

Summary

SUMMARY

Introduction

Human beings construct their own pattern of behavior and entail different settings in which they can react to perceived stimuli. Each individual is unique in both internal and external concerns and possess different styles to respond the same incentive. Cognition is a much discrete term used in multiple disciplines to interpret the psychological attributes of an individual. No two individuals are alike in any manner just like in physical, social and psychological paradigms etc. Usually we react to receive inputs according to our aptitude, propensity, inclination and proclivity to describe them in different perspectives. Hence, the term “Cognition” has been derived from the Latin “Cognates” means ‘to know’. So the term illustrates a process of sensing, perceiving, thinking, knowing, understanding and responding to the received stimuli in both the normal as well as critical situations. Individuals do any kind of act when they are being insisted by the supremacy of different cognitive modes. It prompts an individual to transfer one’s mind from memory level to reflective one to perceive deep intellectual observations. However cognitive psychology constructs an agenda building to perform various mental activities or behavior to prepare for multiple responses to the same construct. Every individual contain different cognitive styles to react on things existing in the environment. Cognitive styles are being considered as hypothetical edifice that determine the exceptionality of each individual. Cognitive styles has always a multifaceted function in determining and evaluating the distinctive ways in which a person conceptually organizes the environment. Similarly, cognitive style is counted as one of the major variable in psychological perspectives and retain the consistency in behavior of an individual. It also refers to the psychological differentiation which illumines the various modes of cognitive functioning just like, perceiving, thinking, understanding, responding, acting and judging the things in multiple means under various circumstances. Cognitive styles of an individual bearing a significant

contribution in the entire life of an individual. It expands the scope of psychological perspectives which in turn reflects the total individuality and sustains attitude, aptitude, habitual strategies and various approaches of problem solving and judgmental processes. Transformations in cognitive style have to do with “Characteristic models of perceiving, remembering, thinking, problem solving, decision making, and reflection of information processing regularities that develop underlying personality trends and not with intelligence”.

“In the educational aspects, emotional intelligence is emerging as a new field of study” (Mayer 2000). If we throw light on the history and background of the term emotional intelligence its credit goes directly to Peter Salovey and John Mayer, who introduced the term in “Journal of Imagination and Personality” in 1990. From the very emergence of the term emotional intelligence, it has been penetrated throughout the world and diverted the attention of renowned educationists, psychologists and research scholars towards its application and scope. Whenever the term emotional intelligence is being mentioned then the name of Daniel Goleman must not be forgotten in this perspective. After Salovey and Mayer, he was the one who popularized this term throughout the globe in his illustrious work “Emotional Intelligence”. There are so many educationists such as Gibs, Segal, Ellis etc. who contributed a lot to expand the limits and scope of emotional intelligence in the field of educational psychology. The existence of the term emotional intelligence brought a significant revolution in the field of research in educational psychology and other disciplines over the decades. Renowned psychologists asserted that emotional intelligence has a marvelous role in all the aspects of human life just like in, making relations, behaving, interacting with others, communicating, activities and teaching and learning etc.

Generally, before processing any activity human beings select the aims and objectives of that activity in advance and starts the encounter to achieve that objectives. It is an acceptable fact that there is no human effort without any fruitful result. Similarly in the educational settings

teaching learning processes are carried out to achieve the academic objectives prepared in advance before initiating the process in classroom. Academic achievement is considered as milestone in refining or overhauling the whole teaching learning processes. Achievement tests are being done to assess the learning and mental ability of students at different stages of life. It describes the motivation and capability of an individual to the extent he grasps the things taught to him. However we use achievement tests to analyze the students' performance in their respective subjects and judge their future outlines. Change is the law of nature and most of the significant changes in the educational or academic field are being fetched by observing the achievement of students through formative as well as summative tests. Good academic achievement of students inspire teachers for further improvement and adaptations in the process of teaching and makes them feel proud for their effective teaching. Students are always competitive in nature and their academic dreams of higher achievement also play an oversize role in making teaching learning more effective.

Subsequently the concept of socio-demography represent the specific characteristics of population of any particular region. While discussing the different perspectives of socio demography of any selected region on one hand we should also mention the different paradigm of their culture, values, standards and life style on another hand. In the process of educational research socio-demography has a colossal role in determining the area and its significant characteristics, where the research process is going on. We cannot conduct any research study without taking any area or region into consideration and we identify the research problem that need to be addressed in that particular region. Researcher always require the knowledge and experience of the area to which his research process is belonging to. These type of variables prepare the investigator for portraying the overall picture of study and makes him competent to survey in that specific region. It appries one about the challenges that he may face during the interaction with people there. After selecting the area for study researcher always explore

various socio-demography just like, age, locality, gender, marital status, socio-economic status, category, caste, educational institutions, language speaking preference and religion etc. Due to having the marvelous utility of these variables researcher cannot exclude them at any cost. It gives a clear idea about the respondents who are filling the survey questionnaires and also helps in identifying whether we are taking the right population for the study or not.

