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An exploratory study of the gifted learner: do they have an unique learning style?

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Abstract:

Learning styles are various approaches or ways of learning. They involve educating methods, specific to individuals that are presumed to allow an individual to learn best. Most learners have their individual methods of interacting with and processing stimuli or information. On the basis of this idea, finding out the learning styles has been emphasized by researchers in the 1970s.In this context, it can be said that in the present times the knowledge of individual learning style can become an essential tool to implement the new learning paradigms. Researchers were eager to know the learning style preferences of students to give them proper education associated to their learning preferences and make learning successful. Often the more abled learner (Gifted learner) in our country may be in danger if their learning style preferences are not understood. Thus the purpose of this paper is twofold. Firstly, to explore whether gifted learners have any unique learning style and secondly, to examine whether learning style preferences depends on gender of gifted learners. For fulfilling these objectives of the paper, thirty-five gifted learners of class eight were assessed using Honey and Mumford Learning Style Questionnaire. Descriptive statistics and 't' test were used to analyse the data. The result of this study indicates that gifted learners mostly preferred activist and pragmatist learning style. Whereas gifted female learners mostly preferred pragmatist style, their counterparts- the gifted male learners preferred activist learning style. Findings stated in this paper also give a clear conception about what type of learning environment and teaching method are mostly preferred by gifted learners.

Keywords: *Gifted learner, Learning style, Gender*

Introduction

"Learning Styles" has been considered as one of the most important measures that control the way people learn. There is also a tendency to match student‟ learning styles" to the "teaching styles" of concerned teachers. If teachers have insight into their students' learning styles, they

will have a better understanding of each student's individual needs and increased understanding of the areas in which that student is likely to require additional support and importantly, those areas in which they are likely to shine. Teachers with this knowledge are likely to put a greater emphasis on the need to vary classroom activities and to incorporate multisensory approaches wherever possible. Students will value the fact that their teacher is interested in their learning style and will gain insight into the ways in which they can learn most effectively. This will help them in the organisation of their learning and will guide them towards becoming more independent learners. So the knowledge of students' learning style preferences is important to design an effective learning environment for gifted learners. In a common classroom often learning environment are designed according to the needs of the general students. This situation can adversely affect learning processes of the gifted who have to learn in the same environment with general students. Often gifted learners feel difficulties in learning when the instructional style is not well suited to their own learning styles. If classroom and home conditions discourage or punish a child for expressions of giftedness, the child is even more at risk in experiencing learning problems and underachievement in school, resulting in development of behaviour disorders. The potential for being at risk is reduced when the adults (teachers and parents) associated with them have acute understandings of the nature of their learning style and plan learning environment and teaching method accordingly. Therefore, knowing the learning style of gifted students is an important issue in designing a learning environment and planning learning materials for more abled learners, so they will achieve high level of performance according to their abilities.

Background Literature

For searching the previous literature related to learning styles the researcher adopted a systematic methodology in identifying literature included in the current study. The researcher had searched for literature published in 1993 or later. Starting at the broadest possible range, an initial search using the following keywords:- gifted students, secondary education, learning style, matching teaching style with learning style, classroom and learning preferences, causes of underachievement of gifted students was undertaken in the Shodhganga search, SAGE Journals Online, Tailor & Francis group journals, Elsevier, Black well and Wiley, Turkish Journal of Giftedness and Education, Research Gate, European Journal of Education Studies, European

Scientific Journal, Purdue- E- Pubes, The Journal of Educational Research, JSTORE, Springer-Journals Archive, Indian Citation Index, research thesis and dissertations on gifted learners. Only those studies were included where learning style and cognitive skill was taken as a dependent variable and IQ, sex, type of learners (gifted & non-gifted),classroom environment, creativity, motivation, were taken as an independent variables. A search using the above criteria identified 85 studies (see figure 1).After viewing the title and abstract, 35 of the identified articles were excluded as they did not fit the selection criteria. In the process 10 were excluded because they did not meet all the selection criteria, leaving 40 studies to be included in the study.

