

A Study of School Culture and Academic Motivation in Mathematics of M.P. Board and C.B.S.E. Board Students

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ABSTRACT

This paper focused on A Study of School Culture and Academic Motivation in Mathematics of M.P. Board and C.B.S.E. Board Students. The main objective of research paper is to compare the school culture in M.P Board and CBSE mathematics students of class XI, compare the academic motivation in M.P Board and CBSE mathematics students of class study the correlation of school culture on the academic motivation of M.P Board mathematics students of class XI & To study the correlation of school culture on the academic motivation of CBSE mathematics students of class XI. Our sample size is 550 School level students. The tool was used School Culture made by Maehr & Braskamp (1986) & Academic Motivation made by Investigator. The main finding are There is significant difference between the mean score of the school culture in M.P. Board and CBSE Mathematics students of class XI, There is no significant difference between the mean score of the academic motivation in government M.P. Board and non government M.P. Board students of Mathematics of class XI, There is no significant correlation of school culture on the academic motivation of M.P Board mathematics students of class XI, There is significant correlation of school culture on the academic motivation of CBSE mathematics students of class XI.

Keywords: School Culture, Self-Concept, Academic Motivation, Mathematics, Student, Etc.

I INTRODUCTION

World without mathematics is not possible, without it no subject- Science, Social Science, Technology, Industry can imagine its existence. If it is so important then its role in school curriculum becomes vital. Its importance becomes more vital. Computers and other devices, as a result of mathematics have taken a new look in the school curriculum.

Mathematics is a self-contained mental discipline with its language and structure and the learning of mathematics is dependent on various factors. Researchers have demonstrated that factors like self-concept effect results of students in mathematics. Therefore teaching of mathematics has been a challenging task for the teachers since the origin of human race.

(a) School Culture

The culture of a school has become even more important since the "accountability era" and advent of state, and possibly federal, high-stakes assessment. School communities have invoked a variety of improvement efforts as a means to moderate deficiencies and promote higher levels of student achievement. Wagner and Hall-O'Phelan (1998) noted that many educators and researchers alike are discovering a "missing link" in the school improvement conundrum.

Taylor and Williams (2001) argued that as accountability through tests has become a threat, school principals need to work on long-term cultural goals in order to strengthen the learning environment. **Fullan (2001)** contended that the concept of instructional leader is too limited to

sustain school improvement. He promoted the idea that school principals serve as change agents to transform the teaching and learning culture of the school.

(b) Academic Motivation

A student that is academically motivated wants to learn likes learning-related activities and believes school is important. Children are naturally motivated to learn when they are infants. A baby's struggle to reach a toy, learn to walk, or eat without help are examples of motivation to learn. This early motivation to learn is later applied to school-related activities such as reading and writing. When children are not motivated to learn, it is usually because something has gotten in the way of natural motivation. They often believe they cannot do well in school related tasks and stop trying or do not try hard enough because they do not think their efforts will make a difference. They may also become easily frustrated and give up when learning is difficult.

According to Allen (1964) remarked that success equals intelligence and motivation. The excellence of success in life depends upon the potential endowments in the form of intelligence and also the urge to succeed or motivation, it is popularly known.

School culture in mathematics plays great role in over-all academic achievement. Thus, it plays a crucial role at school level and a teacher has a greater responsibility to help the child to learn mathematics better by Increasing self-concept and reducing motivation which indirectly affects his/her achievement.

II REVIEW RELATED OF THE WORK

Kjersti Waege and Marilena Pantziara (2007) "Students' Motivation And Teachers' Practices In The Mathematics Classroom." This paper presents five different families of social cognitive motivational constructs: efficacy, control, interest, values and goals. Two motivation theories will be developed further, namely achievement goal theory and self-determination theory. Research on the relationship between teachers' practice in the mathematics classroom and students' motivation, in terms of intrinsic motivation and goal orientation, will be reviewed. It seems like some aspects of mathematics teachers' instructional practices have a positively influence on both students' intrinsic motivation and goal orientation.

Deborah MacNamara and Kurt Penner (2004) "First-Year Math Students: Using Study Skills and Motivation to Predict Academic Success." This study is part of Kwantlen's Counselling, First Year Experience, and Math Departments ongoing work to increase the success and retention of first year math students. The study measured the study skills and learning strategies of over 300 first year math students in the fall of 2004, specifically in Math 0093, 1112, and 1120 classes to determine particular study skills predictive of academic success. Five of the ten LASSI (Learning and Study Skills Inventory) subscales significantly predicted the final grades of first year math students; in specific, time management, motivation, anxiety, concentration and self testing. There were significant differences in three of the LASSI subscales between students who withdrew from the course and those who persisted, in particular, attitude, selecting the main ideas, and test strategies

James A. Middleton & Photini A. Spanias (1999) "Motivation for Achievement in Mathematics: Findings, Generalizations, and Criticisms of the Research." In this review we examine recent research in the area of motivation in mathematics education and discuss findings from research perspectives in this domain. We note consistencies across research perspectives that suggest a set of generalizable conclusions about the contextual factors, cognitive processes, and benefits of interventions that affect students' and teachers' motivational attitudes. Criticisms are levelled concerning the lack of theoretical guidance driving the conduct and interpretation of the majority of studies in the field. Few researchers have attempted to extend current theories of motivation in ways that are consistent with the current research on learning and classroom discourse. In particular, researchers interested in studying motivation in the content domain of school mathematics need to examine the relationship that exists between

mathematics as a socially constructed field and students' desire to achieve.

