

**COGNITIVE STYLE AND ACADEMIC ACHIEVEMENT
OF B. Ed STUDENTS**

DIVYA.A

REG. No. 17PED002

**A THESIS SUBMITTED TO
AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND
HIGHER EDUCATION FOR WOMEN
COIMBATORE- 641043.**

In Partial Fulfilment of the Requirements for the Degree of

MASTER OF EDUCATION

APRIL 2019

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Under the Guidance of

Ms. A. SURYALATHA

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CERTIFIED AS BONAFIDE RESEARCH WORK

Signature of the Head of the Department

Signature of the Guide



ACKNOWLEDGEMENT

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I am obliged much to express my sense of gratitude to the **LORD ALMIGHTY** who has been blessing me.

I would like to place my reverential gratitude to **T.S.AVINASHILINGAM AYYA**, the **Founder** and the **First Chancellor** of this esteemed university and Hon. Colonel **RAJAMMAL.P.DEVADAS**, **Former Chancellor**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for providing the opportunity and exposure to the world of knowledge.

It is with great pleasure that I record my deep sense of gratitude and indebtedness to **Dr.P.R.KRISHNA KUMAR**, **Chancellor**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for all amenities provided for this investigation.

I express my boundless gratitude to **Dr. PREMAVATHY VIJAYAN**, **Vice chancellor**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for providing all facilities necessary for the study.

I am obligated much to express my sincere thanks to **Dr.S.KOWSALYA**, **Registrar**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for the constant encouragement and the facilities provided to me by the institution.

I owe my noble indebtedness to **Dr.T.GEETHA**, **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.

I express my reverential gratitude to the Head of the Department **Dr. INDU.H**, **Department of Education**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for providing necessary facilities during the conduct of the study.

It is my privilege to express my grateful thanks and sincere appreciations to my respected guide. **Ms.A.SURYALATHA**, **Assistant professor in Education**,

Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for her unflinching and dynamic guidance, heartfelt inspiration, motivation, untiring enthusiasm, undaunted encouragement, meticulous corrections and comments, valuable suggestions and timely help at each step throughout the process of research which were instrumental in the successful completions of the study.

I express my gratitude to all the staff members of Department of Education and Librarian who gave me all the support and courage to complete the study.

Words fail to express my deep indebtedness to my **Parents, Husband, Daughter and Friends** for their inspiration and affectionate encouragement during the course of this investigation.



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INTRODUCTION

CHAPTER I

INTRODUCTION

The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking

-Albert Einstein

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. Educational methods include storytelling, discussion, teaching, training, and directed research. Education frequently takes place under the guidance of educators and also learners may also educate themselves. Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. The methodology of teaching is called pedagogy.

Education is knowledge gain. Education gives us knowledge of the world around us and changes it into something better. It develops in us a perspective of looking at life. It helps us build opinions and have points of view on things in life. People debate over the subject of whether education is the only thing that gives knowledge. Some say education is the process of gaining information about the surrounding world while knowledge is something very different. They are right. But then again, information cannot be converted into knowledge without education. Education makes us capable of interpreting things, among other things. It is not just about lessons in textbooks. It is about the lessons of life.

Cognitive psychology, as the name suggests, is that branch of psychology that deals with cognitive mental processes. Sternberg (1999) defined Cognitive psychology as that which deals with how people perceive, learn, remember, and think about information.” In 2005, Solso gave another definition of Cognitive psychology as the study of processes underlying mental events. In general, Cognitive psychology can thus be defines as that branch of psychology that is concerned with how people acquire, store, transform, use and communicate language. The cognitive psychologists study the various cognitive processes that make up this branch. These processes include attention, the process through which we focus on some stimulus; perception, the process through

which we interpret sensory information; pattern recognition, the process through which we classify stimuli into known categories; and memory, the process through which information is stored for later retrieval, and so on.

Cognitive psychology is one of the more recent additions to psychological research, having only developed as a separate area within the discipline since the late 1950s and early 1960s (though there are examples of cognitive thinking from earlier researchers). The cognitive approach was brought to prominence by Donald Broadbent's book *Perception and Communication* in 1958. Since that time, the dominant paradigm in the area has been the information processing model of cognition that Broadbent put forward. This is a way of thinking and reasoning about mental processes, envisaging them as software running on the computer that is the brain. Theories refer to forms of input, representation, computation or processing, and outputs. Applied to language as the primary mental knowledge representation system, cognitive psychology has exploited tree and network mental models. Its singular contribution to AI and psychology in general is the notion of a semantic network. One of the first cognitive psychologists, George Miller is well-known for dedicating his career to the development of WordNet, a semantic network for the English language. Development began in 1985 and is now the foundation for many machine ontologies.

This way of conceiving mental processes has pervaded psychology more generally over the past few decades, and it is not uncommon to find cognitive theories within social psychology, personality psychology, abnormal psychology, and developmental psychology; the application of cognitive theories to comparative psychology has driven many recent studies in animal cognition.

COGNITIVE DEVELOPMENT

From Encyclopaedia of Children's health states cognitive development is the construction of thought processes, including remembering, problem solving, and decision-making takes from childhood through adolescence to adulthood. The growth and development of the mental abilities and capacities which helps an individual to adjust his or her behaviour to the over changing environment conditions or to enable him or her to accomplish task that needs complex cognitive abilities is referred to cognitive development.

Cognitive development refers to how a person perceives, thinks, and gains understanding of his or her world through the interaction of genetic and learned factors. Among the areas of cognitive development are information processing, intelligence, reasoning, language development and memory.

ASPECTS OF COGNITIVE DEVELOPMENT

Imagination

Imagination is the ability to form mental images, or concepts of objects that is not present, or that do not exist. It is fairly easy to conjure up images of, i.e. a beach, outer space, grandparents, school or foods. The imagination forms the basis of many activities that we find it enjoyable. These are parts of our culture and form the basis of activities that people choose to be involved in or participate during their leisure time. It provides relaxation and adds quality into and enriches their life. Imagination is also involves the below activities Problem solving & Innovative and original thought or ideas.

Creativity

Creativity is the expression of imaginative ideas in a personal and unique way. There is a lot of debate of what creativity is about and whether it is taught or innate. It is always difficult to say or identify precisely what is creative and what is not but to describe something as creative it needs to have below tributes and features: Use of imagination, Begin with an open ended outcome, be a personal expression of ideas and be unique in its process and product.

Concentration

Concentration is the skill of focusing all your attention on one task. It is necessary if successful learning wants to take place. Children especially need to be encouraged to focus their attention and therefore develop their skills of concentration and perseverance. Children can be encouraged to concentrate at activities. The activities are at an appropriate level, the activities are attractively presented Offering praises suggestion and encouragement during the activities.

Memory

Formations of learning are through 3 basic stages:

1. Taking in information: Information was received through our five senses.
2. Storing the information: Storage of information was done with our memory.
3. Recalling the information: Information and past events can be retrieved from our memory, we address it as remembering.

Problem Solving

Problem solving does not just mean complex problems. It also includes daily problems that we encounter. That is choosing the route to take on a journey; how to put things into the bag that fit perfectly and etc. Posses and gained the experiences by engaging with the world around and knowing how things work could accelerate the problem solving process and skills.

THE CONCEPT OF COGNITION

The word comes from the Latin root *cognoscere*, which means “**to know**”.

From **Wikipedia** we can understand that cognitive style is “**The accumulation of information that we have acquired through learning or experience.**”

Cognition or cognitive processes can be natural and artificial, conscious and not conscious; therefore, they are analyzed from different perspectives and in different contexts, in anaesthesia, neurology, psychology, philosophy, systemic and computer science. The concept of cognition is closely related to such abstract concepts as mind, reasoning, perception, intelligence, learning, and many others that describe numerous capabilities of human mind and expected properties of artificial or synthetic intelligence. Cognition is an abstract property of advanced living organisms; therefore, it is studied as a direct property of a brain or of an abstract mind on sub symbolic and symbolic levels. In psychology and in artificial intelligence, it is used to refer to the mental functions, mental processes and states of intelligent entities (humans, human organizations, highly autonomous robots), with a particular focus toward the study of

such mental processes as comprehension, inference, decision-making, planning and learning .

Recently, advanced cognitive researchers have been especially focused on the capacities of abstraction, generalization, concretization/specialization and meta-reasoning which descriptions involve such concepts as beliefs, knowledge, desires, preferences and intentions of intelligent individuals/objects/agents/systems. The term "cognition" is also used in a wider sense to mean the act of knowing or knowledge, and may be interpreted in a social or cultural sense to describe the emergent development of knowledge and concepts within a group that culminate in both thought and action.

THE CONCEPT OF COGNITIVE STYLE

According to Sellah et.al (2017) Cognitive style is a term used to describe the way individuals perceive, think and remember information. Cognitive styles as a concept is a component of a larger concept termed as learning styles. Learning styles highlight characteristic cognitive, affective and psychomotor behaviours displayed by an individual as they learn. Learning styles provide an explanation for how any two learners who are taught the same concepts would differ in the way they learn as a result of various stimuli, including: environmental (e.g. noise, temperature and design); emotional (e.g. motivation and persistence); sociological (e.g. pairing and grouping); physical stimuli (e.g. auditory, visual or kinaesthetic); and psychological stimuli (e.g. global or analytic in approach, impulsive or reflective). Cognitive styles of an individual can be gauged from their response to physical and psychological stimuli, and have both internal and external features. Internally, they are structured contents of thought and experience in one's mind. Externally, they are outward expressions of thought in terms of flow of logic, arrangement of symbols (writings, drawings etc.), use of language and relations between these facets. Consequently, cognitive styles influence decisions and choices made by both the learner and the teacher during teaching and learning. According to Evans (2010), cognitive styles of the teacher impact on the various phases of preparation for learning, even before learning begins. The aspects impacted include: organisation of content, choice of resources, choice of tasks, as well as planning for how feedback will be given. During the learning process itself, cognitive styles determine how the lesson is structured, pace of the lesson delivery, interaction, flexibility of the learner and the teacher, as well as how marking and

follow-up is done. The differences in the ways the learner and the teacher perceive think and remember information is thus, the basis for differential performance in a classroom. Some learners therefore grasp the content better as a direct result of the manner in which the teacher presents the content.

Kumar (2011) defined that cognitive style has to be considered as a holistic process of cognition that begins with the perception, and mediated by information processing, and the resultant retrieval; it varies from person to person and it is affected by various personality factors, such as, previous information, heredity and environment, interest, thinking, attitude, value system, intelligence, creativity, social and economic status and so on. The Nature of an Individual varies from one other especially in ways of perception; understanding and retrieval processes become an important focus for the cognitive style differences. Teachers form significant portion of the human population who has an aim in building citizenry for the country.

Wikipedia states Cognitive style or "thinking style" is a term used in cognitive psychology to describe the way individuals think, perceive and remember information. Cognitive style differs from cognitive ability (or level), the latter being measured by aptitude tests or so-called intelligence tests. Controversy exists over the exact meaning of the term cognitive style and also as to whether it is a single or multiple dimension of human personality. However, it remains a key concept in the areas of education and management. If a pupil has a cognitive style that is similar to that of his/her teacher, the chances that the pupil will have a more positive learning experience are improved. Likewise, team members with similar cognitive styles likely feel more positive about their participation with the team. While matching cognitive styles may make participants feel more comfortable when working with one another, this alone cannot guarantee the success of the outcome.

At the present time, many cognitive scientists would agree that research on cognitive styles has reached an impasse. In their view, although individual differences in cognitive functioning do exist, their effects are often overwhelmed by other factors, such as general abilities and cognitive constraints that all human minds have in common. The paradox of the current situation is that interest in building a coherent theory of cognitive styles remains at a low level among researchers in the cognitive sciences; however, investigators in numerous applied fields have found that cognitive

style can be a better predictor of an individual's success in a particular situation than general intelligence or situational factors. **Allinson and Hayes** (1996) have given the concept of one more cognitive style-intuition and analysis. According to them intuition refers to immediate judgment based on feeling and adoption of global perspective and analysis refers to judgment based on mental reasoning and a focus on details.

- There are distinct, observable, and measurable differences among people's cognitive styles.
- Cognitive style can easily be detected through language and nonverbal behaviour patterns.
- Dialogue between individuals can reveal differences and can highlight the need for awareness and understanding of these differences.
- Styles are frequently associated with career choices; therefore, there are connections between behavioural styles and certain functions or divisions within an organization. In fact, style can dominate an organization's culture.
- Styles take on connotations of "good" or "bad," with one style generally considered being "better" or "best" depending on the individual interpreter or system evaluator.
- There is a need to understand, recognize, and develop each area of cognitive specialty.
- Creativity and effectiveness can be increased when the bipolar dimensions are fused.
- Although the systematic and intuitive styles provided the foundation for The Cognitive Style Model, these two styles had not previously been shown to reflect the entire spectrum of people's behaviour with regard to thinking, learning, and especially problem solving and decision making.

CLASSIFICATION OF COGNITIVE STYLE

SYSTEMATIC STYLE

An individual identified as having a systematic style is one who rates high on the systematic scale and low on the intuitive scale. According to findings in the Harvard studies, 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 programmatic approach; and then makes an overall plan for solving the problem.

INTUITIVE STYLE

An individual who rates low on the systematic scale and high on the intuitive scale is described as having an intuitive style. Someone whose style is intuitive uses an unpredictable ordering of analytical steps when solving a problem, relies on experience patterns characterized by universalized cues or hunches, and explores and abandons alternatives quickly.

INTEGRATED STYLE

A person with an integrated style rates high on both scales and is able to change styles quickly and easily. Such style changes seem to be unconscious and take place in a matter of seconds. A result of this “rapid-fire” ability is that it appears to generate energy and a proactive approach to problem solving. In fact, integrated people are often referred to as “problem seekers”.

UNDIFFERENTIATED STYLE

An individual rating low on both the systematic and the intuitive scale is described as having undifferentiated cognitive behaviour. Such a person appears not to distinguish or differentiate between the two styles extremes and, therefore, appears not to display a style. In fact, in a problem-solving or learning situation, he or she may 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.

SPLIT STYLE

An individual rating in the middle range on both the systematic and the intuitive scale is considered to have a split style involving fairly equal (average) degrees of systematic and intuitive specialization. At first glance the split style appears to differ from the integrated style only in the degree of specialization. However, people with a split style do not possess an integrated behavioural response; instead, they exhibit each

separate dimension in completely different settings, using only one style at a time based on the nature of their tasks or their work groups. In other words, they consciously respond to problem-solving and learning situations by selecting appropriate style.

Systematic and Intuitive styles provided the foundation for The Cognitive Style Model, these two styles had not previously been shown to reflect the entire spectrum of people's behaviour with regard to thinking, learning, and especially problem solving and decision making. Therefore, a multidimensional model intended to reflect the entire spectrum was created (Martin, 1983). This model consisted of two continua: (1) high systematic to low systematic and (2) high intuitive to low intuitive. Ongoing observational studies, along with efforts to develop measurement devices for assessing cognitive behaviour, have resulted in an expanded version of that original model.

COGNITIVE STYLES IN LEARNING

Cognitive styles refer to the preferred way individual processes information. Unlike individual differences in abilities (e.g., Gardner, Guilford, Sternberg) which describe peak performance, styles describe a person's typical mode of thinking, remembering or problem solving. Furthermore, styles are usually considered to be bipolar dimensions whereas abilities are unipolar (ranging from zero to a maximum value). Having more of ability is usually considered beneficial while having a particular cognitive style simply denotes a tendency to behave in a certain manner. Cognitive style is usually described as a personality dimension which influences attitudes, values, and social interaction.

- Scanning – differences in the extent and intensity of attention resulting in variations in the vividness of experience and the span of awareness
- Levelling versus sharpening – individual variations in remembering that pertain to the distinctiveness of memories and the tendency to merge similar events
- Reflection versus impulsivity – individual consistencies in the speed and adequacy with which alternative hypotheses are formed and responses made

- Conceptual differentiation – differences in the tendency to categorize perceived similarities among stimuli in terms of separate concepts or dimensions

According to Changju Shi (2011) 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 paper, so they turn to be the most influential cognitive styles that have an impact on learners' learning strategy choices.

RELATIONSHIP BETWEEN COGNITIVE STYLE AND LEARNING

According to **Vandana Singh** (2017) Learning at elementary classes is a crucial time as it lays a foundation for future learning. Yet, the universal achievement is still a far reached goal. Although many variables have been identified that hinders the low achievement among learners at this stage. In an attempt to explore how learning styles and cognitive styles affect the learning and nature of relationship these styles have with the achievement of learners. The data from the research indicates that there is a link between cognitive style and learning style which also determines the achievement of learners. The results from the data indicate that the learners having field dependents and field independents (cognitive style) have different learning styles. Since, the learners differs in their cognitive style, therefore if an attempt is made to identify them will improve the learning. It is also argued that by supplementing the curriculum transaction with the awareness of cognitive and learning styles, the teachers can help their learners to reach the desired learning levels.