Figure 1

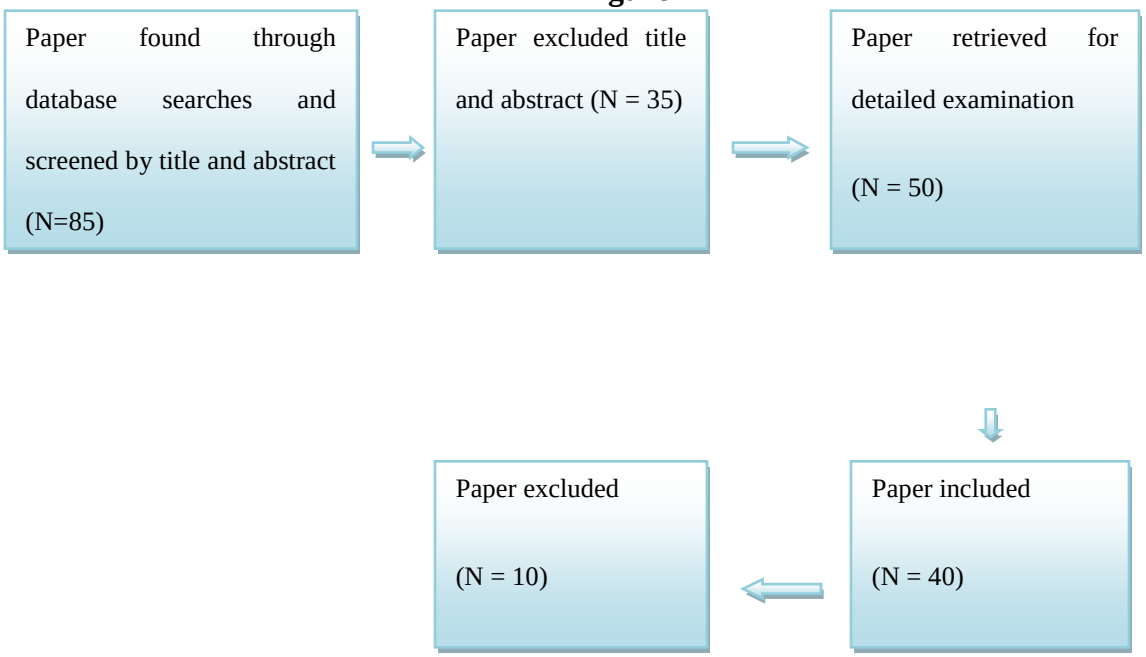

Table-1

Number of paper according to year, continent wise, country wise	
a)Year wise research trend of previous literature	
Year	**No of paper**
1993-1997	15 (38%)
1998-2002	14 (35%)
2003-2007	6 (15%)
2008-2012	2 (5%)

2013-2017	3 (7%)
b)Continent wise research trends of previous literature	
Asia	19 (47.5%)
North-America	12 (30%)
South-America	3 (7.5%)
Europe	4 (10%)
Australia	2 (5%)
c)Country wise research trends of previous literature	
Turkey	6 (33.3%)
Jordan	3 (16.6%)
China	3 (16.6%)
Israel	1 (5.5%)
India	2 (11.1%)
Iran	1 (5.5%)
Korea	1 (5.5%)
Hong Kong	1 (5.5%)

So far as the findings of the previous study are concerned, researchers found out that gifted students mostly perceived kinaesthetic learning style whereas non-gifted perceived tactile, visual, auditory learning style (Marc, 2015). Study results also suggest that students' academic achievement is affected by students' cognitive characteristic and learning styles (Doris & Matthews, 1996; Ainly, 1993). Majority of findings indicate that gender plays an important role in students' learning style. However some contradictory results were found about gender. Four study results indicate that there is no significant difference in learning style preferences based on gender, age, educational level. Research in the field of giftedness reveals parents and teachers believe that learning and school achievement are easy for all gifted youngsters; they tend to demand more effort and tolerate little error or imperfection. This reveals an unhealthy vulnerability gifted children naturally have toward perfectionism, which can result in a desire to avoid the risk of being less than "the best" or "failing." Similarly, when adults believe that gifted children are more mature than their peers developmentally, they tend to expect more mature

behaviour than is reasonable and forget the childishness that is necessarily present even in gifted children. As a result of this ignorance and misguidance these gifted child often fail to achieve the desired level of performance in respect of their ability. Cage's research has found that "certain learning style variables, taken into combination, are significantly related to higher achievement among gifted students" (Cage, 1982).

