CHAPTER – 5
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Human resources development seems to be fundamental for all other development. If human resources are developed, a country get excellence in every field. In a broadest sense, education is considered as a basic need to the development of human resources. For better achievement of student, much time and effort of the school are used to help in their scholastic endeavors. Now a days academic achievement in a broader meaning is believed as a indicator of an individual’s expertise, potential and success. Academic achievement is taken as skill developed or knowledge obtained in the course subjects usually designated by test scores or by marks obtained.

Determinants of academic achievement

The studies identified many factors that might responsible for the variance in achievement including individual attributes as well as those related to school, home, society and community etc. In the present day the studies on correlates of achievement is so vast that it is very difficult to classify them. However, some determinants are discussed below: Environment of school and classroom has a significant impact on student motivation and achievement (Maehr & Midgley, 1996). School climate and scholastic success are correlated (Ahluwalia, 1990; Panda, sahoo & Sahoo, 1995; Reddy, 1994; Sananda Raj & Sreethi, 2000). Teacher’s expectation have been found to have a significant impact on student’s achievement (Goode, 1985; Goodlad, 1984; Gondson Bilings, 1994; Ferguson, 1998). teaching style (Merchant, Paulson & Rothlisberg, 2001) significantly predict academic achievement. Parental Expectation High expectation from the parents are generally associated with higher levels of academic achievement.
Parental education and Socioeconomic Status Ferguson (1998) found that parental education accounted for about twenty four percent of variance in student test scores, while socio-economic status accounted for about twenty six percent. Van Voorhis (2003) found that parental involvement affected achievement more strongly than socio economic status. Chung and Hustance (2001) found individual differences in intelligence to be associated with variations in academic performance. Oxford et al. (1993) in the Japanese language program observed that student characteristics like motivation, learning style, gender, and learning strategies shows very important role in academic achievement. Anxiety causes a performance decrement (Geetha, 2000; Gupta & Anshika, 1998; Murthy & Kulshretha, 1999; Yadav & Mayuri, 2001). Some research evidence suggests that interest is correlated with performance in achievement test (Ganguly, 1989; Schiefele, Krapp & Winteler, 1992; Steinkamp & Maehr, 1983). Level of aspiration as an important determinants of academic achievements at secondary level (Khan, 2000). Student teacher relationships are associated with higher academic achievement (Crosnoe, Johnson & Elder Jr., 2004; Niebuhr and Niebuhr, 1999).

Emotional intelligence

Emotional intelligence (EI) is relatively a recent development in the area of intelligence as well as in affective science. Researches become increasingly dissatisfied with the fact that general intelligence is correlated very poorly in predicting the life success and adaptation of individual to his environment. Salovey and Mayer (1990 & 1997) proposed a theory of emotional intelligence as the ability to: (a) perceive and express emotion, (b) use emotion to facilitate thought, (c) understand and reason with emotion, and (d) regulate emotion in the
self and others. These researchers conceptualize EI as a mental ability that pertains to an individual’s capacity to process and reason with and about emotion-laden information. Bar-on (1997) characterized emotional intelligence as “an array of non-cognitive capabilities, competencies and skills that influence one’s ability to success in coping with environment demands and pressures”. Goleman (1995) said that if IQ contributed to 20% of life success, the remaining 80% has been filled by EQ. Emotional intelligence has been a positive and exciting topic with enormous implication for education.


