievement. Conclusion was that female's educational achievement was more than makes. In institutional style males education achievement was high.

Vakharia Radhika (2006): Conducted study on the subject a study of cognitive of secondary school students in relation to their emotional maturity in this research. The researcher had studied correlation cognitive style of secondary level teachers with their emotional maturity. 789 students were taken as a sample for this study. The researcher selected tools from secondary student's cognitive style as per sex. There appeared difference in emotional maturity regarding dependent styles and independent styles.

Verma, Preeti (2006): In this article "Cognitive Process differences among L.D"s (Learning Disorder) and N.L.D"s (Nonverbal Learning Disorder) in perspectives in education. The study to find out in what ways L.D and N.L.D would differ significantly in respect to their cognition. L.D and N.L.D were found to be significant with respect to selective attention, auditory, visual discrimination, and figure- ground perception score. Memory failed to discriminate between the two groups significantly.

Studies conducted in abroad

Sedat Altintas Izzet Gorgen (2018): This study was conducted on the effects of pre service teachers" cognitive styles on learning approaches. The main purpose of this study is to investigate the effects of prospective teachers" cognitive styles on learning approaches. It is aimed to define whether exist significance differences between defining prospective teachers cognitive styles and learning approaches and demographic variables within the scope of the mean purpose. For data collection "The Group Embedded Figures Test" was administered to define prospective teachers" cognitive style in the study. On the other hand "The Revised Two Factor Study Process Questionnaire" was used to reveal prospective teachers" learning approaches. According to the findings, prospective teachers generally have field dependent cognitive style. It is determined that between with prospective teachers" gender and academic success and cognitive style scores there isn't any significant difference revealed. However, there is significant difference between branches and cognitive style scores. It has been viewed that prospective teachers prefer deep learning approach generally. There isn't significant difference between gender and learning approaches yet there is significant difference between learning approaches-branches and academic success. It is

also concluded that as prospective teachers‟ cognitive styles approaches to field independent, deep learning approach preference of prospective teachers has diminished.

SilvanaMiceli, Valeria de Palo (2018): This study was conducted on the Italian Version of the Cognitive Style Indicator and its Association with Decision-Making Preferences. This study shows that the Cognitive Style Indicator (CoSI) includes 3 cognitive dimensions: creating (flexible, open ended and inventive), knowing (emphasizing facts, details, objectivity, and rationality), and planning (guided by preferences for certainty and well-structured information). The first aim of this research was to validate the 3-factor structure of the CoSI within the Italian context. The second was to verify whether cognitive styles, as measured by the CoSI, accounted for individual differences in decision-making processes. Two studies were conducted using 2 different samples (n = 549 and n = 397). Confirmatory and multigroup factor analysis corroborated the 3-factor model and the measurement invariance of the instrument across genders. Reliability indices showed good internal consistency, as well as good levels of convergent and discriminate construct validity. Results from structural equation model revealed that cognitive styles, as measured by the CoSI, predicted individual differences in intuitive and deliberative decision making processes. Findings of the study gave evidence for the validity of the Italian version of the CoSI and for the causal relationship between cognitive styles and decision-making processes.

Alomyan, H (2016): This research was conducted on Web-based Learning: Cognitive Styles and Instructional Strategies. In this study the researcher investigated whether different instructional strategies might interact with individual’s cognitive style in learning. A web-based learning package was designed employing three strategies, Interactive Concept Maps, Illustration with Embedded Text and Text-Only. Group Embedded Figure Test was administered to 178 university

students to identify their cognitive style as field dependent or field independent. Findings showed that no significant difference in performance was found between field dependents and field independents in Concept Maps and Illustration with Embedded Text treatment condition. However, a significant difference was found in between field dependents and field independents in the Text-Only treatment condition. Also significant interaction was found between cognitive style and treatment type.

Ozlem Yagcioglui (2016): This research was conducted on the positive effects of cognitive learning styles in let classes. The study shows that in the EFL, ESL, ESP and in the ELT classes, students are taught their courses with different kinds of methods and approaches. Cognitive learning styles are the most essential styles in foreign language education. In this study, the positive effects of cognitive learning styles will be handled. The benefits of these styles will be highlighted. Games on cognitive learning styles will be explained. Sample classroom activities will be shared.

Singh Venita (2015): Conducted research on cognitive and non-cognitive variables as predictors of emotional maturity of adolescents. This study examine and compare the predictive efficiency of the six cognitive and non- cognitive variable of academic achievement, intelligence, emotional intelligence and eight measures of family environment and overall scores on family environment, self-concept and six measures on mental health and overall scores on mental health towards the criterion variable of emotional maturity. Data was collected from various government and private senior secondary schools situated in urban and rural areas of seven districts of Punjab consisting of 939 male and female adolescents responding to an information blank prepared by the investigator herself and emotional maturity scale by Singh and Bhargave, group test of general mental ability by tendon, emotional intelligence scale by Khera and Sarabjeet Kaur, family

environment scale by Bhatia and Chaddha, self concept questionnaire by Saraswat, and mental health inventory by Jagdish. Result revealed that all the cognitive and non- cognitive variable academic achievement, intelligence, emotional intelligence, family environment, mental health and self concept are found to be good predictors of emotional maturity of adolescents.

Sherry Y. Chen & Li-Ping Chang (2014): The research conducted on the influences of cognitive styles on individual learning and collaborative learning. The study shows that both individual learning (IL) and collaborative learning (CL) provide students with different benefits. However, previous research indicates that cognitive styles affect students‟ learning preferences. Thus, it is necessary to examine how cognitive styles influence students‟ reactions to Individual learning and Collaborative learning. Among various cognitive styles, Pack's Holist /Serialist biases have recently received considerable attention. Accordingly, the current study aims to illuminate how Holists and Seriailsts react to IL and collaborative learning. Subsequent results indicate heterogeneous groups with both Holists and Serialists obtain the best learning performance when undertaking collaborative learning. The findings suggest that there is a need to provide Serialists with additional support, regardless of either individual learning L or collaborative learning.

Chrysostomou, Pitta- Pantazi, Tsingi, leanthous and Hristou (2013): Conducted research on examining number sense and algebraic reasoning through cognitive styles. Recently, a new cognitive style approach was introduced, which refers to two types of visualizes. This approach was based on neuro psychological evidence and neuron imaging results, which suggested that the existence of two distinct imagery subsystems, the object and the spatial imagery subsystems. The goal of the study was twofold; first to examine a possible relationship between this new cognitive style approach and achievement in number sense and algebraic reasoning tasks and second to

explore a possible relationship between the strategies used in solving the aforementioned tasks and cognitive styles. A mathematical test on number sense and algebraic reasoning and the self-report object- spatial imagery and verbal cognitive style questionnaire were administrated to 83 prospective school teachers (PSTs).The result indicated that spatial imagery, in contrast to the object imagery and verbal cognitive styles, is related to achievement in number sense and algebraic reasoning. In addition to this, the results revealed that the higher the PST‟s tendency towards spatial imagery cognitive style, the most conceptual and flexible strategies they employ in algebraic reasoning and number sense tasks.

Changju Shi (2011): The researcher studied the relationship between Cognitive Styles and Learning Strategies. This study focuses on the relationship between cognitive styles and learning strategies of 184 second-year English majors from the Foreign Language School of a university in Wuhan. In this study, quantitative data was presented.Two self-reported inventories were employed. Learning Style Survey was used to examine the learning styles of the participants and the Chinese version of Oxford's Strategy Inventory for Language Learning (SILL) was conducted to survey the subjects‟ learning strategies. The results show that cognitive styles have significant influence on learners‟ choices of learning strategies. Synthesizing style, sharpener style, field-independent style and impulsive style of cognitive styles correlate positively almost with every strategy presented in this research so they turn to be the most influential cognitive styles that have an impact on learners‟ learning strategy choices.

Sagiv, Arieli, Goldenberg & Goldschmidt (2010): Conducted research of structure and freedom in creativity: the interplay between externally imposed structure and personal cognitive style. This research investigated how creativity is influenced by external imposed structure, internal, cognitive

produced structure and the interaction between these two factors. Reviewing past literature, it was found that there is a contradiction. Studies that focused on the situation perspective found that externally imposed structure increases creativity. The finding of both studies revealed that creativity was higher under structured condition. It also showed that intuitive individuals are more creative than systematic individual.