As per the above discussion it has been confirmed by researchers that gifted learners have their own individual learning style and if the teaching method is associated with their learning style, their performance shows a positive increase. Therefore, when planning the curriculum and teaching method for gifted students, educators need to be cognizant of their preferences as a group and structure the programme around the kind of learning experiences which are most advantageous for gifted students.

Research Gap

There is very little research in India which discusses learning style of gifted students. However taking this point into consideration the present study has tried to find out the gifted students' learning style and the way a gifted student prefers to gain knowledge. In the previous researches contradictory results were also found about gender of gifted learner and learning style. However this study has tried to establish a relationship between gender and learning style of gifted students.

Methodology

Objectives of the study

1. To know the learning style of Gifted Learner.
2. To assess whether there is any significant difference in the preferred learning style of gifted learners in respect of gender.

Hypothesis

H_{01}: There is no significant difference between learning style of gifted eight graders on the basis of gender.

Variable

Researcher has taken learning style as a dependent variable and gender as an independent variable.

Operational definition of the variable

- **Learning Style**

  Learning styles are different ways in which a learner learns. The manner in which a learner perceives, interacts with and responds to the learning environment are taken as learning styles. In this study, learning style is defined as the different ways in which the gifted and non-gifted learners begin to concentrate, process, internalize and remember new and difficult knowledge.

- **Gender**

  Gender (male/ Female) of the students of secondary schools under WBBSE/CBSE/ICSE is an important variable in this study to assess gender-wise differences in learning style.

- **Gifted learner**

  Through the Jacob Javits Gifted and Talented Students Education Act – part of the Elementary and Secondary Education Act – the federal government currently defines gifted students as:

  "Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities."

  Those students who score 95th percentile in an IQ test (Standard Progressive Matrices Test) are considered as gifted students in this study.

Population

The population of this study was gifted eight graders in the school under WBBSE/CBSE/ICSE in Howrah and Kolkata.

Sample

Data was gathered through 35 gifted students who were identified through Raven's Progressive Matrices Test from eight schools under WBBSE/CBSE/ICSE in Howrah and Kolkata.

Data gathering tools

Total 3 tools (General information schedule, IQ test, Honey and Mumford learning style questionnaire) have been used in this study. A General information schedule was constructed by the researcher. Original tools of Raven's Standard Progressive Matrices Test were used to identify gifted students. Honey and Mumford Learning Style Questionnaire was used to assess learning style.

- General Information Schedule

A specific General Information Schedule containing Name, School name, age, caste, gender etc. was collected from each of the chosen students.

- Standard Progressive Matrices Test

The Standard Progressive Matrices (SPM) Test was first developed in 1938 by J Raven, J C Raven, and J H Court. The Standard Progressive Matrices Test was constructed to measure the educative component of 'g' as defined in Spearman's Theory of cognitive ability. The test consists of 60 problems divided into five sets (A, B, C, D, and E) each made up of 12 problems. This is a standardized test. Over 40 studies dealing with the reliability of SPM have been reported in different literatures. The reliability of Standard Progressive Matrices through internal consistency method is 0.98 to 1.00,through test-retest method is 0.83 to 0.93.Validity of this test is 0.94.

- Learning Style Questionnaire by Honey and Mumford (1986)

Learning Style Questionnaire for all age was developed in 1986 by Peter Honey and Alan Mumford. This questionnaire consisted of 80 statements. The learners required to put a tick if they agreed with the statement, if disagreed, he was to put a cross in the box.

Pilot study

To ensure the validity and reliability of Honey and Mumford Learning Style Questionnaire (1986), a pilot study was carried out. For pilot study, the researcher followed purposive sampling to select the schools (one school from Howrah and one school from Kolkata). Sample consisted

of 40 learners of class eight .Random sampling was followed to choose the sample of the pilot study.

