



Critical Thinking and Decision-Making Style among the Higher Secondary School Students

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Abstract

The present study investigates the level of critical thinking and decision making style among higher secondary school students and examines the relationship between these two vital cognitive constructs. In today's rapidly changing educational and social environment, students are frequently required to make important academic and personal decisions. Sound decision making is closely linked with the ability to think critically, analyze alternatives, and evaluate consequences. Hence, understanding students' critical thinking and decision making styles becomes essential for effective educational planning and instruction. The study adopted a descriptive survey method and was conducted on a sample of 300 XI standard students studying in government, aided, and self-financing schools of Madurai District under the Tamil Nadu State Board syllabus. The tools used for data collection were the Decision Making Style Inventory developed by Rajaram (2009) and the Critical Thinking Skills Scale developed by Sunitha and Ramakrishnan (2007). Statistical techniques such as mean, standard deviation, 't' test, and Pearson's Product Moment Correlation were employed for data analysis. The findings revealed that higher secondary school students possess a high level of critical thinking and a desirable level of decision making style. A significant and strong positive relationship was found between critical thinking and decision making style. Further, critical thinking differed significantly with respect to gender, school locality, school kind, intimate friends, and participation in sports, while it did not differ based on school management. Decision making style showed significant differences based on school locality, school kind, and intimate friends, but not on gender, school management, and participation in sports. The study highlights the need for educational strategies that foster critical thinking and informed decision making among school students.

Keywords: Critical Thinking, Decision Making Style, Higher Secondary School Students, Gender, School Locality, Educational Psychology

Need for the Study

Sometimes we rush into making decisions and regret the choices we make. A hasty decision could lead to long term disappointment. So it's best you think through everything clearly, but don't delay to long, because sometimes we'll go past the point where our decisions matter. Our decision is final is an expression we hear a lot. And the truth is to move forward we have to make decisions and stick with them. But it is of utmost importance to look at each question clearly that is associated with the decision we are about to make and determine categorically whether it is the right one. Coming up with the right answer can be hard, even uncomfortable, but it is essential. What we were reminded by this situation were that we should frequently be visualizing the life we really want. What does it look like, what does it feel like. This will help us to make

decisions in align with our dreams. We should stop and examine the choices we make, evaluating them to determine they fit with our chosen path. The assessment of students' decision making style can help teachers to plan instruction and structure the classroom environment so as to help students develop more enlightened critical thinking. Hence the researcher wants to know the relationship between the decision making style and critical thinking among the school students. Hence the conduct of the current study.

Terms and Definitions

Critical Thinking – refers to the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.

Decision Making Style- refers to selection of a belief or a course of action among several alternative possibilities.

Higher Secondary School Students – refers to students who are studying in XI standard in government, aided and unaided schools in Madurai District under state board syllabus of Tamil Nadu State.

Variables of the Study

The variables involved in this study are as follows:

Dependent Variables: Critical Thinking and Decision Making Style

Independent Variables: Gender, School Locality, School Kind, School Management, Intimate Friends and Participation in sports

Objectives of the Study

1. To measure the level of critical thinking among the school students
2. To find out the Decision making style among the school students.
3. To find out the significant influence of independent variables viz., Gender, School Locality, School Kind, School Management, Intimate friends and Participation in sports on dependent variable critical thinking.
4. To find out the significant influence of independent variables viz., Gender, School Locality, School Kind, School Management, Intimate friends and Participation in sports on dependent variable decision making style.
5. To find out the relationship between critical thinking and decision making style among the school students.

Hypotheses of the Study

The following hypotheses are formulated for the present study:

1. School students have high level of critical thinking.

2. School students have desirable decision making style.
3. There is a significant positive relationship between critical thinking and decision making style.
4. There is a significant difference in the critical thinking among school students in terms of gender.
5. There is a significant difference in the critical thinking among school students in terms of school locality.
6. There is a significant difference in the critical thinking among school students in terms of school kind.
7. There is a significant difference in the critical thinking among school students in terms of school management.
8. There is a significant difference in the critical thinking among school students in terms of intimate friends.
9. There is a significant difference in the critical thinking among school students in terms of participation in sports.
10. There is a significant difference in the decision making style among the school students in terms of gender.
11. There is a significant difference in the decision making style among the school students in terms of school locality.
12. There is a significant difference in the decision making style among the school students in terms of school kind.
13. There is a significant difference in the decision making style among school students in terms of school management.
14. There is a significant difference in the decision making style among school students in terms of intimate friends.
15. There is a significant difference in the decision making style among school students in terms of participation in sports.

