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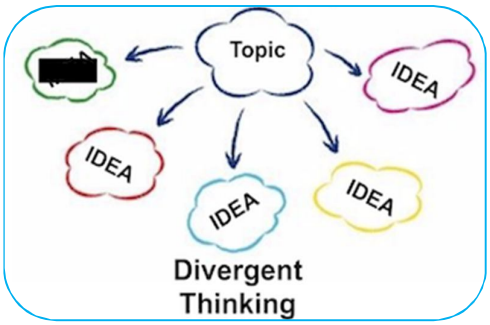
DIVERGENT THINKING OF CLASS IX STUDENTS WITH RESPECT TO SELF-CONCEPT AND SOME DEMOGRAPHIC VARIABLES — A DESCRIPTIVE STUDY

Dr. Avtar Singh
Associate Professor, School of Education, Devi Ahilya Vishwavidyalaya, Indore, M. P.

Dr. Roshni Desai
Assistant Professor, Smt. S. I. Patel Ipcowala College of Education, Petlad, Anand, Gujarat .

Ms. Aishwarya Khandelwal
Post Graduate Research Scholar, School of Education, Devi Ahilya Vishwavidyalaya, Indore, M. P.

ABSTRACT



The present investigation aims to study the divergent thinking of Class IX students with respect to their self-concept and some demographic variables. The sample comprised 306 students studying in CBSE-affiliated schools of Indore city. A descriptive research design was employed for the study. Standardized tools were used to collect data: the Divergent Thinking Test developed by Dr. K.N. Sharma and the Self-Concept Scale by Dr. G.P. Sherry, Dr. R.P. Verma and Dr. P.K. Goswami. The data were analysed by statistical techniques using Frequency, mean, standard deviation and two-way ANOVA. The results indicated non-significant influences of demographic variables on divergent thinking. The findings suggest that divergent thinking, as an aspect of creativity, may not be directly influenced by students' self-concept and demographic factors within the target population. The findings show that schools can encourage divergent thinking without worrying about students' psychological or personal traits. Divergent thinking can thrive anywhere; it just needs the right environment. Every mind can think divergently; we just need to build the right spaces to let it happen.

KEYWORDS: *divergent thinking , demographic variables , statistical techniques.*

CONCEPTUAL FRAMEWORK

Divergent thinking is about pushing students to think beyond the "box". It allows them to see different perspectives for generate new ideas which produce more creative results. In education divergent thinking opens various possibilities of way to solve more complex problems among the students that they might not have thought before. In education divergent thinking play important role to develop self-concept among the students which make the base of the research work such as:

- Is divergent thinking is influenced by demographic factor?
- Is there is relationship between divergent thinking with the self- concept of students?
- What factors of the demographics influences the divergent thinking and how much?

Above questions developed the interest of researcher to choose this topic as a research work. Divergent thinking plays important role in today's world. Divergent thinking helps students come up with many ideas and different solutions to problems. But not all students think divergently in the same way. Some of them are more confident in themselves (self-concept), and some believe more in their

own efforts than luck. These differences may affect how divergent thinker a student can be. Many studies have already shown a relation between these variables. **Glover & Sautter (1977), Rotter (1966), Jena & Phookun (2015) and Runco & Albert (1986)** found that students who believe in their own self are thinks more divergently (same views were accepted by **Bandura (1997)**). Similarly, **Kaufman and Baer (2004)** found that students with high self-concept, performs better in divergent thinking tasks. **Runco and Albert (1986)** explained that as students grow and build their self-concept, their divergent thinking improves. **Zhou and Lee (2017)** showed that people, who believe they can influence outcomes, think of more solutions to problems.. Moreover, no major study has focused on Class IX students, who are at a critical stage of developing their identity and thinking styles. Most research has either focused on college students or gifted children (**Atman, 1987),** but not on regular school students. Also, demographic factors like gender, type of school, and background may also affect divergent thinking, but this is often not explored in detail. So, this study is needed to fill that gap. It will help teachers and parents understand what helps or blocks student's divergent thinking. Present study will fill the gap by looking at how self-concept and some demographic variables together influence divergent thinking of class IX students. The results could help educational institutions, curriculum developer, policymakers, teachers, education is to create better programs that help students build self-confidence, take responsibility, and think divergently.

