

Academically Talented and Creatively Learning Disabled: How They differ on Achievement Motivation and Cognitive Style

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Abstract

Gifted students with learning disabilities are becoming more prevalent in the education system. Students with these characteristics have been filtering through the system for years, but just now being noticed. Gifted students with learning disabilities excel in one area, while struggling in another. Educators commonly overlook their abilities, which deny these students the chance to reach their full potential.

In this paper an attempt has been made to compare creatively learning disabled with academically talented children in relation to their Achievement Motivation, and Cognitive Style. This study was conducted on a represented sample 280 students of grade VI-VIII drawn from 500 schools of Bareilly and Pilibhit district of U.P, India. It is evident from the present study that academically talented students are more achievement motivated than creatively learning disabled and it was also observed that there is no significant difference on cognitive style between the two said groups.

Keywords: Prevalent, motivation, talent, characteristics

In the context of present day race for superiority among the great nation of the world, the importance of creatively gifted has been well recognized in the progressive countries. Creatively gifted persons are now rightly considered as a blood of civilization because creative talent can change the course of history by reshaping man's world. A society for its balanced progress, to a large extent, depends upon a creative, handful individual who can offer intelligent solution to the complex problem. The excellence and the quality of a nation depends on now this specially endowed proportion of the population in nurtured and how they are used in developing society.

School is a unique institution where students meet friends and learn and grow as human beings. Schools and classrooms are connected with advanced technology and provide modern conveniences and adaptations to reach the needs of most students. There are a plethora of advantageous programs and extracurricular activities that are used to enhance, guide and expand instruction

and student interests. Teachers are now more concerned with individualizing lessons to meet the needs of students; so each student can reach their greatest academic potential.

These modifications, adaptations and individualized education plans are great (for those who receive them), but what about the students who have an invisible disorder (Brody & Mills, 1997)? The invisible disorder Brody and Mills are speaking of is known as gifted children with learning disabilities, dual manifestations (Coleman, 2001), conundrum kids (Vail, 1987) and twice-exceptional (Little, 2000). Students that are characterized as twice-exceptional (and all the other similar names) are students who have exceptional talents or abilities in one or more areas, either realized or potential, but also experience specific academic problems as a result of underlying processing deficits (Dole, 2000).

Many people have the misconception that to be gifted and talented one must excel in all academic areas. This misconception is known as global giftedness. In today's educational

system, the myth of global giftedness is quite prevalent. Winner (as cited in Little, 2000) stated that while some students are talented in all academic areas, many more are not.

There is considerable evidence to suggest, that high abilities and learning disabilities appearing together may cause a special talent. In their foetus studies Geschwind and his co-workers (1984) showed the connection between the development of hemispheres and dyslexia. They concluded that dyslexia is caused by a defect in the development of the left hemisphere. However on the other side, the same process may cause a more developed right hemisphere. While the functions of the left side of the brain are poor, the functions connected to the right side can work on a higher level than the average. They called the phenomenon as "pathology of superiority".

There is another series of interesting studies to suggest this notion. Shaw and Brown (1991) assessed 97, 6th and 7th graders who presented with behaviour's characteristic of attention deficit hyperactivity disorder, but who had high IQs. These children had more mixed laterality, used more diverse, nonverbal, and poorly focused information, and showed higher figural creativity than did high- IQ peers without attention problems. Results supported Geschwind's prediction that high talent would be found in some types of learning-disordered individuals. Later Shaw (1992) found, that these children were more creative than their peers, when the stimuli were presented simultaneously. They perceived and used background information more effectively.

In recent years interest in education of gifted children has increased, but most gifted student do not receive any special services appropriate to their abilities, due to the widespread belief about gifted children, that they regularly score high on intelligence tests and performs well in school (Brody & Mills, 1997). Yet during the last decade many contemporary definition of giftedness argue against the use of the unitary full-scale IQ score in favor of more specific attributes. These include Gardner's (1993) multiple intelligences, the three- ring conception of giftedness (Renjulli, 1978), and Sternberg's (1988) triarchic theory of intelligence. Perhaps the most inclusive definition of giftedness is that expressed by the U.S. Department of Education (1993), which states:

Children and youth with outstanding talent perform or show the potential for performing at remarkable high levels of accomplishment when compared with others of their age, experience, or environment. These children and youth exhibit high capability in intellectual, creative, and/or artistic area, possess an unusual leadership capacity, or excel in specific academic fields. They require services or activities not

ordinary provided by the schools. Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor.
(p,26)

Therefore, a given child may be gifted at one time, in one area of performance, or in one situation and not in another. Now days increasingly attention has been given to the confusing question of high ability students who also have learning disabilities. These learning disabled gifted students need remediation activities. At the same time, they also require opportunities to promote their own individual strengths and talents in one or more domains in which they have previously displayed their superior abilities, but maximum gifted learning disabled do not receive any special services appropriate to their abilities. As a result, some of the gifted students become underachievers those who fail to achieve at a level consistent with their abilities, whatever the reason.