ACADEMIC ACHIEVEMENT

Academic achievement is the core of the entire educational growth. It is regarded as an important goal of education. Academic achievement or (academic) performance is the extent to which a student, teacher or institution has achieved their short or long-term educational goals. Cumulative GPA and completion of educational benchmarks such as secondary school diplomas and bachelor's degrees represent academic achievement.

- The support and availability of the parents, their financial situation and standard of living. In Québec, as in other places in the world where the topic is studied, it has been observed that students in socioeconomically disadvantaged areas get lower marks.
- The geographical location of the educational institution.
For example, English as a second language is not learned in the same conditions throughout Québec.
- The percentage of students in a school whose mother tongue is not the language of instruction
- The diversity of student profiles in the same class
- The grouping together, in certain schools, of students with severe learning difficulties, or with problems associated with psychosocial integration in special education classes
- The various practices pertaining to the student admission requirements. Some educational institutions admit students indiscriminately, whereas other selects them on the basis of previous academic achievement or their results on aptitude tests.

SIGNIFICANCE OF THE STUDY

The nature of an Individual varies from one other especially in ways of perception; understanding and retrieval processes become an important focus for the cognitive style differences. Teachers form significant portion of the human population who has an aim in building citizenry for the country. Their role is crucial as transmitters of culture to the new members of the society and they are also dynamic participants in social change. Cognitive style of a student teacher involves acquisition of knowledge and the mode of processing the information, thinking process in solving problems and organized way of communication. A student teacher as he or she is still a learner needs the cognitive style framed and formulated in his mental structure so as to advance his or her skills required for creating the right milieu for learning and teaching. The ‘cognition’ is incidental and the ‘learning’ is goal-directed (Srinivas Kumar, 2013). These are complementary to each other. Hence, an attempt is made in the present study to prepare a profile of cognitive styles of student teachers for facilitating better learning

for them. Probably, by finding the cognitive styles, the perceptions, ways of information processing, retrieval etc., of student teachers could be gauged.

STATEMENT OF THE TOPIC

The statement of the present study is “**COGNITIVE STYLE AND ACADEMIC ACHIEVEMENT OF B. ED STUDENTS**”.

DEFINITIONS OF KEY TERMS

The investigator adopted the following definitions of the terms.

COGNITIVE STYLE

“It is hypothetical construct that has been developed to explain the process of mediation between stimuli and responses”.

-Goldstein and Blackman (1978)

ACADEMIC ACHIEVEMENT

By Academic Achievement the investigator means the level of attainment of instructional objectives fixed for the student teacher to reach by the end of a term of teaching or training pivoted around a well defined curriculum.

B. Ed STUDENT

Students who are all undergo pre service training on teaching learning process that provides experience for development.

OBJECTIVES OF THE STUDY

- To find out the level of Cognitive Style of B. Ed students
- To find out the dimensions of Cognitive Style- Systematic and Intuitive style of B. Ed students
- To find out if any significant difference in cognitive style and its dimension of B. Ed students in terms of gender, qualification, locality of residence, locality of college, Major subject and nature of college

- To find out the relationship if any between Cognitive style and Academic achievement of B. Ed students.

HYPOTHESIS

1. There is no association between the cognitive styles of B. Ed students
2. There is no significant difference in cognitive style and its dimension of B. Ed students with gender of with gender, locality, subject, nature of college, internet usage and qualification
3. There is no significant relationship between cognitive style academic achievements of B .Ed students.

DELIMITATION OF THE STUDY

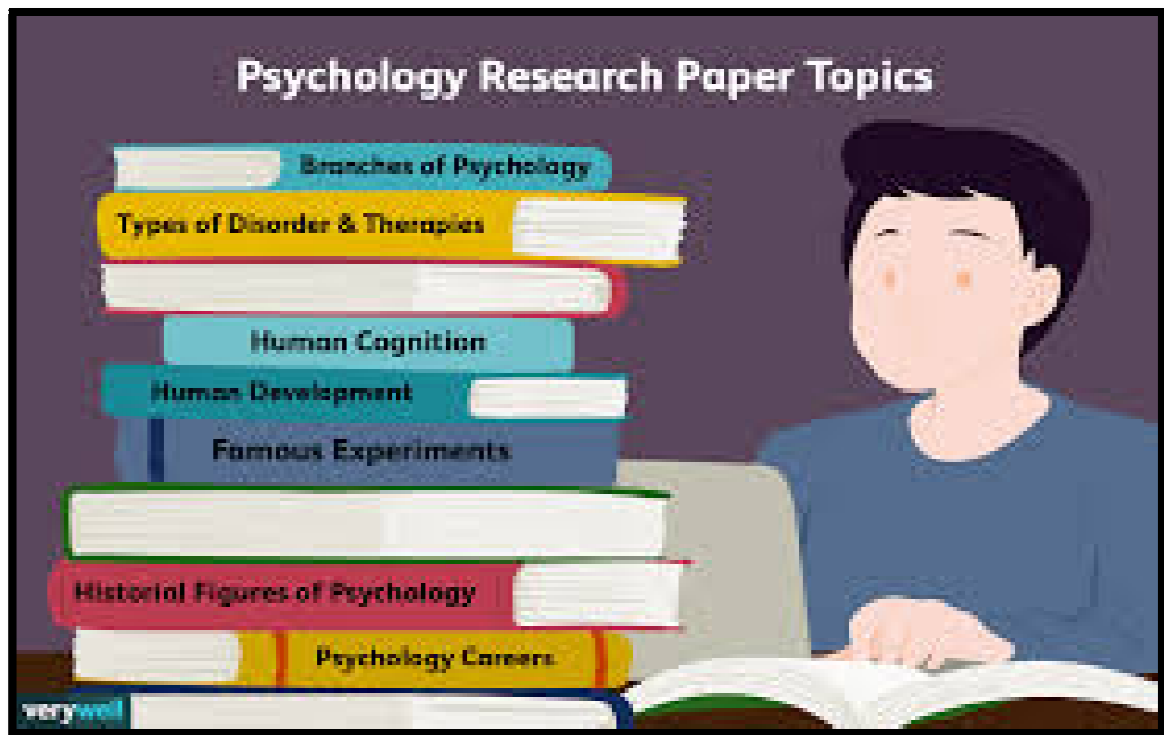
- Although this research was carefully prepared there are some limitations in this study.
- This study is limited to B. Ed colleges situated in Coimbatore city.
- Even though the study was conducted among B. Ed students only second year B. Ed student are taken for the study.
- The investigator adopted cognitive style inventory by Praveen Kumar Jha (2001) of various dimensions comprised by the tool, only two dimensions (systematic style and intuitive style have been selected for the study.
- Academic achievement is measured in terms of the marks obtained by B. Ed students in their first year B. Ed Examination.

ORGANISATION OF THESIS

This study “cognitive style and academic achievement of B. Ed students” is presented in five chapters.

1. First chapter deals with introduction, significance of the study, statement of the topic, definition of key terms, objectives of the study, hypothesis of the study , delimitation of the study and organisation of study.

2. The second chapter deals with Review of literature which is related to cognitive style and academic achievement.
3. The third chapter presents a detailed description of the procedure adopted in this study as how sample was selected, methodology employed in the study and it covers the sample selection and instrumentation
4. The fourth chapter deals with the analysis and interpretation of the data
5. The fifth chapter deals with the summary, findings and suggestions for further research and conclusion.



REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

INTRODUCTION

Escalation of knowledge in modern times is an accepted fact. A review of related literature in the area of investigation is of prominent significance, and its importance cannot be denied in any research. The review of related studies is an exacting piece of work calling for a deep insight to provide clear-cut perspective of the overall field. The term 'Review' means to organize, to envelope an edifice of knowledge, to show the present study would be an addition to a particular field. The term 'Literature' refers to the knowledge of a particular area of any discipline, which includes theoretical, practical and research studies. In tracing roots of problems, preparing outlines of the study, discussion and interpretation of the results and writing the research report, review of literature is of utmost importance.

The study of related literature is useful to search the update and latest information already available and to define the limits of the specific problem. Research takes advantage of the knowledge that has accumulated in the past as a result of constant human endeavours. A review is not only important from the theoretical point of view but it also provides guidelines to decide procedure and tools to be used. The keys to the vast store house of published literature may open new doors to a source of significant problems and explanatory hypothesis which provides helpful orientation for the definition of the problem and background for the selection of procedure. Thus, the study of related literature helps the investigator to acquire comprehensive information about what has already been done in a certain field. It helps in the formulation of hypotheses and provides necessary knowledge regarding the methodology to be followed. For worthwhile study in any field of knowledge, the research worker needs adequate familiarity with the work which has already been done in a particular area. The search for related material is a time consuming but a fruitful phase of the research programme. With this background in view, the investigator tapped various sources of available literature like surveys of research, research journals, magazines, dissertations, encyclopaedias and educational research centres of the country as well as studies

available on various websites and other sources of information related to the present study.

PURPOSE OF REVIEW LITERATURE

Conducting a literature review is a means of demonstrating the **author's knowledge** about a particular field of study, including vocabulary, theories, key variables and phenomena, and its methods and history.

- Randolph, 2009; cited in Lib Guides

Conducting a literature review also informs the student of the **influential researchers and research groups** in the field

- Report on **knowledge and ideas** that have been established on a particular topic, including their **strengths and weaknesses** while they allow you to discover the agreed academic opinion on the topic while at the same time letting you find out the disagreements on the same subject.
- Position your research project within the body of literature and thereby **provide perspective** for the reader.
- Demonstrate **your knowledge** of the subject area.
- Determine what each source contributes to the topic.
- Understand the **relationship between the various contributions**, identify and (if possible) resolve contradictions, and determine gaps or unanswered questions.
- Justify your **choice of research design**; for instance, your choice of qualitative over quantitative approaches, or your method of data analysis.
- Clarify how your work fills a **gap** in the scholarly literature.

A brief review of related studies is discussed under the following headings:

- A. Review of Indian Studies Cognitive Styles and Academic achievement
- B. Review of Foreign Studies related to Cognitive Styles and Academic achievement

A. Review of Indian Studies Cognitive Styles and Academic Achievement

Sharma (2017) conducted a study on "Cognitive style of senior secondary students with relation to their gender." The present study is based on the cognitive styles of boys and girls of senior secondary students. Simple random sampling technique has been used to collect the sample. 50 boys and 50 girls of senior secondary school have been selected for the study purpose. For result analysis, the chi-square test has been used. Significant difference has been found between cognitive styles of Hence investigator feels that there is a need for the development of new instructional programs that could accommodate the unique styles of the individual students.

Singh (2017) investigated a study on "exploring the relationship between cognitive styles and learning style with academic achievement of elementary school learners." From the study the investigator took an attempt to explore how learning styles and cognitive styles affect the learning and nature of relationship these styles have with the achievement of learners. The data from the research indicates that there is a link between cognitive style and learning style which also determines the achievement of learners. The results from the data indicate that the learners having field dependents and field independents (cognitive style) have different learning styles. Since, the learners differs in their cognitive style, therefore if an attempt is made to identify them will improve the learning. It is also argued that by supplementing the curriculum transaction with the awareness of cognitive and learning styles, the teachers can help their learners to reach the desired learning levels.

Srinivaskumar and Munichandra (2017) conducted a study on "Profile of Cognitive Styles of Principals of Andhra Pradesh Model Schools". An attempt is made in the current investigation to prepare a profile of the Principals of the Andhra Pradesh Model Schools located in the state of Andhra Pradesh state in India. Survey method has been used. A sample of 77 principals has been selected by means of simple random sampling technique for the study. The cognitive style inventory developed by Praveen Kumar Jha (2001) has been used for data collection. Results revealed that out of 77 principals 37 possess split cognitive style, 28 have systematic cognitive style and other three cognitive styles in small numbers among them.

Katoch and Thakur (2016) conducted “A Study on Cognitive Styles Of Secondary School Teachers.” In this paper, an attempt has been made to study the cognitive styles of secondary school teachers in Kullu District of Himachal Pradesh. For this purpose sample of 200 secondary school teachers from the government schools of Kullu district was taken through simple random sampling technique. To collect the data cognitive style inventory developed and standardized by Dr. Praveen Kumar Jha (2001) was used. Results indicated that there is a significant difference between male and female secondary school teachers regarding systematic and intuitive cognitive style. Whereas there is no significant difference was found between male and female secondary school teachers regarding integrated, undifferentiated and split cognitive styles.

Vinitha and Indhu (2016) found a study on “Cognitive Strategies influencing Academic Achievement of Higher Secondary School Students”. The study was conducted to find out the Meta cognitive awareness, learning style preference and academic achievement of higher secondary school students in Coimbatore district. The sample of 1005 students of higher secondary school, The finding that Tamil medium students possess better meta cognitive ability reveal the fact that when students learn in their mother tongue their thinking ability and cognition is better than when learning in a foreign language.

Manjula Devi(2016) conducted a study on “ Cognitive Style And Academic Achievement of Higher Secondary Students”. Survey method was adopted for this study. The objective of the study is to find the predominance of cognitive style prevailing among Standard XI students. The tool used was Cognitive-Style Inventory developed by Praveen Kumar Jha (2001). A sample comprised of 221 students who were studying Standard XI in Science and Arts groups in Tirunelveli District. Random sampling technique was adopted. 60.6% of standard XI students have systematic cognitive style and 39.4 % of intuitive style. Systematic style of cognitive style is predominant than intuitive style so teachers should follow logical, step by step sequential approach to thinking, learning, problem solving and decision making which helps to attain more academic scores.

Balasubramaniam and Rajaguru (2016) investigated a study on “Cognitive Styles of Student Teachers”. The chief objective of the present study is to profile the

cognitive styles of student teachers. It is based on data collected from 75 student teachers studying from colleges of education. Simple random sampling technique has been used to collect the sample. The Cognitive Style Inventory (CSI) has been used as tool to collect the data. Results indicate that the student teachers possess three types of cognitive styles, namely, split cognitive style, systematic cognitive style and integrated cognitive style. It has also been found that there exists association in cognitive styles of teachers based on variation in their gender.

Krishnamohan (2015) analysed a study on “Study on Cognitive Styles of Student Teachers about their Social and Emotional Intelligence”. The sample size of the study is 600, which includes Student Teachers. Out of 4285 population, 600 – Student Teachers (B. Ed) sample has been derived by Stratified Random sampling method i.e.15% (600) which includes Location, gender, and Social status. The result of the study was the research concludes that the Student Teachers of B. Ed course lack in Social Intelligence and Emotional Intelligence. So, automatically they are less coping with cognitive styles.

Seetharaman (2015) done a study on “Teaching effectiveness of B Ed Student teacher about teaching Aptitude hemisphericity cognitive style and academic proficiency.” The present study was conducted with 820 B. Ed student teachers studying in Chennai city and Kanchipuram district of Tamilnadu. The study results that teacher education programmes would take into account structural changes in the system of education. It should be efficient and effective implementation of the teacher education programme.

Islam (2015) conducted a study on "Nature of some cognitive correlates of academic achievement in English among higher secondary learners." The target population for the present study consisted of all the adolescent (16 years + age group) learners – both boys and girls, studying in class XI in Bengali medium higher secondary institutions (both schools and madrasahs) under West Bengal Council of Higher Secondary Education (WBCHSE) curriculum. The study was conducted in one district of West Bengal, namely, Murshidabad. To cover the entire geographical area of Murshidabad, it employed systematic sampling technique in order to select the institutions for collecting sample. The findings of t test revealed statistically significant difference between high achievers and low achievers in English with respect to their

spatial intelligence. The findings indicated that the two groups under study were not the same with respect to spatial intelligence. The findings of „t“ test revealed statistically significant difference between high achievers and low achievers in English with respect to their visual learning style.

Srinivaskumar and Nagaraju (2014) investigated a study on “Cognitive Styles of High School Mathematics Teachers.” present study is based on data collected from 72 high school Mathematics teachers. Simple random sampling technique has been used to collect the sample. The Cognitive Style Inventory (CSI) has been used as tool to collect the data. Results indicate that the high school Mathematics teachers possess three types of cognitive styles, namely, split cognitive style, integrated cognitive style, and undifferentiated cognitive style. It has also been found that there exists difference in cognitive styles of teachers based on variation in their gender and types of management of their schools

Renjith(2014) conducted ‘A study on cognitive style of prospective teacher in Malappuram’. The sample used for the study was prospective teachers in malappuram district. Stratified random sampling was adopted. Tool used for the study is standandardised tool of Praveen kumar jha. Major findings of the study are 20% of the students are having better cognitive style ,65% medium,15% low. There is a significant difference between social science and English teacher in undifferentiated style and systematic style. There is significant difference between prospective teachers with UG and PGwith integrated and split style.