LITERATURE REVIEWED

Guilford (1950), one of the pioneers in the study of creativity, argued that divergent thinking is an essential aspect of intelligence, but also one that is deeply connected to how individuals view themselves. He emphasized that people with positive self-concept are more likely to exhibit high levels of creative thinking because they have the mental flexibility to approach problems from multiple angles. **Runco and Albert (1986)** provided support through a developmental perspective. Their longitudinal research demonstrated that as children's self-concept developed with age and experience, their divergent thinking skills also improved. They argued that fostering a positive self-concept from a young age can help unlock creative potential, especially as children begin to trust their ideas and express themselves without fear of judgment. **Sternberg and Lubart (1995) and Jena& Phookun (2015)** found that self-concept is a crucial factor in students' ability to perform well in tasks requiring creative thinking. They studied a group of high school students and concluded that those who had a high self-concept were more open to exploring unconventional ideas in both academic and extracurricular activities. **Raina (2004)** also investigated the connection between self-concept and creativity, with a specific focus on academic achievement. Its findings showed that students with higher self-concept not only performed better in creative thinking tasks but also had better academic outcomes. These students appeared to possess both the self-assurance and mental flexibility needed to excel in academic and non-academic settings, linking creativity, academic success, and personal belief systems. Study concludes that the students with the different religions possess the same divergent thinking. **Kaufman and Baer (2004)** explored the relationship between self-esteem, a component of self-concept, and divergent thinking in adults. They concluded that people with higher self-esteem were more likely to think divergently because they had a greater sense of self-worth and confidence in their abilities. Study also concluded that the family and societal atmosphere stimulates the divergent thinking. **Mayer and Mussweiler (2011)** took a slightly different approach by focusing on how self-comparison affects divergent thinking. They found that individuals who viewed themselves positively in comparison to others were more likely to think flexibly and generate unique responses. This highlights how one's perception of self-worth and personal identity influences not just behaviour but also cognitive styles, particularly in generating creative and original thoughts. **Singh and Kaur (2012)** studied the impact of self-concept on creative behavior among school students. Their study highlighted that individuals with a strong and healthy self-image showed more fluency in generating ideas and were more confident in expressing those ideas, regardless of social feedback. They concluded that self-concept not only influences self-confidence but also has a direct impact on the cognitive processes involved in divergent thinking. They also concluded that the females have the more divergent thinking than the males. **Chamundeswari (2013)** conducted a study among school students and found that those with higher

levels of self-concept also scored higher in measures of creativity, particularly in dimensions like fluency, flexibility, and originality. This suggests that when students believe in their own abilities, they are more likely to engage in open-ended thinking and generate innovative solutions. He also concluded that the non-significant effect of habitat and gender on divergent thinking. **Jena and Phookun (2015)** explored this relationship among adolescents and observed that a well-developed self-concept helped students feel more confident in participating in tasks that required imaginative and creative input. These students demonstrated a greater willingness to take intellectual risks and share novel ideas, indicating that their sense of self influenced how they approached problem-solving. Their findings support the idea that self-concept plays a motivational role in encouraging individuals to think creatively. **Kumar and Ghosh (2016)** focused on adolescents and discovered a significant positive correlation between self-concept and creative potential. Their research indicated that students who had a positive image of themselves were more likely to show creative tendencies in writing, drawing, and verbal expression. These findings support the view that self-belief directly affects one's openness to exploring new and original ideas.

Conclusively, **Guilford (1950), Rancor and Albert (1986), Sternberg and Lubart (1995), Raina (2004), Kaufman and Baer (2004), Jena & Phookun (2015), Singh and Baer (2012), Chamundeswari (2013)** consistently highlights that divergent thinking is positively associated with a strong and positive self-concept. Individuals who view themselves confidently are more willing to take intellectual risks, explore novel ideas, and express themselves creatively. This suggests that fostering self-belief and emotional security in students can lead to enhanced divergent capacities.

Regarding the demographics' influence on divergent thinking, **Raina (2004)** concludes that the students with the different religions possess the same divergent thinking; **Kaufman and Baer (2004)** concluded that the family and societal atmosphere stimulates the divergent thinking; **Singh and Kaur (2012)** concluded that the females have the more divergent thinking than the males; **Chamundeswari (2013)** also concluded that the non-significant effect of habitat and gender on divergent thinking.

STATEMENT OF PROBLEM

Divergent Thinking of Class IX Students with respect to Self-Concept and Some Demographic variables: A Descriptive Study

OPERATIONAL DEFINITIONS OF THE TERM

Divergent thinking: divergent thinking is an ability to think beyond the normal thinking. It involves multiple flows of ideas, ways and solution of the problem which can be acquire through various activities.

Self-concept: Self-concept is an ability to see one self. It can be belief, idea, image and opinion about one self.

OBJECTIVES OF THE STUDY

1. To study the influence of self-concept, gender and their interaction on divergent thinking of class IX students.
2. To study the influence of self-concept, type of family and their interaction on divergent thinking of class IX students.
3. To study the influence of self-concept, caste category and their interaction on divergent thinking of class IX students.
4. To study the influence of self-concept, family income and their interaction on divergent thinking of class IX students.

HYPOTHESES OF THE PRESENT STUDY

The null hypotheses of the present study were as follows:

1. *Ho1:* There is no significant influence of self-concept, gender and their interaction on divergent thinking of class IX students.
2. *Ho2:* There is no significant influence of self-concept, type of family and their interaction on

divergent thinking of class IX students.