Sample

A sample of 300 school students in Madurai District served as the subjects of the study.

Tools Used

The following tools were adopted and used for the present study

1. Personal Information Schedule
2. Decision Making Style Inventory constructed and standardized by **Rajaram, K. (2009)**.
3. Critical Thinking Skills Scale constructed and standardized by **Sunitha, M. & Ramakrishnan, G. (2007)**

Statistical Treatments

1. “t” test between the large independent samples.
2. Pearson’s Product Moment Correlation

Review of Related Literature

Amalor (1993) made an attempt to study of decision making style in relation to some personality characteristics. He found that (i) there is a significant positive correlation between decision making self-esteem and vigilant decision making style and a significant negative correlation between decision making self-esteem and non-vigilant (hypervigilant and defensive avoidance) styles of decision making. (ii) Extraversion has a significant positive correlation with vigilant decision making style and a significant negative correlation with procrastination style and total avoidance, (iii) Neuroticism has a significant positive correlation with non-vigilant styles of decision making (iv) Psychoticism has a significant negative correlation with vigilant decision making style and a significant Self-Esteem and Decision making style positive correlation with procrastination style and a significant positive correlation with procrastination style and total avoidance.

Sarah Manickaraj, Suresh, and Sabesan (1993) made an attempt to find the difference between male and females in decision making. Leon Mann's decision making questionnaire II was used to collect the data from 87 (55 males and 32 females) post graduate students of distance education in psychology. It was found that males and females did not differ significantly in vigilant decision making style. However, males and females differed significantly in non-vigilant decision making style.

Hui et al. (2001) administered the CSI to 387 adult consumers in China. Their findings indicate that five decision-making styles are valid and reliable in Chinese culture. These styles were perfectionist, novelty-fashion conscious, recreational, price conscious, and confused by over choice.

Canabal, M.E. (2002) investigated the decision making style of South Indian Consumers utilizing Customer Style Inventory. Using data collected from 173 college students from two institutions of higher education in the city of Coimbatore, South India, Canabal (2002) identified five decision making style of South Indian. These styles are (1) Brand Conscious Style, (2) High Quality Conscious / Perfectionist Style, (3) Confused by Overchoice Style, (4) Impulsive / Brand Indifferent Style, and (5) Recreational Shopper Style.

Data Analysis

Hypothesis No.1: School students have high level of critical thinking.

The empirical average score of critical thinking among the school students is found to be 22.88, while the theoretical average is 20 only. This shows that the critical thinking among the school students is above the average level. In other words, critical thinking is found to be high among the school students. **Hence the hypothesis No.1 is accepted.**

Hypothesis No.2: School students have desirable decision making style.

The empirical average score of decision making style among the school students is found to be 60.53, while the theoretical average is 50 only. This shows that the Decision making style among the school students is above the average level. In other words, Decision making style is found to be desirable among the school students. **Hence the hypothesis No.2 is accepted.**

Hypothesis No. 3: There is a significant positive relationship between critical thinking and decision making style among the school students. Result of relationship of decision making style and critical thinking is presented Table 1:

Variables	Correlation coefficient (r)
	Total, N =300
Decision Making Style And Critical Thinking	0.9051*

*denotes Significant at 0.05 level

The above table shows that the calculated value 'r', **0.9051** is greater than the critical value i.e 0.058. Hence the decision making style has significant positive relationship with critical thinking. **Hence the hypothesis No. 3 is accepted.**

Hypothesis No.4: There is a significant difference in the critical thinking style among the school student in terms of gender.