Research Gap

To represent a clear picture of the whole research process various national and abroad related studies have been reviewed. There were an indefinite number of studies related to the current research problem under study but the most germane and significant studies have been considered. Although many of the studies conducted on cognitive styles, emotional intelligence and academic achievement with reference to different socio-demography at different levels had been given comprehensive pondering. One of the research study demonstrated a significant effect of cognitive style on students' academic performance in basic science and technology. The current study's examination also revealed that female students have reflective styles while male students have impulsive styles. Some other factors are also accountable to influence the academic performance of students but as per the reports of latest researches cognitive styles has a noteworthy role in shaping the academic performance of students at all junctures. Existing research study was conducted to "Know the difference in cognitive styles and academic achievement of higher secondary students of Karur district". The study also laid emphasis on searching out the correlation of cognitive styles and academic achievement of students. For 300 higher secondary students "Cognitive Style Inventory (CSI)" developed by Praveen Kumar Jha (2001) was employed for collecting the primary data. In terms of cognitive styles and academic achievement statistical tests such as percentage analysis, mean, sd., t-test, and Pearson product moment correlation did not find any differences between boys and girls. However, the study also revealed a strong association between cognitive styles and senior

secondary student's academic success. Researcher becomes competent to conduct a research in smooth way only after experiencing the review of relevant literature. Neither the objectives of research can be accomplished nor can any theory be developed unless there should have theoretical and empirical support for conducting research study.

Emotional intelligence became a sound and vastly explored variable in the field of educational psychology that has a prodigious move in theoretical as well as practical concepts. Systematic review of literature surfaced that the key behind each success is emotional maturity and emotional competency. EI is the contributor in all the achievements of life. Studies have also shown a significant relationship between students' academic success across all grade levels and their emotional intelligence, however many of the studies did not depict results that could highlight the need for additional research. The study conducted by Özlü, Z. K. et al (2016) depicted that that students of natural science did possess lower mean of EI and social science students showed highest mean of emotional intelligence. This investigation also described that levels of EI were found lower among natural science students where as it was found moderate among social science students. According to the research studies cognitive styles and emotional intelligence of students should be given full consideration as they both lead to psychological well-being and predict future analysis of one's life. Even though Teng, P. et al. (2009) in his research found that that people in the intuition group prefer image thinking whereas those in the analysis group prefer word thinking; as a result, the intuition group performs better than the analysis group. Jain (2015) strived to disclose whether High/Low EQ has any contribution in impacting the satisfaction level of females. For measuring the female's levels of emotional intelligence five – competency model of Daniel Goleman's Satisfaction Life Scale was administered to measure the life satisfaction of females. Results of the analysis conformed a positive correlation of emotional intelligence and life satisfaction of females of moderate level. Present research also explained that age does not have any impact on emotional intelligence

but study showed that occupation has a high tendency to impact EI of females. Sharma & Pooja (2018) looked into how the cognitive styles (field independent/dependent) of ninth-grade students studying English correlated with one another. The analysis of the research illustrated a positive relationship of cognitive styles (field Independent & field dependent) with academic achievement of students. Critical analysis of the related literature exhibited a large number of factors that can be great contributors in improving and effecting the cognitive styles, emotional intelligence and academic performance of students at all levels. So good number of researches have been found supportive to the present study and highlighted the implication of educational psychology in the academic life of students. Naqvi and his team in 2016 conducted an investigation to find relationship of EI and teaching performance of secondary teachers. Emotional Intelligence Questionnaire Short Form (TEIQue-SF) was used for collecting the primary data. Statistical means of mean, SD and Product moment correlation methods were used for analysis. The result portrayed a clear picture of significant relationship of emotional intelligence and performance of teachers. Therefore, cognitive styles and emotional intelligence variables are of paramount significance in the field of educational psychology and their attributes are evergreen with the harmonious development of personality. Cognition and emotions guide and direct our total individuality from birth till death.

The current study has also incorporated the necessary criteria to carefully examine the results of earlier investigations related to the variables under study. During the process of review different aspects of cognitive styles and emotional intelligence have been explored at different levels of age and schooling. Even though by reviewing the literature relating to the cognitive styles and emotional intelligence various ideas had created in mind that assisted in preparing objectives, hypotheses, research design, procedure for selecting the population and sample, tools appropriate for collecting the relevant data and appropriate statistical measures for analyzing the data. Some research studies help in selecting the smooth, systematic and

flexible way to achieve the objectives of study without much hindrances. Despite being aware about conducting research we also come to know about the applications of research findings in real life by reading the literature. By the comprehensive infiltration of past literature researcher has become acquainted about his research and its scope in different perspectives of life. Researcher has also been conversant about the national importance of study and its significance for human life by deeply analyzing related literature. Researcher has found various studies associated with cognitive styles and emotional intelligence but has never found any research study on “Cognitive Styles of Prospective Teachers in relation to their Socio-Demographic Variables, Emotional Intelligence and Academic Achievement”. By scrutinizing the primary as well as secondary sources of information and literature it is now clear from the view point of researcher that the problem selected for current research has not been investigated so far. After analyzing different sources like dissertations, theses, conference proceedings and journals of national and international level associated with my topic, it is now clear that the researcher by his genuine endeavors did not find any study which has been done either in the country or abroad earlier on the present topic. Since the novelty was one of the great reason for selecting this topic and its scope and predictable applications in reality also compelled me for selecting the said topic. Despite having the large number of factors determining the levels of emotional intelligence and academic achievement of students, but this inclusive and succinct research study lays emphasis on studying the correlated variables of cognitive styles, emotional intelligence and academic achievement of prospective teachers in context of their different socio-demographics. Keep in view the foresaid research gap, the researcher take up the present study.