Table-2 Nature of the sample for pilot study

Serial no	School	Number of students
1	School -1(Howrah)	20
2	School -2(Kolkata)	20

Validity

For measuring the consistency of the items as well as dimensions of the Questionnaire, correlations of two sets of scores were computed.

1. Individual Item scores-Dimensions scores.
2. Inter- Dimensions scores.

Table-3 Item Validity Measures of Honey and Mumford Learning Style Questionnaire by using the data collected from students in class eight (N=40).

Name of dimension of Honey & Mumford Learning Style Questionnaire (LSQ)	Individual Item-Dimensions
Activist p Value	.319*-.589** <0.01-<0.05
Reflector p Value	.320*-.549** <0.01-<0.05
Theorist p Value	.333*- .599** <0.01-<0.05
Pragmatist p Value	.317*-.596** <0.01-<0.05

Note. ** P < .01. * P < .05.

Table- 4 The Inter-Dimensions Correlation Matrix of Honey and Mumford Learning Style Questionnaire by using the data collected from students in class eight (N=40).

Dimensions	Activist	Reflector	Theorist	Pragmatist
Activist	1			
Reflector	.638**	1		
Theorist	.327*	.479*	1	
Pragmatist	.463*	.525**	.528**	1

Note. ** P < .01. * P < .05.

The correlation analysis on 80 items was carried out. The results show positive correlation between individual item and dimension total. All the items are significantly correlated within the dimension. For correlation analysis between dimensions, 'r' value ranges from .327*-638**.

Reliability

Reliability Test was computed with respect to all valid items and dimensions on the basis of the responses of the students (N = 40) of class eight from secondary schools in West Bengal in the Pilot Study. Cronbach's Alpha was used to find out the Reliability values.

Table-5 Cronbach's Alpha Values establishing Reliability Coefficients of the Tools according to their Dimensions.

Honey and Mumford	Dimension-	Activist	Reflector	Theorist	Pragmatist
Learning style	No. of Item-	20	20	20	20
Questionnaire	Cronbach's Alpha -	.637	.740	.705	.725

The reliability coefficients of the dimensions of Honey and Mumford LSQ according to Cronbach's Alpha were .637-.725.

Result and Interpretation

To verify the research hypotheses with respect to the related objectives, various tools were used and result were interpreted accordingly.

The first objective:

The first objective in this study was to know the learning style of gifted learner. To achieve this objective the researcher presented the Honey and Mumford Learning Style Questionnaire score in a table format along with dimension. In the table it was found that 28 gifted students out of 35 had preferred Activist learning style and 7 gifted learners had preferred pragmatist learning style.

Table 6:- Presentation of percentage of preferred learning style of gifted and Non-gifted students.

	Learning Style				Total
Gifted students	Activist	Reflector	Theorist	Pragmatist	
Count	28	0	0	7	35
% total	80%	0.0%	0.0%	20%	100%

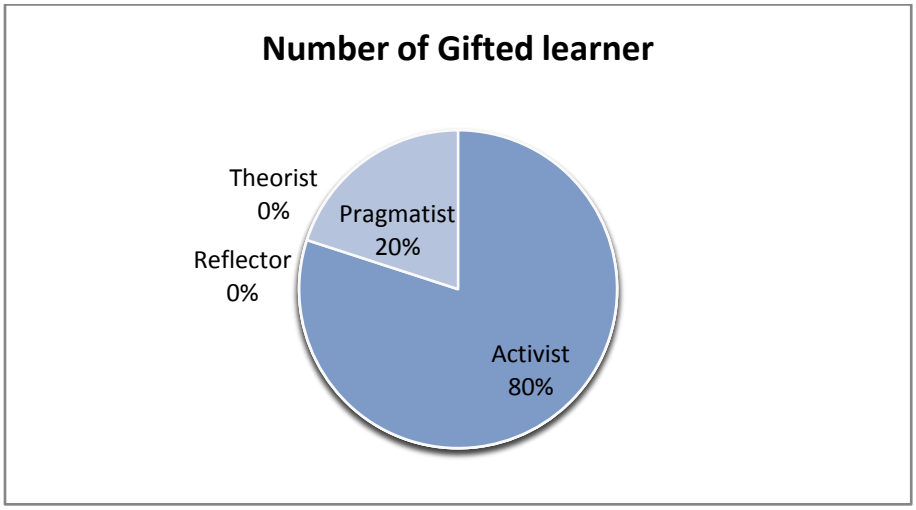

Figure 2:- Graphical representations of preferred learning style of gifted learners