**Thinking style**

The theory of Mental Self Government proposed by Sternberg (1998b) conceives that the various style of government we see in our world is external reflection or mirrors that we find in our mind (Sternberg, 1994a). The theory (Sternberg, 1988b, 1990a, 1994a, 1997) assumes that people need some how to govern or ménage their everyday activities. There are many ways of doing so, as people choose styles of managing themselves with which they are comfortable, whenever possible. Sternberg (1988, 1997) provides categories and characterization of how people organize, direct and manage their own thinking activities and he proposes 13 thinking styles which fall under five aspects of Mental Self Governance. These 13 styles are briefly described under their
Leanings There are three functions of people’s mental self-government: legislative, executive, and judicial. People who have a Legislative style prefer tasks that require using creative strategies and generating new approaches and solutions. People who have an Executive style are more concerned with the proper implementation of tasks within a set of guidelines, and those having a Judicial style are concerned with evaluating the work process and products of other people’s activities. Two levels of governance are defined: local and global. People with a Local style prefer activities that require them to attend to very specific and concrete details, whereas those with a Global style prefer dealing with problems that are general in nature and that require abstract thinking. These two major leanings, conservative and liberal, are also identified in mental self-government. People with a Liberal style prefer tasks that require them to go beyond existing rules and structures and tasks that are aimed at effecting substantial change. Those with a Conservative style prefer familiar tasks that require the application of and adherence to existing rules and structures. Forms, According to Sternberg, just as there are different forms of government, there are various ways in which individuals govern themselves: monarchic, hierarchic, oligarchic, and anarchic. People with a Monarchic style prefer engaging in activities that require them to focus on only one thing at a time. Those with a Hierarchic style prefer distributing their attention and energies over several tasks that are prioritized. Those with an Oligarchic style prefer working toward several objectives all at the same time without prioritizing the tasks. Finally, individuals with an Anarchic style prefer working on tasks that require no system at all, and, thus, allow for greater flexibility. Scope, Individuals with an Internal style prefer tasks that require
working independently of other people. In contrast, those with an External style prefer activities that allow for interaction with others.

**Academic Motivation**

Motivation has long been considered by experts of psychology and education as an important factor that affects students’ learning and achievement. It is a common contention that adaptive motivational orientations facilitates learning while maladaptive ones impede it. Recent researches on motivation has focused on the nature of motivational constructs and the ways these constructs affect learning and achievement. In Self Determination Theory (SDT) Deci & Ryan, (1985) distinguished between different types of motivation based on the different reasons or goals that give rise to an action. The most basic distinct types of motivation are intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to doing something because it is inherently interesting or enjoyable while extrinsic motivation refers to doing something because it leads to a separable outcomes. Researchers have shown that the quality of experience and performance can be very different when one is behaving for intrinsic versus extrinsic reasons. Kahoe & McFarland (1975) and Vallerand et al. (1992) stated that intrinsic motivation is a global construct that can be differentiated into three more specific motives : (i) Intrinsic motivation to know, (ii) Intrinsic motivation to accomplish, and (iii) Intrinsic motivation to experience stimulation. Similarly Vallerand et al. (1992) considered three dimensions of extrinsic motivation. These are: (i) Identified regulation, (ii) Introjected regulation and (iii) External regulation.
Rationale of the study

Academic achievement has been studied at the light of the various factors but no one study could explain the fact and predict hundred percent of the academic achievement theories always argue that his particular theory can explain. The dependent variable in most appropriate way but empirical evidences do not support the theories. Sternberg proposed his theory against the role of intelligence and claimed that success in any area can be very well predicted on the basis of thinking style, but review of literature clearly demonstrate that their is a big gap between the claim and the fact. Similarly proposal of intrinsic motivation theory assumed that any behavior can be predicted on the basis of intrinsic, extrinsic nature of motivation. Similar case is with emotional intelligence review of literature shows the mix experience, some times the variables predict the academic achievement while in many cases they proved to be unfit for the prediction.

One thing which clear from the review that emotional intelligence, thinking style, academic motivation seems to be important factor for academic achievement of students, but no one study has been observed to undertaken these factors under one umbrella and to examine their roles in determining the academic achievement. However Bhuiyan (2012) has made and attempt to examine the role of thinking style academic motivation and intelligence in determining the academic achievement of urban boys and girls. The study has failed to establish the linkage between intelligence and academic achievement, thinking style and academic motivation were important factors in this regard.

Against this back drop it was an opinion to examine the role of thinking style, academic motivation and emotional intelligence in determining the
academic achievement of students as intelligence was formed to be non significant variable and many has claimed that emotional intelligence is an important factor for academic achievement.