Need and Significance of Study

One of the crucial aspects of psychology that has a significant impact on a person's life at different times is cognitive style. Everyone has a unique style to explore, what he senses,

perceives, touches, smells etc. and exhibits deferent outputs for the same input. Cognitive style has a gigantic role in determining the personality dimensions of an individual, which in turn shapes and influences their attitudes, values and social interaction. Cognitive style largely assists in organizing information which guides in understanding the human behaviour. Students being unique from the cognitive point of view indicates that they have an exceptional way to compile, organize, process and understand information or knowledge due to that they differ in their life achievements. On the other hand researches have explored the emotional intelligence through diverse perspectives and found that the significance of EQ is not less than of IQ. Today emotional intelligence have gained a familiarity in the educational research and indulged the scholars with the role of emotional intelligence in human life. Emotional intelligence helps us in making interactive conversations, building relationships, social integrations and in all other activities of life. Emotional Intelligence acquired highest precedence in the field of psychology and literature. Different paradigms of EI contributed too much in the cognitive and non-cognitive dimensions. Exploring numerous research studies it had been explored that EI has a substantial role in the harmonious development of students. Even though EI is considered as a primary factor behind the academic success of an individual and it is appearing an accruing predictor of individual's social adjustment. It has also been elaborated that in each success IQ contributes 20% while EQ contributes 80% role.

After making the comprehensive review of previous research studies it has been seen that many researches have already been conducted in the relevant area. But, however the topic selected by the investigator has not been investigated so much earlier. By doing an exhaustive review of earlier national and international researches, articles, journals, conference papers and working- papers associated with my topic, researcher did not find any study that had been done either in the country or abroad before on the present topic. The topic selected for investigation is new and yet have not been investigated, while because of that researcher has got the attention

for this topic. Hence, novelty of the topic is also one of the major causes which inspired the researcher to select the said theme for the present study.

Keeping in mind the paucity of researches in the field and keeping in contemplation the need and importance of cognitive styles, emotional intelligence, socio-demographic variables and academic achievement for the individual and society, the present study is a genuine attempt to study the “Cognitive Styles of Prospective Teachers in relation to their Socio-Demographic Variables, Emotional Intelligence and Academic achievement”. It is expected here that present study will be contributive and of paramount importance to the education field, society and nation at par.

Statement of the Problem

On the basis of above literature and vigorous discussion the research problem identified for the present study is stated here as “**Cognitive Styles of Prospective Teachers in relation to their Socio-Demographic Variables, Emotional Intelligence and Academic Achievement**”

Operational definitions of the key terms used

- ❖ **Cognitive Styles:** In the present study, cognitive styles refer to the five basic components that are “systematic style, intuitive style, integrated style, undifferentiated style and split style”. These five dimensions describe the unique styles of thinking, understanding, creativity, problem solving and decision making processes.
- ❖ **Emotional Intelligence:** In this study, emotional intelligence refers to its five basic components viz. “self- awareness (knowing our emotions), self-regulation (managing ones internal states, impulses and resources), motivation (motivating ourselves), empathy (recognizing emotions in others), social skill (handling relationship)”.
- ❖ **Socio-demographic variables:** In this investigation, socio-demographic variables imply the different social backgrounds of prospective teacher’s e.g. gender

(male/female), locality (rural/urban), division (Jammu & Kashmir), stream (arts/science/commerce), social category (reserved/unreserved) and parental occupation (employed/unemployed).

❖ **Prospective Teachers:** Prospective teachers refer to the pupil teachers who are enrolled in teacher education programme (B. Ed.) in various universities and colleges of education in Jammu and Kashmir.

Objectives of the Study

1. To study the levels of cognitive styles, emotional intelligence and academic achievement of prospective teachers.
2. To study the correlation of cognitive styles with emotional intelligence and academic achievement of prospective teachers.
3. To compare the cognitive styles of prospective teachers with reference to their socio-demographic variables i.e. (i) gender (male/female), (ii) locality (rural/urban), (iii) division (Jammu/Kashmir), (iv) stream (arts/science/commerce), (v) social category (reserved/unreserved) and (vi) parental occupation (employed/unemployed).
4. To compare the emotional intelligence of prospective teachers with reference to their socio-demographic variables (i) gender (male/female), (ii) locality (rural/urban), (iii) division (Jammu/Kashmir), (iv) stream (arts/science/commerce), (v) social category (reserved/unreserved) and (vi) parental occupation (employed/unemployed).
5. To compare the academic achievement of prospective teachers with reference to their socio-demographic variables (i) gender (male/female), (ii) locality (rural/urban), (iii) division (Jammu/Kashmir), (iv) stream (arts/science/commerce), (v) social category (reserved/unreserved), and (vi) parental occupation (employed/unemployed).
6. To study the effect of cognitive styles on emotional intelligence of prospective teachers.

