Cognitive Styles of Post Graduate Students

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Abstract

The study is descriptive survey in nature. The study purports to find the cognitive styles of post graduate students. It also purports to find out the predominance of cognitive styles among the post graduate students with reference to gender, locality and subject stream. The findings of the study shows that, 18%, 0.9%, 2.7%, 84% and 1.8% of the students found to possess Systematic, Intuitive. Integrated, Split and undifferentiated style respectively. It is also found that the students have more split cognitive style irrespective of their gender, locality and subject stream.

KEYWORDS: Cognitive Style, Systematic style, Intuitive style, Split style, Integrated style, Undifferentiated style, Post Graduate Students.

1. Introduction.

The term cognitive style involves two terms cognition and style. The cognition is related with mental operations involving thinking, processing of information which includes perception, problem solving, memory recall, and decision making, whereas the style is the way or typical mode of thinking, remembering or problem solving.

Cognitive styles as a concept is a component of a larger concept termed as learning styles. The cognitive style refers to the different approaches people in undertaking the cognitive tasks. The understanding of the concept cognitive styles started as early as early as in the late 1930s.

Herman Witkin (1950) introduced the term 'cognitive style' to describe the concept that individuals consistently exhibit stylistic preferences for the ways in which they organize stimuli and construct meanings for themselves out of their experiences.

Cognitive styles refer to an individual's preferred way of processing information. It is different from the cognitive abilities which describe a person's typical mode of thinking, remembering or problem solving. It is a tendency to behave in certain way. It is the way of thinking, judging, remembering, storing information, decision making and believing in interpersonal relationships. It is a hypothetical construct which explains the process of mediation between stimulus and response. Cognitive style is a usually described as a personality dimension which influences attitudes, values, and social interaction. It represents the consistent patterns of organizing and processing information. Cognitive style is a self evident mode of functioning which aid in the individual's perceptual and intellectual activities.(Witkin, etal, 1962).

Several studies resulted in number of cognitive styles among which the Field independence versus Field dependence is the most well known style. A field dependent individual is passive and less competent in analytical functioning having greater social orientation. While on the other hand, a field independent individual is more active and competent in analytical functioning with less social orientation and socially sensitive.

The cognitive style theory developed by Witkin, et al assumed that cognitive style with has single dimension with two extremes. The two extremes were systematic style and intuitive style. The theory of Witkin with two extremes does not explain the entire spectrum of individual's behaviour with reference to thinking, learning and problem solving and decision making. In 1983, Martin proposed multidimensional model to explain the entire spectrum of the individual's behaviour. This indicates that cognitive style consists of two continuum i.e., high systematic to low systematic and high intuitive to low intuitive. In developing the measurement devices for assessing cognitive behaviour the studies have resulted in expansion of the original model of cognitive style and identified five types of cognitive s styles viz., systematic, intuitive, integrated, undifferentiated and split styles.

In Systematic style an individual uses a well defined step-by step approach to solve a problem, looks forward, and makes an overall plan for solving the problem.
In intuitive style the individual uses an unpredictable ordering of analytical steps to solve the problem, relies on experience patterns characterized by non verbal areas or hunches and explores and abandons alternatives quickly.
Individuals with integrated style are able to change the styles quickly and easily. The changing of styles is unconscious and takes place in a few seconds. The quick changing of the style produces energy and a proactive approach to problem solving. They are problem seekers and think it as opportunities to do things in better way.
Individuals who possess split type show equal degrees of specialization in systematic and intuitive styles. They are able to exhibit different dimensions in completely different setting. Based on the nature of their work they consciously use the style.
Individuals with Undifferentiated style are not able to distinguish between the extremes of the two styles (systematic and intuitive) and also not able to exhibit any one style. They depend on others in problem solving situations for guidelines. They are withdrawn, passive and reflective.
Ausburn. J. L & Ausburn. F.B (1978) suggested two principal cognitive styles and labelled as Wholist-Analytic and Verbialiser-Imager dimensions. Cognitive style is a wholistic process of cognition that begins with the perception, and mediated by information processing and the resultant retrieval (Srinivasa Kumar, 2011). Sellah. L, Jacinta. K and Helen, M 2017 indicated that the sequential–global dimension of cognitive style was a significant predictor of performance in chemistry subject. Studies also shown that cognitive style and learning correlated (Messick, 1978).