Also it was observed that separate studies on these factors were undertaking urban subjects. It was observed in most of the cases tribal sample was less explored. John (2005); John, Singh & Verma (2011) concluded tribal sample and observed the role of thinking style and academic achievement. Their result show that thinking style of tribal students were different and they concluded that due to that variation in thinking style tribal students showed inferior achievements taking John’s (2005), finding into consideration it was decided to concentrate the research focus on tribal students and to compare them with non tribal population. The specific objective and formulated hypotheses are presented below:

**Objectives**

**Emotional Intelligence**

1a. To examine whether boys and girls shows significant variation on different dimension of emotional intelligence.

1b. To study whether tribal and non tribal students show significant differences on different dimension of emotional intelligence.

2a. To explore emotional intelligence (self awareness, self regulation, self motivation, social skill, social awareness) profile of tribal boys.

2b. To study emotional intelligence (self awareness, self regulation, self motivation, social skill, social awareness) profile of tribal girls.

2c. To examine emotional intelligence (self awareness, self regulation, self motivation, social skill, social awareness) profile of non tribal boys.
2d. To explore emotional intelligence (self awareness, self regulation, self motivation, social skill, social awareness) profile of non tribal girls.

B. Thinking style
1a. To study whether boys and girls shows significant variation on different dimension of thinking style.
1b. To prepare whether tribal and non tribal students shows differences on different dimension of thinking style.
2a. To examine the thinking style (monarchic, hierarchic, oligarchic, anarchic, legislative, executive, judicial, global, local, internal, external, liberal, conservative) profile of tribal boys.
2b. To explore the thinking style (monarchic, hierarchic, oligarchic, anarchic, legislative, executive, judicial, global, local, internal, external, liberal, conservative) profile of tribal girls.
2c. To study the thinking style (monarchic, hierarchic, oligarchic, anarchic, legislative, executive, judicial, global, local, internal, external, liberal, conservative) profile of non tribal boys.
2d. To examine the thinking style (monarchic, hierarchic, oligarchic, anarchic, legislative, executive, judicial, global, local, internal, external, liberal, conservative) profile of non tribal girls.

C. Academic motivation
1a. To examine whether boys and girls shows significant variation on different dimension of academic motivation.
1b. To study whether tribal and non tribal students shows significant difference on different dimension of academic motivation
To prepare the academic motivation (intrinsic motivation, extrinsic motivation, a-motivation) profile of tribal boys.

To study the academic motivation (intrinsic motivation, extrinsic motivation, a-motivation) profile of tribal girls.

To explore the academic motivation (intrinsic motivation, extrinsic motivation, a-motivation) profile of non-tribal boys.

To examine the academic motivation (intrinsic motivation, extrinsic motivation, a-motivation) profile of non-tribal girls.

**D. Academic achievement**

1a. To examine whether tribal and non tribal students shows differences on academic achievement.

1b. To examine whether boys and girls shows significant variation on academic achievement.

**HYPOTHESES**

**A. Emotional intelligence**

1. There would be significant difference between boys and girls on different five dimension of emotional intelligence.

2. There would be significant difference between tribal and non tribal students on different five dimension of emotional intelligence.

3. There would be significant interaction effect of gender and culture on different five dimension of emotional intelligence.

**B. Thinking style**

1. There would be significant difference between boys and girls on different thirteen dimension of thinking style.
2. There would be significant difference between tribal and non tribal students on different thirteen dimension of thinking style.

3. There would be significant interaction effect of gender and culture on different thirteen dimension of thinking style.

c. **Academic motivation**

1. There would be significant difference between boys and girls on different three dimension of academic motivation.

2. There would be significant difference between tribal and non tribal students on different three dimension of academic motivation.

3. There would be significant interaction effect of gender and culture on different three dimension of academic motivation.

D. **Academic achievement**

1. There would be significant difference between boys and girls on academic achievement.

2. There would be significant difference between tribal and non tribal groups on academic achievement.

3. There would be significant interaction effect of gender and culture on academic achievement.

E. 1. Role of emotional intelligence, thinking style, academic motivation and gender would show significant role in determining academic achievement of tribal students.

2. Role of emotional intelligence, thinking style, academic motivation and gender would show significant role in determining academic achievement of non tribal students.
3. Role of emotional intelligence, thinking style, academic motivation and gender would show significant role in determining academic achievement.