Numerous great creators failed or had serious difficulties in their school achievement. Many of them had some types of learning disabilities. Einstein could not speak until his age 3, he was a weak learner at school, yet he gained the Nobel Prize when he was 26. Leonardo da Vinci started to speak late as well, and Nietzsche had similar difficulties (Briggs, 1990). Anatole France could read early, but he hardly could get his baccalaureate because of his bad spelling (Ambrus, 1935). Picasso, the brilliant painter, and even Yeats the poet, Flaubert and Agatha Christie, the great writers, had difficulties in reading. Benoit Mandelbrot the creator of fractal geometry could not count well (Briggs, 1990).

Gifted students with disabilities are at-risk because their educational and social/emotional needs often go undetected. The resulting inconsistent academic performance can lead educators to believe twice-exceptional students are not putting forth adequate effort. Hidden disabilities may prevent students with advanced cognitive abilities from achieving their potential. The frustrations related to unidentified strengths and disabilities can result in behavioral and social/emotional issues. For some twice-exceptional students, behavior plans become the focus of their interventions. The behaviors are managed, but the underlying disabilities are never addressed. School can become a very frustrating experience for struggling twice-exceptional students, their teachers, and parents.

A collaborative effort between classroom teachers, special educators, gifted educators, and parents is needed to identify twice-exceptional students and implement strategies to meet their diverse needs. It is essential that the disabilities are identified early so appropriate interventions can be provided at optimum times. Unfortunately, the struggles of many twice-exceptional students go unnoticed for many years, resulting in learning gaps and undeveloped potentials.

Twice-exceptional students will continue to be at-risk until educators can learn about and understand the educational and

social/emotional needs of twice-exceptional students. Educators can implement strategies to develop their potential, to identify learning gaps and provide explicit instruction, to support the development of compensatory strategies, to foster their social/emotional development, and to enhance their capacity to cope with mixed abilities.

Review of research in India records no study wherein an attempt has been made to compare creatively learning disabled with academically talented children in relation to Achievement Motivation and Cognitive Style. These relatively unexplored research problems in addition to others provide the basis for present investigation because knowledge of the characteristics which differentiate between creatively learning disabled and academically talented students has major importance in the development of curriculum and counseling. Hence this study was undertaken to study systematically, achievement motivation and cognitive style of creatively learning disabled and academically talented children.

Objectives

1. To compare creatively learning disabled and academically talented children in relation to achievement motivation.
2. To compare creatively learning disabled and academically talented children in relation to field dependence-independence on E.F.T.
3. To study, how two groups of creatively learning disabled and academically talented children differ on achievement motivation and field dependence independence gender-wise?
4. To study, how two groups of creatively learning disabled and academically talented children differ on achievement motivation and field dependence independence area-wise?

Hypothesis

1. There is no significant difference between creatively learning disabled and academically talented children in relation to achievement motivation.
2. There is no significant difference between creatively learning disabled and academically talented children in relation to field dependence-independence on E.F.T.
3. There is no significant difference between two groups of creatively learning disabled and academically talented children on achievement motivation and field dependence - independence gender-wise?
4. There is no significant difference between two groups of creatively learning disabled and academically talented children differ on achievement motivation and field dependence independence area-wise?

Sample of the study

In the first phase all the schools having VI class both from urban as well as rural area from the Bareilly and Pilibhit district of UP, were arranged alphabetically. Out of the total schools, 500 schools were selected randomly in such a way that male and female as well as rural and urban children represent the sample.

In the second phase, the investigator established rapport with these selected schools students and administered the tests, i.e. Torrance Test of Creative Thinking (1966) and Diagnostic Test of Learning Disability (1993). After scoring the T.T.C.T. a group of children was selected who were 2.0 S.D. above the mean and were found learning disabled on the test of Diagnostic Test of Learning Disability (1993). Finally a group was formed with creatively learning disabled. Another group of academically talented children was selected on the basis of their marks in previous three years i.e. III, IV, V. The children who scored more than 95% marks in past three years examination continuously were selected and named as academically talented children. The detail for the final sample is given in the following table.

Table 1: Sample distribution according to locality and sex

	Total	Male	Female	Rural	Urban
Creatively Learning disabled	120	79	41	76	44
Academically talented	160	115	45	65	95

In this way the two groups of creatively learning disabled and academically talented student were compared for their achievement motivation and cognitive style i.e. Field Dependence-Independence with Sentence Completion Test by Witkin's Group Embedded Figure Test (1950 b) and Mukharjee (1964) respectively.