Karmvir (2014) studied the “Impact of cognitive behaviour therapy on emotional competence and academic performance among learning disability group of students”. For the present investigation, a sample of 200 screened and diagnosed Learning Disability group of students was selected for the present research. The Learning Disability school students were purposely selected from different normal schools (private & government).Hence, cognitive behavior therapy coping skill techniques reveal an impact on emotional competence and academic performance of learning disabilities group of students. Often in previous researches, the cognitive behavior therapy programme reveals the positive impact on the improvement of mental health issues of the normal population, but here in present research cognitive behavior

therapy intervention has revealed itself enhancement of emotional competence and academic performance on learning disability group of students.

Dafedar (2014) conducted “A Study of Learning Achievement in Science of Secondary School Students in Relation to their Meta cognitive Skills and Scientific Aptitude.” 800 students studying in ninth standard in the divisions of Karnataka namely Bangalore, Belgaum, Gulbarga and Mysore constitute the sample of the study. The results of the study shows that there is a significant relationship between learning achievement in science and meta cognitive skills and between learning achievement in science and scientific aptitude, but the study reveals that majority of the students are placed on average and below average (50% and 26.25%) level with respect to learning achievement in science.

Maria (2014) analysed study on “Cognitive style and selected non cognitive variables in relation to achievement in mathematics of pupils of standard X”. From the study the proper classroom and trained teachers make the learning very easy to the students. the sample used for the study were 740 students of standard tenth using proportionate stratified random sampling method. Tool used for the study are achievement test in mathematics The study takes place for the tenth standard students. Findings of the study were there should be proper trained teachers and there should be sufficient amenities in the classroom as these also influence the students learning of mathematics .parents also should be made aware of their role in determine high achievement of their children and they should actively participate and contribute their children achievement .if proper attention given for above statements will definitely become successful in the learning of and achievement in mathematics.

Lilach Sagiv, et al (2013) investigated a study on Not All Great Minds Think Alike: Systematic and Intuitive Cognitive Styles and the investigator found Individuals process information and make decisions in different ways. Some plan carefully and analyze information systematically, whereas others follow their instincts and do what “feels right.” We aimed to deepen our understanding of the meaning of the intuitive versus systematic cognitive styles. Study 1 (N = 130, 39% female, Mage = 24) compared cognitive styles of arts, accounting, and mathematics students. Cognitive styles were associated with values (Study 2: N = 154, 123, 78; female = 59%, 49%, 85.9%; Mage = 22, 23, 27) and traits (Study 3: N = 77, 140, 151; female = 59%, 66%,

46%; Mage = 22, 25, 23), and they interacted with experience in predicting performance (Study 4: N = 63, 48% female, Mage = 23; Study 5: N = 44, 39% female, Mage = 23). All participants were Caucasian Israeli students. The systematic style was most frequent among accountants, and the intuitive style was most frequent among artists, validating the meaning of the styles. Systematic style was positively correlated with Conscientiousness and with security values and negatively correlated with stimulation values. The intuitive style had the opposite pattern and was also positively correlated with Extraversion. Experience improved rule-based performance among systematic individuals but had no effect on intuitive ones. Cognitive style is consistent with other personal attributes (traits and values), with implications for decision making and task performance.

Jenna (2013) conducted a study on “Cognitive Styles of Rural Senior Secondary School Students in Relation to their Gender and Stream” The present study is descriptive in nature and survey method has been used. The investigator has taken 300 rural senior secondary school students from Pulwama and Anantnag district of Jammu and Kashmir as sample by using simple random sampling technique. For collection of data the investigator have been used Cognitive Style Inventory (CSI) constructed and standardized by Praveen Kumar Jha in 2001. For result analysis the investigator has used t-test and Analysis of Variance (one-way). The finding of the study revealed that the group difference between male and female undergraduate students on systematic cognitive style as well as on intuitive cognitive style is found to be insignificant.

Thakur (2012) in his study on “Teacher Effectiveness as Related to Cognitive Style and Emotional Competence.” In the present study, descriptive survey method of research was used. In this study two types of variables are (i) Independent Variables and (ii) Dependent Variable. Gender, Academic Stream, Cognitive Style and Emotional Competence will constitute independent variables. Teacher Effectiveness will be regarded as dependent variable. All the teachers serving in secondary and senior secondary schools of Himachal Pradesh constitute the population of the study. In this study convenient and multi-stage sampling was used. Out of 12 districts of Himachal Pradesh four districts (Kullu, Mandi, Hamirpur and Bilaspur) will be selected conveniently by the researcher. These four districts will be selected keeping in view the number of educational blocks available in these districts. For proper. In

Tool used for the study is standardised tool of Praveen Kumar jha. The findings from the study were to improve teacher effectiveness, cognitive style and emotional competency are important.

Saroja (2011) conducted a study on "Influence of cognitive style and multiple intelligence on the academic achievement of prospective teachers of biological science." Survey method was taken for the study. The sample taken for the study was 500 biological prospective teachers Tirunelveli, tutukudi and Kanyakumari district Tamilnadu. The study concluded by cognitive style and multiple intelligence affect the academic achievement of biology teachers. From the study the respondent with high systematic style and low intuitive style having systematic style , and person having low systematic and high intuitive style have high intuitive style.

Pannu (2010) investigated a study on "Academic Achievement about Cognitive styles, Personality traits and Adjustment of Adolescents." Descriptive survey method of research was employed for the present study. Cognitive style inventory (CSI) developed by Dr. Praveen Kumar Jha (2001) measures the ways of thinking, judging, remembering, storing information, decision making and believing in interpersonal relationship. The population in the present study was defined as all students of class 10+1 studying in different schools of Amritsar district affiliated to Punjab School Education Board, Mohali, Punjab. The main finding of the study were Cognitive style influenced the academic achievement of adolescents. Adolescents having different levels (systematic, intuitive, integrated, undifferentiated and split) of cognitive style possessed different levels of academic achievement. Adolescents having high intuitive cognitive style possessed higher academic achievement than those having low, medium low and medium high intuitive cognitive style. The trend showed that higher the intuitive cognitive style higher was the academic achievement.

Sarsani et al. (2010) studied "achievement in Mathematics of secondary school students." The population for the present study was sample taken for the study was 480 students and found that girls performed better than boys in Mathematics scholastic achievement test; caste did not influenced the performance in Mathematics scholastic achievement test; type of school, medium of school and locality influenced the performance in Mathematics scholastic achievement test.

Basu (2010) conducted a study on “The cognitive development of prospective teachers at elementary and secondary level” In the present study results showed that majority of the prospective elementary and secondary teachers function at the formal operational level of cognitive development of the prospective elementary and secondary school teacher. Also no significant gender differences came to light when the levels of cognitive development of male and female prospective elementary and secondary school teachers were compared.

B. Review of Foreign Studies related to Cognitive Styles and Academic Achievement

Sellah et al. (2017) conducted a study on “Analysis of Student-Teacher Cognitive Styles Interaction: An Approach to Understanding Learner Performance.” This study which is informed by cognitive styles theories is a descriptive study that examined the interactive effects of cognitive styles and their influence on academic performance. The study specifically explored the interactive effect of cognitive styles of students and teachers on learners’ performance in Mock and in Kenya Certificate of Secondary Education (KCSE) Examinations. The target population for the study was all students in sixty schools elevated to National School status across Kenya’s 47 Counties. Six schools from three counties were randomly selected. From the sampled schools, one class of Form Four students was randomly selected. A total of 293 students, 6 teachers and 6 Academic Masters formed the sample. Data was collected using a Cognitive Styles Inventory, interview guide for Academic Masters and marks record forms. Data was analyzed using SPSS Version 20 to run correlation, t-tests and ANOVA tests. The study revealed two compelling findings: (i) interaction between the four dimensions of cognitive styles results in significant differential performance, and (ii) students whose cognitive styles matched those of their teachers to a level of 100% performed poorest in both Mock and KCSE.

Musya (2015) investigated a study on “Cognitive styles and academic achievement among secondary school learners in Kenya.” The study The questionnaires contained three sections: personal information of the students, performance in chemistry and field independence/ dependence questionnaire. Sampling was done using stratified and systematic random sampling. The results show that both Field independent and Field dependent cognitive styles are evident among the secondary

school students. The results also show that more male students were found to be field dependent while more female students were field independent and that field independent individuals scored higher than field dependent individuals.

Dupe (2014) in their study on “Cognitive Style Profiles and Physics Achievement of senior secondary school students in Ogun State, Nigeria” This study analysed physics students’ cognitive styles and physics achievement of senior secondary school students. Five hypotheses were tested. The sample consisted of 107 Senior Secondary III physics students from four co-educational secondary schools in Ogun State. These students were categorized as analytic and non analytic learners based on their performance on the Sigel’s Cognitive Style Test (SICOST). Results revealed that most of the students (69%) were analytic, and a significant difference in physics achievement in favour of analytic students was found. Also, a significant difference in favour of analytic boys (as against non-analytic boys) was found. However, there was no significant difference between the physics achievement of analytic and non-analytic girls. Based on these, the first and second, fourth and fifth hypotheses were rejected while the third hypothesis was upheld. The study concluded that teachers should endeavour to find out students’ cognitive style and use strategies consistent with it.

Tinajero (2012) studied on “cognitive style and learning strategies as factors which affect academic achievement of Brazilian university students”. In the present study, the influence of the cognitive style called field dependence-independence on academic achievement of Brazilian university students was explored as well as the mediating effect of learning strategies on that influence. Learning strategies of 313 first-year university students (189 women and 124 men; M age = 20.86, SD = 3.86) from different fields, with upper, medium and lower scores on field dependence-independence were assessed on a self-report questionnaire and their overall academic marks in the first year were registered. Results of a regression analysis showed that cognitive style and learning strategies significantly contributed to academic achievement. A path analysis revealed that planning strategies mediated the influence of cognitive style on achievement.

Grossmann (2011) conducted a study of “Cognitive Styles and Strategy use by Successful and Unsuccessful Adult Learners in Switzerland.” A great deal of an EFL teacher’s time is spent helping individuals struggling with L2 learning, and although

many variables have been identified which account for success, this knowledge has not produced a universal theory of second language acquisition. Consequently, scholars are increasingly arguing that successful learners combine these factors in unique ways in the process of self-regulated learning. In an attempt to understand this process more clearly, the research reported in this paper investigates the existence of a link between cognitive style and learning strategies, and considers how their relationship differs between successful and unsuccessful learners in my classroom, with the aim of offering concrete advice to assist students in the process of self regulation. The data from this study suggests that a link between cognitive style and learning strategies exists and that certain types of strategy are important for successful learning for the different cognitive style groups.

Changju (2011) conducted a study on “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 is presented. Two self-reported inventories are employed. Learning Style Survey is used to examine the learning styles of the participants and the Chinese version of Oxford’s Strategy Inventory for Language Learning (SILL) is 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 paper, so they turn to be the most influential cognitive styles that have an impact on learners’ learning strategy choices. Finally, implications for teaching are discussed, as are suggestions for the future researches.

CONCLUSION

The purpose of this review was to view the trends in composition studies within the past 10 years. Thinking is the one which develop a person creativity, opinion and also attitude. The studies not only help to understand a teacher or a student’s cognitive styles but also for every individuals thinking style.



METHODOLOGY

CHAPTER III

METHODOLOGY

INTRODUCTION

Research is important both in scientific and non-scientific fields. In our life new problems, events, phenomena and processes occur every day. Practically, implementable solutions and suggestions are required for tackling new problems that arise. Scientists have to undertake research on them and find their causes, solutions, explanations and applications. Precisely, research assists us to understand nature and natural phenomena. In research methodology is very much important.

Research methods are the various procedures, schemes and algorithms used in research. All the methods used by a researcher during a research study are termed as research methods. They are essentially planned, scientific and value-neutral. They include theoretical procedures, experimental studies, numerical schemes, statistical approaches, etc. Research methods help us collect samples, data and find a solution to a problem. Particularly, scientific research methods call for explanations based on collected facts, measurements and observations and not on reasoning alone. They accept only those explanations which can be verified by experiments.

Research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena are called research methodology. It is also defined as the study of methods by which knowledge is gained. Its aim is to give the work plan of research.

- Which is a suitable method for the chosen problem?
- What is the order of accuracy of the result of a method?
- What is the efficiency of the method? And so on. Consideration of these aspects constitute a research methodology

The methodology for the study on “Cognitive style and academic achievement of B. Ed students” is discussed the following heads:

3.1 Method used for study

3.2 Population and sample

3.3 Tool used for the study

3.4 Administration of the tool

3.5 Statistical technique used in the study

3.1 METHOD USED FOR THE STUDY

The investigator has adopted survey method for the study. The term survey is used for the technique of investigation by a direct observation of a phenomena or systematic gathering of data from population by applying personal contact and interviews when adequate information about a certain problems is not available in records, files and other sources. It is used in those investigations also where published data is used. Survey can be applicable only when a direct contact is made and does not include any study from the libraries. A survey is a process of collecting data from existing population units with no particular control over factors that may affect population characteristics of interest in the study.

The area selected for the study was Coimbatore district of Tamilnadu. Student teachers from one Government, two Aided and two Self - Finance colleges of Coimbatore were selected for the study.

Sample is the process by which relatively small number of individuals, objects or events is selected and analyzed in order to find out something about the entire population from which it was selected. It helps to reduce expenditure, save time, energy, permit measurement of greater scope or produce precision and accuracy. Sampling procedures provide generalizations on the basis of relatively small portion of the population.

The investigator has selected sample from government, government aided and self-financing B. Ed colleges in Coimbatore.

3.2 POPULATION AND SAMPLE

POPULATION

A population is any group of individuals that have one or more characteristics in common by population, the researcher means the aggregate or totality of objects or individuals regarding which in some reference are made to be made sampling study.

In this study, the population refers to student teachers studying in College of Education/ University Department of Education of Coimbatore city.

SAMPLE

A sample is a small portion of the population selected for observation and analysis. Here the sample consists of 350 student teachers studying in colleges of Education/University Department of Education of Coimbatore city using simple random sampling technique.

DETAILS OF THE SELECTED SAMPLE

The table below shows the distribution of sample selected for the study.

TABLE 1
DISTRIBUTION OF THE SAMPLE FOR THE STUDY

S. No	TYPE OF COLLEGE	BOYS	GIRLS	TOTAL
1	Government	-	62	62
2	Aided	35	135	170
3	Self Finance	9	109	118
TOTAL		44	306	350

3.3 TOOL USED FOR THE PRESENT STUDY

The selection of relevant tool is another major consideration in an educational research.

The following tools were used for the study.

1. Personal data sheet

2. Cognitive Style Inventory (CSI), Developed by Praveen Kumar Jha (2001).

1. Personal data sheet

The self made personal data sheet is used to collect necessary variables need for the study. The variables includes Age, Marital status, Educational qualification, Type of college, Locality of the college, Locality of Residence, Experience in Teaching, Nature of the College, Type of family, internet usage, cultural event participation, participation in science club, Marks obtained and Major Subject

2. Cognitive Style Inventory(CSI)

The Cognitive Style Inventory (CSI) was developed by Praveen Kumar Jha (2001). It is a self report inventory of the ways of thinking, judging, remembering, storing information, decision making, and believing in interpersonal relationships. The CSI comprises 40 statements from which 20 statements are related to Systematic Style and the other 20 statements to Intuitive Style and are to be responded on five-point scale running from ‘Strongly Agree’ to ‘Strongly Disagree’ with three middle responses of ‘Agree’, ‘Undecided’, and ‘Disagree’.

Scoring Procedure

Cognitive Style Inventory (CSI) is a self research tool which gives an estimate of cognitive style of an individual in a five point Likert format. The minimum and maximum score for each dimension range between 20 to 10

TABLE 2
SCORING OF THE ITEMS OF CSI

Responses	Score
Strongly agree	1
Agree	2
Undecided	3
Disagree	4
Strongly disagree	5

Interpretation

Respondents are classified according to the following interpretation. A respondent who rates high on the systematic scale and low on the Intuitive scale is

identified as having systematic style. Respondent who rates low on systematic scale and high on Intuitive scale is designated as a person having Intuitive scale.