7. To study the effect of cognitive styles on academic achievement of prospective teachers.

Hypotheses of the Study

- H₀ 1.1. There will be no significant correlation between the cognitive styles and emotional intelligence of prospective teachers.
- H₀ 1.2. There will be no significant correlation between the cognitive styles and academic achievement of prospective teachers.
- H₀ 2.1. There will be no significant difference between the cognitive styles of prospective teachers with reference to their gender (male/female).
- H₀ 2.2. There will be no significant difference between the cognitive styles of prospective teachers with reference to their locality (rural/urban).
- H₀ 2.3. There will be no significant difference between the cognitive styles of prospective teachers with reference to their division (Jammu/Kashmir).
- H₀ 2.4. There will be no significant difference between the cognitive styles of prospective teachers with reference to their stream (arts/science/commerce).
- H₀ 2.5. There will be no significant difference between the cognitive styles of prospective teachers with reference to their social category (reserved/unreserved).
- H₀ 2.6. There will be no significant difference between the cognitive styles of prospective teachers with reference to their parental occupation (employed/unemployed).
- H₀ 3.1. There will be no significant difference between the emotional intelligence of prospective teachers with reference to their gender (male/female).
- H₀ 3.2. There will be no significant difference between the emotional intelligence of prospective teachers with reference to their locality (rural/urban).
- H₀ 3.3. There will be no significant difference between the emotional intelligence of prospective teachers with reference to their division (Jammu/Kashmir).

- H₀ 3.4. There will be no significant difference between the emotional intelligence of prospective teachers with reference to their stream (arts/science/commerce).
- H₀ 3.5. There will be no significant difference between the emotional intelligence of prospective teachers with reference to their social category (reserved/unreserved).
- H₀ 3.6. There will be no significant difference between the emotional intelligence of prospective teachers with reference to their parental occupation (employed/unemployed).
- H₀ 4.1. There will be no significant difference between the academic achievement of prospective teachers with reference to their gender (male/female).
- H₀ 4.2. There will be no significant difference between the academic achievement of prospective teachers with reference to their locality (rural/urban),
- H₀ 4.3. There will be no significant difference between the academic achievement of prospective teachers with reference to their division (Jammu/Kashmir)
- H₀ 4.4. There will be no significant difference between the academic achievement of prospective teachers with reference to their stream (arts/science/commerce).
- H₀ 4.5. There will be no significant difference between the academic achievement of prospective teachers with reference to their social category (reserved/unreserved).
- H₀ 4.6. There will be no significant difference between the academic achievement of prospective teachers with reference to their parental occupation (employed/unemployed).
- H₀ 5. There will be no significant effect of cognitive styles on emotional intelligence of prospective teachers.
- H₀ 6. There will be no significant effect of cognitive styles on academic achievement of prospective teachers.

Delimitations of the Study

1. The present study is delimited to only cognitive styles, emotional intelligence, socio demo-graphic variables and academic achievement of prospective teachers.
2. The study is confined to only 6 government teacher training institutions (B.Ed) of Jammu and Kashmir union territory.
3. The study is delineated to only 530 prospective teachers of 6 government teacher training institutions.

Research Method

Keeping in view the nature and objective of the study, descriptive research method was used by the researcher.

Population

Keeping in consideration the scope and nature of present investigation, all the central and state universities and government colleges of education of Jammu & Kashmir Union Territory constituted the universe/population of the study and the same is given below in table 1:

Table 1: Population of the Study

S No.	Name of the Institution	Total Population
1.	Central University of Kashmir	100
2.	University of Kashmir	200
3.	Institute of Advanced Studies in Education, Srinagar	700
4.	Central University of Jammu	120
5.	Jammu University (Bhaderwah Campus)	100
6.	Government College of Education, Jammu	400
7.	Baba Ghulam Shah Badshah University, Rajouri	100
		1720

Sample

In the current research study, the researcher has employed simple random sampling technique for collecting the relevant data. During the research process investigator has prepared

a complete list of government universities and government colleges of education offering B.Ed. programme in Jammu and Kashmir Union territory, where from researcher has randomly taken 530 prospective teachers as respondents for the existing study, though among them 243 were male and 287 were female prospective teachers. The sample selection for the current study has been represented here in the table 2.

Table 2: Sample of the Study

S No.	Name of the Institution	Selected Sample
1.	Central University of Kashmir	40
2.	University of Kashmir	70
3.	Institute of Advanced Studies, Srinagar	220
4.	Central University of Jammu	0
5.	Jammu University (Bhaderwah Campus)	35
6.	Government College of Education, Jammu	130
7.	Baba Ghulam Shah Badshah University, Rajouri	35
		530

Variables under Study

The classification of variables is given below:

- ❖ **Independent Variable:** Cognitive Styles
- ❖ **Dependent Variables:** Emotional Intelligence and Academic Achievement

Tools Used

In this study self-prepared “Cognitive Styles Scale” and “Emotional Intelligence Scale” developed by Dr. Shubam Sarkar and Samrat Sarkar (2019) were employed.

Selection of the Tools

Typically, it is depicted that in order to conduct any research study, researcher always require some research tools or instrument for collecting the relevant data. These instruments help in collecting solid evidences regarding the problem identified earlier under study and

explore certain new arenas about which the researcher was unfamiliar. In this research work, researcher has prepared a self-made cognitive styles scale and standardized emotional intelligence scale for collecting the data on the designated psychological variables;

Self-Prepared “Cognitive Styles Scale”

Meanwhile, the researcher has explored all the relevant literature and research tools regarding the cognitive styles of prospective teachers but none of the cognitive styles scale or questionnaire was available since 2002 that could be used in the existing study. Therefore, researcher has decided to prepare a Cognitive Styles Scale” for the present study. This self-prepared scale has five dimensions viz. “systematic style, intuitive style, integrated style, undifferentiated style and split style”.