Psychometric Instrument

Basic test of divergent thinking abilities used in this study was Torrance Test of Creative Thinking (1966). Both the forms verbal (Product Improvement and Unusual Uses) and non verbal (Picture Completion and Circle) were used and scored for fluency, flexibility and originality.

Diagnostic Test of Learning Disability and Behavioral Checklist for Screening the Learning Disabled Student constructed by Swarup,S.,& Mehta,D,H. (2005) was used to measure the learning disabilities in different areas, each representing a basic psychological process.

Sentence Completion Test (SCT) for measuring Achievement Motivation constructed by Mukharjee (1964) was used in the present study. This test is a force choice measure of verbalized need for achievement. The SCT consists of 50 forced choice triads (one item reflecting achievement motivation and other aspect of manifest needs) selected in such a manner as to minimize the social desirability factor.

Group Embedded Figure Test constructed by Witkin (1971) was used to measure the Field Dependence-Independence (Cognitive Style). This test consists of twenty-four complex figures, in each of which, a simple figure is to be located. The subject's score is the mean amount of time taken to find the simple figures within the complex ones. This provides a measure of the extent to which his perception is influenced by the context in which an item occurs

Statistical techniques used

As the data have been obtained on interval scale, samples are quit large and samples have been selected randomly. All these conditions permit the use of parametric statistical technique. To see the differences between creatively learning disabled and academically talented children on Achievement Motivation and Cognitive Style, the Means S.Ds. and 't' ratios were calculated. The 't' technique is the best suited to seek answer of the question, how two groups differ from each other.

Results

Creatively Learning Disabled and Academically Talented Children In Relation To Achievement Motivation

To get the clear picture that how creatively learning disabled and academically talented differ on achievement motivation, comparison has been made between both the groups.

The result points out in table-2, that the mean score on achievement motivation of creatively learning disabled and academically talented are 20.76(4.39) and 24.04(3.67) respectively. The mean of achievement motivation value shows that there is an edge in favor of academically talented than their counterpart. The 't' value 6.784 is significant at .01 levels. It shows that academically talented are more achievement motivated than creatively learning disabled children.

The result also shows that the mean score for creatively learning-disabled male is 20.43(4.69), whereas their counterpart's mean score is 24.24 (4.01). The 't' ratio is 6.06 significant at .01 levels and clearly indicates that both the groups are apart from each other as far as achievement motivation is concerned. It is concluded that the academically talented male are more achievement motivated in comparison to creatively learning disabled male.

From the table 2 it is clear that mean score on achievement motivation of academically talented female is higher than their counterpart. The mean scores of academically talented female and creatively learning-disabled females are 23.60 (3.02) and 21.41 (3.73) respectively. The 't' value 2.99 is significant at .01 level. On the basis of above findings it is concluded that academically talented female is more achievement motivated in comparison to creatively learning-disabled female.

The results point out that the mean score on achievement motivation, of urban creatively learning disabled and urban academically talented is 23.06(4.30) and 23.89(3.78) respectively, which are almost equal. The 't' value 1.14 could not reach up to significant level. It shows that urban creatively learning disabled does not differ from urban academically talented on achievement motivation.

From the table 2 it is clear that rural academically talented children have higher mean score value 24.30(3.74) in comparison to their counterpart. The 't' ratio 7.53 is significant at .01 level which shows that both group differ significantly from each other and it is also clear that rural academically talented students are more achievement motivated in comparison to creatively learning disabled.

The finding of the present study are in tune with Mills (1993) Baum and Owen (1988) who revealed that academically talented students

Table 2: Significance of mean difference of creatively learning disabled and academically talented children in relation to achievement motivation.

Classes	Criteria	No. of cases	Mean	S.D.	S.E.	't'	Remark
CLD	Total	120	20.76	4.39	.4016	6.784	Significant At .01 level
AT	Total	160	24.04	3.67	.2904		
CLD	Male	79	20.43	4.69	.5282	6.06	Significant At .01 level
AT	Male	115	24.24	4.01	.3743		
CLD	Female	41	21.41	3.73	.5833	2.99	Significant At .01 level
AT	Female	45	23.60	3.02	.4510		
CLD	Urban	44	23.06	4.30	.6490	1.14	Not Significant
AT	Urban	95	23.89	3.78	.3887		
CLD	Rural	76	19.43	3.89	.4470	7.53	Significant At .01 level
AT	Rural	65	24.30	3.74	.4646		

Where CLD* = Creatively Learning Disabled
 AT* = Academically Talented

are highly achievement motivated whereas creatively learning disabled shows keen motivation outside of the school environment, while their performance in school is poor.