Method

There were two major objectives as to see the gender and cultural variation in emotional intelligence, thinking style, and academic motivation as well as to examine the role of gender, culture, emotion intelligence, thinking style and academic motivation in determining the academic achievement of high school students. For study of the first objective, a 2×2 factorial design was opted taking two levels of gender (boys and girls) and two levels of culture (non-tribals and tribals) as independent variables while emotional intelligence, thinking style, academic motivation and academic achievement were taken as dependent variables separately. To examine the role of different independent variable in determining the dependent variable (i.e. academic achievement) a correlational design was opted taking gender, culture and different dimension of emotional intelligence, thinking style, and academic motivation as independent variables while academic achievement of subjects as dependent variable.

Sample

To select the sample for the present research, initially a list of all Hindi medium high and higher secondary schools of Bastar district was prepared. They were from four tehsils (out of seven) of bastar district. Seven schools were selected randomly from those of selected tehsils considering rural and urban areas. A total of 600 class tenth students were taken, out of them, 300 were boys and 300 were girls. They were taken separately from two types of cultures, i.e. tribals and non-tribals. Half of the subjects (i.e., 150 boys and 150 girls) were taken from tribal group while rest (i.e., 150 boys & 150 girls) were taken from...
non-tribal group. Subjects from two cultures were taken from the same schools to control the school variation. The tribal students were placed under the tribal and rest were placed under non-tribal (NT) category.

**Tools**

To measure emotional intelligence, Emotional Intelligence Scale developed by Meharchandani, Singh & Verma (2014), Thinking Style Scale developed by John, Singh & Verma, (2005) was used to measure thinking styles. Academic Motivation Scale developed by Bhuyia and Singh (2009) was used. To measure academic achievement of the subject “High School Academic Achievement Test” developed by Sunita Rani, Bhuyia and Singh (2009) was used.

**Results**

**Emotional intelligence:**

Boys are higher than the girls on all the five dimensions of emotional intelligence. On the other hand, tribal students were found to be higher on self awareness, social skills and social awareness while non-tribal students were higher on self regulation and self motivation than their counterpart groups.

**Main Effect of Gender on Emotional Intelligence**

The main effect of gender on self regulation and social awareness dimension of emotional intelligence were significant. Mean value of boys on self regulation and social awareness is greater than the group of girls.

**Main effect of culture on Emotional Intelligence**

The main effect of culture on self motivation and social awareness dimension of emotional intelligence were significant. Average self motivation score of non-tribal significantly greater than the group of tribal students. The mean value of tribals for social awareness is greater than the group of non-tribals.
Therefor clearly demonstrate that non-tribals had higher emotional intelligence in the term of self motivation than the tribals, whereas tribals had higher emotional intelligence in the term of social awareness than the non-tribals.

**Interaction Effect of Gender and Culture on Emotional Intelligence**

The interaction effect of gender and culture are significant on four dimensions i.e., self awareness, self regulation, social skill and social awareness. Average self awareness score of non-tribal boys is significantly greater than non-tribal girls whereas the mean value of tribal girls is greater than tribal boys.

The mean value of self regulation of non-tribal boys is significantly greater than non-tribal girls, Whereas the average score of tribal boys greater than tribal girls. The mean value of non-tribal boys on social skill is significantly greater than non-tribal girls, Whereas the mean value of tribal girls is greater than tribal boys. Average of non-tribal boys on social awareness is greater than non-tribal girls, Whereas the mean value of tribal girls is greater than tribal boys.

**Thinking Style**

Boys were higher in monarchic, hierarchic, anarchic, legislative, executive, global, internal, external liberal and conservative type of thinking style than the girls, whereas oligarchic, judicial, and local type of thinking style are higher in case of girls than their counter parts.

Tribal students were found to be higher on monarchic, hierarchic, oligarchic, legislative, global, local, internal, external liberal and conservative thinking style than their counter part groups, while non-tribal students were higher on anarchic, executive and judicial thinking style.

**Main Effect of Gender On Thinking Style**
Boys were comparatively higher on monarchic, hierarchic, executive, judicial, global, internal, external, liberal, conservative thinking styles than girls. Whereas, girls were found significantly higher on judicial style than boys.