3. *Ho3:* There is no significant influence of self- concept, caste category and their interaction on divergent thinking of class IX students.
4. *Ho4:* There is no significant influence of self-concept, family income and their interaction on divergent thinking of class IX students.

METHOD OF RESEARCH

It is a survey kind of descriptive study where the researcher attempts to find out the influence of self-concept and different demographic variables on divergent thinking of class IX students.

POPULATION

The population of present study was all class IX students of Indore City.

SAMPLE

The sample of present study was students of class IX of CBSE schools of Indore City. Schools were selected randomly from East, West, North, South and Central direction of the Indore city. The information of selected schools is given below.

TABLE 1
List of selected schools

S.NO	School	Affiliated by	Address	No. of students
1.	PM Shri Kendriyavidhyalaya No. 1 Indore	CBSE Board	Navlakha, Residency Club Road, Near Zoo, Indore (M.P.)	**71**
2.	PM Shri Kendriyavidhyalaya No. 2 BSF Indore	CBSE Board	Airport Road,nearBijasanTekari, Indore (M.P.)	**79**
3.	ShriVaishnav KanyaVidhyalaya	CBSE Board	Scheme 71, Sector B, Gumasta Nagar, Indore (M.P.)	**27**
4.	Alpine Academy	CBSE Board	Scheme 97, VigyanNagar,Annapurna Road, Indore (M.P.)	**32**
5.	Chhatrapati Shivaji Public School	CBSE Board	Usha Nagar Indore (M.P.)	**24**
6.	Shri Devi Ahilya Shishu Vihar	CBSE Board	Chhatribagh Indore (M.P.)	**31**
7.	Sarafa Vidhya Niketan	CBSE Board	M.O.G Lines, Indore (M.P.)	**26**
8.	Guru Nanak Public School	CBSE Board	Khandwa road, Indore (M.P.)	**16**
	Total			**306**

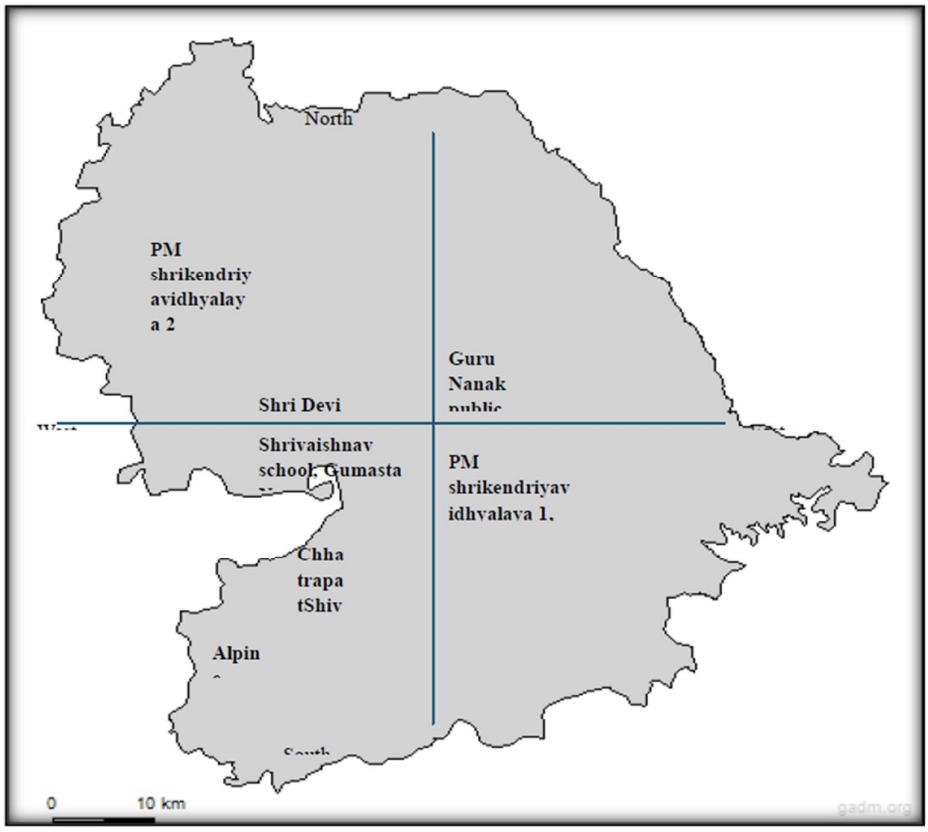


Figure 1: Map Showing Selected Schools from different directions

DELIMITATIONS

The study was delimited to:

- Only CBSE Board Affiliated Schools of Indore city was selected for present study.
- The study is limited to students of Class IX only.
- Only such demographic variables like gender, family income, type of family and caste category was taken.