Pitaa-Pantazi & Consgantions Christou (2009): Conducted research on cognitive styles, dynamic geometry and measurement performance. The researcher investigated the effect of students‟ cognitive styles on achievement in measurement tasks in a dynamic geometry learning environment, and to explore the ability of dynamic geometry learning in accommodating different cognitive styles and enhancing students‟ learning. A total of 49, VI grade students were tested using the VICS (Peterson's verbal imagery cognitive styles) and the extended CSA-WA tests administration guide. New Zealand: Peterson for cognitive styles. The same students were also administered a pre-test and a post test involving 20 measurement tasks. All students were taught a unit in measurement with the use of dynamic geometry, after a pre-test. As expected the dynamic geometry software seems to accommodate different cognitive styles and enhances student‟ learning. However, country showed that more in measurement achievement in the environment of dynamic geometry than students who had a tendency towards other cognitive styles.

Hanushek and Ludger Woessmann (2008): Conducted research on the role of cognitive skills in economic development. The role of improved schooling for most development strategies, has become controversial because expansion of school attainment has not guaranteed improved economic conditions. This research showed that the role of cognitive skills in promoting economic well-being, with a particular focus on the role of school quality and quantity. It concluded that the

cognitive skills of the population rather than more school attainment are powerfully related to individual earnings, to the distribution of income, and to economics growth. New empirical results show the importance of both minimal and high level skills, the complementarily of skills and growth. International comparison developed data on cognitive skills reveal much larger skill deficits in developing countries that generally derived from just school enrolment and attainment. The magnitude of change need to makes clear that closing the economic gap with development countries will require major structure changes in schooling institutions.

Kreutzm Sxhubert & Mitchell (2008): Conducted research on cognitive styles of music listening. It was empathizing characterized as the capacity to respond to felling states of other individual, whereas systemizing was characterized as the capacity to respond to regularities of objects and events. To investigate these traits within the music domain, a questionnaire study was conducted. Constructed validity and reliability of the measurement instrument were assessed by factor analysis procedures. A simplified unit weighting scale was used to demine individual difference in music empathizing and music systemizing. Significant effects of sex and of music performance experience were observed, a highly similar pattern of results emerged from a replicating survey using a short- version of the questionnaire. These results suggested that the ME and MS traits corroborate and extend the general E-S theory.

Raffaella Nori & Fiorella (2006): Conducted research on predicting cognitive styles from spatial abilities. Previous studies on spatial memory reveal that people represent spatial information in 3 different forms, landmark, out and survey. The aim of these studies to assess spatial abilities in order to predict a person's cognitive style. In order to do this the researchers used 9 different spatial tasks, which were tasks are able to distinguish different levels of spatial abilities.

2.4 CONCLUSION

The production of new knowledge is fundamentally depend on past knowledge, proving this the literature reviews are the practice papers ensured the success of a researcher by giving several kinds of research designs, sampling, techniques, statistical procedures, questionnaire and processes of presenting analyzing and interpreting data from where will be the research problem. The reviews done by the researcher shows that the path of self-efficacy and cognitive style. Therefore, researcher intends to study the challenges faced by the student, teachers etc. literature review is not just a descriptive test of the material available or a set of summaries; it is a laborious task but very essential if the research process is to be successful.

METHODOLOGY

CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

Research Methodology is a way to find out the result of a given problem on a specific matter or problem that is also referred as research problem. In Methodology, researcher uses different criteria for solving/searching the given research problem. Different sources use different type of methods for solving the problem. If we think about the word “Methodology”, it is the way of searching or solving the research problem. (Industrial Research Institute, 2010).

Research is an academic activity and as such the term should be used in a technical sense. According to Clifford Woody research comprises defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organizing and evaluating data; making deductions and reaching conclusions; and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis.

3.2 DESIGN OF THE STUDY

Research design stands for advanced planning of the methods to be adopted for collecting the relevant data and the techniques to be used in the analysis. The study was conducted under survey method to determine the "Relationship between Self Efficacy and Cognitive style among B.Ed student-teachers". The main concern of the study is to know the relationship between two variables by applying correlation method to know whether the variables are related with each other. The sample from the target population was selected using purposive sampling method. The investigator has taken 150 samples of both male and female of B.Ed student-teachers from different colleges and universities. The data are collected through Google forms.

3.3 SAMPLING OF THE STUDY

The sample of the present study consisted of 150 B.Ed student-teachers of both male and female from different colleges which it has three B.Ed colleges in coimbatore district. The study followed purposive sampling method. Out of 150 students, 30 males and 120 females student-teachers were responded to the questionnaire through Google forms.

3.4 DESCRIPTION OF THE TOOLS

The investigator has taken standardized tool. The tools used in this study are General Self Efficacy tool it was developed by Gilan Chen and Team in 2001. The Reliability of GSE are Cronbach's alpha. The values for Cronbach,s alpha are 0.76 and 0.90.

The Validity of General Self Efficacy Scale was face method were obtained. The other tools used in this study are Cognitive style Inventory scale it was developed by Pradeep Kumar Jha in 2001. The Reliability of CSI are Cronbach's alpha. The values of Cronbach's alpha are 0.70 and 0.81. The Validity of Cognitive style inventory Scale was face method were obtained.

3.4 PERSONAL ENVIRONMENTAL FACTORS OF THE TOOL

The personal environmental factors of the tools are obtained from the B.Ed student-teachers of both male and female from different colleges. The demographic variables for Self Efficacy and Cognitive style tools used in the study are

1. Gender
2. Locality
3. Age
4. Educational qualification
5. Family structure

The questionnaire obtained for Self efficacy and Cognitive style are typed in Google forms. The forms are sent it through link to B.Ed student-teachers to fill. The data are collected through Google forms due to pandemic situation.

3.5 TOOL DESCRIPTION AND ADMINISTRATION

The study has two variables Self Efficacy and Cognitive style. A questionnaire obtained for both variables contains 50 questions. 10 questions for Self efficacy and 40 questions for Cognitive style for B.Ed student-teachers. The questions are converted into Google forms and the link is shared to student-teachers. Each student has to respond to each questions represented multiple choice type. The Self efficacy statements were related to behaviours, capacity, ability, solving problems and emotions in their work. The Cognitive Style statements were related to individual's attitude, values, social interaction, thinking and capacity to solve problems in their work. The study wanted to know the students self efficacy and cognitive style level in their work and to study the relationship between two variables Self Efficacy and Cognitive style. This study wanted to know if there is any relationship between self efficacy and cognitive styles by applying correlation test of these two variables.

The Questionnaire in Google forms of Self Efficacy and Cognitive style has been sent to B.Ed student -teachers for their responses and 150 students for both male and female are responded it.

3.6 MEASUREMENT OF THE TOOL

The study contains 150 samples of both male and female of B.Ed student-teachers. The questionnaire contains 50 questions. 10 questions for Self Efficacy and 40 questions for Cognitive Style. Self Efficacy questions comes under 4 point likert scale. Each item carries minimum 1 to maximum 4 points. The scoring value of each student contains minimum 1to maximum 40. The Cognitive Style questions have 40 questions. Cognitive style Inventory Scale comes under 5 point

likert scale. Each item carries 5 points. The scoring value of each student contains minimum 1 to maximum 50.

3.7 SAMPLE FOR THE MAIN STUDY

This study mainly focused on Relationship between Self Efficacy and Cognitive Style among B.Ed student-teachers. The reason for choosing B.Ed student- teacher's it is believed that Self Efficacy and Cognitive Style are most required for their carrier development. The High level of Self Efficacy experience high level of Job satisfaction, low level of job related stress and face less difficulties in dealing with students. The cognitive style helps them to improve perceiving, thinking, remembering and problem solving. The sample taken is 150 B.Ed student-teachers in and around Coimbatore city.

Table 1:

Distribution table:

S. No	Demographic variables		Number of samples	Percentage
1	Gender	Male	30	20%
		Female	120	80%
2	Locality	Urban	79	52%
		Rural	71	48%
3	Age	20-25	123	82%
		26-30	17	11%
		30 and above	10	7%
4	Educational qualification	UG	105	70%
		PG	45	30%
5	Family structure	Joint	40	27%
		Nuclear	110	73%

3.8 HYPOTHESES

1. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Gender.

2. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Locality.

3. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Age.

4. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Educational Qualification.

5. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Family structure.

6. There is a significant mean score difference in the Cognitive Style of B.Ed student-teachers based on Gender.

7. There is no significant mean score difference in the Cognitive Style of B.Ed student-teachers based on Locality.

8. There is no significant mean score difference in the Cognitive Style of B.Ed student-teachers based on Age.

9. There is no significant mean score difference in the Cognitive Style of B.Ed student-teachers based on Educational Qualification.

10. There is no significant mean score difference in the Cognitive Style of B.Ed student-teachers based on Family structure.

11. There is no relationship between Self Efficacy and Cognitive Style of B.Ed student-teachers.

3.9 STATISTICAL ANALYSIS OF THE DATA

INTRODUCTION

It's the science of collecting, exploring and presenting large amounts of data to discover underlying patterns and trends.

Statistical knowledge helps to use the proper methods to collect the data, employ the correct analyses, and effectively present the results.

The statistical analysis of data used for Relationship between Self Efficacy and Cognitive Style among B.Ed student-teachers are

1. Mean
2. Standard Deviation
3. ANOVA test
4. t-Test
5. Pearson's correlation coefficient

Mean:

For a data set, the arithmetic mean, also known as arithmetic average, is a measure of central tendency of a finite set of numbers.

Standard Deviation:

A quantity expressing by how much the members of a group differ from the mean value for the group.

ANOVA test:

Analysis of variance is a collection of statistical models and their associated estimation procedures used to analyze the differences among means. This study has choosen three categories of Age (20-25, 26-30 and 30 and above). Hence ANOVA has been adapted.

t-Test:

A t-test is a statistical test that is used to compare the means of two groups. It is often used in hypothesis testing to determine whether a process or treatment actually has an effect on the population of interest, or whether two groups are different from one another.

Pearson's correlation coefficient:

The Pearson correlation coefficient also known as Pearson's r, the Pearson product-moment correlation coefficient, the bivariate correlation, or colloquially simply as the correlation coefficient is a measure of linear correlation between two sets of data. The study has chosen correlation to calculate the relationship between two variables.

3.11 CONCLUSION

In this chapter, the methodology of the present investigation is explained. A clear view about the method selected, administration of the tool and evaluation of the tool are discussed. Thus the data obtained was consolidated analyzed interpreted and presented in chapter IV.

ANALYSIS AND INTERPRETATION

CHAPTER 4

ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

This section is the heart of the research report. The report should be highly organized and divided depending on the number of objectives of the study, each being devoted for presenting the results pertaining to an objective. The formulae and statistical procedures which were used in the analysis of the data will be clearly specified and explained in detail here. Analysis can be defined as a detailed study of collected data, which is converted to tabulated data, so as to determine the actual facts, which are inherent. Analysis is a research technique for the objectives, systematic and qualitative description of manifest content of communication.

The analysis of data, involves a number of operation , which are performed with purpose of summarizing the collected data and organizing them in such a manner that they will yield answer to the question in research. If analysis involves data organizing in a particular manner, then it is the interpretive ideas that govern this task if the product of analysis is the setting up of certain general conclusions really mean and reflect is the bare minimum that researcher would want to know. Interpretation is the way to gain knowledge. Thus the task of analysis is incomplete without interpretation coming into play.

4.2 DESCRIPTIVE ANALYSIS OF DATA

The investigator has taken 150 samples of both male and female B.Ed student-teachers from different colleges in Coimbatore district. The demographic variables used in this study are Gender, Locality, Age, Educational qualification and Family structure. The data are collected through Google forms due to pandemic situation. The questions asked in Google forms are 10 item for Self

Efficacy and 40 items for Cognitive Style. The statistical method used to calculate the data are Mean, Standard Deviation, t-test, ANOVA test and Pearson's correlation coefficient. The Mean test is used to find the average of the sample. The Standard Deviation is used to measure the amount of variation of set of values. The t-Test used in the study is to determine if there is any significant difference in the mean score of two groups. The ANOVA test is used for testing three or more variables. The Pearson's correlation coefficient test is used to compare the two variables if they had any relationship between them.

4.3 STATISTICAL ANALYSIS

It's the science of collecting, exploring and presenting large amounts of data to discover underlying patterns and trends. The statistical analysis used in this study is

1. Mean
2. Standard Deviation
3. t-Test
4. ANOVA test
5. Pearson's correlation coefficient

4.4 STATISTICAL ANALYSIS OF DATA

It's the science of collecting, exploring and presenting large amounts of data to discover underlying patterns and trends. The study Relationship between Self Efficacy and Cognitive style among B.Ed student-teachers are undergone statistical analysis that are calculated the data with statistical method. The statistical method are used to calculate the two groups of demographic variables. The demographic variables are Gender, Locality, Age, Educational qualification and Family structure.

Mean:

Mean is an average that is used to calculate set of values of two variables for both sample male and female.

Standard Deviation:

Standard deviation is used to measure the amount of values. It is used to calculate each demographic variables of different section.

t-Test:

t-test is used to determine if there is a significant difference between means of two groups of demographic variables.

ANOVA test:

ANOVA test is used to calculate difference among means. The study has choosen three categories of demographic variable (Age). The ANOVA test had undergone to calculate the three categories to get whether it is significant.

Pearson's correlation coefficient:

Pearson's correlation coefficient is a measure of linear correlation between two sets of data. The main focus of the study is to measure correlation between two variables Self Efficacy and Cognitive style to see the two variables had a relationship or not.

4.5 HYPOTHESES OF THE STUDY

1. The study shows that the correlation between two variables Self Efficacy and Cognitive style had a perfect relationship with each other. Hence, it had high relationship between these two variables.
2. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Gender.

3. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Locality.
4. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Age.
5. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Educational qualification.
6. There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Family structure.
7. There is a significant mean score difference in the cognitive style of B.Ed student-teachers based on Gender.
8. There is no significant mean score difference in the cognitive style of B.Ed student-teachers based on Locality
9. There is a significant mean score difference in the cognitive style of B.Ed student-teachers based on Age.
10. There is no significant mean score difference in the cognitive style of B.Ed student-teachers based on Educational qualification.
11. There is no significant mean score difference in the cognitive style of B.Ed student-teachers based on Family structure.

4.6 SAMPLE DISTRIBUTION:

Table 4.1 Sample based on the demographic variables

S.NO	Demographic Variables		Number of samples	Percentage
1	Gender	Male	20	20%
		Female	130	80%
2	Locality	Urban	79	52%
		Rural	71	48%
3	Age	20-25	123	82%
		26-30	17	11%
		30 and above	10	7%
4	Educational qualification	UG	105	70%
		PG	45	30%
5	Family structure	Joint	40	27%
		Nuclear	110	73%

The various statistical procedures adopted are as follows:

Correlation between Self Efficacy and Cognitive style

Hypotheses 1:

There is a perfect correlation between two variables Self Efficacy and Cognitive style. It had a high relation between two variables.

Variables	R-Value	LOS
Self Efficacy and Cognitive Style	0.92	0.05 level

Table 4.2: Correlation between Self Efficacy and Cognitive Style

The table (4.2) shows that the correlation between Self Efficacy and Cognitive style are strongly and positively correlated with each other. The obtained R-Value is (0.92) which is highly correlated. Hence it proves that the two variables are strongly related with each other. So the null hypothesis 1 is rejected.

Discussion:

From the table (4.2) it is shown that the correlation between two variables Self Efficacy and Cognitive style are perfectly correlated with each other. Hence it shows that they had high relationship with each other.

Figure 4.1 Correlation between Self Efficacy and Cognitive Style

4.7 Descriptive analysis for General Self Efficacy Questionnaire:

Under descriptive analysis, the following details were included. In accordance with selected samples of 150 male and female students values were listed as follows:

Hypotheses 2:

There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Gender.

Gender	N	Mean	SD	t-Value	Result
Male	30	28.63	5.73	1.83	Non Significant at 0.05 level
Female	120	30.75	5.58		

Table 4.3 Self Efficacy of the sample in relation to the Gender

The table (4.3) indicates that there is no significant mean score difference in the Self Efficacy of B.Ed student teachers based on Gender. The obtained t- value is 1.83.Hence, the null hypotheses H.2 is accepted.