**Main Effect of Culture on Thinking Style**

Tribal subjects were higher on monarchic and external thinking style than non-tribal groups, whereas non-tribal subjects were higher on anarchic and judicial thinking style.

**Interaction Effect of Gender and Culture on Thinking Style**

Results regarding interaction effect of gender and culture are significant on four styles i.e., monarchic, hierarchic, oligarchic, and judicial. The average monarchic thinking style of non-tribal boys significantly greater than non-tribal girls, whereas the mean value of tribal girls is greater than tribal boys.

The mean value of hierarchic thinking style of non-tribal boys is significantly greater than non-tribal girls, whereas the mean value of hierarchic thinking style of tribal boys which is greater than tribal girls.

The results reveals that the mean value of oligarchic thinking style of non-tribal boys is significantly greater than non-tribal girls, whereas the mean value of oligarchic thinking style of tribal girls is significantly greater than tribal boys.

The average judicial thinking style of non-tribal girls is greater than non-tribal boys, whereas the mean value of judicial thinking style of tribal girls is greater than tribal boys.

**Academic Motivation**

Boys are higher in extrinsic motivation and a-mtoivation than the girls, whereas intrinsic motivation is higher in case of girls than their counter parts. On the other hand, tribal students were found to be higher on extrinsic motivation and
intrinsic motivation than their counter part groups, while non-tribal students were higher on a-motivation.

**Main effect of Gender on Academic Motivation**

The main effect of gender on a-motivation was found significant. The mean value of a-motivation of boys which is greater than the girls.

**Main effect of culture on Academic Motivation**

The main effect of culture on intrinsic motivation was found significant. The mean value of intrinsic motivation of tribal subjects which is greater than the Non-tribal subjects.

**ACADEMIC ACHIEVEMENT**

The average academic achievement of girls were higher than boys whereas nontribal subjects were found higher than tribals.

**Main effect of Gender**

The mean value of Academic achievement of girls is significantly higher then the boys.

**Main effect of culture**

The mean value of Academic achievement of non-tribal subjects which is greater than the tribal subjects.

**Determinants of academic achievement**

Results regarding multiple regression analysis taking emotional intelligence, thinking style, academic motivation and gender as independent variables and academic achievement as dependent variable. R for all the significant variables was found to be .631, its square is .398 indicating that significant variables accounted for 39.8% variance in academic achievement of the subjects.
A study of regression coefficient reveals that sign of b-coefficient are found positive for self motivation, self awareness, gender, external thinking style and monarchic thinking style, which indicate that increase in self motivation, self awareness, external thinking style and monarchic thinking style and being a girl increase the academic achievement of the subject on the other hand b-coefficient for social awareness, extrinsic motivation and social skill are negative which indicate that lower the scores on social awareness, extrinsic motivation and social skill increases the academic achievement.

Self motivation, self awareness, being girl were emerged as most important factors responsible for academic achievement scores while social awareness and external thinking style had effect at moderate level on the other hand extrinsic motivation, monarchic thinking style and social skill has lowest influence, though they were significant contributors.

Self motivation, gender, self awareness, external thinking style, and intrinsic motivation which indicate that increase in all these variable, increase the academic achievement of non-tribal subjects. multiple correlational coefficient was found .669 which was highly significant. $R^2$ change show that self motivation explained about 22.8%, gender is 9.8%, role of self awareness 10%, role of executive thinking style and intrinsic motivation both are 1.1%.

Increase in self awareness, self motivation, gender, external thinking style and hierarchic thinking style increase the academic achievement of the tribal subjects. On the other hand, lower the scores on social awareness, extrinsic motivation, monarchic thinking style and social skill increase the academic achievement of tribal subjects. Multiple correlational coefficient was found .654 which was highly significant. $R^2$ change show that self awareness explained about
21.3%, role of self motivation 9.3%, gender and role of social awareness both are 2.7% whereas role of different thinking style i.e., external is 2.2%, hierarchic is 1.4%, role of extrinsic is 1.3%, monarchical is 0.9% and social skill is 1% seems to be very less but were significant.