The statistical measures and the results of test of significance of difference between the mean scores of critical thinking among the students in terms of Gender is presented in Table 2.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
Gender	Male	136	23.882	3.353	4.360	Significant
	Female	164	22.043	3.859		

The obtained 't' value 4.360 is greater than the table value 1.96 at 0.05 level of significance. This shows that there is a significant difference in critical thinking among male and female students in the critical thinking. Further it is observed that male students have high level of critical thinking than the female students. **Hence the hypothesis No. 4 is accepted.**

Hypothesis No.5: There is a significant difference in the critical thinking Style among the school student in terms of school locality.

The statistical measures and the results of test of significance of difference between the mean scores of critical thinking among the students in terms of school locality is presented in Table 3.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
School Locality	Rural	174	23.483	3.554	3.349	Significant
	Urban	126	22.040	3.856		

The obtained 't' value 3.349 is greater than the table value 1.96 at 0.05 level of significance. This shows that there is a significant difference in critical thinking among the school students in terms of school locality. Further it is observed that students studying in the rural schools have high level of critical thinking than the studying in the urban schools. **Hence the hypothesis No.5 is accepted.**

Hypothesis No.6: There is a significant difference in the critical thinking style among the school student in terms of school Kind.

The statistical measures and the results of test of significance of difference between the mean scores of critical thinking among the students in terms of school kind is presented in Table 4.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
School Kind	Unisex	159	22.214	3.921	3.308	Significant
	Mixed	141	23.624	3.401		

The obtained 't' value 3.308 is greater than the table value 1.96 at 0.05 level of significance. This shows that there is a significant difference in critical thinking among the school students in terms of school kind. Further it is observed that students studying in mixed schools have high level of critical thinking than the studying in the unisex schools. **Hence the hypothesis No. 6 is accepted.**

Hypothesis No.7: There is a significant difference in the critical thinking style among the school student in terms of school Management.

The statistical measures and the results of test of significance of difference between the mean scores of critical thinking among the students in terms of school management is presented in Table 5.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
School Management	Government	159	22.679	3.948	0.969	Not Significant
	Self-financing	141	23.099	3.506		

The obtained 't' value 0.969 is less than the table value 1.96 at 0.05 level of significance. This shows that there is no significant difference in critical thinking among the school students in terms of school management. **Hence the hypothesis No. 7 is rejected.**

Hypothesis No.8: There is a significant difference in the critical thinking style among the school student in terms of intimate friends.

The statistical measures and the results of test of significance of difference between the mean scores of critical thinking among the students in terms of intimate friends is presented in Table 6.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
Intimate Friends	Few	189	23.222	4.003	2.097	Significant
	Many	111	22.288	3.195		

The obtained 't' value 2.097 is greater than the table value 1.96 at 0.05 level of significance. This shows that there is a significant difference in critical thinking among the school students in terms of intimate friends. Further it is observed that students having few intimate friends have high level of critical thinking than the students having many intimate friends. **Hence the hypothesis No. 8 is accepted.**

Hypothesis No.9: There is a significant difference in the decision making style among the school student in terms of participation in sports.

The statistical measures and the results of test of significance of difference between the mean scores of critical thinking among the students in terms of participation in sports is presented in Table 7.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
Participation in Sports	Rarely	172	23.343	3.918	2.522	Significant
	Regularly	128	22.250	3.418		

The obtained 't' value 2.522 is greater than the table value 1.96 at 0.05 level of significance. This shows that there is a significant difference in critical thinking among the school students in terms of intimate friends. Further it is observed that students rarely participating in sports have high level of critical thinking than the regularly participating in sports. **Hence the hypothesis No. 9 is accepted.**

Hypothesis No.10: There is a significant difference in the decision making style among the school student in terms of gender.

The statistical measures and the results of test of significance of difference between the mean scores of decision making style among the students in terms of Gender is presented in Table 8.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
Gender	Male	136	62.000	11.608	1.894	Not Significant
	Female	164	59.317	12.696		

The obtained 't' value 1.894 is less than the table value 1.96 at 0.05 level of significance. This shows that there is no significant difference in decision making style among male and female students in the decision making style. **Hence the hypothesis No. 10 is rejected.**

Hypothesis No.11: There is a significant difference in the decision making style among the school student in terms of school locality.