3.4 ADMINISTRATION OF THE TOOL

The investigator visited the selected B. Ed colleges in Coimbatore. After getting permission from the head of the institution the investigator administered the tool. The questionnaires were distributed. The procedures of the tool were explained to the student teachers in detail. Then the data were collected successfully.

3.5 STATISTICAL TECHNIQUES USED IN THE STUDY

The data were analyzed and interpreted using following techniques.

Selection of Sample

- Percentage Analysis
- 't' test
- F test
- Correlation Analysis

Percentage Analysis

Percentage analysis is the method to represent raw streams of data as a **percentage** (a part in 100 - **percent**) for better understanding of collected data. **Percentage Analysis** is applied to create a contingency table from the frequency distribution and represent the collected data for better understanding.

't' test

The **'t' test** is one type of inferential statistics. It is used to determine whether there is a significant difference between the means of two groups. With all inferential statistics, we assume the dependent variable fits a normal distribution

't' test is used to find out the significant difference between the mean of two variables

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

Where,

\bar{x}_1 = Mean of first set of values

\bar{x}_2 = Mean of second set of values

S1 = Standard deviation of first set of values

S2 = Standard deviation of second set of values

n1 = Total number of values in first set

n2 = Total number of values in second set.

F test

An **F-test** is any statistical **test** in which the **test statistic** has an **F-distribution** under the null hypothesis. It is most often used when comparing statistical models that have been fitted to a data set, in order to identify the model that best fits the population from which the data were sampled.

$$f = \frac{\text{Sum of Squares of between variable}}{\text{Sum of Squares of within variable}}$$

Product Moment Correlation

Correlation analysis is a method of statistical evaluation used to study the strength of a relationship between two, numerically measured, continuous variables (e.g. height and weight).

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

CONCLUSION

In this chapter the methodology of the present investigation is enumerated. A clear cut view about the method selected, administration of the tool and data collections are discussed.



ANALYSIS AND INTERPRETATION

CHAPTER IV

ANALYSIS AND INTERPRETATION

INTRODUCTION

The most important part of the investigation is the analysis and interpretation of data. This is studying the tabulated material in order to determine its meaning. It involves breaking down complex factors into simple parts together in new arrangements for the purpose of interpretation.

This serves the following functions:

- To make raw data meaningful.
- To test the hypothesis
- To obtain significant results.

The present study is aimed to analyse the relationship between **Cognitive Style and Academic Achievement of B. Ed students**. The investigator collected data with the help of research tool or Cognitive style. The investigator analysed data with the help of appropriate statistical techniques and the analysed data were given in form with interpretation.

SECTION I

4.1 DESCRIPTIVE ANALYSIS

4.1.1 Distribution of Sample in terms of Background Variables

Table below reveals the details of sample in terms of background variables

TABLE 3

DISTRIBUTION OF SAMPLE IN TERMS OF BACKGROUND VARIABLES

S. No	Variables	Category	Total N=350	
			N	%
1	Gender	Male	44	12.5
		Female	306	87.4
2	Major subject	Language	120	34.28
		Science	75	21.4
		Maths	67	19.1
		Social Science	45	12.8
		Special Education	43	12.2
3	Educational qualification	UG	242	69.1
		PG	108	30.8
4	Type of college	Aided	165	47.1
		Government	65	18.5
		Self Finance	120	34.2
5	Locality of residence	Rural	125	35.7
		Urban	225	64.2
6	Nature of college	Women	232	66.2
		Co-Education	84	24
		Men	34	9.7

Gender:

The majority of the student teachers are female (87.4 percent) and the strength of male student teachers are very low (12.5 percent)

Major Subject:

Majority of student teachers are coming under the subject as Maths, Science, English and Social Science. In that above subjects Most of the student teachers were having Language (34.28 percent) as major subject, followed by Science (21.4 percent) and Mathematics as major subject is (19.1).

Qualification:

The majority of student teachers were having UG (69.1 percent) degree as highest qualification. Only 30.8 percent were Post graduates.

Type of College:

Majority of the student teachers were from aided college (47.1 percent) the student teachers from Government College are 18.5 percent and the less numbers of student teachers are from Self finance (34.2 percent).

Locality of Residence:

Most of the student teachers were from urban area (64.2 percent) and the student teachers from rural area were only 35.7 percent.

Nature of College:

Majority of the B. Ed students (66.2 percent) were from Women colleges.

4.1.2 LEVEL OF COGNITIVE STYLE OF B. Ed STUDENTS

The table below gives the level of Cognitive Style of B. Ed students.

TABLE 4
LEVEL OF COGNITIVE STYLE OF B. Ed STUDENTS

S. No	Cognitive style	Male N=44	%	Female N=306	%
1	High	25	56.8	109	35.6
2	Average	11	25	97	31.6
3	Low	8	18.1	100	32.6

The above table reveals the level of Cognitive Style of B. Ed students. 57 percent of Male and 36 percent Female B. Ed students have high level of Cognitive Style. Whereas 25 percent of Male and 31 percent have average level of Cognitive Style.

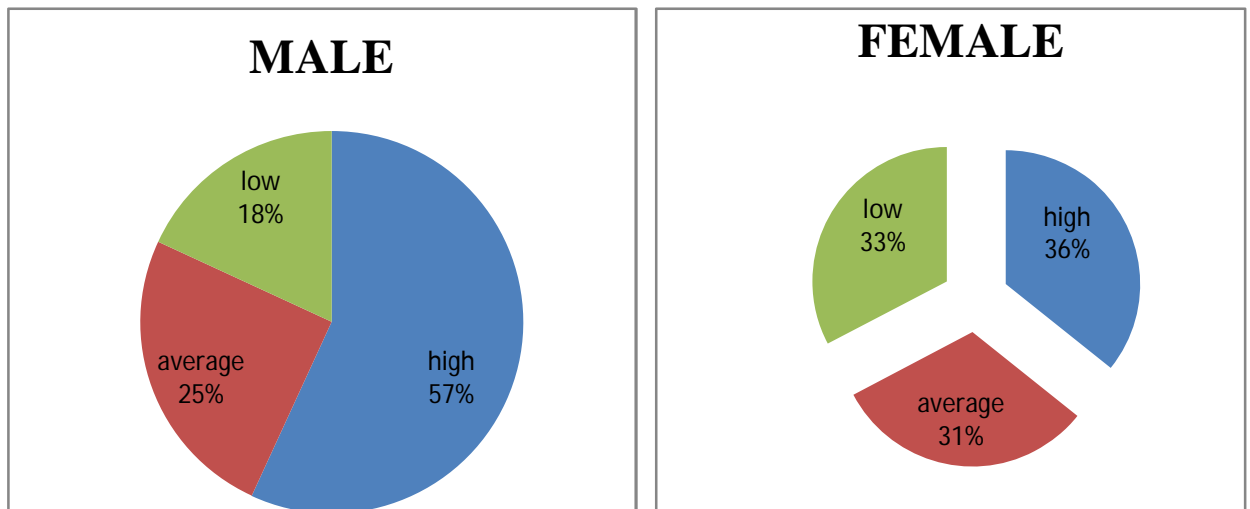


FIGURE 1
LEVEL OF COGNITIVE STYLE OF B. Ed STUDENTS

4.1.3 SYSTEMATIC COGNITIVE STYLE OF SELECTED SAMPLE WITH REFERENCE TO BACKGROUND VARIABLES

Table below reveals the Systematic Cognitive Style of B. Ed students with reference to background variables.

TABLE 5

SYSTEMATIC COGNITIVE STYLE OF SELECTED SAMPLE WITH REFERENCE TO BACKGROUND VARIABLES

S. No	Variables	Category	Systematic style	
			N=179	%
1	Gender	Male	18	10
		Female	161	90
2	Major subject	Language	55	31
		Science	33	19
		Maths	32	18
		Social Science	30	17
		Special Education	29	16.2
3	Educational qualification	UG	112	63
		PG	67	37
4	Type of college	Government	35	20
		Aided	63	35
		Self Finance	81	46
5	Locality of residence	Rural	81	45.2
		Urban	114	63.6
6	Nature of College	Women	112	66
		Co-Education	49	27.3
		Men	18	10

Gender:

The result percentage shows women B. Ed students have higher Systematic Cognitive style (90 percent) than Men B. Ed students (10 percent).

Major Subject:

The results show that, B. Ed students from Language subjects have higher Systematic Cognitive Style (31 percent) than other students. Science B. Ed students are having 19 percent of second highest Subject in the category. Maths, Social Science and Special Education are having slight variations in their Systematic Cognitive Style also very low Systematic Cognitive Style

Educational Qualification:

Graduate as highest qualification B. Ed students have higher Systematic Cognitive style (63 percent) than the B. Ed students who have completed PG as highest qualification.

Nature of College:

The Self- Finance students have higher Systematic Cognitive style (46 percent). The students from Aided College students have better Systematic Cognitive Style (35 percent) than the students from Government College (20 percent).

Locality of Residence:

The B. Ed students from urban area have higher Systematic Cognitive style (63.6 percent) than the B. Ed students from rural area (45.2 percent).

Type of College:

The B. Ed students from Women College have higher Systematic Cognitive Style (66 percent) than the B. Ed students from Men and Co Education colleges. The B. Ed students from Men College have low Systematic Cognitive Style (10 percent).

4.1.4 INTUITIVE COGNITIVE STYLE OF SELECTED SAMPLE WITH REFERENCE TO BACKGROUND VARIABLES

Table below depicts the level of Intuitive Cognitive Style of B. Ed students.

TABLE 6
INTUITIVE COGNITIVE STYLE OF SELECTED SAMPLE WITH REFERENCE TO BACKGROUND VARIABLES

S. No	Variables	Category	Intuitive style	
			N=171	%
1	Gender	Male	26	15
		Female	145	85
2	Major subject	Language	65	38
		Science	42	25
		Maths	35	20
		Social Science	15	8.8
		Special Education	14	8.2
3	Educational qualification	UG	130	76
		PG	41	24
4	Type of college	Government	30	18
		Aided	102	60
		Self Finance	39	23
5	Locality of residence	Rural	60	35.1
		Urban	111	64.9
6	Nature of College	Women	120	70.2
		Co-Education	35	20.4
		Men	16	9.4

Gender:

The result percentage shows Female students have higher Intuitive Cognitive style (85 percent) than Male students (15 percent).

Major Subject:

The Intuitive Cognitive style is less among the B. Ed students. The results show that B. Ed students from Language Subjects Intuitive Cognitive Style (38 percent) higher than other students. Science students have Intuitive Cognitive Style of 25percent. Social Science students have Intuitive Cognitive style of 8.8 percent which very low but compare to high than Special Education students (8.2).

Educational Qualification:

The B. Ed students who have completed UG as highest Educational Qualification have higher Intuitive Cognitive Style (76 percent) than the B. Ed students who have completed PG as highest Educational Qualification.

Type of College:

The Aided College B. Ed students have higher Intuitive Cognitive Style (60 percent). The students from Self- Finance College have better Cognitive Style (23 percent) than the students from Government College (18 percent).

Locality of Residence:

The B. Ed students from urban area have higher Intuitive Cognitive style (64.9 percent) than the B. Ed students from rural area (35.1 percent).

Nature of College:

The B. Ed students from Women College have higher Intuitive Cognitive style (70.2 percent) than the B. Ed students from Men and Co Education colleges. The B. Ed students from Men College had low Intuitive Cognitive style (9.4 percent).

4.1.5 SUBJECT WISE COMPARISON OF COGNITIVE STYLE OF B. ED STUDENTS

Table below depicts the Subject Wise Comparison of Cognitive Style of B. Ed Students.

TABLE 7
SUBJECT WISE COMPARISON OF COGNITIVE STYLE OF B. Ed
STUDENTS

Subject	Low		Average		High	
	N	%	N	%	N	%
Language	5	4.2	89	74.1	26	21.6
Maths	5	7.5	40	59.7	22	32.8
Science	3	4	36	60	35	46.6
Special Education	2	4.7	7	16.2	34	79.1
Social Science	4	8.8	27	60	14	31.1

Majority of the B. Ed students of different Subject specialisation come under the category of Average level of Cognitive Style. B. Ed students of Special Education have high Cognitive Style (79.1 percent) followed by Science students (46.6 percent) Maths (32.8percent) and Social Science (31.1 percent).

4.1.6 ACHIEVEMENT SCORES OF B. Ed STUDENTS

Table below gives the details of achievement scores of B. Ed students.

TABLE 8
ACHIEVEMENT SCORES OF B. Ed STUDENTS

Range of Achievement Scores	N=350	%
50-60	37	10.57
60-70	167	47.7
70-80	101	28.8
80-90	22	6.28
90 Above	23	6.57

From the table above shows majority of the students scored 60-70 percent marks in their First year B .Ed Degree Examination. It also shows that most of the students have completed their first semester with first class and above.

SECTION II

4.2 DIFFERENTIAL ANALYSIS

4.2.1 Difference in Systematic Cognitive style of Male and Female B. Ed students

The table below shows the difference in Systematic Cognitive Style of male and female B. Ed students.

TABLE 9
DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF MALE AND FEMALE B. Ed STUDENTS

Gender	N= 350	Mean	SD	't' Value
Male	44	79	9.65	1.99*
Female	306	72.37	15.54	

* Significant at 5% level

To find out the difference in Systematic Cognitive Style of male and female B. Ed student, 't' test was applied. From the above table, it is seen that the calculated t-value (1.99) is higher than the table value (1.96) which shows that there is a significant difference in Systematic Cognitive Style of Male and Female B. Ed students. Hence the null hypothesis stated that there is no significant difference in the Systematic Cognitive style of B. Ed students in relation to gender is rejected.

4.2.2 Difference in Systematic Cognitive Style of B. Ed students with respect to their Educational Qualification

The table below shows the difference in systematic cognitive style of B. Ed students with respect to their Educational Qualification.

TABLE 10
DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO THEIR EDUCATIONAL QUALIFICATION

Educational Qualification	N =350	Mean	SD	't' Value
UG	242	73.07	15.5	1.97*
PG	108	73.85	14.32	

* -Significant at 5% level

The calculated' value is 1.97 which higher than the table value of 1.96 at 5% level of significance. Since the calculated' value is higher than the table value, it is inferred that the Systematic Cognitive style vary significantly between Graduates and Post graduates. Hence the null hypothesis stated that there is no significant difference in the Systematic Cognitive style of B. Ed students in relation to Academic Qualification is rejected.

4.2.3 Difference in Systematic Cognitive Style of B. Ed students with respect to their Locality of residence

Table below reveals the difference in Systematic Cognitive Style of B. Ed students with respect to their Locality of Residence.

TABLE 11

DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS WITH RESPECT TO LOCALITY OF RESIDENCE

Locality of residence	N =350	Mean	SD	't' value
Rural	125	75.14	13.5	1.97*
Urban	225	72.30	15.8	

* -Significant at 5% level

To find out the difference in Systematic Cognitive Style of B. Ed students from Rural and urban area and 't' test was applied and presented in table 11. From the above table it is seen that the calculated t-value (1.97) is higher than the table value (1.96) at 5% level. Hence the null hypothesis stated that there is no significant difference in the cognitive style of B. Ed students in relation to their Locality of residence is rejected.

While comparing the Mean Scores of Systematic Cognitive style (75.14) of rural students with the mean scores of Systematic Cognitive Style of Urban students, Rural students show better Systematic style.