Table 3: Dimension-wise dispersal of the designated items

Sr. No.	Dimensions	Serial wise item no.	Total items
1	Systematic Style	1, 2, 3 ,4 ,5 ,6 ,7	07
2	Intuitive Style	8, 9, 10, 11, 12, 13, 14, 15, 16	09
3	Integrated Style	17, 18, 19, 20, 21, 22, 23, 24	08
4	Undifferentiated Style	25, 26, 27, 28, 29,30, 31	07
5	Split Style	32, 33, 34, 35, 36, 37, 38, 39	08
			39

Scoring System

Scoring procedure of the scale has been mentioned here in the table below.

Table 4: Scoring System

Nature of Item	Always	Often	Sometimes	Rarely	Never
Positive	5	4	3	2	1

The minimum and maximum range of the score is 39 to 195

Reliability of the Scale

Reliability is nothing but consistency of scores in various trials for the same test. It is an extent to which test, experiment or other measuring instrument avail the same results again and again within the same conditions. In this study test retest reliability method was adopted to see the consistency of scores of the two repeated trials of cognitive styles Scale

Validation of the Scale

There are few main types of validity that are mandatory to be evaluated during tool development:

Content Validity: Content validity has been defined as “the degree to which items in an instrument reflect the content universe to which the instrument will be generalized” (Straub, Boudreau et al. 2004). While developing a new questionnaire or scale it becomes necessary to apply content validity so that we can know whether the content of the statements specify the area or characteristics that you want to measure. Here all the statements were evaluated in the under developed scale in order to exclude the undesirable ones and retain the rest one’s. After a wide literature review researcher have sent a scale to subject specific experts who have given their judgment regarding the authenticity of content and its validation.

Face Validity: It usually refers to the surface of the questionnaire or scale where it is assumed that whether a test/scale/questionnaire does appear to measure the same for which it was constructed to measure. This type of validity thoroughly display the structure of the questionnaire and its relevance to the concepts for that it has been developed to measure. Obviously in the existing study, face validity of the “cognitive styles scale” shows a clear picture that it has measured the same for what it was purported to measure.

Emotional Intelligence Scale (2019)

In the ongoing scenarios of current world, emotional intelligence and EQ has a pivotal contribution, significance, importance and application in business, sports, educational

institutions, personality development, world of work and even in the academic performance of students as well. In the present study, Emotional Intelligence Scale developed and standardized by Dr. Subhash Sarkar & Samrat Sarkar (2019) was used.

Description of the Scale

On the basis of the item analysis showing in the table items have been for the final draft of the emotional intelligence test. The items specified in the bold form are negative in the scale.

Table 5: Dimension-wise distribution of the selected items

Sr. No.	Dimensions	Serial wise item no.	Total item
1.	Self-Awareness	1, 2, 3, 4, 5, 6 , 7, 8	08
2.	Self-Regulation	9, 10, 11, 12, 13, 14 , 15, 16	08
3.	Motivation	17, 18, 19, 20, 21, 22, 23, 24	08
4.	Empathy	25, 26, 27, 28, 28, 30, 31, 32	08
5.	Social Skills	33, 34, 35, 36, 37 , 38, 39, 40	08
Total			40

Scoring System

Scoring procedure of scale has been give here in the table

Table 6: Scoring system

Nature of Item	Always	Often	Sometimes	Rarely	Never
Positive	5	4	3	2	1
Negative	1	2	3	4	5

The minimum and maximum range of the score is 40 to 200.

Reliability of the Scale

The reliability of this test was calculated by Split-half (odd-even) method and with a view to male & female. The coefficients of correlations are given in the table here;

Table 7: Reliability of the scale

Sample	N	r.(Split-half)	Significance Level
Male	100	0.80	0.1
Female	100	0.83	0.1

Validity of the Scale

“The validity of this emotional intelligence test has been estimated by item analysis of the first draft, by finding out the ‘t’- differences between the mean of the high scoring group (30%) and low scoring group (30%) and on the basis of this item elimination and final selection of the items was done”.

Data for Academic Achievement

During the process of data collection of the existing study researcher have instructed the respondents to write down their academic marks of their last semester or exam. The mentioned academic scores obtained by the prospective teachers have been considered their academic achievement and in the latter moments this academic achievement was converted in to percentage while excel of the scores has been prepared.

Administration of the Tools

Initially, the researcher has visited all the universities and colleges of education where he has contacted with HOD/Dean and Principals of the respective institution to convey them about the purpose of researcher’s visit. Researcher has kept his words before HOD/Dean and Principals and showed them authority letter of the department to avail the permission for data collection. After certain interaction with them researcher have been permitted for data collection and started to meet with the respondents. After that researcher has discussed a lot about the purpose, objectives and methodologies of research study with participants and acquainted them with its principles and consequences. For the internal satisfaction of respondents’ researcher has instructed them in a very systematic way and have given the

assurance that their general information and responses will only be used for research purpose. Hence, by making a strong and good rapport with the respondents' researcher has successfully collected the relevant data without any internal or external threats.