TOOLS

Two tools Self-concept test is developed by Dr. G.P. Sherry and divergent production ability test developed by K.N Sharma was used in the present research. Broadly speaking there are only four abilities in divergent: fluency, flexibility, originality, and elaboration. The battery of divergent production abilities contains six tests for measurement of the eight abilities like Word fluency, Ideational fluency, Association fluency, Expressional fluency, Spontaneous flexibility, Adaptive flexibility, Originality and Elaboration.

TABLE 2

Divergent production ability and their test name

S.NO	Divergent production ability	Name of the Test
1.	Word fluency	Word production
2.	Ideational fluency	Uses of things
3.	Association fluency	Similarities
4.	Expressional fluency	Sentence contraction
5.	Spontaneous flexibility	Uses test
6.	Adaptive flexibility	Titles
7.	Originality	Titles
8.	Elaboration	Solutions/completion

From the table it is clear that broadly speaking there are only four abilities: fluency, flexibility, originality, and elaboration. However, each sub-ability is measured separately. In the present battery two tests can measure two abilities each through a psychometric variation. For example, second test of uses of things can measure ideational fluency as well as spontaneous flexibility, and the titles test can measure adaptive flexibility as well as originality. Therefore, only six tests are required to measure eight abilities. The battery can be used on children, adolescents and adults.

The divergent production ability test was standardization on sample of 443 students, both male and female. The average age of sample was 13.80 years.

Reliability

The test-re-test reliabilities of the battery are given in the table below:

TABLE 3

Test-retest Reliabilities of the Test

S.NO	Name of Test	Reliabilities
1.	Word production	.67
2.	Uses of things	.80
3.	Similarities	.68
4.	Sentence construction	.84
5.	Titles	.85
6.	Solutions/ Completion	.82

Validity

To ensure content validity, a consistent and deliberate effort has been made to use the test stimuli, test tasks, instructions and scoring procedures based on the test theory and researches available on creativity or divergent production abilities, or creative thinking abilities. Swatva-Bodh Parikshan, includes 48 items, yielding scores in eight different dimensions of the self-concept and on the total. Thus, the present test provides eight separate measures of self-concept.

TABLE 4

Areas of self- concept

S.No.	Dimensions	Symbolic Name
1.	Health and Physique	A
2.	Temperamental Qualities	B
3.	Academic Status	C
4.	Intellectual abilities	D
5.	Habits and Behavior	E
6.	Emotional Tendencies	F
7.	Mental Health	G
8.	Socio-Economic Status	H

The statements of the test are simple and declarative about self, seeking responses in "yes" or "No". Responses are obtained on an answer sheet and the test booklet can be used again and again. There is no time limit for completing the test, but the respondent is advised to complete the test as quickly as possible. Generally it takes a respondent about 20 minutes to complete the test. A high score on this test indicates a bright self-concept while a low score shows a poor self-concept.

PROCEDURE OF DATA COLLECTION

After getting permission was obtained from the principals of selected CBSE-affiliated schools, the data collection for this study was carried out, in accordance with school policies. The researcher personally visited these schools during month of November-December to administer the tools to procure the necessary data.

DATA ANALYSIS

The collected data was analyzed using both descriptive statistics such as mean, median, mode standard deviation, standard error of mean and variance and inferential statistical techniques Two-Way ANOVA were used.

ANALYSIS WITH RESPECT TO OBJECTIVE – 1

The objective – 1 of the study was "To study the influence of Self-concept, Gender and their interactions on Divergent Thinking of Class IX Students. "For the purpose of studying the influence of Self-concept, Gender and their interactions on the Divergent Thinking of Class IX Students the following null hypothesis was formulated.

Ho1: "There is no significant influence of Self-concept, Gender and their interactions on the Divergent Thinking of Class IX Students." To test this hypothesis, sum of squares, mean score, F-value, degrees of freedom (df), and level of significance of the Divergent Thinking of Class IX Students was calculated with respect to variables Self-concept and Gender. Following table 5 and 6 represent the results.

Table 5

Mean, Standard Deviation, Sample Size (N), of Divergent Thinking Scores of Class IX Students with respect to the categories of Self Concept and Gender

Gender	Self-concept	Mean	Std. Deviation	N
MALE	Low	66.5400	21.72012	50
	Average	65.4444	18.18791	81
	High	69.7600	19.68985	25
	Total	66.4872	19.54993	156
FEMALE	Low	69.0943	20.53165	53
	Average	68.1231	17.98828	65
	High	71.0625	17.85052	32
	Total	69.0933	18.80538	150

Table 6

Two way ANOVA summary for Influence of Self Concept, Gender and their interaction on Divergent Thinking of Class IX Students

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Gender	309.851	1	309.851	.834	.362	.003
Self- concept	531.790	2	265.895	.716	.489	.005
Gender * Self -concept	20.293	2	10.146	.027	.973	.000
Error	111392.399	300	371.308			
Corrected Total	112453.059	305				
a. R Squared = .009 (Adjusted R Squared = -.007)						

From the Table it is clear the F- value for Divergent Thinking scores with respect to Gender was found to be .834 at df (1, 300). This F- value is significant at p-value of .362, which is greater than the 0.05 level of significance (alpha). Therefore, the null hypothesis, "There is no significant difference in the mean Divergent Thinking scores of class IX students with Male and Female Category of Gender" is not rejected at 0.05 level of significance. Hence, Gender had no significant influence on Divergent Thinking.