Discussion:

From the table (4.3), it is shown that the t-value 1.83 shows that there is no significant difference in the scores of male and female students. Hence, the null hypothesis H.2 is accepted.

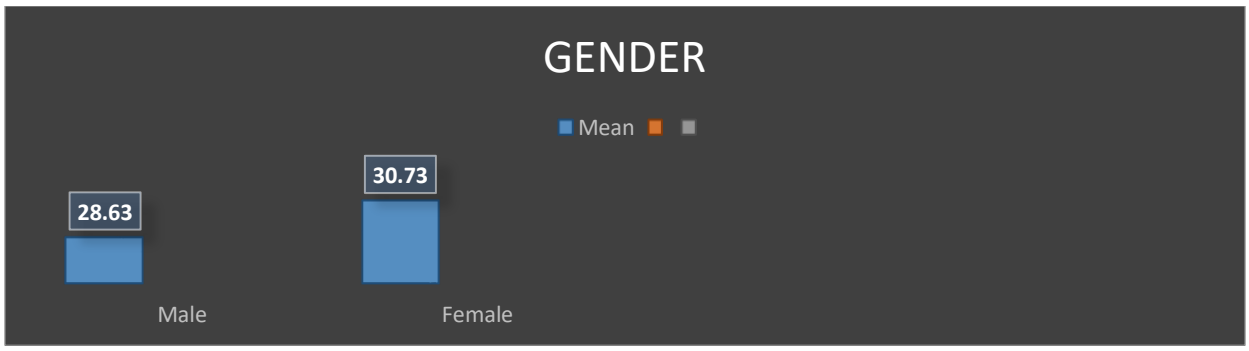

Figure 4.2 Self Efficacy of the sample in relation to the Gender

Hypotheses 3:

There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Locality.

Locality	N	Mean	SD	t-Value	Result
Rural	79	30.20	5.81	0.21	Non Significant at 0.05 level
Urban	71	30.46	5.44		

Table 4.4 Self Efficacy of the sample in relation to the Locality

The table (4.4) indicates that there is no significant mean score difference in the Self Efficacy of B.Ed student teachers based on locality. The obtained t- value is 0.21. Hence, it proved that the null hypothesis H.3 is accepted.

Discussion:

From the table (4.4), it is shown that the t-value 0.21 shows that there is no significant difference in the scores of Rural and Urban of locality. Hence, the null hypothesis H.3 is accepted.

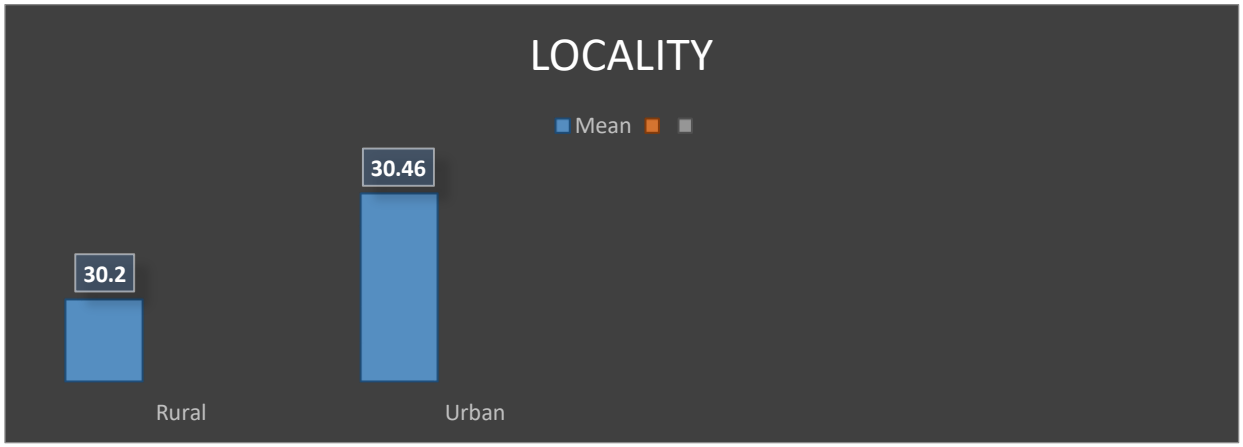

Figure 4.3 Self Efficacy of the sample in relation to the Locality

Hypotheses 4:

Source of variation	Sum of squares	Degrees of freedom	Mean squares	F_ value	LOS
Between group	60.88	2	30.44	0.956	Non significant at 0.05 level
Within group	4680	147	31 .83		

Table 4.5 Self Efficacy of the sample in relation to the Age

The table (4.5) indicates that there is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Age. The obtained F-value is 0.95. Hence, it proved that there is non significant in Self Efficacy of B.Ed student-teachers of different Age groups.

Discussion:

From the table (4.5), it is shown that the F-value 0.95 shows that there is no significant difference in the scores of Age groups. Hence, the null hypothesis H.4 is accepted.

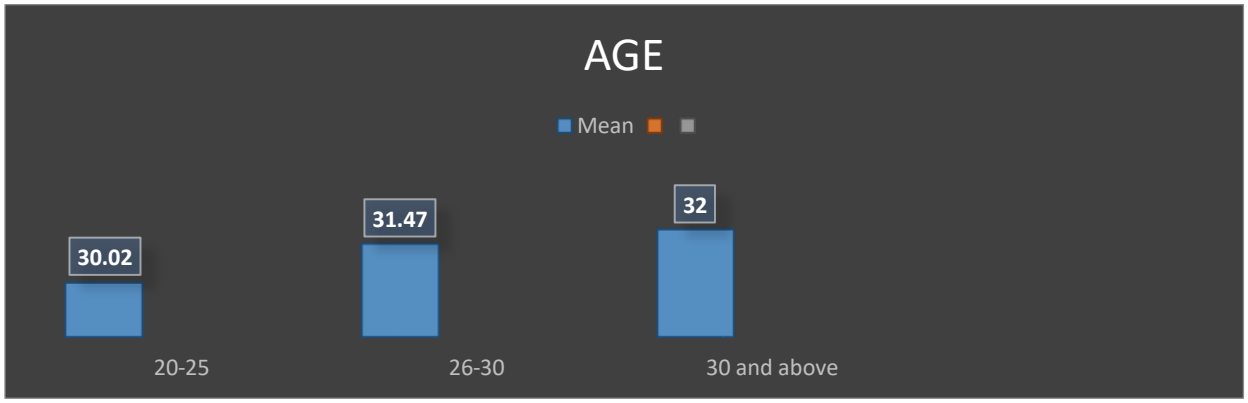

Figure 4.4 Self Efficacy of the sample in relation to the Age

Hypotheses 5:

There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Educational qualification.

Educational qualification	N	Mean	SD	t_ value	Result
UG	105	29.84	5.38	1.60	Non Significant at 0.05 level
PG	45	31.44	6.11		

Table 4.6 Self Efficacy of the sample in relation to the Educational Qualification

The table (4.6) indicates that there is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Educational Qualification. The obtained t-value is 1.60. Hence, it proved that there is a non significant in Self Efficacy of B.Ed student-teachers of Educational Qualification.

Discussion:

From the table (4.6), it is shown that the t-value 1.60 shows that there is no significant difference in the scores of UG and PG of Educational Qualification. Hence, the null hypothesis H.5 is accepted.

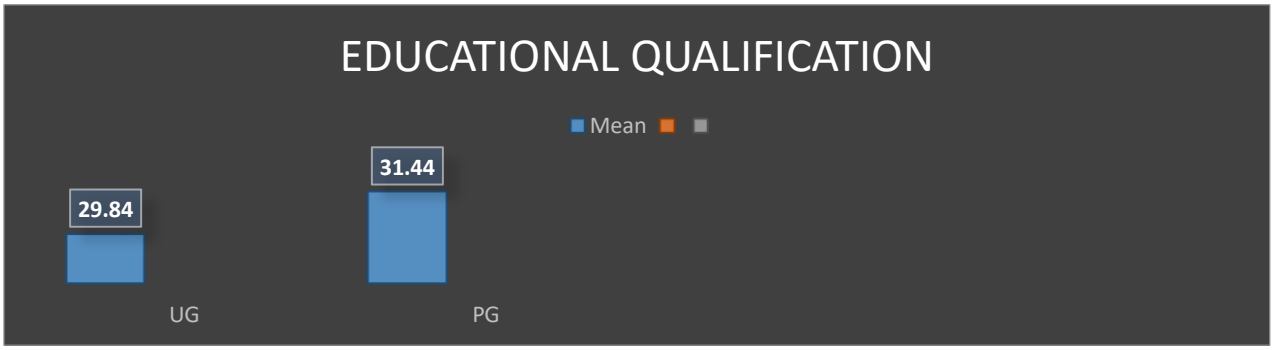

Figure 4.5 Self Efficacy of the sample in relation to the Educational qualification

Hypotheses 6:

There is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on the Family structure.