Scoring Procedure

Scoring of the items/statements of scale/questionnaire is one of the essential part of research that allows us to set a variable score for each option. Existing study followed a five point scoring procedure, where positive items have been scored from 5-1 and negative items have been scored in reverse as per the guidelines of the manual. Here, the marks have been given to all the respondents according to their response at particular statement. Similar approach was adopted for all the respondents to sum up their total scores from various dimensions of cognitive styles and emotional intelligence and hence academic achievement of all the prospective teachers have been converted into percentage.

Statistical Techniques Employed

Similarly, keeping in view the fabulous role of statistical methods in research, researcher has employed, Frequencies, Percentage, Mean, SD., Pearson's Correlation Coefficient, T-test and ANOVA as a statistical measure in the existing study.

Main Findings

The main findings of the study are given as per the objectives:

- Prospective teachers have the different levels of cognitive styles, emotional intelligence and academic achievement. The same findings are supported by Sellah (2018), Akduman, Yuksekbiljili and Hatipoglu (2015).
- There is a significant correlation of cognitive styles of prospective teachers with emotional intelligence and academic achievement as the same finding have been revealed by Naz and Malik (2021) and Sharma and Ranjan (2018).

- Male and female prospective teachers have similar cognitive styles except “Integrated styles” in which female prospective teachers have been found better than males and the similar result has also been exhibited by Katoch and Thakur (2016).
- Rural and urban prospective teachers have the similar cognitive styles.
- Prospective teachers of Jammu and Kashmir possess similar cognitive styles. Moreover, prospective teachers of Jammu were found better than the prospective teachers of Kashmir division.
- Similar cognitive styles of prospective teachers have been found with reference to streams, but further study demonstrated a significant difference in two dimensions (intuitive style and integrated style) which depicts that prospective teachers are far better in integrated styles rather than intuitive style.
- Prospective teachers belonging to reserved and unreserved categories have similar cognitive styles.
- Findings also represented the same cognitive styles of prospective teachers with reference to their parental occupation (employed/unemployed).
- Prospective teachers have not been found different in terms of emotional intelligence with reference to their gender and locality. But findings also revealed a significant difference in social skills of rural and urban prospective teachers and in which rural have been found better than urban. The same findings have been revealed by Gupta (2014).
- Prospective teachers belonging to Jammu and Kashmir divisions have showed similar cognitive styles, but instead of that a significant difference has also been found self-regulation and social-skills dimension of emotional intelligence. Moreover, prospective teachers of Jammu have been found better in self-regulation than their counterparts

whereas prospective teachers of Kashmir have been found far better in social skills than the counterparts.

- Prospective teachers of arts/science/commerce streams displayed the same emotional intelligence, but they have significantly been found different in self-awareness dimension.
- Prospective teachers with reference to social categories have been found alike in emotional intelligence.
- Prospective teachers with reference to their parental occupation (employed/unemployed) have been found similar in emotional intelligence.
- Findings of the study revealed similar academic achievement of prospective teachers with reference to their gender, locality and division. The findings of the study have also been supported by Ahmad, Karim, Banerjee, Sen, Chatterjee and Mandal (2022).
- Findings of the study have divulged similar academic achievement of prospective teachers with reference to their stream.
- Prospective teachers of social categories i.e. reserved/unreserved showed the same academic achievement
- Findings also highlighted the same academic achievement of prospective teachers with reference to their parental occupation.
- There is a significant effect of cognitive styles on emotional intelligence of prospective teachers.
- Significant effect of cognitive styles on academic achievement of prospective teachers has also been highlighted from the findings. The same result has also been found by Behera (2022).

Educational Implications

Educational implications of the study are discussed here:

For Teachers

- It always become mandatory for the teachers to know the cognitive levels, levels of emotional maturity, educational background, socio-cultural ethos, language, and socio economic status etc. of the students so that they would be taught accordingly.
- The existing study thoroughly make it coherent that there will be no effective teaching and learning unless the teachers acquaint themselves about the cognitive ability of their students.
- Teachers should always provide opportunity to students for exploring the things in their own pattern so that they could accrue their cognitive level along with emotional competency.
- Teachers should not expect for acquiring the same academic performance by their students, because they differ in their cognition, emotional intelligence, IQ and in some other factors also.
- The whole process of education does not merely depend on the external environment, but also the internal world of psychology has a gigantic role in teaching learning process.
- From this perspective it is obvious that teachers must know the learning characteristics of students and should have the deep epistemology of their cognition.
- In view of the ensuing conditions both pre-service and in-service teacher training programs should be started in the schools, colleges and universities where they will be practiced and trained about how to update psychological constructs that mediate learners learning styles.
- The teachers at pre level must know and comprehend the cognitive power, intensity of thinking, understanding and the capacity to grasp the easy, moderate and difficult tasks of students at every occasion.

- The study further recommended that teachers should also accrue the interest and motivation level of students for external activities.
- In the educational context, teachers should provide diverse classroom facilities, textbooks, and activities according to the needs, aptitude and cognitive level of students.
- It is also recommended here that teachers should be aware about the cognitive levels of their students and must focus on their needs as well as the needs of society.
- Individual differences must be taken into consideration by teachers while dealing with students in and out-side the classroom.
- Hence the teachers should always remain acquainted with the psychological physiognomies which influence not only the academic life of students but also social, moral and physical dimensions of life etc.