From the table it is clear that the F- value for Divergent Thinking scores with respect to Self Concept was found to be .716 at df (2, 300). This F- value is significant at p- value of .489, which is greater than the 0.05 level of significance (alpha). Therefore, the null hypothesis, "There is no significant difference in the mean Divergent Thinking scores of class IX students with High, Average and Low Self Concept" is not rejected at 0.05 level of significance. Hence, Self Concept levels had no significant influence on Divergent Thinking.

From the Table, it is clear that the F- value for Divergent Thinking scores of class IX students with respect to the interaction of Gender and Self Concept was found to be .027 at df (2, 300). This F- value is significant at p-value of .973 which is greater than the 0.05 level of significance (alpha). Therefore the null hypothesis, "There is no significant influence of interaction of Gender and Self Concept on Divergent Thinking" is not rejected at 0.05 level of significance. Hence, interaction of Gender and Self Concept had no significant influence on Divergent Thinking of class IX students.

Conclusively, from the Table 6, it is clear that there is non-significant main effect of Gender, F (1,300) =.834, p = .362; a non- significant main effect of Self Concept, F (2, 300) = .716, p = .489; and non - significant interaction effect for Gender and Self Concept, F (2, 300) = .027, p= .973, on Divergent Thinking of class IX students.

ANALYSIS WITH RESPECT TO OBJECTIVE – 2

The objective – 6 of the study was "To study the influence of Self-concept, Type of Family and their interactions on Divergent Thinking of class IX students, "For the purpose of studying the influence of Self-concept, Type of Family and their interactions on the Divergent Thinking of Class IX Students the following null hypothesis was formulated.

Ho7: "There is no significant influence of Self-concept, Type of Family and their interactions on Divergent Thinking." To test this hypothesis, sum of squares, mean score, F- value, degrees of freedom (df), and level of significance of the Divergent Thinking of Class IX students was calculated with respect to variables Self- concept and Type of Family. Following table 7 and 8 represent the results.

Table 7

Mean, Standard Deviation, Sample Size (N), of Divergent Thinking Scores of Class IX Students with respect to the categories of Self Concept and Type of Family

Self-concept	Type of family	Mean	Std. Deviation	N
Low	Nuclear	68.6094	21.80041	64
	Joint	66.6154	19.97843	39
	Total	67.8544	21.05195	103
Average	Nuclear	66.8478	16.82093	92
	Joint	66.2778	20.22180	54
	Total	66.6370	18.08634	146
High	Nuclear	69.2857	19.62020	28
	Joint	71.6552	17.66004	29
	Total	70.4912	18.51941	57

Table 8

Two way ANOVA summary for Influence of Self Concept, Type of Family and their interactions on Divergent Thinking of Class IX Students

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Self-concept	614.023	2	307.012	.825	.439	.005
Type of family	.269	1	.269	.001	.979	.000
Self-Concept * Type of family	171.478	2	85.739	.230	.794	.002
Error	111655.434	300	372.185			
Total	1517622.000	306				
a. R Squared = .007 (Adjusted R Squared = -.009)						

From the Table it is clear the F- value for Divergent Thinking scores with respect to Self Concept was found to be .825at df (2, 300). This F- value is significant at p-value of .439, which is greater than the 0.05 level of significance (alpha). Therefore, the null hypothesis, "There is no significant difference in the mean Divergent Thinking scores of class IX students with High, Average and Low Self Concept" is not rejected at 0.05 level of significance. Hence, Self Concept levels had no significant influence on Divergent Thinking.

From the table it is clear that the F- value for Divergent Thinking scores with respect to Type of Family was found to be .001 at df (1, 300). This F- value is significant at p- value of .979, which is greater than the 0.05 level of significance (alpha). Therefore, the null hypothesis, "There is no significant difference in the mean Divergent Thinking scores of class IX students with Nuclear and Joint Type of Family" is not rejected at 0.05 level of significance. Hence, Type of Family had no significant influence on Divergent Thinking.

From the Table, it is clear that the F- value for Divergent Thinking scores of class IX students with respect to the interaction of Self Concept and Type of Family was found to be .230 at df (2, 300). This F- value is significant at p-value of .794 which is greater than the 0.05 level of significance (alpha). Therefore the null hypothesis, "There is no significant influence of interaction of Self Concept and Type of Family on Divergent Thinking" is not rejected at 0.05 level of significance. Hence, interaction of Self Concept and Type of Family had no significant influence on Divergent Thinking of class IX students.