Family structure	N	Mean	SD	t_value	Result
Joint	40	29.02	5.75	1.74	Non Significant at 0.05 level
Nuclear	110	30.8	5.54		

Table 4.7 Self efficacy of the sample in relation to the Family structure

The table (4.7) indicates that there is no significant mean score difference in the Self Efficacy of B.Ed student-teachers based on Family structure. The obtained t-value is 1.74. Hence, it proved that there is a non significant in Self Efficacy of B.Ed student-teachers of Family structure.

Discussion:

From the table (4.7), it is shown that the t-value 1.74 shows that there is no significant difference in the scores of Family structure. Hence, the null hypothesis H.6 is accepted.

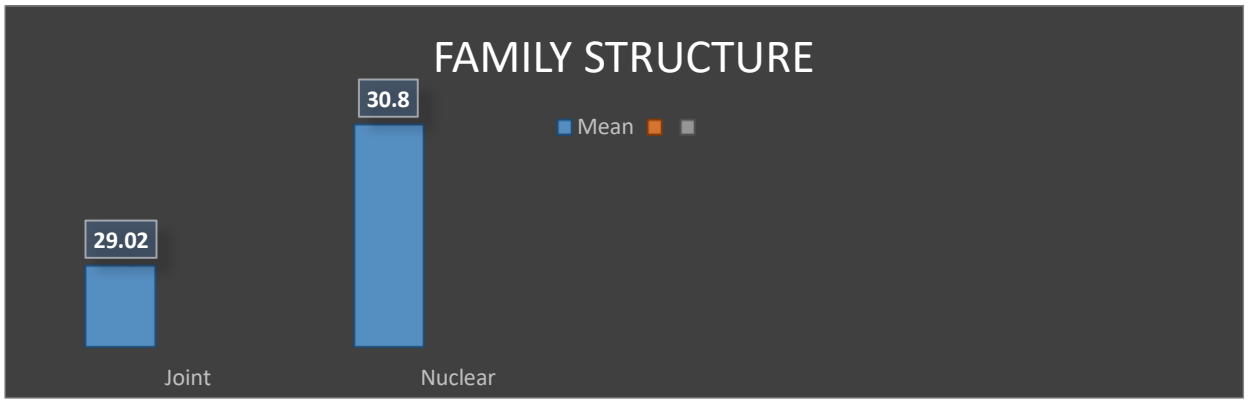

Figure 4.6 Self efficacy of the sample in relation to the Family structure

Weightage for Self Efficacy:

The Self Efficacy of B.Ed student-teachers shows that there is no significant mean score difference based on the demographic variables Gender, Locality, Age, Educational qualification and Family structure.

Discussion:

The Figure 4.7 weightage of the self efficacy shows that there is no significant mean score difference in the Self efficacy of B.Ed student teachers based on Gender, Locality, Age, Educational qualification and Family structure.

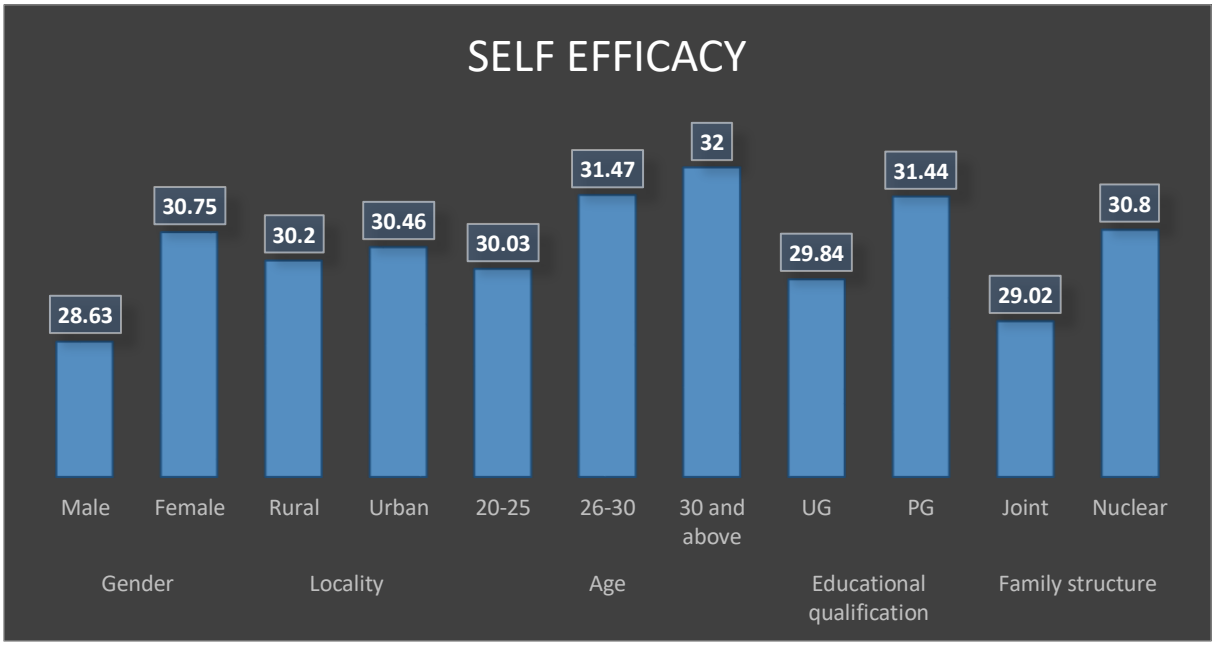

Figure 4.7 Weightage for Self Efficacy

Hypotheses 7:

There is a significant mean score difference in the Cognitive style of B.Ed student-teachers based on Gender.

Gender	N	Mean	SD	t_value	Result
Male	30	166.26	19.17	2.71	Significant at 0.05 level
Female	120	154.80	20.87		

Table 4.8 Cognitive style of the sample in relation to the Gender

The table (4.8) indicates that there is a significant mean score difference in the Cognitive style of B.Ed student-teachers based on Gender. The obtained t-value is 2.71. Hence, it proved that there is a non significant in Self Efficacy of B.Ed student-teachers of Family structure.

Discussion:

From the table, it is shown that the t-value 2.71 shows that there is a significant difference in the scores of Male and Female of Gender. Hence, the null hypothesis H.7 is rejected.

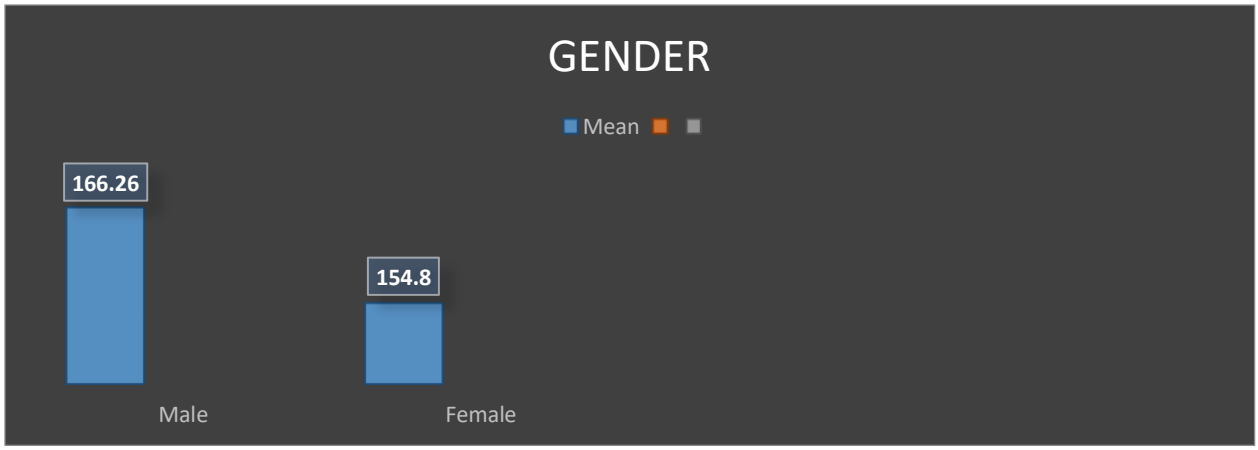

Figure 4.8 Cognitive style of the sample in relation to the Gender

Hypotheses 8:

There is no significant mean score difference in the Cognitive style of B.Ed student-teachers based on Locality.