For Students

- The study recommends that cognition and emotional intelligence of students should be given priority in the learning process. Students from different natures, regions, social backgrounds, castes and family standards might be different in both IQ and EQ.
- Cognitive power and good EQ inspires one to be ready, motivated and persisted during interpersonal communications, making social relationships and in learning processes that would increase their progress not only in academic but also in multiple fields of life.
- Students should be given special care so that they would fulfill their personal as well as social needs.
- Students should also take voluntary participation in various programmes that would be based on psychological themes so that they can renovate or overhaul their cognitive strength.

- Each student perceive and understand information according to their cognitive level and how they are being taught.
- To improve and enhance their teaching aptitude they must be given liberation and opportunity to have an in-depth inquiry about the existing issues and challenges in the current system they encounter.
- Innovative instructional methods and smart classrooms should also be used for training the pre-service teachers to prompt them for the teaching profession.
- Pre-service teachers should review and explore the different theories and experiments developed and conducted by psychologists that can insist them for making significant contributions in the field of teaching and psychology. Willey & Maddison (1971) “Sending into schools unsuitable persons, badly trained, can be as harmful to school children as any shortage of teacher”.
- Prospective teachers should also be acquainted with the significance of psychological physiognomies, so that they would become the successful leaders and nation builders in future.
- Pedagogic skills should be furnished among teacher students to understand the psychology of learners.
- They should be given great opportunities to participate in various academic programmes so that required skills can be developed among them for becoming an efficient teacher.
- Prospective teachers should also be aware about the human rights in order to deal with organizational or managerial skills.
- Both pre-service and in-service teachers should focus on studying books, papers, articles etc. so that they would continue their effective teaching. Tagore has remarkably said that “A lamp can never light another lamp unless it continues to burn its flame”.

For Policy Makers

- The implications of the study recommend that counselors, stakeholders, and curriculum framers should reduce over burden from the students at all levels and should take necessary measures in order to attain good mental health among students to improve the learning outcomes.
- Quality pre-service teacher education programmes should be organized to meet the objectives of teacher education.
- The syllabus, material or book framers should also focus on the current trends and review the old and existing materials to overcome the possible changes or modifications.
- The scope of teacher training programmes in its practical aspects should be expanded with some of the particular activities to be included in the programme so that pupil teachers will be anticipated to perform effectively when they become full-fledged teacher.
- The training curriculum should be grounded on identified needs of the prospective trainees as well as current needs of the profession.
- Educational authorities should facilitate prospective teachers at all stages for being competent in this modern and scientific education system.
- The focus of the review should be on innovative pedagogies and the new topics that can boost the performance of prospective teachers in all contexts.
- The precautionary measures and training curricula should be given priority during pre-service and in-service training of teachers, so that they would clearly analyze and synthesize the cognitive map and emotional intelligence of their own as well as of their students.

- Cognitive psychology and emotional intelligence covered all the areas of human life and it enables one to perceive emotions, integrate feelings and to manage the emotions in normal as well as in critical situations. Policy makers should start such programmes in all type of educational institutions where students will be given any problem to solve in his own style.
- Various workshops, seminars, conferences should also be conducted on psychological themes in educational institutions so that pre-service teachers would be trained and benefitted more and more.
- Organize both pre-service and in-service teacher training programmes that would be democratic in nature so that they could be able to express their feelings, emotions and experiences with others.
- Pre-service teacher education programmes should be given priority so that fresher's would be prepared for teaching profession.
- NEP 2020 lays a precise focus on the “development of the creative potential in each individual and it should be based on the belief that education must develop not only cognitive capacities - both the ‘foundational capacities ’of literacy and numeracy and ‘higher-order’ cognitive capacities, such as critical thinking and problem solving – but also social, ethical, and emotional capacities and dispositions”.
- We should make prospective teachers capable to understand the individual differences and to prepare them for enriching an optimal development of learners.

National Importance of the Study

The growth of scientific research in the current epoch have a gigantic role in day to day life of an individual to determine the different perspectives for achieving the goals of 21st century. Human beings function according to the signals received from brain and it is the mind that prompts an individual to perform any task according to the stimuli. Cognitive power is the

sole milestone that activates the body for doing a specific task that has been assigned to it and even illustrates the way for doing the task by knowing its consequences. Individual respond to any stimuli when he gets the direction and response style for that particular stimuli. Hence, human beings are quite different from other species of universe because of cognitive power or mind that lead us to the world of worthiness, intelligence, creativity, and technological assumptions. Alteration in the psychological attributes of human beings thoroughly changed the mind setup of people that in reflection caught them out from traditional thinking or out dated styles of life and boost them towards modern styles in every aspect. The utilization of physical power or strength of an individual totally depends upon his cognitive power and mental health. Today human life became a very complex and need a sound mind in sound body to adjust with the overwhelming circumstances in order to face the challenges of life in a very creative manner. If we think off to restructure our own patterns of life, standards of society and nation then we require to shape and restructure the mapping mind of individuals to make them innovative and ingenious production among all the creatures on earth.