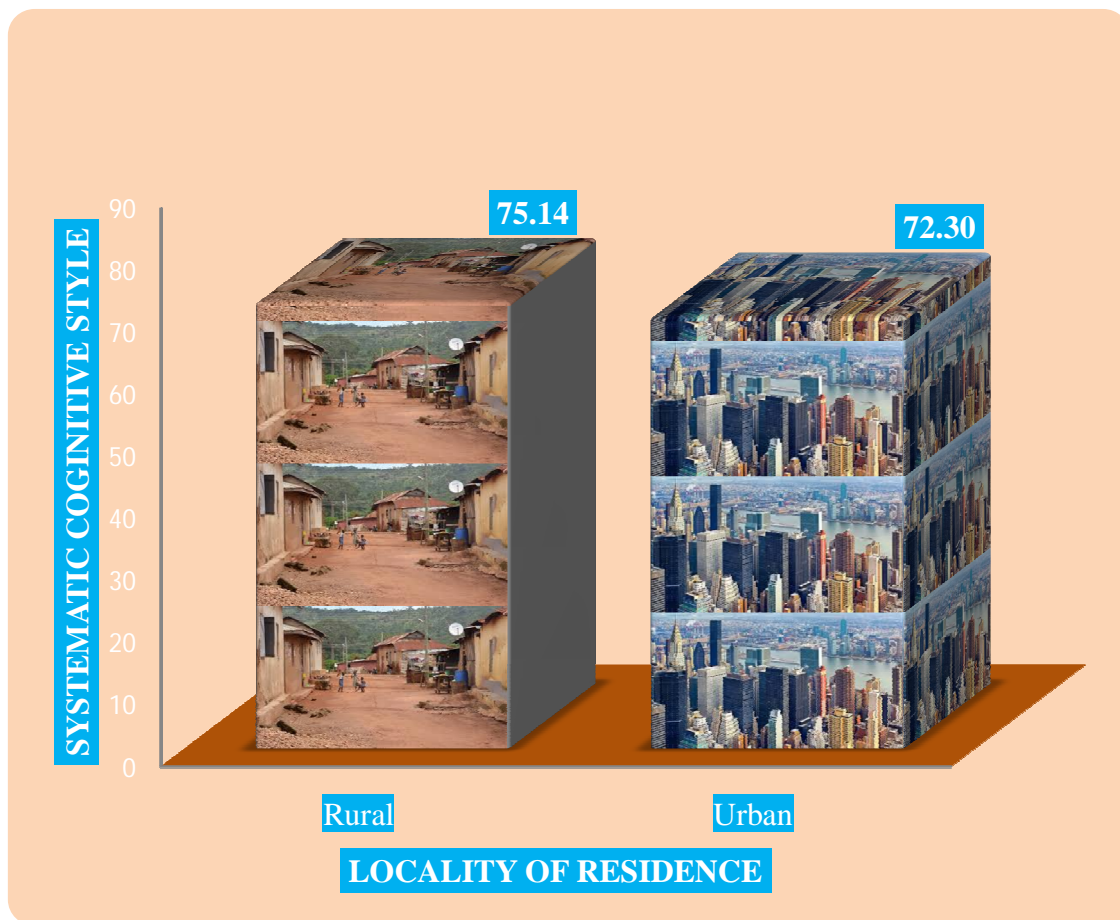


FIGURE 2

DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS WITH RESPECT TO LOCALITY OF RESIDENCE

4.2.4 DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS WITH RESPECT TO TYPE OF COLLEGE

The table below shows the difference in systematic cognitive style B. Ed students with respect to Type of College.

TABLE 12

DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS WITH RESPECT TO TYPE OF COLLEGE

Sources Of Variance	Sum of Squares	df	Mean Squares	F Value
Between Group	2776.7	2	1388.35	3.02*
Within Group	77122.7	347	222.25	
Total	78801.88	343		

*-Significant at 5% level

One way ANOVA (F test) was applied to find whether mean improvement scores differ significantly among the B. Ed students from Government, Self finance and Aided Colleges. From above table, it is seen that the calculated F-value (3.02) is higher than the table value (6.24) and it shows that there is a significant difference in the Systematic Cognitive Style of student teachers in relation to type of college. Hence the null hypothesis stated that there is no significant difference in the cognitive style of B. Ed students in relation to type of college is rejected.

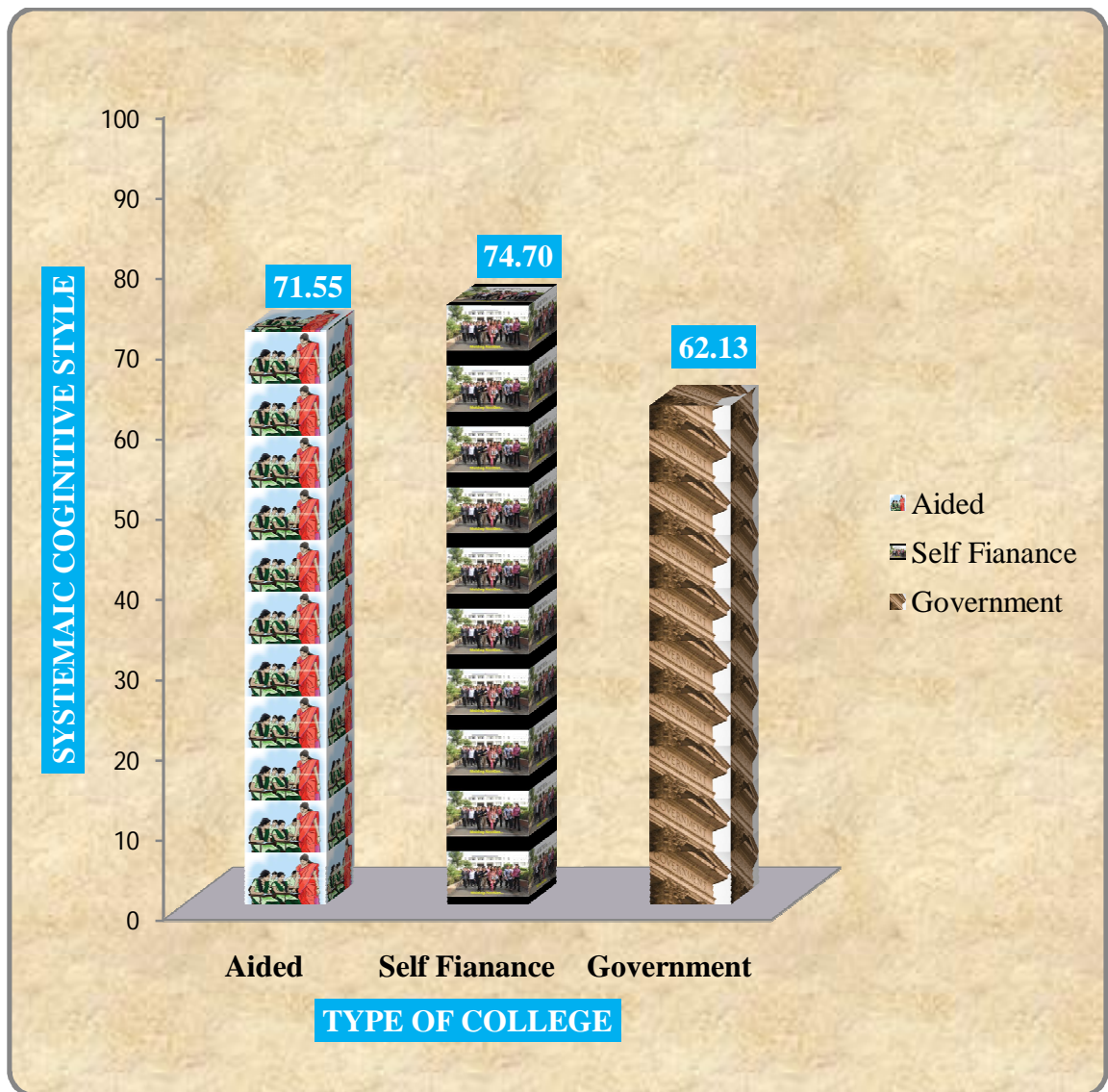


FIGURE 3

DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS WITH RESPECT TO TYPE OF COLLEGE

4.2.5 Difference in Systematic Cognitive Style of B. Ed students with respect to Nature of College

Table below shows the difference in systematic cognitive style B. Ed students with respect to their nature of college.

TABLE 13
DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO NATURE OF COLLEGE

Sources Of Variance	Sum of Squares	df	Mean Squares	F Value
Between Group	4930.437	2	2465.2	3.02*
Within Group	76001.55	353	215.3	
Total	80931.9	355		

*Significant at 5% level

To find out the difference in Systematic style among Men, Women and Co-education colleges, one way ANOVA test was applied. The ANOVA results show that the calculated F-ratio (3.02) is higher than the table value (11.45) at 5% level. Hence the null hypothesis stated that there is no significant difference in the cognitive style of B. Ed students in relation to Nature of college is rejected.

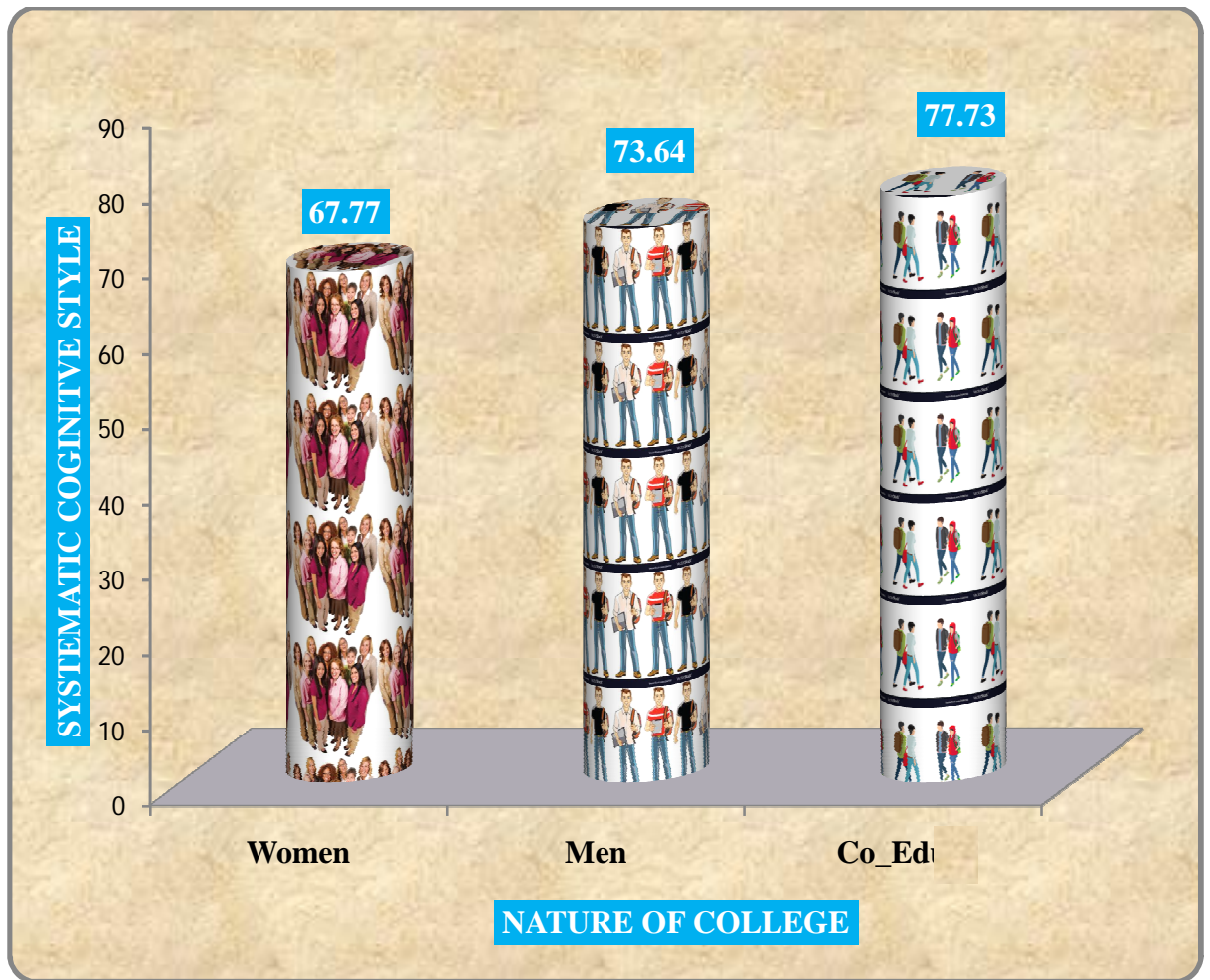


FIGURE 4
DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO NATURE OF COLLEGE

4.2.6 DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS WITH RESPECT TO MAJOR SUBJECT

Table below gives the difference in Systematic Cognitive Style B. Ed students with respect to Major subject.

TABLE 14

DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS WITH RESPECT TO MAJOR SUBJECT

Sources Of Variance	Sum of Squares	df	Mean Squares	F Values
Between Group	2839.21	4	709.80	2.39*
Within Group	85958.13	417	165.58	
Total	88797.35	421		

*-Significant at 5% level

To find out the difference in Systematic style among B. Ed students of different subjects, one way ANOVA test was applied. The ANOVA results shows that the calculated F-ratio (2.39) is higher than the table value (6.09) hence it proves that there is a significant difference in the Systematic Cognitive Style of B .Ed students in relation to their Major subjects. Hence the null hypothesis states there is no significant difference in the Systematic cognitive style of B. Ed students in relation to their Major subject is rejected.

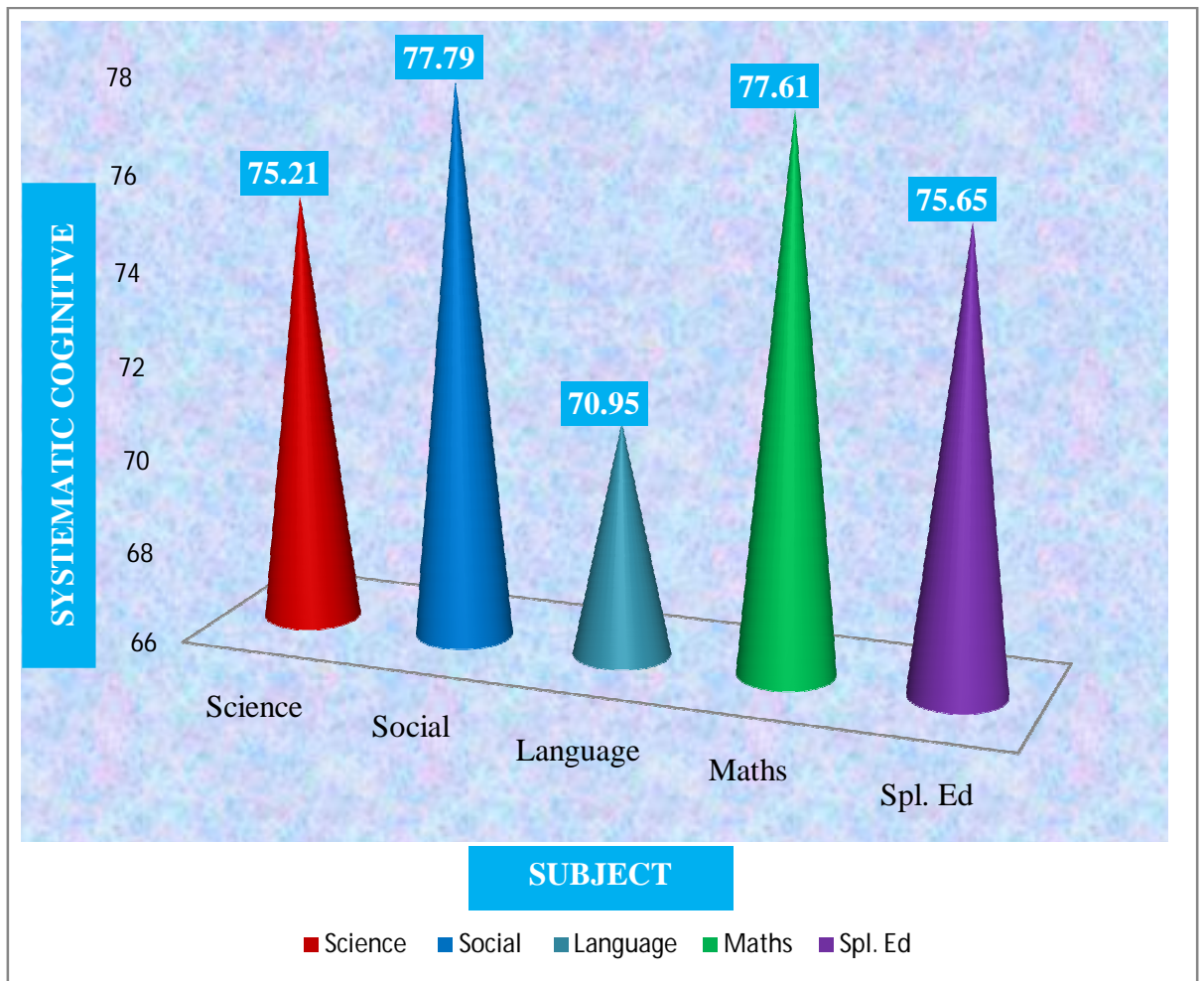


FIGURE 5

**DIFFERENCE IN SYSTEMATIC COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO MAJOR SUBJECT**

4.2.7 Difference in Intuitive Cognitive Style of male and female B. Ed students

Table below shows the difference in Intuitive Cognitive style of male and female B. Ed students.

TABLE 15
DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF MALE AND FEMALE
B. Ed STUDENTS

Gender	N = 350	Mean	SD	't' Value
Male	44	77.62	12.47	1.99*
Female	306	69.34	16.46	

*Significant at 5% level

To find out whether any difference in mean scores of Intuitive Cognitive style of Male and Female B. Ed students 't' test was applied and presented in table 15. From the above table, it is seen that the calculated t-value (1.99) is higher than the table value (1.96). Hence the null hypothesis stated that there is no significant difference in the Intuitive Cognitive Style of B. Ed students in relation to their gender is rejected.

