



Pedagogy of Learning, Volume-1, Issue-2, pp.1-7, April 2015
(International Journal of Education)
ISSN: 2320-9526 (Print), ISSN: 2395-7344 (Online)
Website: www.pedagogyoflearning.com

Recommended Citation:

Attri, A.K. (2015). Form based thinking styles of prospective teachers. *Pedagogy of Learning, Vol.1* (2), pp.1-7.

Form Based Thinking Styles of Prospective Teachers

Ajay Kumar Attri*

Assistant Professor in Education, ICDEOL, Himachal Pradesh University, Summerhill
E-mail: sivattri@yahoo.co.in

Article Received : 21-11-2014

Article Revised : 18-02-2015

Article Accepted : 26-04-2015

Abstract: *The purpose of the present study was to examine the differences in form based thinking styles (monarchic, hierarchic, oligarchic and anarchic) of high, average, and low achieving prospective teachers. In the beginning over 501 secondary prospective teachers (B.Ed. students) from eight private B.Ed. Institutions of Himachal Pradesh were selected randomly. Hindi Adapted version of Thinking Styles Inventory (TSI) developed by Sternberg and Wagner (2005) was used to assess form based thinking styles of prospective teachers. The obtained data was analyzed by calculating mean, standard deviation and 't' values. Results indicate that there exists significant difference only in anarchic thinking style of high, average and low achieving prospective teachers. High and average achieving prospective teachers have more inclination towards anarchic style than low achieving prospective teachers. Further, high, average and low achieving prospective teachers were almost similar on monarchic, hierarchic and oligarchic styles of thinking.*

Keywords: *Monarchic, Hierarchic, Oligarchic, Anarchic, Mental self-government.*

Introduction

Our thinking style is our characteristic way of processing information. It's the way we acquire our knowledge, organize our thoughts, form our views and opinions, apply our values, solve problems, make decisions, plan, and express our-self to others. Individual differences have always aroused much interest in educational psychology. In current cognitive psychology, research mainly focuses on cognitive differences, such as thinking styles. In the theory of mental self-government, Sternberg (1988, 1997) attempted to integrate various approaches to styles. The basic assumption of the theory was that people, like societies, govern themselves and their mental processes and establish systems and organizations for this governance. In the theory, Sternberg provides categories and characterizations of how people organize, direct, and manage their own thinking activities,

Attri // Form based thinking styles of prospective teachers.....

and he proposed 13 thinking styles, grouped together in five dimensions: function (legislative, executive and judicial), form (hierarchical, oligarchic, monarchic and anarchic), level (global and local), scope (internal and external) and leaning (liberal and conservative). According to Sternberg (1988, 1997), 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. Achievement can be defined as the extent to which learner is profiting from instructions in a given area of learning. It is the outcome of general and specific learning experiences.

Thinking styles have been studied in various educational settings and investigating different academic outcomes. Grigorenko and Sternberg (1997) suggested that thinking styles significantly add to abilities as a tool for predicting academic achievement. In several studies by Zhang and colleagues (Bernardo, Zhang, & Callueng, 2002; Zhang, 2001, 2002, 2004; Zhang & Sternberg, 1998) academic performance was significantly associated with specific thinking styles. Zhang and Sternberg (1998) found that the thinking styles of hierarchical, internal, judicial, conservative, and global positively predicted academic performance among Hong Kong University students and that local, legislative, liberal, and external style negatively predicted academic performance. Furthermore, Zhang (2002) found that among US university students, their self - reported GPA was negatively predicted by liberal and global thinking styles while the conservative thinking style positively predicted self-reported GPA. In Zhang's (2004) study, hierarchic, monarchic, and judicial, positively contributed to academic performance.

Recently, the concepts of styles of thinking and learning have received considerable attention of the educationists of the Western World in connection with intellectual and academic performances of the students. However the area of pre-service secondary teacher education has remained unexplored. This situation warrants that the association between academic achievement and styles of thinking and learning should be explored systematically.

Rationale of the Study

In the last three decades, there has been extensive research on various methods of college teaching. But no single method of teaching has been found consistently superior for mythical average students. In view of this, the researchers started exploring the issue: which students learn best under what conditions. As a result of this endeavour they found the answer in the area of thinking styles. In their opinion all types of learners can be reached well through proper diagnosis and prescriptions of their thinking styles. The knowledge of

Attri // Form based thinking styles of prospective teachers.....

how students think is essential for tailoring the instruction to the learning needs of the students so as to produce best learning. The present study will be a humble attempt in fulfilling the gap in existing research on thinking styles. Further, the results of this study may be helpful in providing the empirical base for organizing classroom teaching in most effective and satisfactory manner in college of teacher education for enhancing the level of academic performance of prospective secondary teachers. Moreover, thorough knowledge of styles of thinking of teacher educators perhaps will prepare themselves to become diagnosticians, prescribers, educational designers and to adjust teaching methods to different ways in which prospective teachers prefer to learn.