2. Need and significance of the study.

Teaching Learning is a process of bringing desirable behavioural changes among the individuals. The learning occurs among the individuals as result of interaction between individual's own experiences and environment. It is noted that there is a difference in the ability of processing the information or learning experiences provided among the students with similar intellectual abilities.
It is observed that the Information which is neatly and systematically arranged can easily be absorbed by some individuals, while some other individuals can easily absorb information that is not quite neatly and systematically arranged.

The individual differences also observed in the information processing as some are fast and some lag behind. Woolfolk (1993) indicated that there are different ways of seeing, recognizing, and organizing information. These are the some of the strategies adopted by the individuals to process the information. Every individual will

select their own preferred way of processing and organizing as in response to the stimulation given by the environment.
In this background the researcher made an attempt to study the cognitive styles of students at post graduate level, in order to adopt learning strategies according to the cognitive styles of students for academic progress.
3. Statement of the Problem: The study purports to identify cognitive styles of postgraduate students and entitled as **"A study on Cognitive Styles of Post Graduate Students".**

4. Objectives of the Study:

The study was undertaken with the following objectives.

- To find the cognitive style of post graduate students.
- To find the predominance of cognitive style among post graduate students with reference to the following categories.
  - Gender
  - Locality
  - Subject Stream

5. Methodology.

5.1 Method of the study.

The study is descriptive survey in nature.

5.2 Sample of the study.

The 110 post graduate students studying in different post graduate departments of University of Mysore were selected randomly as sample.

5.3 Variables of the Study.

Main Variables.

- Cognitive Style

Background Variables

- Gender
- Locality
- Subject stream

5.4 Operational definition of terms.

Cognitive Style- the preferred and consistent patterns of responses that are both habitual and unconscious as well as deliberate and uni-dimensional psychological state of an individual.
In the present study the cognitive styles of the student is represented by the scores obtained by the student on the Cognitive Style Inventory constructed by Praveen Kumar Jha, 2001.

5.6 Research tools.

Cognitive Style Inventory

To measure the dimension of cognitive style, Cognitive Style Inventory constructed by the Dr. Praveen Kumar Jha, 2001 was utilized.
The Inventory consists of 40 items having five alternatives strongly disagree. Disagree, strongly agree, undecided, agree and strongly disagree. The scale found to possess concurrent validity and split half reliability coefficient of 0.653.

5.7 Statistical Techniques.

To analyze the data Percentage Analysis technique was utilized.

6. Analysis and interpretation.

6.1 Cognitive Styles of Post Graduate Students.

Table 1: Cognitive Styles of Post Graduate Students.

Cognitive style	**N**	**%**
Systematic	20	18.18
Intuitive	01	0.9
Integrated	03	2.7
Split	84	76.36
Undifferentiated	02	1.81

The above table reveals the following points.

- 18% of the students found to possess Systematic Style.
- 0.9% of the students possess Intuitive style.
- 2.7% of students found to possess Integrated style.
- 84% of student found to possess split style.
- 1.8 % of students possess undifferentiated cognitive style.

6.2 Cognitive Styles of Post Graduate Students with reference to gender, subject stream and locality.

Table2 :Cognitive Styles of Post Graduate Students with reference to gender, subject stream and locality.

Variables	**Type of cognitive style**									
	Systematic		**Intuitive**		**Integrated**		**Split**		**Undifferentiated**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender										
Male	00	00	00	00	00	00	**15**	**71.42**	**06**	**28.57**
Female	**21**	**23.59**	00	00	00	00	**68**	**76.4**	00	00
Locality										
Rural	**9**	**13.23**	**3**	**4.4**	**3**	**4.4**	**53**	**77.94**	00	
Urban	**9**	**21.42**					**33**	**78.57**	00	
Subject stream										
Art					**3**	**12.5**	**21**	**87.5**		
Commerce	**15**	**35.71**	00		**3**	**7.14**	**24**	**57.14**	00	
Science	**6**	**13.63**	00		**00**		**38**	**86.36**	00	

The above table reveals the following points.