This finding can be supported by Prakash Chandra Jena (2013) in his study revealed that the group difference between Male and Female UG students on Intuitive Cognitive Style is found to be in significant.

4.2.8 Difference in Intuitive Cognitive style of B. Ed students with respect to their Educational Qualification

Table below depicts the difference in Intuitive cognitive style of B. Ed students with respect to their Educational Qualification.

TABLE 16

DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS WITH RESPECT TO THEIR EDUCATIONAL QUALIFICATION

Educational Qualification	N = 350	Mean	SD	't' Value
UG	242	70.04	16.9	1.97*
PG	108	71.08	14.6	

* -Significant at 5% level

To find whether the mean scores of Intuitive Cognitive style of B. Ed students with reference to Academic Qualification .The calculated' value is 1.97 which higher than the table value of 1.96 at 5% level of significance. Since the calculated' value is higher than the table value, it is inferred that the Intuitive Cognitive style of B. Ed students vary significantly between UG and PG. Hence null hypothesis states there is no significant difference in Cognitive Style of B. Ed students in relation to Educational Qualification is rejected.

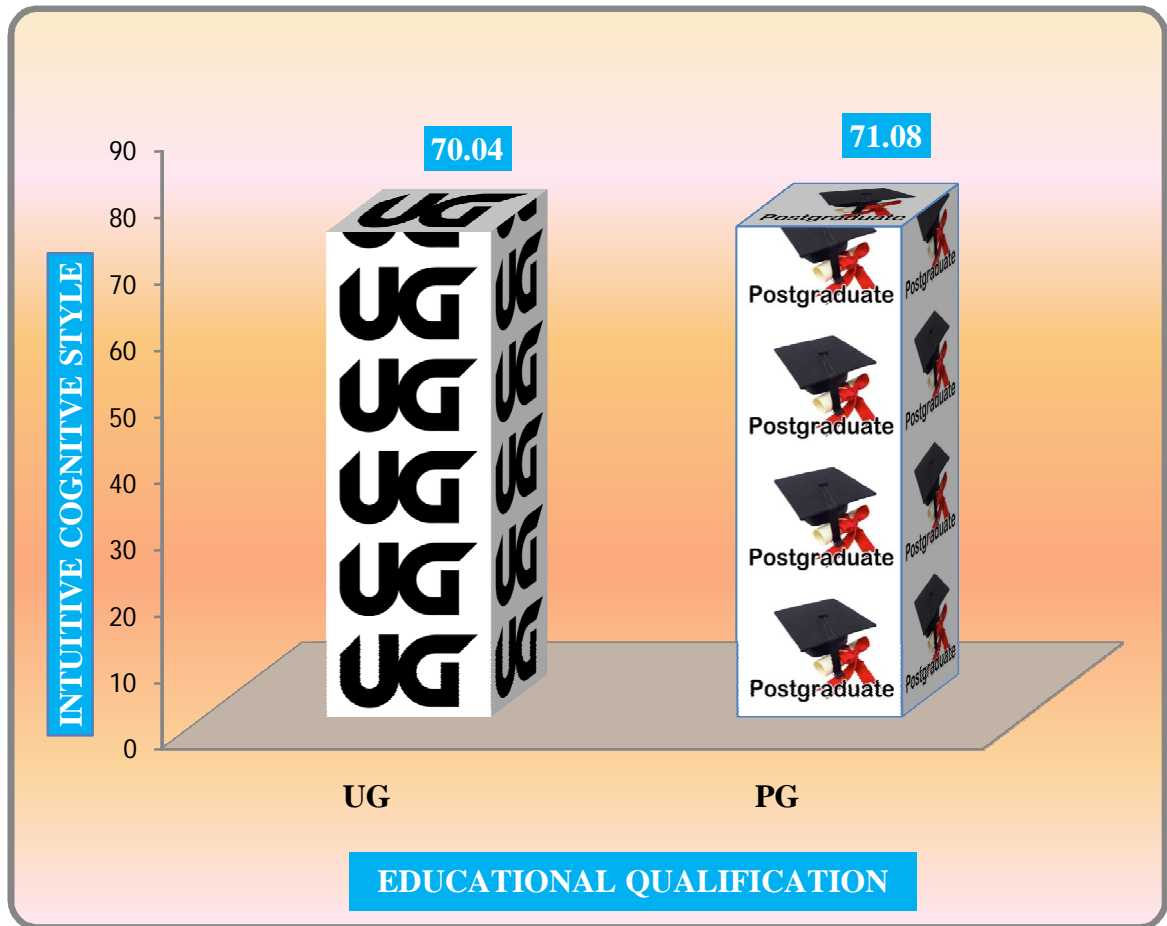


FIGURE 6

DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS WITH RESPECT TO THEIR EDUCATIONAL QUALIFICATION

4.2.9 Difference in Intuitive cognitive style of B. Ed students with respect to Locality of Residence

Table below shows the difference in Intuitive cognitive style of B. Ed students with respect to Locality of Residence.

TABLE 17
DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO LOCALITY OF RESIDENCE

Locality of Residence	N= 350	Mean	SD	't' Value
Rural	125	71.97	14.65	1.97*
Urban	225	69.58	17	

* -Significant at 5% level

To find out the difference in Intuitive Cognitive style of B. Ed students from Rural and urban area and 't' test was applied and presented in table17. From table above table, it is seen that the t-value (1.97) is significant at table value (1.96) at 5% levels. Hence the null hypothesis stated that there is no significant difference in the cognitive style of B. Ed student in relation to their Locality of residence is rejected.

The rural Students throughout their life have faced and solved not only personal problems but more problems related to environment and society. This experience must have sharpened their Intuitive Style. Hence the finding reveals that B. Ed students have significantly better in Intuitive Cognitive Style.

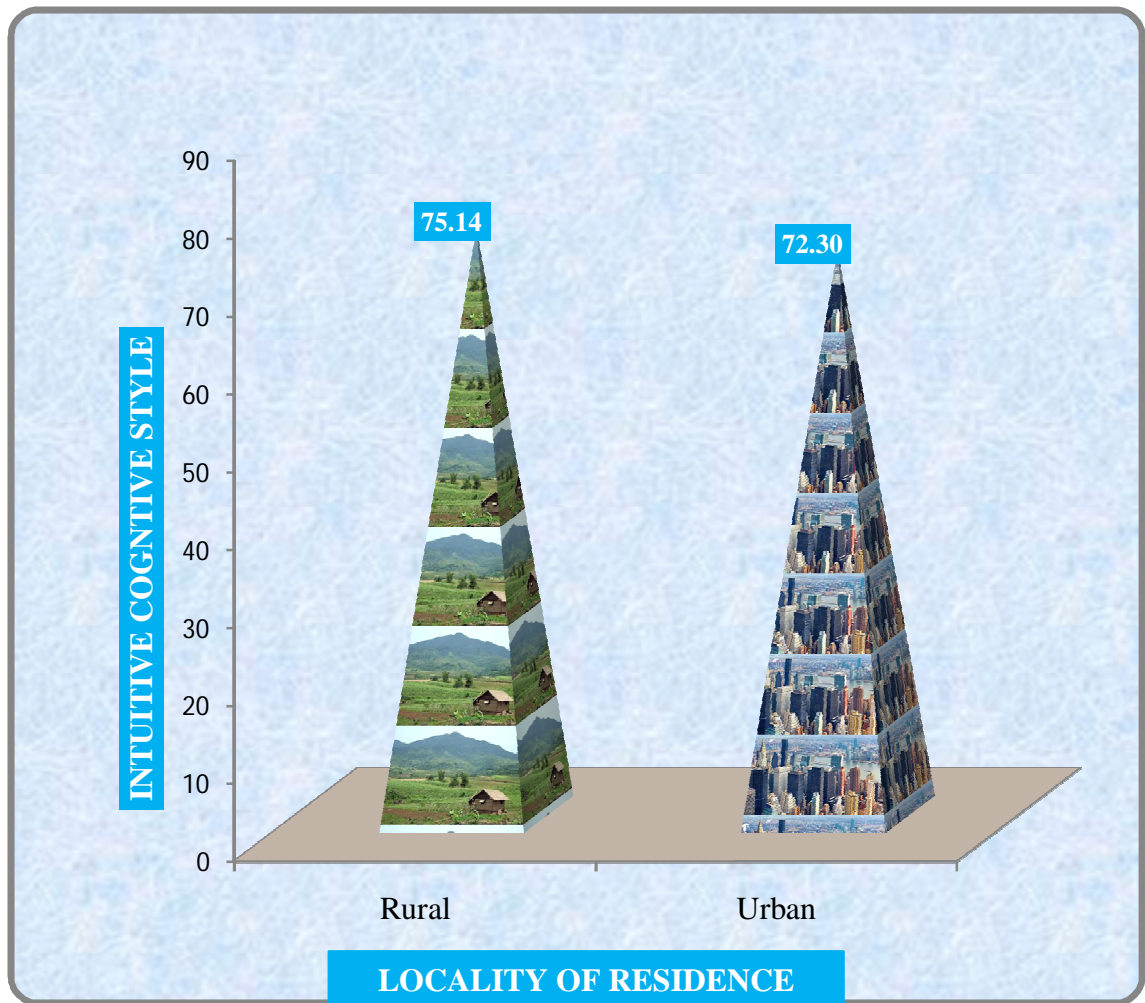


FIGURE 7
DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO LOCALITY OF RESIDENCE

4.2.10 Difference in Intuitive cognitive style of B. Ed students with respect to Type of College

Table below shows the difference in Intuitive cognitive style B. Ed students with respect to Type of College.

TABLE 18
DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO TYPE OF COLLEGE

Sources of Variance	Sum of Squares	df	Mean Squares	F Value
Between Group	11889	2	5944	3.01 [*]
Within Group	103398	430	240	
Total	115288	432		

*-Significant at 5% level

One way ANOVA (F test) were applied to find whether mean improvement scores differ significantly among the B. Ed students from Government, Self finance and Aided College. From the above table, it is seen that the calculated F-value (3.01) is higher than the F table value (6.24) which shows that there is a significant difference in the Intuitive Cognitive style of B. Ed students in relation to their type of college. Hence the null hypothesis stated that there is no significant difference in the Cognitive style of B. Ed students in relation to their type of college is rejected.

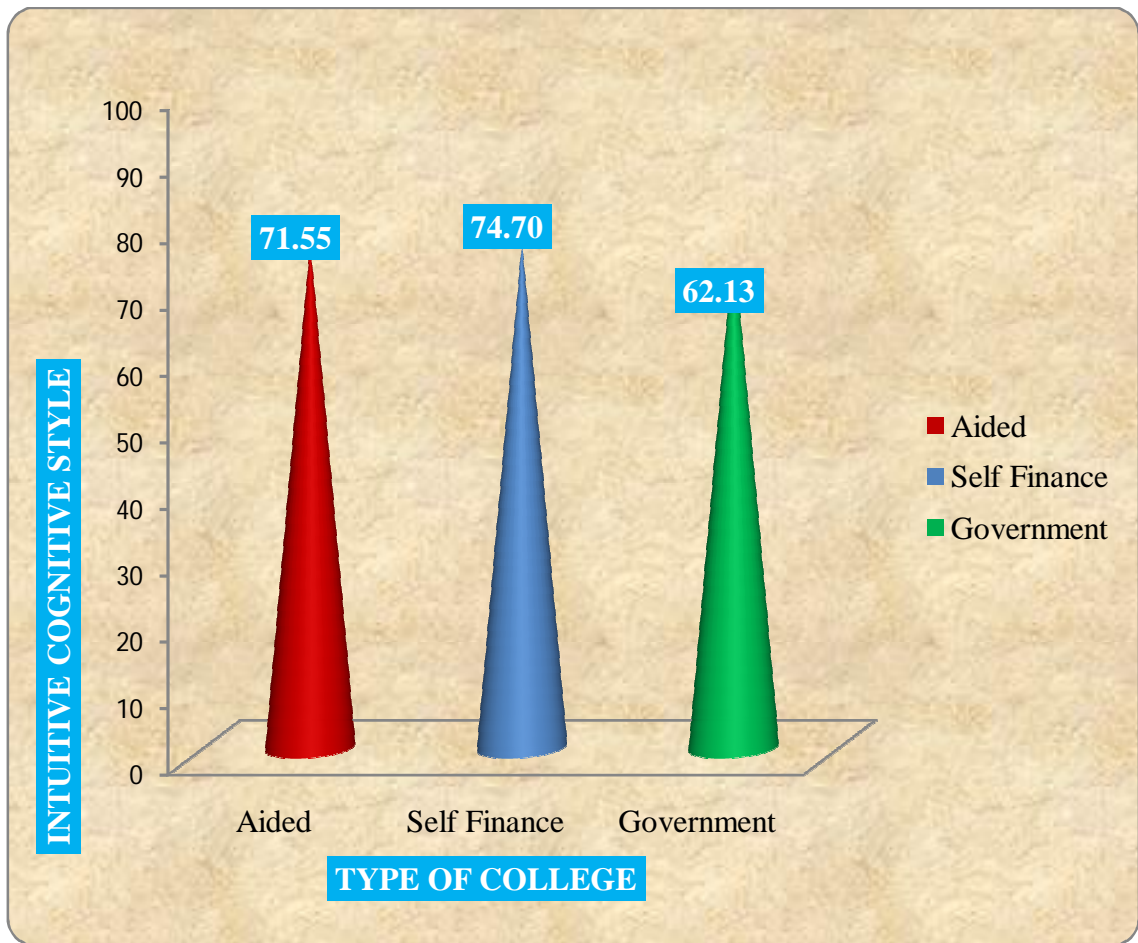


FIGURE 8
DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO TYPE OF COLLEGE

4.2.11 Difference in Intuitive cognitive style of B. Ed students with respect to Nature of College

Table below shows the difference in Intuitive Cognitive Style B. Ed students with respect to Nature of College.

TABLE 19
DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO NATURE OF COLLEGE

Sources Of Variance	Sum of Squares	df	Mean Squares	F Values
Between Group	6448	2	3224	3.02*
Within Group	85359	353	241	
Total	80931.9	355		

*Significant at 5% level

ANOVA single factor was used to test this difference in Intuitive Cognitive style among B. Ed students of different nature of College. From above table, it is seen that the F-value (3.02) is significant at table value (11.45) it proves there is a significant difference in the Intuitive cognitive style of student teacher in relation to their Nature of college. Hence the null hypothesis states there is no significant difference in the cognitive style of student teachers in relation to their Nature of college is rejected.

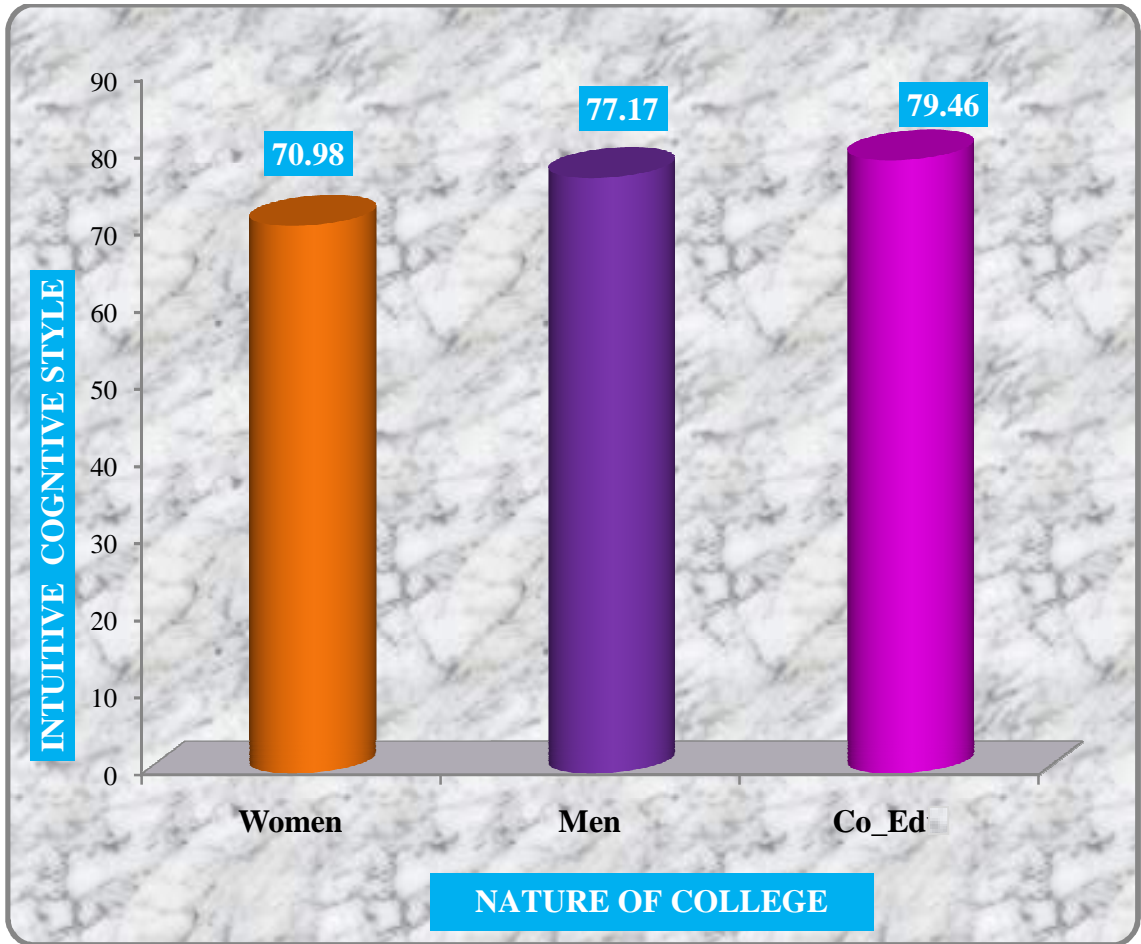


FIGURE 9
DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO NATURE OF COLLEGE

4.2.12 Difference in Intuitive cognitive style of B. Ed students with respect to Major Subject

Table below shows the difference in Intuitive cognitive style B. Ed students with respect to their Nature of College.