Objectives of the Study

The following objectives were formulated to pursue in the study:

1. To investigate anarchic thinking style among high, average and low achieving prospective teachers.
2. To explore monarchic thinking style among high, average and low achieving prospective teachers.
3. To study hierarchic thinking style among high, average and low achieving prospective teachers.
4. To investigate oligarchic thinking style among high, average and low achieving prospective teachers.

Hypotheses of the Study

The following non-directional hypotheses were tested in the study:

1. There will be significant difference in anarchic thinking style of high, average and low achieving prospective teachers.
2. There will be significant difference in monarchic thinking style of high, average and low achieving prospective teachers.
3. There will be significant difference in hierarchic thinking style of high, average and low achieving prospective teachers.
4. There will be significant difference in oligarchic thinking style of high, average and low achieving prospective teachers.

Methodology of the Study

In the present study, descriptive research method was employed as the purpose of the study was to simply explore the difference in form based thinking styles of high, average and low achieving prospective teachers.

Population

In the present case the target population was the B.Ed. students studying in B.Ed. colleges of Himachal Pradesh. But accessible population was the B.Ed. students studying in private B.Ed. colleges affiliated to H.P. University.

Sample of the Study

The initial sample for the study comprised 501 secondary prospective teachers (B.Ed. students) from eight private B.Ed. Institutions of Himachal Pradesh. These subjects were of both the gender and from both the streams science and arts. First of all institutions were selected as per convenience. Thereafter, two sections from each of the institutions were taken randomly. Thus sampling of the subjects was done through random cluster technique. Subjects were classified according to levels of academic achievements by using $M_{\pm}SD$ formula. Those who scored $M+SD$ or above were identified as high achievers and those who scored $M-SD$ or below were designated as low achievers. Rests of the subjects were regarded as average achievers. Equal number of high, average and low achieving prospective teachers was selected from their group by using table of random number.

Tool Used

Hindi adapted version of Thinking Styles Inventory (TSI) developed by Sternberg and Wagner (2005) was used to assess participants thinking styles. This is a short form, consisting of 65 items. The inventory has 13 scales, with 5 items on each scale. On original TSI, the respondents are asked to rate themselves on a 7 point scale anchored by 1-which indicates the statement does not characterize them at all, 7-which indicates that the statement characterize them extremely well. These 13 scales correspond to the 13 thinking styles described in Sternberg’s theory of mental self-government. Sternberg and Wagner (1992) collected norms for various age groups on the long version of the TSI (which contains 104 items, 8 for each of the 13 scales) for their college sample, scale reliabilities ranged from .42 (monarchic) to .88 (External), with median of .78. The thinking styles inventory has also proved to be reasonably reliable and valid for identifying thinking styles of university students. While the alpha coefficients in Sternberg’s (1994) study ranged .44 to .88, those in Zhang and Sachs’s (1997) study ranged from .53 to .87 and in another study of Zhang between .46 and .89.

Analysis and Interpretation

Table 1: ‘t’ Values Showing Significance of Difference in Mean Scores of Form Based Thinking Styles in respect of High, Average and Low Achieving Prospective Teachers

Thinking Style	High Achievers Gp ₁ N=60	Average Achievers Gp ₂ N=60	Low Achievers Gp ₃ N=60	Gp ₁ vs Gp ₂	Gp ₁ vs Gp ₃	Gp ₂ vs Gp ₃
Monarchic	M= 19.37 SD= 2.86	M= 20.3 SD= 2.96	M=19.45 SD = 2.72	t=1.75 NS	t= 0.15 NS	t = 1.64 NS

Attri // Form based thinking styles of prospective teachers.....

Hierarchic	M= 20.1 SD= 2.67	M= 20.52 SD= 2.43	M= 19.95 SD = 2.67	t= 0.09 NS	t=1.22 NS	t = 0.31 NS
Oligarchic	M= 15.27 SD= 3.54	M= 16.30 SD= 3.67	M= 16.13 SD = 3.59	t= 1.48 NS	t=0.26 NS	t=1.32 NS
Anarchic	M= 18.40 SD= 2.82	M= 18.71 SD= 2.62	M=17.45 SD = 2.65	t= 0.62 NS	t=1.90*	t = 2.61**

** = Significant at .01 level, * = significant at .05 level, NS = Non-significant

Table-1 discloses that there was no significant difference between the means of groups 1 and 2 on monarchic thinking style as the first obtained 't' value (1.75) is not significant at .05 level of significance. Table 1 further indicates that the second 't' value for groups 1 and 3 is 0.15, which was not significant at .05 level of confidence with df 118. It may also be observed from the Table 1 that groups 2 and 3 did not differ significantly. From this it may be concluded that high, average and low achieving prospective teachers were almost similar on monarchic style of thinking. For hierarchic thinking style, Table 1 shows that the first 't' value (0.09) of groups 1 and 2 was non-significant. It indicates that high achieving and average achieving groups did not differ significantly with reference to hierarchic thinking style. It may be seen further in Table 1 that the second 't' value (1.22) was not significant at .05. Also, the third 't' value equal to 0.31 was not significant at .05 level. This pointed out that there was no significant difference in hierarchic thinking style of high, average and low achieving prospective teachers.