On the basis of the above discussion we may conclude that gifted learners mostly follow activist learning style. They learn best from activities where new experiences are emphasised, where the

central focus is on team problem-solving. A few gifted learners also follow pragmatist learning style. Those who follow this style learn best from activities where there are many opportunities to implement what has been learned.

Verification of Hypothesis

Objective 2:- To assess whether there is any significant difference in the preferred learning style of gifted learner with respect to gender.

H_{01}= There is no significant difference between learning style of gifted eight graders according to their Gender.

In order to verify this research hypothesis according to the respective objective, descriptive statistics and "t" test were conducted on the Honey and Mumford Learning Style Questionnaire. Significant differences were found from the Mean values and "t" test results in preferred learning style with respect to gender of gifted students. Result of "t" test indicated statistically significant difference (t=3.44, P=<.01) in the preferred learning style of gifted students with respect to gender. Accordingly, the Mean values of Gifted female students (M=2.24) were found to be higher than Gifted male students (M=1.00). [Table-7]

Table 7: - Distribution of Mean, Standard deviation &"t" value preferred learning style of gifted students with respect to their gender.

Learning style	Gifted students				t Value
	Male(18)		Female(17)		
	Mean	SD	Mean	SD	
	1.00	1.522	2.24	.000	3.447**

Note. ** P < .01.

Table 8:- Dimension wise Distribution of Mean, Standard deviation &"t" value of Honey and Mumford Learning Style questionnaire with respect to gender of gifted students.

Dimension of learning style	Gifted students	t Value

questionnaire	Male(18)		Female(17)		
	Mean	SD	Mean	SD	
Activist Learning style	17.67	1.455	14.88	3.120	3.415**
Reflector Learning style	11.28	1.638	11.06	1.519	.409
Theorist Learning style	11.00	1.455	11.12	1.576	.230
Pragmatist learning style	10.78	1.437	13.35	3.707	2.739*

Note. ** P < .01. * P < .05.

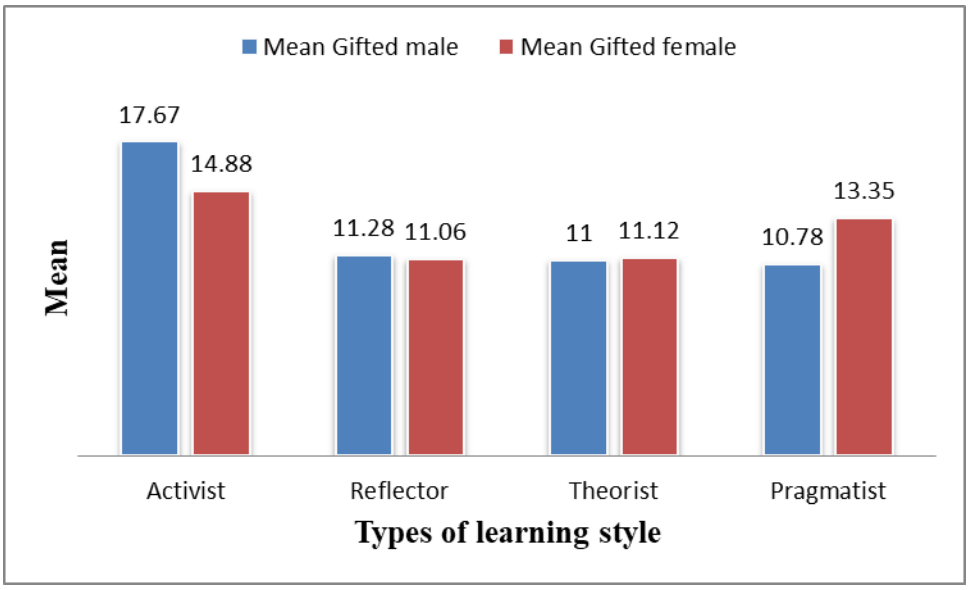

Figure 3:- Mean of Honey and Mumford Learning Style Questionnaire with respect to gender of gifted learner.