The statistical measures and the results of test of significance of difference between the mean scores of decision making style among the students in terms of school locality is presented in Table 9.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
School Locality	Rural	174	62.833	11.534	3.906	Significant
	Urban	126	57.357	12.584		

The obtained 't' value 3.906 is greater than the table value 1.96 at 0.05 level of significance. This shows that there is a significant difference in decision making style among the school students in terms of school locality. Further it is observed that students studying in the rural schools have higher desirable decision making style than the studying in the urban schools. **Hence the hypothesis No. 11 is accepted.**

Hypothesis No.12: There is a significant difference in the decision making style among the school student in terms of school Kind.

The statistical measures and the results of test of significance of difference between the mean scores of decision making style among the students in terms of school kind is presented in Table 10.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
School Kind	Unisex	159	56.717	12.480	6.053	Significant
	Mixed	141	64.837	10.511		

The obtained 't' value 6.053 is greater than the table value 1.96 at 0.05 level of significance. This shows that there is a significant difference in decision making style among the school students in terms of school kind. Further it is observed that students studying in mixed schools have higher desirable decision making style than the studying in the unisex schools. **Hence the hypothesis No. 12 is accepted.**

Hypothesis No.13: There is a significant difference in the decision making style among the school student in terms of school management.

The statistical measures and the results of test of significance of difference between the mean scores of decision making style among the students in terms of school management is presented in Table 11.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
School Management	Government	159	59.887	11.554	0.969	Not Significant
	Self-financing	141	61.262	13.029		

The obtained 't' value 0.969 is less than the table value 1.96 at 0.05 level of significance. This shows that there is no significant difference in decision making style among the school students in terms of school management. **Hence the hypothesis No. 13 is rejected.**

Hypothesis No.14: There is a significant difference in the decision making style among the school student in terms of intimate friends.

The statistical measures and the results of test of significance of difference between the mean scores of decision making style among the students in terms of intimate friends is presented in Table 12.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
Intimate Friends	Few	189	62.429	11.965	3.559	Significant
	Many	111	57.306	12.156		

The obtained 't' value 3.559 is greater than the table value 1.96 at 0.05 level of significance. This shows that there is a significant difference in decision making style among the school students in terms of intimate friends. Further it is observed that students having few intimate friends have desirable decision making style than the students having many intimate friends. **Hence the hypothesis No. 14 is accepted.**

Hypothesis No.15: There is a significant difference in the decision making style among the school student in terms of participation in sports.

The statistical measures and the results of test of significance of difference between the mean scores of decision making style among the students in terms of participation in sports is presented in Table 13.

Variable	Sub-Variables	N	Mean	SD	't' Value	Significance at 0.05 Level
Participation In Sports	Rarely	172	61.512	12.205	1.605	Not Significant
	Regularly	128	59.219	12.278		



The obtained 't' value 1.605 is less than the table value 1.96 at 0.05 level of significance. This shows that there is no significant difference in decision making style among the school students in terms of intimate friends. **Hence the hypothesis No. 15 is rejected.**

Conclusions

1. Critical thinking among the school students is found higher
2. Critical thinking style among the school students is dependent upon
 - Gender
 - School Locality
 - School Kind
 - Intimate Friends
 - Participation in sports
3. Critical thinking style among the school students is independent upon
 - School Management
4. School students have desirable Decision making style.
5. Decision making style among the school students is dependent upon
 - School locality
 - School Kind
 - Intimate Friends
6. Decision making style of the school students is in independent upon
 - Gender
 - School management
 - Participation in sports
7. There is s significant positive relationship between critical thinking and decision making style among school students

Educational Implications

School students have desirable decision making style and high level of critical thinking. The study reveals that students studying in rural schools, mixed schools and having few intimate friends have higher level desirable decision making style than their counterpart. Further it is noted that male students, students studying in rural schools, mixed schools, having few intimate friends and rarely participation in sports have high level of critical thinking skills than their counterpart. Educational planners, administrators and academicians have to develop suitable strategy to enhance the decision making further and critical thinking among the school students.



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