28.5% and 71.42% of male students found to possess undifferentiated and split cognitive style respectively.
23.59% and76.4% of female students found to possess Systematic and Split cognitive style.

This implies that the both male and female students have more Split style than other styles. It is also observed that, the one fourth of female students have Systematic style and more than one fourth male students have undifferentiated style.
13.23%, 4.4%, 4.4% and 77.94% of rural students have systematic, intuitive, integrated and split styles respectively.
21.42% and 78.57% of urban students have systematic and split style respectively.

It implies that the rural and urban students have more split style than other styles. It also found that the both rural and urban students have systematic style.
12.5% and 87.5% of Arts students have integrated and split style respectively.
13.63% and 86.36% of science students have systematic and split style.
35.71%, 7.14% and 57.14% of commerce students have systematic, integrated and split style.

It implies that arts, science and commerce students have more split style. One third of the commerce students are more in systematic style.

7. Findings of the study.

The major findings of the study are as follows.

- 18%, 0.9%, 2.7%, 84% and 1.8% of the students found to possess Systematic, Intuitive. Integrated, Split and undifferentiated style respectively.
- 28.5% and 71.42% of male students found to possess undifferentiated and split cognitive style respectively.
- 23.59% and76.4% of female students found to possess Systematic and Split cognitive style.
- 13.23%, 4.4%, 4.4% and 77.94% of rural students have systematic, intuitive, integrated and split styles respectively.
- 21.42% and 78.57% of urban students have systematic and split style respectively.
- 12.5% and 87.5% of Arts student have integrated and split style respectively.
- 13.63% and 86.36% of science students have systematic and split style.
- 35.71%, 7.14% and 57.14% of commerce students have systematic, integrated and split style.

8. Educational implications.

It is evident from the study that most of the students possess split style. The Individuals who possess split type show equal degrees of specialization in systematic and intuitive styles. They are able to exhibit different dimensions in completely different setting. Based on the nature of their work they consciously use the style.
The study also shown that, most of the students from commerce and female students, 10–15% of students from rural area, urban area, Arts, and Science have systematic style. In Systematic style an individual uses a well defined step-by step approach to solve a problem, looks forward, and makes an overall plan for solving the problem. Hence, the teachers at higher level has adopt strategies to enhance the step by step sequential analytical approach to thinking, learning, problem solving and decision making to develop a rational behaviour among the students.

It is also found that 30% of the male students have undifferentiated style. Hence, the teacher has to help the students to overcome the style and take necessary actions to change the style.

In the process of teaching-learning the teacher has to create supportive and stimulating classroom atmosphere to solve problem.

Students should be encouraged to think on their own and find out a solution.

Teacher should appreciate unusual ways of thinking and unconventional approaches.

A free non-competitive, unrestricted classroom atmosphere and flexible curriculum should be provided.

9. Conclusion.

Every individual has a different style in processing information. Therefore, the teacher has to support and help the students in developing appropriate cognitive styles to develop productive human resources for prosperity of the nation.

References:

- Ausburn, L. J & Ausburn, F. B(1978). Cognitive styles: Some information and implications for instructional design. ECTJ volume 26, 337–354.
- Manjula Devi .M.T & William. B. D. (2016). Cognitive Style and Academic Achievement of Higher Secondary Students. Paripex Indian Journal of Research. Vol. 5 (4), 388-389.
- Messick, S. (1984). The nature of Cognitive Styles: problems and promise in educational practice. Educational Psychologist, 19, 59-74.
- Praveen Kumar Jha. (2001). The Cognitive Styles Inventory. Agra, Rakhi Prakashan.
- Sellah. L, Jacinta, K & Helen, M (2018). Predictive power of cognitive styles on academic performance of students in selected national secondary schools in
- Kenya, Cogent Psychology, 5(1).
- Srinivas Kumar, D. (2011). Introduction to Cognitive Styles and Learning Styles. Kuppam: Prasaranga, Publications Bureau, Dravidian University.
- Witkin, Herman A. “Individual Differences in Case of Perception of Embedded Figures.” Journal of Personality 19 (1950):1-15.
- http://psychology.iresearchnet.com/sports-psychology/perception-in-sport/cognitive-styles/