In case of the dimension namely, Activist Learning Style of Honey and Mumford learning Style Questionnaire, "t" test result indicated statistically significant difference (t = 3.415**, p < .01) with respect to gender of Gifted students. According to the mean value of male Gifted students (M=17.67) were found to be higher than female gifted students (M=14.88).In case of the dimension namely, Reflector Learning style of Honey and Mumford Learning Style Questionnaire, "t" test result indicated statistically insignificant difference (t = .409, p < .01) with respect to gender of Gifted students. According to the mean value, male gifted students

(M=11.28) were found to be higher than female gifted students (M=11.06). In case of the dimension namely, Theorist Learning Style of Honey and Mumford Learning Style Questionnaire, "t" test result indicated statistically insignificant difference (t= .230) with respect to gender of Gifted students. Accordingly the mean value of male gifted students (M=11.00) were found to be lower than female gifted students (M=11.12).In case of the dimension namely, Pragmatist Learning Style of Honey and Mumford Learning Style Questionnaire, "t" test result indicated statistically significant difference (t=2.739*, $p < .05$) with respect to gender of Gifted students. Accordingly, the mean value of male gifted students (M=10.78) were found to be lower than female gifted students (M=13.35).[see Table-8 & Figure-3]

From the above results and interpretations, the second Hypothesis (H_{01}) of the study i.e., There is no significant difference between learning style of gifted eight graders according to their Gender was rejected and thus the alternative Hypothesis (H1) that there is a significant difference in learning style of gifted learner with respect to gender was accepted.

Discussion and findings:

One of the important findings of this study was that gifted learners have their own learning style preferences. (Dunn & Milgram, 1993; Marc, 2013). Result of this study indicated that Gifted preferred Activist and Pragmatist learning style in which they always tried to involve themselves searching for new experience, knowledge etc. They always preferred those work which were full of activity (Altun & Yazici, 2013). Gifted learners were always enthusiastic for something new and they tend to get bored in traditional method of teaching. They responded to problems and opportunities "as a challenge". Their philosophy was: "There is always a better way" and "if it works, it's good". They loved the learning by doing method of teaching. These results were quite similar to that of previous researches which indicated that gifted mostly preferred kinaesthetic learning (Marc, 2015). Gifted students learned least where learning involved a passive role i.e. listening to lectures, monologues, explanations, statements of how things should be done, reading and watching. The second interesting finding of this study was that gifted students' learning style vary in relation to their gender. Gifted boys and gifted girls had their own individual learning preference (Lannie, 2015; Abu Awwad & Nofal, 2012). Gifted boys mostly preferred activist learning style in which they could actively participate and always thrived for

new things to do. They tackled problems by brain-storming. They always tried to generate ideas without constraints of policy or structure or feasibility. On the other hand, gifted girls mostly preferred pragmatist learning style in which they liked to get on with things and acted quickly and confidently on ideas that attracted them. Gifted girls always tried to implement learnt things in any situation and taking any work like a challenge. They concentrated on practical issues, i.e. drawing up action plans with an obvious end product, suggesting short cuts, giving tips.

Some of the major findings of the study were:

1. Findings gave a clear conception about learning style preferences of gifted learner. They mostly preferred learning by doing (Dunn & Milgram, 1993). Activity is the main concern for their learning in spite of listening and watching. Gifted are always attracted to new things and tried to apply those things in practical life. They loved to take any work like a challenge and tried to solve them in a different ways which make them different from others. Gifted learners often preferred learning in groups in which they tried to be in the limelight.
2. Significant mean difference was found in learning style preferences of gifted learners in respect to their gender. Gifted female learners followed pragmatist learning style which included a preference for perfect (rather than practical) solutions to problems, seeing even useful techniques asover simplifications or gimmicks, enjoying interesting diversions (and being side-tracked), leaving things open-ended rather than committing to specific action, believing that someone else's ideas will not work in your situation.. Gifted male often follow activist learning style more than pragmatist one where as female gifted students preferred pragmatist learning style in comparison too activist learning style.