TABLE 20
DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO MAJOR SUBJECT

Sources Of Variance	Sum of Squares	df	Mean Squares	F Values
Between Group	11846.61	4	2961.65	2.4*
Within Group	78913.1	345	228.73	
Total	80931.9	355		

*-Significant at 5% level

To find out the difference in Intuitive Cognitive style among Government, Aided and Self Financing Colleges, one way ANOVA test was applied. The ANOVA results shows that the F-value (2.4) is significant at table value (6.09). Hence the null hypothesis stated that there is no significant difference in the cognitive style of B. Ed students in relation to their Major subject is rejected.

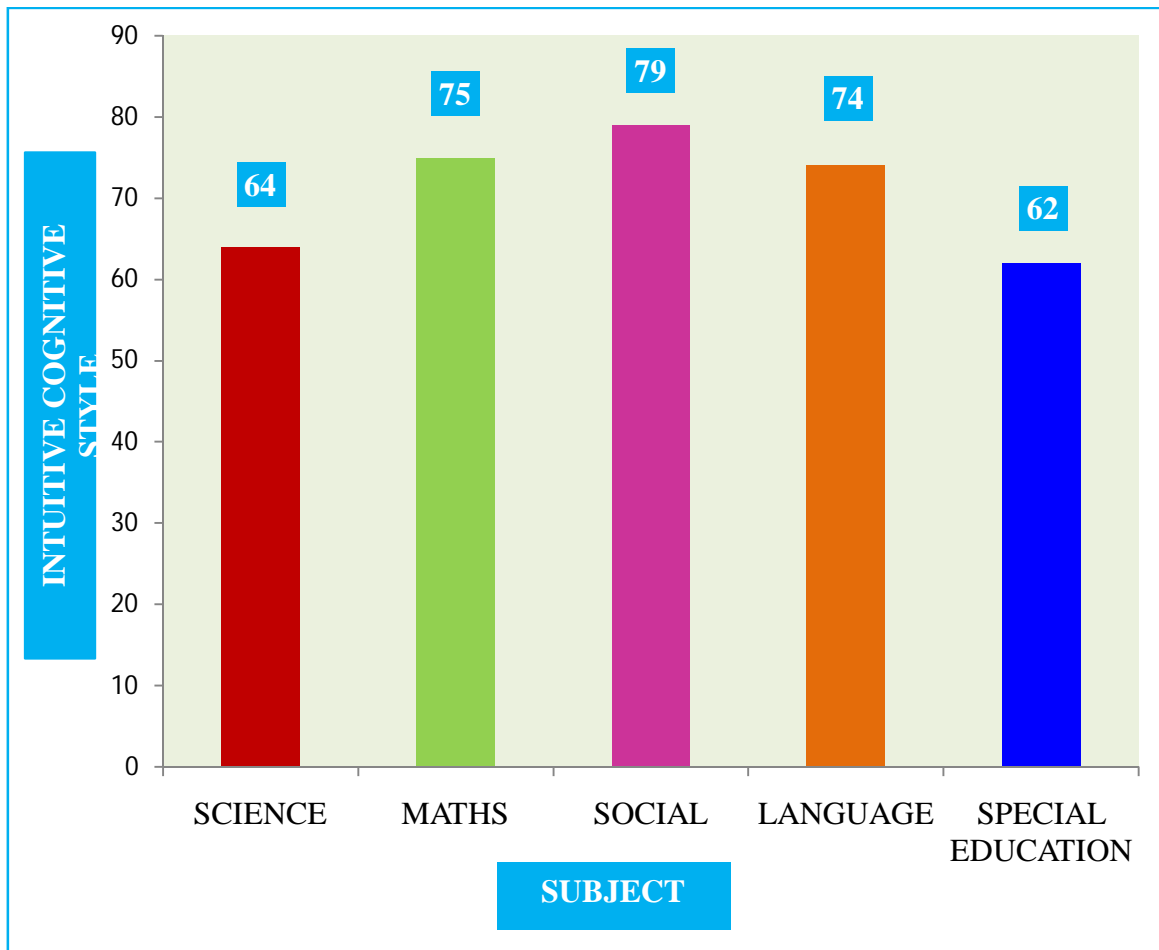


FIGURE 10
DIFFERENCE IN INTUITIVE COGNITIVE STYLE OF B. Ed STUDENTS
WITH RESPECT TO MAJOR SUBJECT

SECTION III

CORRELATION ANALYSIS

4.3.1 Relationship between Systematic Cognitive Style and Academic Achievement of B.Ed. Students with reference to background variables

Table below reveals the relationship between Systematic Cognitive style and Academic Achievement of B. Ed students with reference to background variables.

TABLE 21
RELATIONSHIP BETWEEN SYSTEMATIC COGNITIVE STYLE AND
ACADEMIC ACHEIVEMENT OF B. Ed STUDENTS WITH REFERENCE TO
BACKGROUND VARIABLES

S. No	Variables	Category	Systematic Style	
			r	Remarks
1	Gender	Male	0.477	S
		Female	0.47	S
2	Major subject	Science	-0.06	NS
		Maths	-0.08	NS
		Social Science	-0.04	NS
		Language	-0.04	NS
		Special Education	-0.05	NS
3	Educational qualification	UG	0.02	S
		PG	0.079	S
4	Type of College	Government	0.14	S
		Aided	0.54	S
		Self Finance	0.64	S
5	Locality of residence	Rural	0.04	S
		Urban	0.07	S
6	Nature of College	Men	0.19	S
		Women	0.10	S
		Co-Education	0.10	S

There exists significant relationship between Systematic Cognitive Style and Academic Achievement of B. Ed students with reference to gender, academic qualification, locality of residence, type of college and nature of college whereas there is no relationship between Systematic Cognitive Style and Academic Achievement of B. Ed students having different Subject specialisation.

4.3.2 Relationship between Intuitive Cognitive style and Academic Achievement of B. Ed students with reference to background variables

Table below reveals the relationship between Intuitive Cognitive style and Academic Achievement of B. Ed students with reference to background variables.

TABLE 22
RELATIONSHIP BETWEEN INTUITIVE COGNITIVE STYLE AND ACADEMIC ACHEIVEMENT OF B. Ed STUDENTS WITH REFERNCE TO BACKGROUND VARIABLES

S. No	Variables	Category	Intuitive Style	
			r	Remarks
1	Gender	Male	0.041	S
		Female	-0.024	NS
2	Major subject	Science	0.01	S
		Maths	-0.19	NS
		Social Science	-0.07	NS
		Language	-0.06	NS
		Special Education	-0.07	NS
3	Educational qualification	UG	0.02	S
		PG	-0.01	NS
4	Type of college	Government	0.25	S
		Aided	0.56	S
		Self Finance	0.07	S
5	Locality of residence	Rural	-0.04	NS
		Urban	0.07	S
6	Nature of college	Men	0.12	S
		Women	0.003	S
		Co-Education	0.22	S

There exists significant relationship between Intuitive Cognitive Style and Academic Achievement of B. Ed students with reference to type of college and nature of college type of college and nature of college whereas there is no relationship between Systematic Cognitive Style and Academic Achievement of B. Ed students of different Subject specialisation, gender, academic qualification, locality of residence.

4.3.3 Relationship between Cognitive Style and Academic Achievement of B.Ed students.

Table below shows the relationship between Cognitive Style and Academic Achievement of B. Ed students.

TABLE 23
RELATIONSHIP BETWEEN COGNITIVE STYLE AND ACADEMIC ACHIEVEMENT OF B. Ed STUDENTS

Cognitive style	r
Academic achievement	0.055

From the above table the r value is positive. Hence the null hypothesis state that there is no significant relationship between Cognitive style and Academic Achievement is rejected, which reveals that there is significant relationship between Cognitive Style and Academic Achievement of B. Ed students.

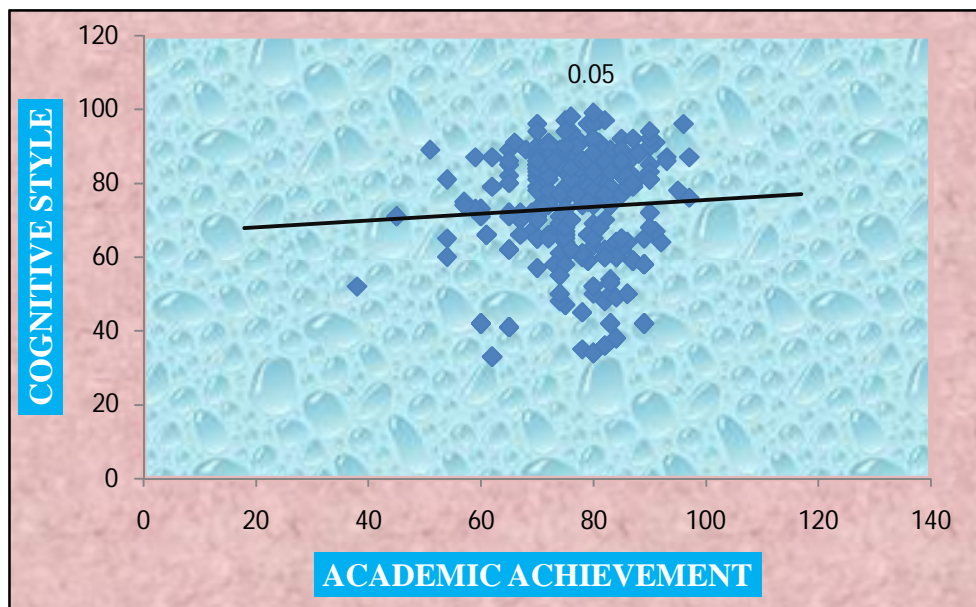


FIGURE 11
RELATIONSHIP BETWEEN COGNITIVE STYLE AND ACADEMIC ACHIEVEMENT OF B. Ed STUDENTS



SUMMARY AND CONCLUSION

CHAPTER V

SUMMARY AND CONCLUSION

5.1 INTRODUCTION

An attempt has been made to discuss the major findings of the study through new light on the unique findings and also to suggest comprehensive ways and means of utilizing the present information in a fruitful manner.

Cognitive style refers to the preferred way individual processes information. Unlike individual differences in abilities, which describe peak performance, styles describe a person's typical mode of thinking, remembering or problem solving. Teachers form significant portion of the human population as a future student teacher they have an aim in building citizenry for the country.

5.2 MAJOR FINDINGS OF THE STUDY

Section I

1. The majority of the student teachers were female (87.4 percent) and the strength of male student teachers were very low (12.5 percent)
2. The majority of student teachers coming under the subject as Maths, Science, English and Social Science. In that above subject Most of the student teachers were having Language (34.28 percent) as major subject, followed by Science (21.4 percent) and Mathematics as major subject is (19.1).
3. The majority of student teachers were having UG (69.1 percent) degree as highest qualification. Only 30.8 percent were Post graduates.
4. Majority of the student teachers were from aided college (47.1 percent) the student teachers from Government College are 18.5 percent and the less numbers of student teachers are from Self finance (34.2 percent).
5. Most of the student teachers were from urban area (64.2 percent) and the student teachers from rural area were only 35.7 percent.
6. Majority of the B. Ed students (66.2 percent) were from Women colleges.

7. Male B. Ed students (56.8 percent) students have high (25 percent) average Cognitive Style and 18.1 percent low level of Cognitive Style. Regarding Female B. Ed students (35.6 percent) have high, 31.6 percent have Average and 32.6 have Low level of Cognitive Style.
8. Female students have higher Intuitive Cognitive style (85 percent) than Male students (15 percent).
9. B. Ed students from Language Subjects Intuitive Cognitive style (38 percent) than other students. Science students have Intuitive cognitive style of 25percent. Social Science students have Intuitive Cognitive style of 8.8 which very low but compare to high than Special Education students (8.2).
10. The B. Ed students who have completed UG as highest qualification have higher Intuitive Cognitive style (76 percent) than the B. Ed students who have completed PG as highest qualification.
11. The Aided College B. Ed students have higher Intuitive Cognitive Style (60 percent) the students from Self- Finance College have better Cognitive Style (23 percent) than the students from Government College (18 percent).
12. The B. Ed students from urban area had higher Intuitive Cognitive style (64.9 percent) than the B. Ed students from rural area (35.1 percent).
13. The B. Ed students from Women College had higher Intuitive style (70.2 percent) than the B. Ed students from Men and Co Education colleges. The B. Ed students from Men College had low Intuitive Cognitive style (9.4 percent).
14. Women B. Ed student teachers have higher Systematic Cognitive style (90 percent) than Men B. Ed student teachers (10 percent).

15. B. Ed students from Language subjects have higher Systematic Cognitive Style (31 percent) than other students. Science B. Ed students are having 19 percent of second highest Subject in the category. Maths, Social Science and Special Education are having slight variations in their Systematic Cognitive Style also very low Systematic Cognitive Style
16. B. Ed students have highest qualification as Graduate have higher Systematic Cognitive style (63 percent) than the B. Ed students who have completed PG as highest qualification.
17. The Self- Finance students have higher Systematic Cognitive style (46 percent). The students from Aided College students have better Systematic Cognitive Style (35 percent) than the students from Government College (20 percent).
18. The B. Ed students from urban area have higher Systematic Cognitive style (63.6 percent) than the B. Ed students from rural area (45.2 percent).
19. The B. Ed students from Women College have higher Systematic Cognitive Style (66 percent) than the B. Ed students from Men and Co Education colleges. The B. Ed students from Men College have low Systematic Cognitive Style (10 percent).

Section II

1. There is significant difference between male and female B. Ed students in their Systematic Cognitive style.
2. There is significant difference between UG and PG B. Ed students in their Systematic Cognitive Style.
3. There is significant difference between the Rural and urban B. Ed Students in their Systematic Cognitive Style.
4. There is significant difference between B. Ed students from different type of College in their Systematic Cognitive Style.

5. There is significant difference between B. Ed students from different Nature of College in their Systematic Cognitive Style.
6. There is significant difference between B. Ed students from different Major Subject in their Systematic Cognitive Style.
7. There is significant difference between male and female B. Ed students in their Intuitive Cognitive style.
8. There is significant difference between UG and PG B. Ed students in their Intuitive Cognitive Style.
9. There is significant difference between the B. Ed students from Rural and B. Ed students from urban area in their Intuitive Cognitive Style.
10. There is significant difference between B. Ed students from different type of College in their Intuitive Cognitive Style.
11. There is significant difference between B. Ed students from different Nature of College in their Intuitive Cognitive Style.
12. There is significant difference between B. Ed students from different Major Subject in their Intuitive Cognitive Style.

Section III

1. There exists significant relationship between Systematic Cognitive Style and Academic Achievement of B. Ed students with reference to gender, academic qualification, locality of residence, type of college and nature of college.
2. There is no relationship between Systematic Cognitive Style and Academic Achievement of B. Ed students having different Subject specialisation.
3. There exists significant relationship between Intuitive Cognitive Style and Academic Achievement of B. Ed students with reference to type of college and nature of college.