Creatively Learning Disabled and Academically Talented Children In Relation To Cognitive Style:

In the present investigation Witkin conception of the nature of cognitive style has been adopted. According to Witkin (1974) “the person with more field independent, way of perceiving tends to experience his surrounding analytically, with objects experienced as discrete from their background. The person with a more field dependent way of perceiving tends to experience his surrounding in a relatively global fashion, passively confirming to the influence of the prevailing field of context.

To get the clear picture that how creatively learning disabled and academically talented differ on cognitive style, comparison has been made between both the groups.

In above table result shows that mean score on cognitive style of creatively learning disabled and academically talented are 10.05(2.99) and 10.14(3.74) respectively. The 't' value .225 is not significant in the favor of any group; where as the mean value of both the groups are more/less identical.

From the above table results show that mean score on filed dependence- independence of creatively learning-disabled male and academically talented male are 10.48(3.16), 10.45(3.88) respectively. The't' ratio 0.55 could not reach up to the significance level. The mean values for both the groups are almost identical.

Data presented in table 3 shows that, in view of cognitive style i.e. field dependence-independence, no significant difference was yielded between mean values of creatively learning disabled female and academically talented female (t=0.215). It shows that cognitive

style of academically talented female and creatively learning-disabled female are almost equal.

The comparison between urban creatively learning disabled and urban academically talented has been made on cognitive style i.e. field dependence-independence and results are given in Table 3. The results show that the mean score of both group are almost equal, i.e. 10.40 (3.01) and 10.32 (3.81). The't' value could not reach up to significant level. It shows that urban creatively learning disabled and urban academically talented students are same on cognitive style i.e. field dependence independence.

Data presented in table 3 show that in view of cognitive style, no significant difference was yielded between mean values of rural creatively learning disabled and rural academically talented student (t = .062). It shows that cognitive style of rural creatively learning disabled and rural academically talented students are almost equal.

The findings of the present study are partly in line with Mills (1993) who reported that gifted learning-disabled children were more similar to gifted on field dependence-independence.

Discussion and its Educational Implication

Creatively learning-disabled and academically talented children have no significant difference on Field Dependence Independence in the present study. This is perhaps because creatively gifted as well as academically talented children are highly sensitive to their environment. They are more open to it; and they are more sensitive to what is happening in their surrounding. In addition, as more theorists agree creative individuals evidence a need and capacity to 'toy' with reorganize, restructure and integrate. Since creativity is a process interrelating the person with his world, a sensuous and at time ever Jarring personal encounter between the individual and the world of objects and other people, seems necessary. This

Table 3: Significance of mean difference of creatively learning disabled and academically talented children in relation to cognitive style.

Classes	Criteria	No. of cases	Mean	S.D.	S.E.	't'	Remark
CLD	Total	120	10.05	2.99	.2737	.225	Not significant
AT	Total	160	10.1438	3.7498	.2964		
CLD	Male	79	10.4810	3.1617	.3625	.055	Not significant
AT	Male	115	10.4522	3.8871	.3557		
CLD	Female	41	9.2195	2.4851	.4894	.215	Not significant
AT	Female	45	9.3556	3.2833	.3881		
CLD	Urban	44	10.40	3.01	.4544	.127	Not significant
AT	Urban	95	10.32	3.81	.3918		
CLD	Rural	76	9.8421	2.98	.3429	.062	Not significant
AT	Rural	65	9.8769	3.65	.4539		

Where CLD* = Creatively Learning Disabled
 AT* = Academically Talented

requires symbiotic openness and unusual capacity to ‘break up’ experience and to remold and reconstitute them in new patterns and configurations.

In this study it has been concluded that creatively learning-disabled children are less achievement motivated in comparison to academically talented children. Other researchers like Baum (1984), Whitmore & Maker, (1985) has shown that a focus on weaknesses at the expense of developing gifts can result in poor self esteem, a lack of motivation, depression and stress. Due to these unique problems they use their creative talent to avoid tasks and are often rated by the teachers as most disrupted school. They all require an environment that will nurture their gifts, attend to the learning disability and provide the emotional support to deal with their inconsistent abilities.

Though, the number of children enrolled in school has increased in the past decade, with the awareness of the importance of education, however many children dropout from school due to poor scholastic performance. When the skills in self-help, motor, communication, and social areas, are performed by the child appropriately, and he is found poor only in academic aspects to such an extent that he is unsuitable to the age appropriate class, it becomes a concern to the parents. According to Maslow’s Hierarchy of needs (1962) individuals must feel like they belong and are valued in order to reach their potential or self-actualize. Therefore we should provide a nurturing environment that values individual differences. In such environment no child will feel insecure. So we should focused attention on the development of strength, interests, and superior intellectual capacities. Enrichment activities should be designed to circumvent problematic weaknesses and to highlight abstract thinking and creative production.

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