Conclusively, from the Table 7, it is clear that there is non-significant main effect of Self Concept, F (2,300) =.825, p = .439; a non- significant main effect of Type of Family, F (1, 300) = .001, p = .979; and non - significant interaction effect for Self Concept and Type of Family, F (2, 300) = .230, p= .794, on Divergent Thinking of class IX students.

ANALYSIS WITH RESPECT TO OBJECTIVE – 3

The objective – 3 of the study was "To study the influence of Self-concept, Caste Category and their interactions on Divergent Thinking of Class IX Students. "For the purpose of studying the influence of Self-concept, Caste Category and their interactions on the Divergent Thinking of Class IX Students the following null hypothesis was formulated.

Ho8: "There is no significant influence of Self-concept, Caste Category and their interactions on the Divergent Thinking of Class IX Students." To test this hypothesis, sum of squares, mean score, F-value, degrees of freedom (df), and level of significance of the Divergent Thinking of Class IX Students was calculated with respect to variables Self-concept and Caste Category. Following table 9 and 10 represent the results.

Table 9

Mean, Standard Deviation, Sample Size (N), of Divergent Thinking Scores of Class IX Students with respect to the categories of Self Concept and Caste Category

Caste Category	Self-Concept	Mean	Std. Deviation	N
GENERAL	Low	69.1818	21.27043	44
	Average	66.7600	18.74714	75
	High	70.6400	18.17021	25
	Total	68.1736	19.38435	144
OBC	Low	69.5143	19.35181	35
	Average	68.5455	17.19174	44
	High	73.8889	19.76297	18
	Total	69.8866	18.38641	97
SC	Low	67.5000	21.18793	22
	Average	63.4167	17.31528	24
	High	64.5833	19.00458	12
	Total	65.2069	18.96142	58
ST	Low	43.5000	6.36396	2
	Average	68.0000	32.52691	2
	High	51.6667	37.97806	3
	Total	54.0000	27.72484	7

Table 10

Two way ANOVA summary for Influence of Self Concept, Caste Category and their interactions on Divergent Thinking of Class IX Students

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Caste Category	996.839	3	332.280	.889	.447	.009
Self-concept	801.322	2	400.661	1.073	.343	.007
Caste Category * Self-concept	1197.722	6	199.620	.534	.782	.011
Error	109830.105	294	373.572			
Corrected Total	112453.059	305				
a. R Squared = .023 (Adjusted R Squared = -.013)						

From the Table it is clear the F- value for Divergent Thinking scores with respect to Caste Category was found to be .889 at df (3, 294). This F- value is significant at p-value of .447, which is greater than the 0.05 level of significance (alpha). Therefore, the null hypothesis, "There is no significant difference in the mean Divergent Thinking scores of class IX students with General, OBC,SC and ST Caste Category" is not rejected at 0.05 level of significance. Hence, General, OBC, SC and ST Caste Category had no significant influence on Divergent Thinking.

From the table it is clear that the F- value for Divergent Thinking scores with respect to Self Concept was found to be 1.073 at df (2, 294). This F- value is significant at p- value of .343, which is greater than the 0.05 level of significance (alpha). Therefore, the null hypothesis, "There is no significant difference in the mean Divergent Thinking scores of class IX students with High, Average and Low Self Concept" is not rejected at 0.05 level of significance. Hence, Self Concept levels had no significant influence on Divergent Thinking.

From the Table, it is clear that the F- value for Divergent Thinking scores of class IX students with respect to the interaction of Self Concept and Caste Category was found to be .534 at df (6, 294). This F- value is significant at p-value of .782 which is greater than the 0.05 level of significance (alpha). Therefore the null hypothesis, "There is no significant influence of interaction of Self Concept and Caste Category on Divergent Thinking" is not rejected at 0.05 level of significance. Hence, interaction ofSelf Concept and Caste Category had no significant influence on Divergent Thinking of class IX students.

Conclusively, from the Table 10, it is clear that there is non-significant main effect of Caste Category, F (3,294) =.889, p = .447; a non- significant main effect of Self Concept, F (2, 294) = 1.073, p = .343; and non - significant interaction effect for Caste Category and Self Concept, F (6, 294) = .534, p= .782, on Divergent Thinking of class IX students.

ANALYSIS WITH RESPECT TO OBJECTIVE – 4

The objective – 4 of the study was "To study the influence of Self-concept, Family income and their interactions on Divergent Thinking of Class IX Students. "For the purpose of studying the influence of Self-concept, Family income and their interactions on the Divergent Thinking of Class IX Students the following null hypothesis was formulated.

Ho9: "There is no significant influence of Self-concept, Family income and their interactions on the Divergent Thinking of Class IX Students." To test this hypothesis, sum of squares, mean score, F-value, degrees of freedom (df), and level of significance of the Divergent Thinking of Class IX Students was calculated with respect to variables Self-concept and Family income. Following table 11 and 12 represent the results.