4. There is no relationship between Intuitive Cognitive Style and Academic Achievement of B. Ed students of different Subject specialisation, gender, academic qualification, locality of residence.
5. There is significant relationship between Cognitive Style and Academic Achievement of B. Ed students

5.3 RECOMMENDATIONS

- ❖ It should have an Practical examination in the Psychology lab of a B. Ed curriculum
- ❖ Teacher Educators should help their student teachers to develop their Systematic and Intuitive styles.
- ❖ Student teachers should be provided with enough opportunities to learn according to their cognitive level.
- ❖ Pedagogy to enhance the systematic, Intuitive and Cognitive style may be framed
- ❖ Intellectual and Individual differences, needs and interests should be considered by the Teacher Educator before planning a lesson to develop cognitive styles among B. Ed Students.
- ❖ Instructions in the class room to be provided with multimedia and electronic materials, which enhance the Student Teachers Cognitive styles.
- ❖ Student Teachers should have a proper search for acquiring, interpreting, categorizing, remembering and returning information in making decisions and solving problems.
- ❖ Student Teachers should improve the systematic style and intuitive style with a sequential approach associated with logical thinking to enhance learning associated with visual approach.
- ❖ Personal Style awareness programmes may be conducted .It may help them to analyse their own Cognitive Style.

5.4 SUGGESTIONS FOR FURTHER STUDY

Research in any branch of human knowledge is never a closed chapter. There is always a need of finding solution to new problems and testing a veracity of the solution to the older problems. In the light of delimitations and findings of present study, following suggestions may be laid down for undertaking future research studies:

- The same study can conduct to in- Service teachers.
- Similar study can be conduct with the students of different profession
- The Colleges should understand the psychological need of students. Proper guidance and counselling centres.
- Similar study can be analyzed by other Cognitive styles
- Similar study can be analyzed by other statistical techniques for verifying results.
- The present study was conducted on a sample of Student teachers i.e. B. Ed Students only. Similar studies may also be conducted at other levels such as D. Ed level as well as M. Ed level
- Investigations may be carried out to find out the impact of curricular and co-curricular programmes on the Cognitive Styles of B. Ed students
- A comparative study may be designed to investigate the differences in Cognitive Styles, Emotional Intelligence and Social intelligence of Student Teachers.
- The impact of usage of Mobile phone on Cognitive Style of B. Ed students.
- The present investigation made use of only two styles. It is suggested that, further studies can be conducted using other styles as well.

5.5 CONCLUSION

The Nature has surrounded every person with a variety of abilities and talents, ranging from low to the high levels, in that, cognition and cognitive style play vital roles in his / her life. From the above findings, it is clear that the Systematic and Intuitive Cognitive styles make some many differences among B. Ed students and there is significant relationship between Cognitive Style and Academic Achievement of B. Ed students. As a future

teacher they should understand about Cognitive styles and should identify their students' Cognitive style, according to it only they should teach and avoid partiality among students in a class. It is very much helpful for a student to understand their thinking style and attain their goal easily.



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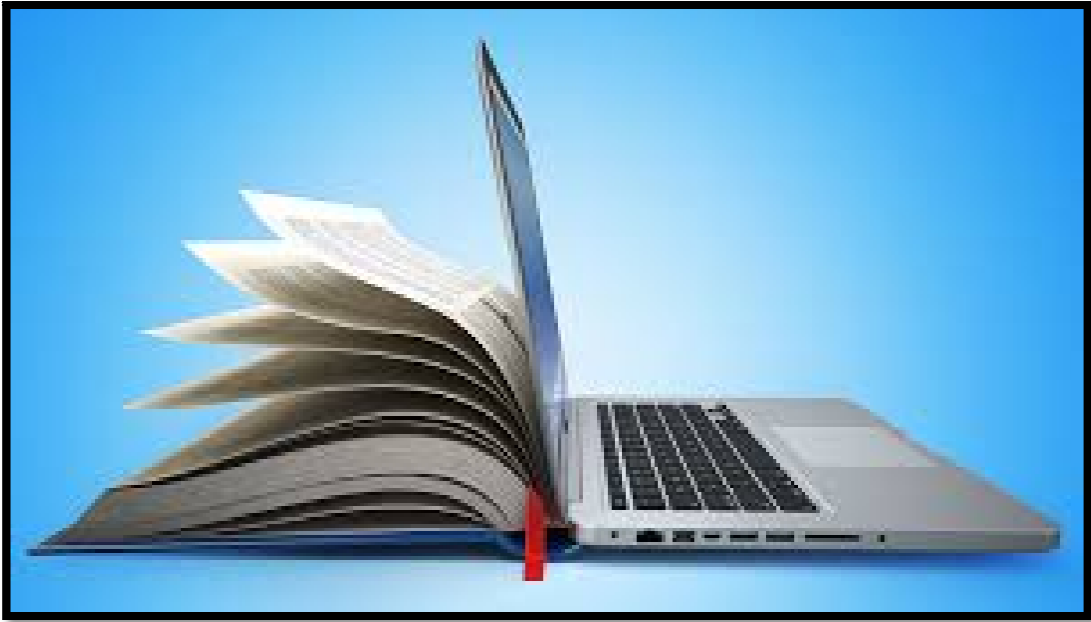
APPENDIX I

AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION FOR WOMEN

PERSONAL DATA

Give your response either in writing or putting tick (✓) mark where applicable

- Gender : Male / Female
- Age :
- Marital status : Single / Married
- Educational qualification : UG / PG
- Type of college : Aided / Self – financing / Govt.
- Locality of the college : Rural / Urban
- Locality of Residence : Rural / Urban
- Experience in Teaching : Yes / No
- Nature of the College : Women / Co-education
- Type of family : Nuclear / Joint
- Do you use the internet for
Your day to day activities of studies : Yes / No
- Are you interested in participating
the cultural events of your college : Yes / No
- Are you a member of any science
organization / NGO / Club ? : Yes / No
- Academic achievement in percentage :
- Major subject :



APPENDICES

APPENDIX II

COGNITIVE STYLE INVENTORY (CSI (PRAVEEN KUMAR JHA, 2001)

Fwpgg[

mi dj ; j t pdhffS fFk; ebf; s; bghUj j bkdf; fUJk; fl j j py; tpi l ahs kpLF

1. Strongly disagree KGi kahf kWffpnwd;
2. Disagree kWffpnwd;
3. Undecided j hkhdpff Koatpyi y
4. Agree VwWf;bfhsfpnwd;
5. Strongly agree KGi kahf VwWf;bfhsfpnwd;

t. vz ;	thffpaqfs;	1	2	3	4	5
1	When Confronted with a problem, I try to judge it or try understanding it from the bottom. xU gurri di a vj hnehff neUkngH myyJ ghpe;J bfhssnth ehd; Kawrpf ffnwd;					
2	I prefer to analyse a problem or a situation and ensure if any specific 'meaning' is emerging from the given facts. xU gurri di a myyJ NHi y gFj j hat i j na ehd; nj ht [brafnwd; nkYk;bfhLffgg l c z i kfsppUe;J Vnj Dk; rpwgghd mhj j k; btspggLf wj h vdgi j c Wj pggLj ; j ffnwd;					
3	In Course of solving a problem, I first concentrate on its important parts. xU gurri dffj ; j ht [fhZ k; bghGJ mj d; Kffpakhd gFj pfs py; ehd; ft dk; brYj ; j ffnwd;					
4	While solving a problem I take into account its different aspects and lay down is limit. xU gurri dffj ; j ht [fhZ k; bghGJ ehd; mj d; gyntW gFj pfs py; mj Di l a vyi yfi sa k; fz ffp y; vLj ; j f; bfhsf fnwd;					
5	I consider a problem in a systematic and stepwise manner. ehd; xU gurri di a Ki wgoahft k; goggoahft k; mZ F ffnwd;					
6	I Examine a problem in its totality before considering its parts separately ehd; xU gurri di aj ; j dj j dp gFj pfs hfg; ghggj wF Kddhy; mj i d KGtJ khf Muha ffnwd;					
7	The best and the most effective way to solve a problem is to solve it logically and conscientiously. j hff h j pahft k; kdrhl rpf f fl Lgg l Lk; gurri d fS fFj ; j ht [fhz gnj rwe j Jk; VwWJ khf , UffpwJ.					
8	For finding out a solution to a problem in its entirety, I carefully link its various parts and put them in a series. xU gurri dff KGi kahd j ht [fhz gj wF ehd; \$hffui j ahf mj d; gyntW gFj pfi sj ; bj hl hgglj j p xnu bj hl uhff ffnwd;					

9	I collect all information in my mental frame like a computer and then derive a lot of statistics by dissecting them into several parts ehd; kdj stpy; gy t# aqfi s fz pdp nghy; nrfhj ;J gpdglgss tptuqfS l d;gy gFggfshfg;gphffpnwd;					
10	I determine the most appropriate information which may solve the problem with accuracy, by using the images already present in my memory in the form of information. Vwfdnt c Utqfsha; epi dtpy; c ss jftyfs;pdgo gurrpi di aj; j hffpw rhpahd jfti y ehd; j hkhdpffpnwd;					
11	Before solving a problem I try to plan and search the ways for finding out a solution. xU gurri dffj; jht[fhz gj wF Kddhy; ehd; mj wFhpa thpi aa[k;jpllj j a[k;nj l Kawrpbrafpnwd;					
12	While solving a problem I normally believe in facts and figures. xU gurri dffj jht[fhZ k; nghJ rhj huz khf ehd; mj d;c z i ki aa[k;c Utj j a[k;ekgfpnwd;					
13	I search for the additional information systematically and select the sources of information carefully. ehd;nj i tahd TLj y;braj pfi s Ki wggonj o nkYk; mj d;%yqfi s ftdkl d;nj ht lbrafnwd;					
14	In the process of solving a problem, first of all identity the different factors which may create hurdles. xU gurri dffj; jht[fhZ k; nghJ Kj yhtj hf vdbddd fhuz pfs; j i l fi s VwgLj J fpwJ vdgij mi lahsk;fhz fpnwd;					
15	While making a deep analysis of the problem, I realize that I am moving systematically from one step to another. xU gurri di a MHkhf Muha[k; nghJ goggoahf XU epi yapyUeJ mLjjLjj epi yfFg; nghti j ehd; c z hffpnwd;					
16	When I am working at a complex problem, I divide it into small units in order to make them accessible for solution. xU rpfyhd gurri dff ehd; jht[fhZ knghJ mi j gy gFj pfs hf ghj ; jht[fhz VJ thfffnwd;					
17	I collect the given facts and sources of information's legally, logically and serially to a certain limit. ehd; bfhLffggl l braj pfi sa[k; mj d; %yqfi sa[k; rl l gghtkhft[k; Thpa rpej i da[DK; bj hl hgglj j p xU vyi yfFs;ti uaWffpnwd;					
18	When I seek a solution to a problem modus operandi is well organised and quite extensive. ehd;xU gurri dff brayKi wj ; jhtpi d ehLk;bghGJ mJ rhpahf xGqF braaggl j hft[k; t hpt h dj hft[k; , UffpwJ.					
19	I have a very good memory and have due interest in mathematics. fz pj j py; c hpa MhtKk; rpej epi dthwwYk; vdfF , UffpwJ.					
20	I consider myself and others credible and Predictable. vdi da[k; kwwthfi sa[k; ekjj fthfshft[k; Kd; Fwffpwthfshft[k;ehd;FUJ fpnwd;					

21	While solving a problem I draw a map at my mental level. xU gpurppi dFFj ; j lht[fhZ k; bghGJ ehd; kdj stpy; xU ti ugl k;VwgLj j pf;b fhs; f p nwd;					
22	Internally I develop a system where I could collect and store the information after solving a problem. xU gpurppi dFFj ; j lht[fz l gpdg[ehd; vdfFsshf mJ bj hl hghd j ftyfi s nrfhj ; i tj ; f; b fhsS k; epi yfi s VwgLj ; f p nwd;					
23	When I am at work in course of solving a problem, I find myself taking loudly. xU gpurppi dFFj ; j lht[fhZ k; bghGJ ehd; nti yapy; ehd; rj j khfg; g y k g f p nwd;					
24	To combat a problem, effectively, a man should take firm and bold steps. xU gpurri di a rpwej Ki wapy; vj phbfhss kdij hfs; epi yahd kwWk; i j hpakhd el tofi ffi sa k; vLff ntz Lk;					
25	Before taking step for the solution of a problem I examine the relationship between the integral parts of the problem besides viewing it in totality. xU gpurppi dFFj ; j lht[fhz gj wF Kddhy; ehd; mj d; c sgFj p f S f F , i l n a c s s bj hl hgpi d Muhaf p nwd;					
26	I work with a presumption that solution of all the problems is pre-destined. vyyhg; gpurppi d f S f F k; Vwfdnt j lht[c z l vdw c j n j r j ; l d; ehd; nti y braf p nwd;					
27	All problems are open and explicit in their own shapes and they present many probabilities for us. vyyhg; gpurppi d f S f F k; b t l l b t s p r r k h f t k; kwWk; mj d; brhej tot q f s p Y k; gy thagg f f i s mi t ek f F j U f p w J .					
28	Normally I depend on perceptions, determination and non-verbal indications as auxiliary factors in the process of solving a problem. rhj huz khd xU gpurri dFFj ; j lht[fhZ k; bghGJ Ji z f f huz p f s h f g y f f h l r pi a a k; ehd; rhhej p U f f p nwd;					
29	While solving a problem, I think on the probable alternatives quickly and at the same time scrutinize them as early as possible. xU gpurri dFFj ; j lht[fhZ k; bghGJ ehd; mj d; mLj j Lj j khwWfi s t pi uthf nahrp f F k; mnj neuj j py; r p f f p u k h f mj i d Muhaf p nwd;					
30	I contemplate various ways of solving a problem and alternative measures simultaneously. Xnu neuj j py; gpurppi dFFj ; j lht[fhZ k; vyyh t H p f i sa k; ehd; f U j j py; b f h s f p nwd;					
31	While analyzing a problem it appears to me that I move from the first step to the second and then start thinking backward or say, turn back to the first on again. xU gpurri di a Muhak nghJ ehd; Kj ygo epi yapy; , Ue; J , uz l hk; goepi y f F g; nght J k; k l z L k; , uz l hk; epi yapy p Ue; J K j yepi y f F g; nght J nghy; bj h p f p w J .					

32	Normally I inquire many sources of statistics and during the process of searching ways of solution, my eyes spread on to many other pieces of information. rhj huz khf epi wa gßspay; %yqfi s ehd; tprhhj j hYk; gurri dffj; jht[fhZ k; bghGJ vd; fz fs;kwj ftyfi s nehffr;bryfwJ.					
33	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. xU gurri dffj; jht[fhZ k; bghGJ xtbthU Ki waç; ntWgl l c l fhz Yl d; klz Lk; mnj epi yff tUti j cz hfpwd;					
34	Generally I take into account the dimensions of a problem and its jurisdiction so that a complete picture of the solution could be drawn. bghJ thf xU gurri dff KGtotpy; jht[fhz gj wF mj d; ghpkhz qfi saç; vyi yfi saç; ehd; fUjj py; bfhs:tjhy; jhtpd; KGtguj i jaç; vddhy; bgw KofpwJ.					
35	I solve problem quickly and effectively without wasting much time on modalities. Xnu Fwggpl l epi yapy; neuji j tuak; braahky; tpi uthftç; kwWk; bj spthftç; xU gurri dff ehd; jht[fhz fipwd;					
36	I am not bothered by uncertainties and incredibility's. ekg Koahj twi waç; eprakwwi jaç; gwwp ehd; fti yggLtj pyi y.					
37	I possess a number of ideas and I am inquisitive by nature. vddpl k; epi wa fUj Jffs; cssd. nkYk; , awi fahfnt ehd; mwpeJ bfhsSk; j di k ci latdhf , Uffipwd;					
38	It is my nature to keep away from momentary ideas with changes. epi yapyyh khWk; fUj JfspyUeJ , awi fahfnt vdi d tpyffr bfhs:tJ vd;, ayg[
39	I look at myself as well as others as one who is ready to take risk. tlj lu brayfi sr; braa jahuhf , Uggthfi saç; vddi aç;xnu khj thpahf ehd; fhz fipwd;					
40	I am never vexed by the 'status quo' because I feel novelty always proves to be better. , Jti u css epi yapy; ehd; xUnghJk; kdKi l tJ fpi lahJ. Vbddpy; glpai tfns rpej bj dW ehd; cz hfpwd;					