In case of oligarchic thinking style, Table 1 further discloses that none of the 't' value was significance even at .05 level. From this it may be concluded that high, average and low achieving prospective teachers were almost similar on oligarchic style of thinking. In case of anarchic thinking style, high and average achieving prospective teachers were almost similar but there exists significant difference among high and low achieving prospective teachers. High achieving prospective teachers were higher on anarchic style as compare to their counterpart low achieving prospective teachers. Further the last t-value i.e. 2.61 was significant at .01 level i.e. average and low achieving prospective teachers differ on anarchic style of thinking. Average achieving prospective teachers were higher on anarchic style as compare to their counterpart low achieving prospective teachers.

Major Findings

The present study examined the differences in form based thinking styles of high, average, and low achieving prospective teachers. Analysis indicated that there exists significant difference in anarchic thinking style of high and low achieving prospective teachers. High achievers had stronger preference for anarchic thinking style than low achieving prospective teachers.

Educational Implications

If thinking style is taken as fixed trait, then these findings call for designing specific interventions to address them both at the level of individual self-awareness and teacher activity. Further, these findings warrant that assessment questions should also be designed in tune with the thinking style preferences. Some theorists believe that in order to counter the problems of limiting the efforts of teachers, teachers should help the learner to develop a repertoire of thinking styles. So that an awareness of their own preferences and abilities should not bar them from working to acquire those thinking styles which they do not yet possess. In particular, as students move from didactic forms of instruction to settings with a mixture of lectures, seminars and problem-based learning, it may become possible for them to use a range of thinking styles. This calls for teachers to develop these styles through different teaching and learning activities or it can lead to what might be seen as a type of pedagogic sheep dip where teaching strategies aim explicitly to touch upon all styles at some point in a formal programme.

References

- Attri, A.K. (2005). *Hindi adapted version of thinking styles inventory (TSI) developed by Sternberg and Wagner*. Ph.D. Education. Himachal Pradesh University Shimla.
- Bernardo, A.B.; Zhang, L.F. and Callueng C.M. (2002). Thinking styles and academic achievement among Filipino students. *The Journal of Genetic Psychology*, 163 (2), 149-163.
- Grigorenko, E. L., & Sternberg, R. J. (1997). Styles of thinking, abilities, and academic performance. *Exceptional Children*, 63 (3), 295-312.
- Sternberg, R. J. (1988). Mental self-government: A theory of intellectual styles and their development. *Human Development*, 31, 197-224.
- Sternberg, R. J. (1994). Thinking styles: Theory and assessment at the interface between intelligence and personality. In R. J. Sternberg & P. Ruzgis (Eds.), *Intelligence and personality* (pp. 169-187). New York: Cambridge University Press.
- Sternberg, R. J. (1997). *Thinking styles*. New York: Cambridge University Press.
- Zhang, L. F., & Sachs, J. (1997). Assessing thinking styles in the theory of mental self-government: A Hong Kong validity study. *Psychological Reports*, 81, 915-928.
- Zhang, L-F. (2001). Do thinking styles contribute to academic achievement beyond self-rated abilities? *Journal of Psychology*, 135(6), 621-637.
- Zhang, L-F. (2002). Thinking styles: Their relationships with modes of thinking and academic performance. *Educational Psychology*, 22 (3), 331-348.
- Zhang, L-F. (2004). Revisiting the predictive power of thinking styles for academic performance. *Journal of Psychology*, 138(4), 351-370.
- Zhang, L-F., & Sternberg, R. J. (1998). Thinking styles, abilities, and academic achievement among Hong Kong University students. *Educational Research Journal*, 13 (1), 41-62.

***About the Author**

Dr. Ajay Kumar Attri has been working as an Assistant Professor in Education ICDEOL, Himachal Pradesh University, Shimla since January 2012. Prior to this he has served in different colleges as Assistant Professor in Education and as the Principal for several years. He has to his credit one book, more than 45 research papers in different National & International Journals and Sixteen Chapters in different books on Educational Technology, Environmental Education, ICTs and Total Quality Management in Professional Education & Human Right Education. Beside that he has presented more than 35 papers in different National & International Seminars / Conferences. His Area of interest includes Distance Education, Teacher Education, Educational Technology, Adult Education and Environmental Education.