Table 11

Mean, Standard Deviation, Sample Size (N), of Divergent Thinking Scores of Class IX Students with respect to the categories of Self Concept and Family income

Self -concept	Family Income	Mean	Std. Deviation	N
Low	low	64.1837	20.46101	49
	Average	72.2000	20.49074	35
	High	69.3158	22.93966	19
	Total	67.8544	21.05195	103
Average	low	67.1111	18.72225	72
	Average	63.5714	17.65205	56
	High	74.2778	14.97765	18
	Total	66.6370	18.08634	146
High	low	68.9286	20.52267	28
	Average	71.5263	16.32438	19
	High	72.9000	17.92236	10
	Total	70.4912	18.51941	57

Table 12

Two way ANOVA summary for Influence of Self Concept, Family income and their interactions on Divergent Thinking of Class IX Students

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Self -concept	278.497	2	139.248	.380	.684	.003
Income	1010.178	2	505.089	1.380	.253	.009
Self-concept * family Income	2092.855	4	523.214	1.429	.224	.019
Error	108740.983	297	366.131			
Corrected Total	112453.059	305				
a. R Squared = .033 (Adjusted R Squared = .007)						

From the Table it is clear the F- value for Divergent Thinking scores with respect to Self-concept was found to be .380 at df (2, 297). This F- value is significant at p-value of .684, which is greater than the 0.05 level of significance (alpha). Therefore, the null hypothesis, "There is no significant difference in the mean Divergent Thinking scores of class IX students with High, Average and Low Self Concept" is

not rejected at 0.05 level of significance. Hence, Self Concept had no significant influence on Divergent Thinking.

From the table it is clear that the F- value for Divergent Thinking scores with respect to Family income was found to be 1.380 at df (2, 297). This F- value is significant at p- value of .253, which is greater than the 0.05 level of significance (alpha). Therefore, the null hypothesis, "There is no significant difference in the mean Divergent Thinking scores of class IX students with High, Average and Low Family income" is not rejected at 0.05 level of significance. Hence, Family income had no significant influence on Divergent Thinking.

From the Table, it is clear that the F- value for Divergent Thinking scores of class IX students with respect to the interaction of Self Concept and Family income was found to be 1.429 at df (4, 297). This F- value is significant at p-value of .224 which is greater than the 0.05 level of significance (alpha). Therefore the null hypothesis, "There is no significant influence of interaction of Self Concept and Family income on Divergent Thinking" is not rejected at 0.05 level of significance. Hence, interaction ofSelf Concept and Family income had no significant influence on Divergent Thinking of class IX students.

Conclusively, from the Table 12, it is clear that there is non-significant main effect of Self Concept, F (2,297) =.380, p = .684; a non- significant main effect of Family income, F (2, 297) = 1.380, p = .253; and non-significant interaction effect for Self Concept and Family income, F (4, 297) = 1.429, p= .224, on Divergent Thinking of class IX students.

FINDINGS

From the analysis and interpretations the following were the key findings:

- There is non-significant effect of self- concept on divergent thinking of class IX students.
- There is non-significant effect of gender on divergent thinking of class IX students.
- There is non-significant interaction effect of gender and self-concept on divergent thinking of class IX students.
- There is non-significant effect of type of family on divergent thinking of class IX students.
- There is non-significant interaction effect of self-concept and type of family on divergent thinking of class IX students
- There is non-significant effect of caste category on divergent thinking of class IX students.
- There is non-significant interaction effect of caste category and self-concept on divergent thinking of class IX students.
- There is non-significant effect of family income on divergent thinking of class IX students.
- There is non-significant interaction effect of self-concept and family income on divergent thinking of class IX students.

DISCUSSION

- **Finding viz.** non-significant effect of self- concept on divergent thinking of the present research were found to be in contradictive to that of **Guilford (1950), Rancor and Albert (1986), Sternberg and Lubart (1995), Raina (2004), Kaufman and Baer (2004), Singh and Baer (2012), Chamundeswari (2013) Glover & Sautter (1977), Rotter (1966), Jena & Phookun (2015) and Runco & Albert (1986)** which were consistently highlights that divergent thinking is positively associated with a strong and positive self-concept.
- The study also found that male and female students do not differ significantly in their divergent thinking abilities. This indicates that both boys and girls have similar potential to generating diverse ideas. It supports the idea that divergent thinking is not influenced by gender and that both genders should be equally encouraged and supported in activity for promoting divergent thinking abilities.
- Finding of the present research viz. non-significant effect of gender and caste on divergent thinking were found to be in the line with that of the **Raina (2004)** which also concludes that the students with the different gender caste and religions possess the same divergent thinking;
- Finding of the present research viz. non-significant effect of gender and caste on divergent

thinking found to be opposite **to that of Singh and Kaur (2012)** concluded that the females have the more divergent thinking than the males; but the findings were in line with that of **Chamundeswari (2013)** which also concluded that the non-significant effect of habitat and gender on divergent thinking.