The vast scope and implications of scientific research have always a significant impact on development of education, individuality, society and nation as well. Keeping in view the findings of study, cognitive styles have been found a significant variable that exhibit the overall picture of individuality. From the early age of schooling such kind of programmes should be started that counsel students in multiple ways so that they would be able to grasp various challenges of life. Cognitive styles of students determines their style of doing things, style of talking, behaving, communicating, interacting, learning and responding to external inputs. Human beings do not differ in physical appearance only but they are too quite different in their psychological perspectives. Cognitive power insists a person to develop an ideas and cognitive styles teach us how to put these ideas into practice. Cognitive styles have an indigenous role in one's life and it differentiates the people while performing any action, because every individual

has own unique style of action. Cognitive styles do not only effect the psychological world of students but it also influences the physical, social, moral and academic disciplines of students. We have different ideologies for the same construct, concept or variable but we explain that concept in different perspectives as changes in the cognitive structure is by nature and from time to time, it also take a paradigm shift in the same individual. So, we utilize our cognitive styles according to the need and demand of external inputs at every occasion.

According to the current research, emotional intelligence is the foundational stone for developing a harmonious personality among individuals. Emotions are the bunch of feelings, love, sentiments and anger that give birth to ethics, morality, social values, human values and flawless society. Whenever, the study discuss about any arena of human life we must not deny the significance of emotional intelligence whether it is about, social, political, physical, psychological, ethical and other multiple scenarios of life. Emotional Intelligence is one of the finest psychological attribute that is inherent in humans and we can't think off to become a successful individuality until becoming an emotionally intelligent being. It does not affect personal life of an individual only but it has a significant contribution in all the fields of life even if it is your academic one.

Academic success is recognized as one of the essential objectives at the institutional, district, state and national level in the field of education that may be used as an indispensable gauge to examine the progress of teaching learning process which is one of the ultimate objective in our educational system. The decisive secret to success for both personal and professional life is scholastic excellence that boost our excellence, proficiency, expertise and aptitude. Academic success is extremely influenced by the students' cognitive and non-cognitive aspects, including ability, motivation for accomplishment, socioeconomic circumstances, readiness, curiosity, personality characteristics, and instructional strategies etc. Students that perform well in academic activities demonstrate maturity, sensitivity,

friendliness, intelligence, and dedication to their job. Prospective teachers who have cognitive difficulties typically struggle with general awareness, concentration, attention, perception, reading comprehension, learning, memory, retention, problem-solving etc. and often lag behind not only in psychological perspectives but in academic areas also.

Nowadays education has a very broad scope at the global level and competition among students is on the peak at all times. Individuals differ in their talent, ability, expertise, capability and excellence due to the variations in their mind and thinking. Cognitive power and styles helps in deciding the destination of a person and to arrive at these destinations of life one requires a good emotional intelligence. Unless or until an individual could not be able to cope up with emotions, until possess self-awareness, until manage the varied situations at different occasions, until being capable to make a healthy relations with others and unless he would attain the empathetic manners. However, humans function on the basis of signals that are being provided by cognition and hence cognitive power of an individual itself decides what to do and what not to do. Every individual hold own state of cognitive function, cognitive styles and emotional intelligence that guide them in managing their ideas into practice and even make them self-reliant, self-oriented and skilled. Even if there are numerous psychological factors that harmoniously laid an impact on the growth and development of an individual but in the current study researcher has laid emphasis on cognitive styles and emotional intelligence of prospective teachers because nowadays these two psychological attributes are of paramount importance in the field of educational research so that educated youth of the country would break the internal and external barriers, restrictions and challenges of 21st century . Educated youth of the nation particularly prospective teachers are the back bones for notational development and integrity. So preparing the educated youth for the world of science and technology they need to be guided and trained through various workshops where they will be acquainted about the consequences of good mental health and emotional intelligence.

However, cognitive styles is a broad concept that influences other dimensions of life in general, whereas it has a significant impact on emotional intelligence and academic achievement according to the present study.

It is difficult for students to manage their emotions in order to deal with various situations in school. Managing emotions in order to perform well is not an easy task. The prediction for success is mostly indicated by emotional measures, and guardians and teachers are always eager to develop the intelligence of students and place emphasis on their emotions for better academic performance. Emotions affect students in a variety of ways, according to research. Considering the current state of the educational system's progress and prosperity. The most recent teaching pedagogies and techniques based on psychological inputs should be implemented at the national level in every school, college, and university so that students would be able to lead the nation at par.

Suggestions for Further Research

Obviously research is a long term process but it does not allow us to go beyond the limitations where your research study loose its accuracy and authenticity. No doubt there is always some opportunity for researchers to find out the research gap as we delimit all research studies to its objectives, population, sample size, findings and discussions. It is a scientific criteria in the field of research that a particular study can address the research problem within its certain specific context and ethnography. Hence we always need to expand the scope of research so that we can correlate and integrate the various fields of study. Limitations of the study make it more scientific, accurate, impeccable, precise and genuine attempt to explore the purpose of educational research.

While considering certain limitations during the course of current research work, suggestions for further research have been put forth here:

- Existing study was done on prospective teachers whereas it can also be conducted on school, college and other university students/scholars.
- Jammu and Kashmir union territory has been selected as research area in this study though it can also be expanded to other states or union territories of the country.
- Researcher have selected only government institutions for the present study while it would also be conducted in private institutions.
- Moreover 530 prospective teachers have been taken as a respondents of study although it can be done on large sample also.
- In future research scholars can relatively conduct this study in in other states of country in a comparative way.
- By the way this research work was confined to the cognitive styles, emotional intelligence, socio-demographic variables and academic achievement of prospective teachers where as it can also be conducted by adding more other variables.