Locality	N	Mean	SD	t_value	Result
Rural	79	159.29	23.37	1.34	Non significant at 0.05 level
Urban	71	154.66	17.83		

Table 4.9 Cognitive style of the sample in relation to the Locality

The table (4.9) indicates that there is no significant mean score difference in the Cognitive style of B.Ed student-teachers based on Locality. The obtained t-value is 1.34. Hence, it proved that there is a non significant in Cognitive Style of B.Ed student-teachers based on Locality.

Discussion:

From the table (4.9), it is shown that the t-value 1.34 shows that there is no significant difference in the scores of B.Ed student-teachers coming from different locality. Hence, the null hypothesis H.8 is accepted.

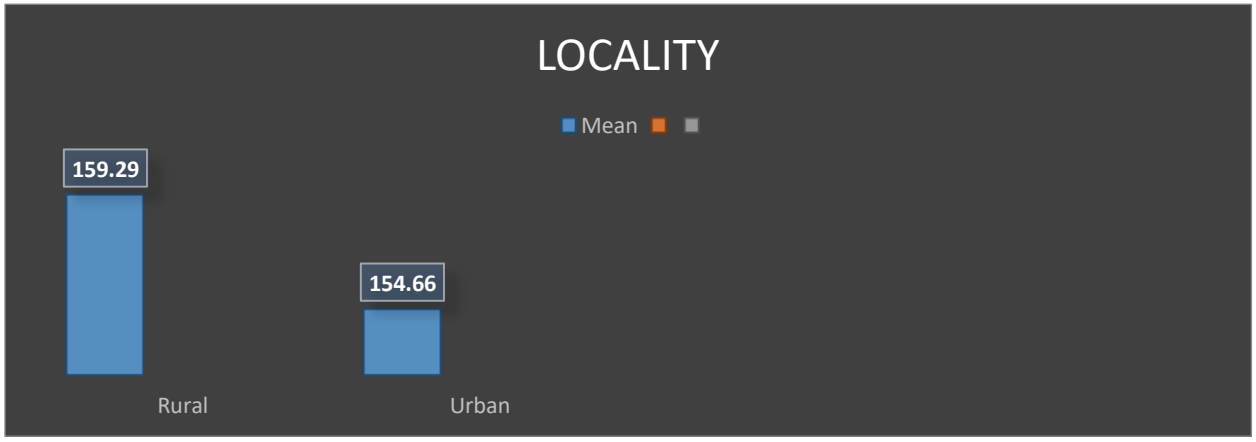

Figure 4.9 Cognitive style of the sample in relation to the Locality

Hypotheses 9:

There is a significant mean score difference in the Cognitive style of B.Ed student-teachers based on Age.

Source of variation	Sum of squares	Degrees of freedom	Mean squares	F_ value	LOS
Between group	3882	2	1941	2.821	Significant at 0.05 level
Within group	1025	149	688.05		

Table: 4.10 Cognitive style of the sample in relation to the Age

The table (4.10) indicates that there is a significant mean score difference in the Cognitive style of B.Ed student-teachers based on different Age groups. The obtained F-value is (2.82). Hence, it proved that there is a significant difference in Cognitive Style of B.Ed student-teachers based on different Age groups.

Discussion:

From the table (4.10), it is shown that the F-value 2.82 shows that there is a significant difference in the scores of Cognitive style of B.Ed student-teachers of different Age groups. Hence, the null hypothesis H.9 is rejected.

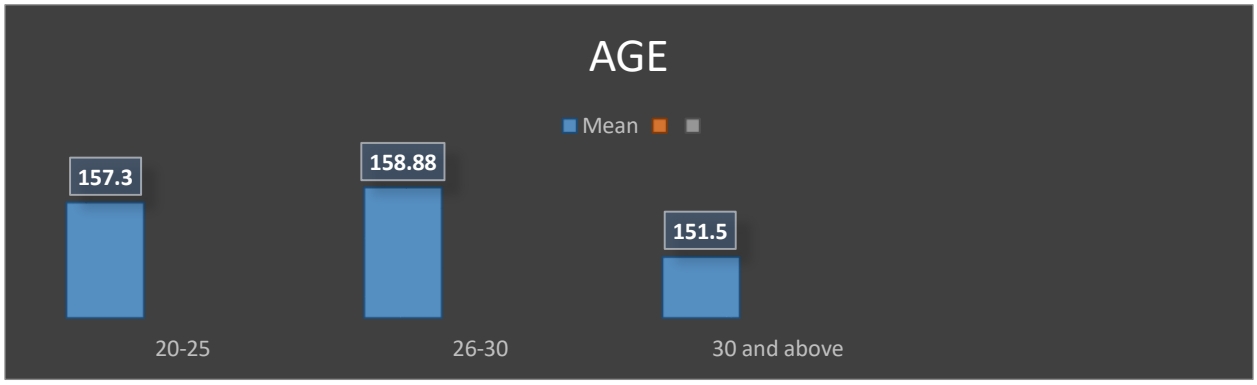

Figure 4.10 Cognitive style of the sample in relation to the Age

Hypotheses 10:

There is no significant mean score difference in the Cognitive style of B.Ed student-teachers based on Educational qualification.

Educational qualification	N	Mean	SD	t_ value	Result
UG	105	157.77	21.37	0.58	Non Significant at 0.05 level
PG	45	155.53	20.22		

Table 4.11 Cognitive style of the sample in relation to the Educational Qualification

The table (4.11) indicates that there is no significant mean score difference in the Cognitive style of B.Ed student-teachers based on Educational Qualification. The obtained t-value is 0.58. Hence, it proved that there is no significant difference in Cognitive Style of B.Ed student-teachers based on Educational Qualification.

Discussion:

From the table (4.11), it is shown that the t-value 0.58 shows that there is no significant difference in the scores of UG and PG of Educational Qualification. Hence, the null hypothesis H.10 is accepted.

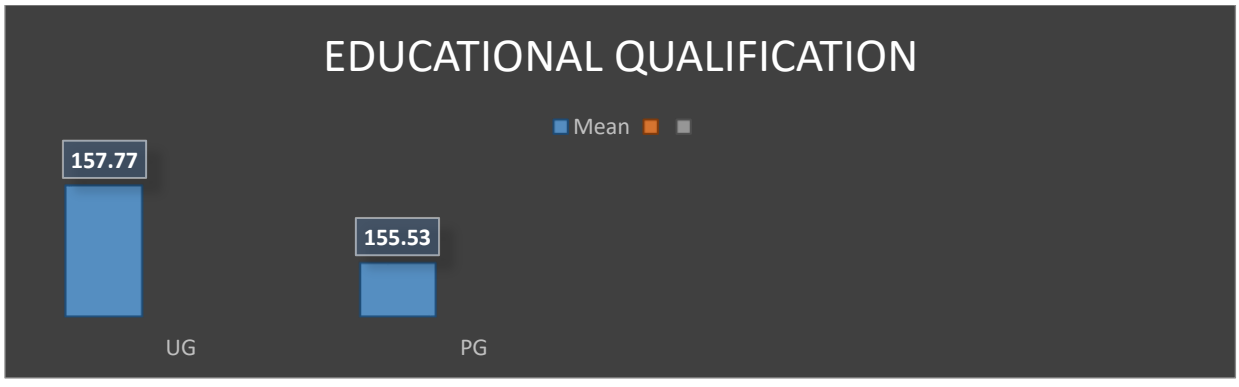

Figure 4.11: Cognitive style of the sample in relation to the Educational qualification

Hypotheses 11:

There is no significant mean score difference in the Cognitive style of B.Ed student-teachers based on Family structure.