Implication of the study

1. Findings of this study can be used to inform educators in public and private secondary schools, and higher education institutions about the differences in learning styles gifted learners bring to the classroom. Earlier research suggested that educators should acknowledge that learning styles differences present a potential to influence student learning, motivation, and achievement (Smith, 1974). Thus, educators need to be aware

of the diversity of learning styles found in the classroom and translate this awareness into a variety of teaching and learning strategies that will accommodate gifted students' learning style preference.

2. In West Bengal educators and law makers face the challenge of providing a better education for gifted students for lack of information about the learning style preferences of gifted students. Findings of this study support the assertion that gifted students have different learning styles. This information may give insights to educators and law makers as they design curricula and programs that are appropriate to all types of learning styles preferences.
3. Gifted students often preferred activity and active participation rather than listening, watching etc. This information may make it possible for teachers to design curriculum and instruction in a way that will meet the needs of both gifted and non-gifted students more effectively.

Limitation of the study

1. The first limitation was the scope of this study. The researcher only has taken 35 gifted learners as a sample. So the sample size could be a limitation of this study for generalized results. The sample size might be increased to acquire even more reliable results.
2. Since the School could not be selected randomly, so it might be a major limitation of the study.
3. This study was limited to three types of schools (schools under WBBSE, school under CBSE and schools under ICSE) – from an urban area of Kolkata and Howrah.

Recommendations for Future Research

The researcher believes the following problem statements should facilitate future research based on this study:

1. Extend this study by investigating the learning styles of secondary school students from rural areas of Kolkata and Howrah district.
2. Replicate this study and include students' race, economic status, and achievement as Variables. These variables were not included in this study.

3. Replicate this study and include gifted learner preferences for different types of learning strategies as a variable. This variable was not included in this study. Since the results of this study demonstrated that gifted and non-gifted students have different learning styles, it would be helpful to identify their preferred learning strategies.
4. Extend this study by comparing secondary level gifted students' learning style with higher secondary and college level gifted students' learning style.
5. In future, extend this study by investigating the home and classroom related factor which effect the learning style of gifted students.

Reference

Abu Awwad, F. & Nofal, M. (2012). Indications of validity and reliability of the felder- Soloman Scale of learning styles and preference among the students of Jordanian Universities. *Journal of Damascus University*, 1 (1).

Aksoy, R. & Narlı, S. (2015). An examination of mathematically gifted students' learning stylesby decision trees.*Turkish Journal of Giftedness and Education, 5*(2), 147-156.

Altun, F.& Yazici, H. (2013). Perfectionism, school motivation, learning styles and academic achievement of gifted and non-gifted students. *Croatian Journal of Education*, 16(4), 1031-1054.

Baymeyer, C. I. (2004). Learning styles and their impact on cross-cultural training: An international comparison in France, Germany and Quebec. *International Journal of Intercultural Relations*, 28(6), 577-594.

Caddy, J. (2013). The implications of a high academic ability learning environment on third grade gifted students' academic achievement in Florida Public Schools: Department of Teaching, Learning and Leadership in the College of Education at the University of Central Florida Orlando, Florida.

Carol J. M. (2003). Characteristics of effective teachers of gifted students. *Teacher Background and Personality Styles of Students: Johns Hopkins University*, 47(4).

Cassidy, J. (2004). Learning styles: an overview of theories, models and measures. *Educational Psychology*, 24(4), 419- 444.

Chan, D. W. (2008). Giftedness of Chinese students in Hong Kong: Perspectives from different conceptions of intelligences. *Gifted Child Quarterly*, 52(1), 40-54.