- Non-significant effect of family income on divergent thinking of the present research were found to be opposite to the findings of **Jena & Phookun (2015), Kaufman and Baer (2004)** which concluded that the family and societal atmosphere stimulates the divergent thinking;
- Non significant influence of self-concept on divergent thinking suggests that self-perception alone may not drive divergent idea generation in adolescents. While self-concept reflects confidence and self-worth, divergent thinking is more directly tied to cognitive skills like imagination, mental flexibility, and the ability to explore multiple possibilities. It is possible that students with varying levels of self-concept are equally capable of divergent thinking when provided with the same cognitive challenges or learning environments. This indicates that divergent thinking may function independently of how students evaluate themselves.
- The combined influence of self-concept and gender showed non -significant influence on divergent thinking. This means that students' gender and self-concept together do not create stronger influence on their divergent thinking abilities. These findings suggest that divergent ideas should be foster through teaching strategies, mind mapping, brain writing and exposure to creative experiences, rather than expecting differences based on personality traits or demographic characteristics.
- The study found that the type of family nuclear or joint does not have a significant effect on the divergent thinking of Class IX students. This means that students' divergent thinking abilities are not strongly influenced by whether they live in a joint family or a nuclear family. It is possible that other factors, like school environment or individual personality, play a bigger role in shaping their divergent thinking. There is no significant influence of self-concept and type of family and their interaction on divergent thinking of class IX students.The absence of a significant effect of self-concept and type of family on divergent thinking suggests that divergent thinking is not primarily shaped by internal self-beliefs or family structure. Divergent thinking involves idea generation, flexibility, and originality, which is cognitive processes, influenced more by stimulation, learning experiences, and problem-solving opportunities. A student with a high self-concept may feel confident, but without exposure to divergent tasks, this confidence may not translate into divergent thinking. Similarly, whether a student belongs to a joint or nuclear family may not matter if both environments provide similar levels of support and cognitive stimulation. Therefore, it is logical that these factors, either alone or together, do not significantly impact divergent thinking.
- There is no significant influence of caste category on divergent thinking of class IX students. This finding showed no significant differences in divergent thinking scores among students belonging to various caste categories. This means that students from General, OBC, SC, and ST categories demonstrated similar levels of divergent thinking. It suggests that social background and caste category does not play a role in shaping students' divergent production ability to generate multiple or novel ideas. Students may not have taken the test seriously, especially if tests were not part of formal academic assessments. This lack of seriousness could have affected the scores in their responses, leading the non-significant scores.
- There is no significant influence of family income on divergent thinking of class IX students. Family income is often linked to access to educational resources, extracurricular activities, and enriched environments. Despite this, the findings showed non-significant influence of income level on students' divergent thinking ability. This result suggests that simply having more financial resources does not impact on divergent thinking of learner. Additionally, divergent thinking may be more strongly influenced by qualitative aspects of the environment such as encouragement, emotional support, problem based learning, group collaboration than financial soundness or weakness.

- There is no significant influence of self-concept, family income and their interaction on divergent thinking of students of class IX students. The non- significant interaction effect means that even when both self-concept and family income were considered together, both variables did not jointly impact on divergent thinking of class IX students. This result reinforces the view that divergent thinking is not necessarily dependent on economic or self-evaluative factors. But it is based on exposure to diverse experiences, encouragement to think independently, or participation in creative tasks may play a more decisive role.

CONCLUSION

The present study aimed to studies the correlation and influence of self-concept, l and some demographic variables on the divergent thinking of Class IX students. The overall findings indicate that most of the independent variables did not have a statistically significant influence on divergent thinking. Additionally, no significant interactions were found between these variables in influencing divergent thinking of class IX students. The lack of significant influence on divergent thinking could be attributed to several factors such as Uniform schooling patterns, Limited classroom emphasis on divergent production abilities, age related cognitive development, students not taking the testing tools seriously, students may not have enough time to complete the tasks to their full potential etc. These findings imply that divergent thinking may be more shaped by some unknown environmental and instructional factors than by personal or demographic traits that hass been taken in this research.

Therefore, there is a need to create educational environments that actively encourage creativity, independent thinking, and open-ended exploration, beyond traditional curriculum boundaries.

The implications of this study highlight that while self-concept and demographic variables not show significant influence on divergent thinking of class IX students. This implies that divergent thinking is not confined to personal traits or social backgrounds. Therefore, all students possess the potential to think divergently if provided with the right environment and opportunities. Educational strategies should emphasize skill-based learning, exposure to divergent tasks, and an open-ended approach to teaching. Teachers play a crucial role in designing classroom activities that stimulate imagination and problem-solving. Parents, too, can support divergent thinking by encouraging hobbies and exploration at home. School administrators should ensure equal access to creative resources for all students. Policymakers must recognize the need to integrate divergent thinking enhancing programs in the curriculum.

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