Family structure	N	Mean	SD	t_value	Result
Joint	40	158.42	24.22	0.46	Non Significant at 0.05 level
Nuclear	110	156.61	19.79		

Table 4.12 Cognitive style of the sample in relation to the Family structure

The table (4.12) indicates that there is no significant mean score difference in the Cognitive style of B.Ed student-teachers based on Family structure. The obtained t-value is 0.46. Hence, it proved that there is no significant difference in Cognitive Style of B.Ed student-teachers based on Family structure.

Discussion:

From the table (4.12), it is shown that the t-value 0.46 shows that there is no significant difference in the scores of Joint and Nuclear of family structure. Hence, the null hypothesis H.11 is accepted.

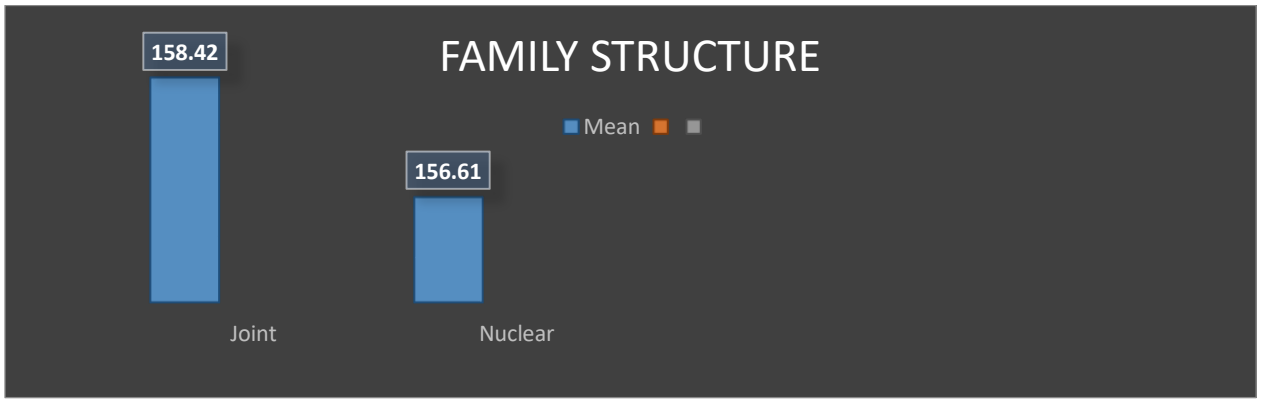

Figure 4.12 Cognitive style of the sample in relation to the Family structure

Weightage for Cognitive style:

The weightage of Cognitive style for all demographic variables shows that the Gender and Age has a significant mean score difference in the Cognitive style of B.Ed student-teachers, and there is no significant mean score difference based on Locality, Educational qualification and Family structure.

Discussion:

The figure 4.13, weightage of Cognitive style shows that there is a significant mean score difference in the Cognitive style of B.Ed student teachers based on Gender and Age.And also it shows that there is no significant mean score difference based on Locality, Educational qualification and Family structure.

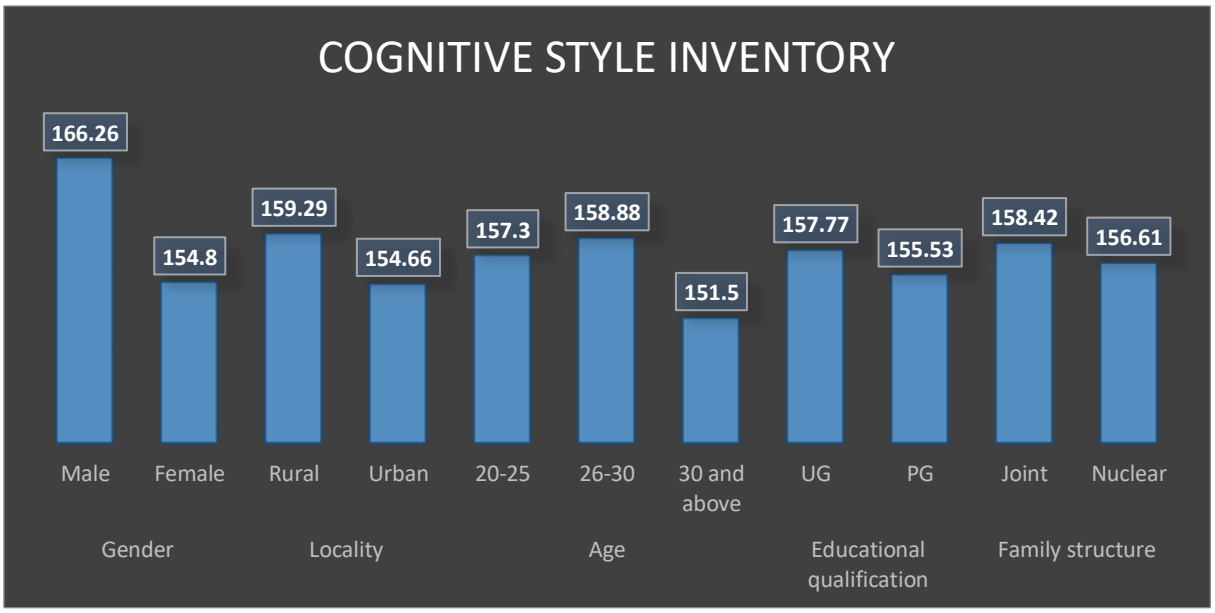

Figure 4.13 Weightage for Cognitive style

4.8 CONCLUSION

The analysis of the data shows that there is no significant difference in the mean score of both variables Self Efficacy and Cognitive style of B.Ed student-teachers and there is a significant mean score in Cognitive style based on Gender. The correlation between two variables shows that it had closely related and shows strong positive correlation between Self Efficacy and Cognitive style.

SUMMARY AND

CONCLUSION

CHAPTER 5

SUMMARY AND CONCLUSION

5.1 OVERVIEW

The present study on "Relationship between Self Efficacy and Cognitive Style among B.Ed student-teachers" aims at describing the correlation between two variables and its level of Self Efficacy and Cognitive Style of B.Ed student-teachers.

The findings of the present study based on the analysis of the data quantitatively and qualitatively summarised in this chapter and also it includes the recommendations for the present study and conclusion.

Summary:

Title of the research:

"RELATIONSHIP BETWEEN SELF EFFICACY AND COGNITIVE STYLE AMONG B.ED STUDENT-TEACHERS".

5.2 OBJECTIVES:

1. To find out the correlation between two variables Self Efficacy and Cognitive Style among B.Ed student-teachers.

2. To find out the level of Self Efficacy and Cognitive Style among B.Ed student-teachers based on the demographic variables taken.

5.3 HYPOTHESES:

1. There is no relationship between two variables Self Efficacy and Cognitive Style among B.Ed student-teachers.

2. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Gender.

3. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Locality.

4. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Age.

5. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Educational Qualification.

6. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Family structure.

7. There is no significant mean score difference in Cognitive Style of B.Ed student-teachers based on Gender.

8. There is no significant mean score difference in Cognitive Style of B.Ed student-teachers based on Locality.

9. There is no significant mean score difference in Cognitive Style of B.Ed student-teachers based on Age.

10. There is no significant mean score difference in Cognitive Style of B.Ed student-teachers based on Educational Qualification.

11. There is no significant mean score difference in Cognitive Style of B.Ed student-teachers based on Family structure.

5.4 GEOGRAPHICAL AREA OF THE STUDY:

The geographical area taken for the present study is Coimbatore district in Tamilnadu.

5.5 RESEARCH DESIGN:

Nature of the study	**Variables**	**Tools**	**Sample**	**Type of analysis**	**Statistical analysis**
Survey method	Self Efficacy and Cognitive Style	General Self Efficacy Scale Cognitive style Inventory Scale	150 samples of both male and female B.Ed student-teachers	Qualitative and Quantitative analysis	Mean Standard Deviation t-Test ANOVA test Pearson's correlation coefficient

5.6 MAJOR FINDINGS OF THE STUDY:

1. There exist a perfect relationship between two variables of the study namely Self Efficacy and Cognitive Style. It proves that both variables influence each other. The relationship of two variables shows that Self Efficacy and Cognitive Style influence each other.

2. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Gender. This proves that both male and female student-teachers are trained equally to execute their specific behavior.

3. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Locality. This shows that area of residence plays no role in enhancing one’s Self Efficacy.

4. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Age. This explains that age does not influence the acquisition of Self Efficacy and any age group can be trained for better Self Efficacy.

5. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Educational Qualification. It can be interpreted that student-teachers irrespective of Educational qualification have gained equal Self Efficacy.

6. There is no significant mean score difference in Self Efficacy of B.Ed student-teachers based on Family structure. There is no influence of family structure in acquiring and implementing Self Efficacy among student-teachers.

7. There is a significant mean score difference in Cognitive Style of B.Ed student-teachers based on Gender. It shows that male had a high Cognitive style than famale, it maybe due to male had a high influence in teaching learning process and controlling students behavior than female.

8. There is no significant mean score difference in Cognitive Style of B.Ed student-teachers based on Locality. It shows that both male and female student-teachers had equal cognitive style, it may due to Student-teachers from Urban and Rural had an equal chance of learning.

9. There is a significant mean score difference in Cognitive Style of B.Ed student-teachers based on Age. This explains that different age groups of student-teachers had a capacity to execute their Cognitive style depands upon their ages.

10. There is no significant mean score difference in CognitiveStyle of B.Ed student-teachers based on Educational Qualification. This explains that student-teachers irrespective of Educational qualification have gained equal cognitive style.

11. There is no significant mean score difference in Cognitive Style of B.Ed student-teachers based on Family structure. This proves that there is no influence of family structure, student-teachers have gained equal cognitive style.

5.7 EDUCATIONAL IMPLICATION:

Self-efficacy refers to an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments. Self-efficacy reflects confidence in the ability to exert control over one's own motivation, behavior, and social environment. Teachers' self-efficacy, had a beliefs in their ability to effectively handle the tasks, obligations, and challenges related to their professional activity, plays a key role in influencing important academic outcomes (e.g., students' achievement and motivation) and well-being in the working environment. Though Self Efficacy is important to Student-teachers because when they had a collective sense of Self Efficacy, they promote high levels of academic progress in even the most disadvantaged communities. The cognitive style influences their teaching-Learning process and classroom behavior which determines the classroom culture and student teacher learning. A Cognitive style found to influence teachers' ways of teaching and students' ways of learning; in addition, show positive mutual evaluation. The Cognitive Style is important for student-teachers because they execute better problem solving, thinking capacity and remembering.

5.8 SUGGESTIONS FOR FURTHER RESEARCH:

1. A similar study may be extended to other district of Tamilnadu and other states of India

2. A comparative study among the Self Efficacy and Cognitive Style of teacher training students may be conducted.

3. The present study was conducted for B.Ed students. Similar research studies may be carried out by taking larger sample of students as well as replicating such studies at other levels of education.

4. The same study may be conducted on different Managements such as Government and private colleges also.

5. The same study may be conducted to determine the levels of Self Efficacy and Cognitive Style among B.Ed student-teachers.

6. The same study Relationship between Self Efficacy and Cognitive Style may also conducted for Arts and science students in various districts of Tamilnadu.

5.9 CONCLUSION:

In this study the two variables Self Efficacy and Cognitive Style shows that it is perfectly correlated with each other and had a High relationship. The hypothesis of each demographic variables for Self Efficacy of B.Ed student-teachers shows that there is no significant mean score difference based on Gender, Locality, Age, Educational qualification and Family structure. In Cognitive style there is a significant mean score difference in the Gender and Age, and no significant mean score difference based on Locality, Educational qualification and Family structure. Finally the research concludes, the high levels of self-efficacy experience higher levels of job satisfaction, lower levels of job-related stress and face less difficulties in dealing with students' misbehaviors. The cognitive style influences their teaching-Learning process and classroom behavior which determines the classroom culture and student teacher learning. In this study it shows that the Self Efficacy and Cognitive Style had a perfect correlation with each other. These two variables are important for student-teachers because it is useful for their future jobs.

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APPENDIX

APPENDIX

Personal Data sheet

1. Gender
    a) Male
    b) Female
2. Locality
    a) Urban
    b) Rural
3. Age
    a) 20-25
    b) 26-30
    c) 30 and above
4. Educational qualification
    a) UG
    b) PG
5. Family structure
    a) Joint
    b) Nuclear

GENERAL SELF EFFICACY SCALE

S.No	Statements	Not at all true	Hardly true	Moderately true	Exactly true
1	I can always manage to solve difficult problems if I try hard enough				
2	If someone opposes me, I can find the means and ways to get what I want				
3	It is easy for me to stick to my aims and accomplish my goals				
4	I am confident that I could deal efficiently with unexpected events				
5	Thanks to my resourcefulness, I know how to handle unforeseen situations				
6	I can solve most problems if I invest the necessary effort				
7	I can remain calm when facing difficulties because I can rely on my coping abilities				
8	When I am confronted with a problem, I can usually find several solutions				
9	If I am in trouble, I can usually think of a solution				
10	I can usually handle whatever comes my way.				

COGNITIVE STYLE INVENTORY SCALE

S.No	Statements	Strongly agree	Agree	Neutral	Disgree	Strongly disagree
1	When confronted with a problem, I try to judge it or try to understanding it from the bottom					
2	I prefer to analyse a problem or a situation and ensure if any specific meaning' is emerging from the given facts?					
3	While solving a problem I draw a map at my mental					
4	Internally I develop a system where I could collect and store the information after solving a problem.					
5	When I am at work in course of solving a problem, I find myself talking loudly.					
6	In course of solving a problem. I first concentrate on its important parts.					
7	While solving a problem I take into accounts its different aspects and lay down its limit.					
8	I consider a problem in a systematic and step-wise manner.					
9	I examine a problem in its totality before considering its parts separately.					
10	The best and the most effective way to solve a problem is to solve it logically and conscientiously					
11	To combat a problem effectively, a man should take firm and bold steps.					
12	For finding out a solution of a problem in its entirety, I carefully link its various parts and put them in a series.					

13	Before taking steps for the solution of a problem I examine the relationship between the integral parts of the problem besides viewing it in totality					
14	I work with a presumption that solution of all the problems is pre destined.					
15	All problems are open and explicit in their own shapes and they present many probabilities for us.					
16	I collect all information in my mental frame like a computer and then derive a lot of statistics by dissecting them into several parts.					
17	I determine the most appropriate information which may solve the problem with accuracy, using the images already present in my memory in the form of information					
18	Before solving a problem I try to plan and search the ways for finding out a solution.					
19	Normally I depend on perceptions, determination and non-verbal indications as auxiliary factors in the process of solving a problem.					
20	While solving a problem I normally believe in facts and figures.					
21	While solving a problem, I think on the probable alternatives quickly and at the same time scrutinize them as early as possible.					
22	I search for the additional information systematically and select the sources of information carefully.					
23	Contemplate various ways of solving a problem and alternative measures simultaneously.					
24	In the process of solving a problem, first of all I identify the different factors which may create hurdles					

25	While analysing a problem it appears to me that I move forward from the first step to the second and then start thinking backward or say, turn back to the first one again.					
26	While making a deep analyse of the problem, I realise that I am moving systematically from one step to another.					
27	Normally I inquire many sources of statistics and during the process of searching ways of solution, my eyes spread on to many other informations.					
28	When I am working at a complex problem, I divide it into small units in order to make them accessible for solution.					
29	In course of solving a problem, I apprehend that I turn back to the same logistics frequently and each time I get a different insight.					
30	I collect the given facts and sources of informations legally, logically and serially to a certain limit.					
31	Generally I take into account the dimension of the problem and its jurisdiction so that a complete picture of the solution could be drawn.					
32	When I seek a solution of a problem modus operandi is well-organised and quite extensive.					
33	I solve a problem quickly and effectively without wasting much time on modalities.					
34	I have a very good memory and have due interest in mathematics.					
35	I am not bothered by uncertainties and incredibilities					
36	I consider myself and others credible and predictable.					

37	I possess a number of ideas and I am inquisitive by nature.					
38	It is my nature to keep away from momentary ideas with changes					
39	I look at myself as well as others as one who is ready to take risk					
40	I am never vexed by the ‘status quo’ because I feel novelty always proves to be better					