Colucciello, M. (1999). Relationships between critical thinking dispositions and learning styles, *Journal of Professional Nursing*, 15(5), 294–301.

Csapo, N. & Hayen, R. (2006) The Role of Learning Styles In the Teaching/Learning Process : Central Michigan University, 7(1)

Dunn, R. (2009). Impact of Learning-Style Instructional Strategies on Students' Achievement and Attitudes: Perceptions of Educators in Diverse Institutions. Taylor & Francis

Dunn, R. & Milgram, R.M. (1993). Learning styles of gifted students in diverse cultures. In Milgram, R.M., Dunn, R. and Price, G.E., (Eds.), Teaching and Counseling Gifted and Talented Adolescents: An International Learning Style Perspective, Westport, 3-23.

Felder, R. M., & Silverman, L. K. (1988). Learning and Teaching Styles in Engineering Education. *Engineering Education*, 78(7), 674-681.

Frances, M (1993) The Gifted Child: Personality Traits, Learning Styles, and Useful Teaching Strategies.

Güven, M. (2004). The relationship between learning styles and learning strategies. Unpublished Master's Thesis.Anadolu University Institute of Educational Sciences.

Griggs, S. A. (1984). Counselling the gifted and talented based on learning styles. *Exceptional Children*, 50, 429–432.

Hecox, C. C. (2010). Cooperative learning and the gifted student in elementary mathematics: Department of Education, Liberty University.

Homayoni, A. & Abdolahi, M. (2003). investigating correlation between learning styles and cognitive styles and their roles in academic achievement of students. *Journal of Psychology*, 2, 179-197.

Jahanbakhsh, R (2012). Learning Styles and Academic Achievement: a Case Study of Iranian High School Girls' Students: Department of Education, Islamic Azad University, Elsevier

Kutay, H. (2006). A comparative study about learning styles preferences of two cultures: Department of Philosophy, The Ohio State University.

Lannie, .K (2015). Do high ability learners enjoy learning alone or in groups? It depends. *International Journal of Special Education*, 30(2).

Logan,K. and Thomas,P. (2002). Learning Styles in Distance Education Students Learning to Program: Department of Computing, Open University, UK, Elsevier.

Matthews, D. B. (1996). An investigation of learning styles and perceived academic achievement for high school students. *Clearing House*, 69 (4), 249-254.

Marc, A., Altun. F. & Yazici. H (2010). Emotional intelligence and self-efficacy beliefs as predictors of academic achievement among high school students. *Procedia- Social and Behavioural Sciences*, 15(2), 2319-2323

Peterson, J. (2015). Learning and classroom preferences of gifted English graders, a qualitative study: Purdue University. *Journal for the Education of the Gifted*, 38(3), 233–256.

Rayneri J. L (2006). The relationship between classroom environment and the learning style preferences of gifted middle school students and the impact on levels of performance. *Gifted Child Quarterly*, 50(2).

Renzulli, J. S. (1982) Learning style Preferences: practical approaches for classroom teachers. *Research Gate, Theory in Practice*, 44-50.

Ross, E.P. & Wright, J. (1987). Matching teaching strategies to the learning styles of gifted readers, The Berkeley Electronic Press.

Sadler-Smith, E. Allinson, C., & Hayes, J. (2000). Learning preferences and cognitive style: some implications for continuing professional development. *Management Learning*, 31(2), 239-256.

Shuib, M & Azizan, N. S (2015). Learning style preferences among male and female ESL students. *The Journal of Educators Online*, 13(2).

Smith, L.H. & Renzulli, J. S. (1984). Learning style preferences: A practical approach for classroom teachers. Taylor & Francis.

Smith, W. E. (1974). The effects of social and monetary rewards on intrinsic motivation. Unpublished doctoral dissertation, Cornell University, Ithaca, N.Y..

Turki, J (2014) Learning styles of gifted and non- gifted students in Tafila Governorate: Department of Educational Psychology, Tafila Technical University, *International Journal of Humanities and Social Science*, 4(5).

Zackary, A.P. & Kate, E.S. (2015). Instruction without learning styles: Possibilities and promise, Louisville University.