III PROBLEM, OBJECTIVES & HYPOTHESIS

(a) Statement of the Problem

A Study of School Culture and Academic Motivation in Mathematics of M.P. Board and C.B.S.E. Board Students.

(b) Objectives of the Study

The objectives formulated for this study are:

- (i) To study the difference between the mean score of the school culture in M.P Board and CBSE mathematics students of class XI.
- (ii) To study the difference between the mean score of the academic motivation in M.P Board and CBSE mathematics students of class XI.
- (iii) To study the correlation of school culture on the academic motivation of M.P Board mathematics students of class XI.
- (iv) To study the correlation of school culture on the academic motivation of CBSE mathematics students of class XI.

(c) Hypothesis of the Study

The following null hypothesis has been formulated in the context of present study's objective:

- (i) There is no significant difference between the mean score of the school culture in M.P. Board and CBSE Mathematics students of class XI."
- (ii) There is no significant difference between the mean score of the academic motivation in government M.P. Board and non government M.P. Board students of Mathematics of class XI."
- (iii) There is no significant correlation of school culture on the academic motivation of M.P Board mathematics students of class XI.
- (iv) There is no significant correlation of school culture on the academic motivation of CBSE mathematics students of class XI.

IV METHODOLOGY

In the light of objectives and to test hypothesis of the present study, the researcher adopted survey method for data collection.

(a) Delimitations of the study

- (i) This study focused only on the school level students
- (ii) This study focused only on the selected College of Bhopal city.

(b) Sample Design

- (i) Sample size: 550
- (ii) Sample frame: School level student in Bhopal city

(c) Research Tool

For the purpose of data collection the following tool was used.

- (i) Academic Motivation: Self- Made.
- (ii) School culture: Maehr & Braskamp (1986)

(d) Statistical Tools

- (i) After collection of data mean S.D. 't' test & co-relation was applied for statistical analysis.

V ANALYSIS AND INTERPRETATION

(a) Analysis Hypothesis 1

- (i) There is no significant difference between the mean score of the school culture in M.P. Board and CBSE Mathematics students of class XI.

**Table 1
Analysis Hypothesis 1**

S. No.	Variable	Group	No. of Cases	Mean	Std. Dev. (σ)	Std. error	Calculate t Value	Table t Value	Significance (.05 Level)
1	School Culture	M. P. Board Student	275	58.65	3.22	.194	3.22	1.96	Significant
2		CBSE Student	275	59.97	3.58	.216			

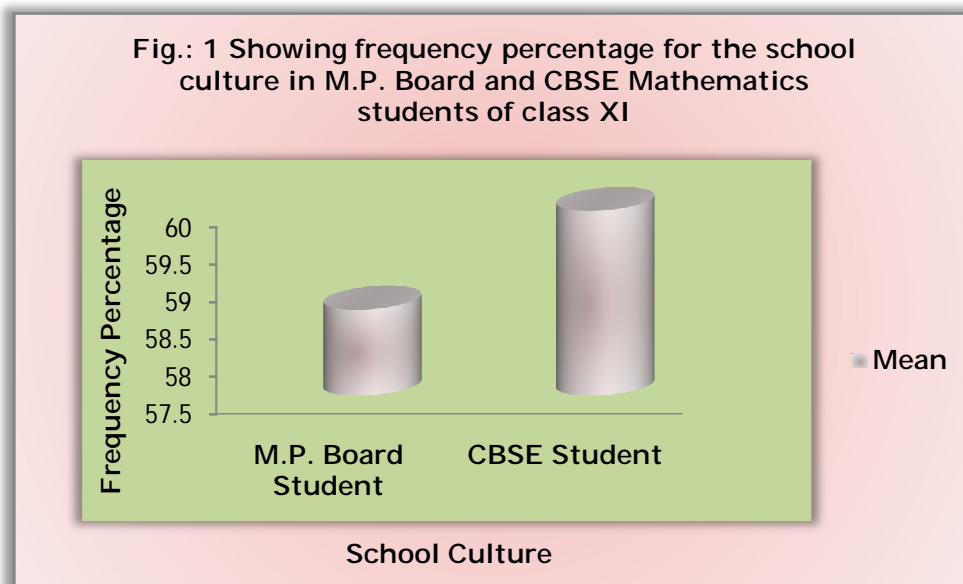
(ii) Interpretation of Analysis for Hypothesis 1: Table No. 1 shows that the mean score of school culture in M.P. Board Mathematics students is a 58.65 and CBSE Mathematics student is 59.97. This shows that the school culture of to CBSE Mathematics students have more as compared to M.P. Board Mathematics students.

Table shows that the computed 't' value 3.22 is more than the critical value 1.96 at .05 level for $df = 548$. It means $3.22 > 1.96$. The results indicate

that there is significant difference between M.P. Board Mathematics students and CBSE Mathematics students in school culture. This implies that the M.P. Board Mathematics students and CBSE Mathematics students differ in their school culture.

Thus null hypothesis No. 1 is rejected.

Fig. No. : 1 Graphic representation of the school culture in M.P. Board and CBSE Mathematics students of class XI.



(b) Analysis Hypothesis 2 -

Academic motivation in M.P. Board and CBSE Mathematics students of class

- (i) **Hypothesis: 2** there is no significant difference between the mean score of the XI.

Table 2
Analysis of Hypothesis 2

S. No.	Variable	Group	No. of Cases	Mean	Std. Dev. (σ)	Std. error	Coefficient t of Correlation (r) value	Table (r) Value	Significance (.05 Level)
1	Academic motivation	M. P. Board Student	275	134.4	10.16	.613	1.84	1.96	Not Significant
2		CBSE Student	275	140.0	9.88	.596			

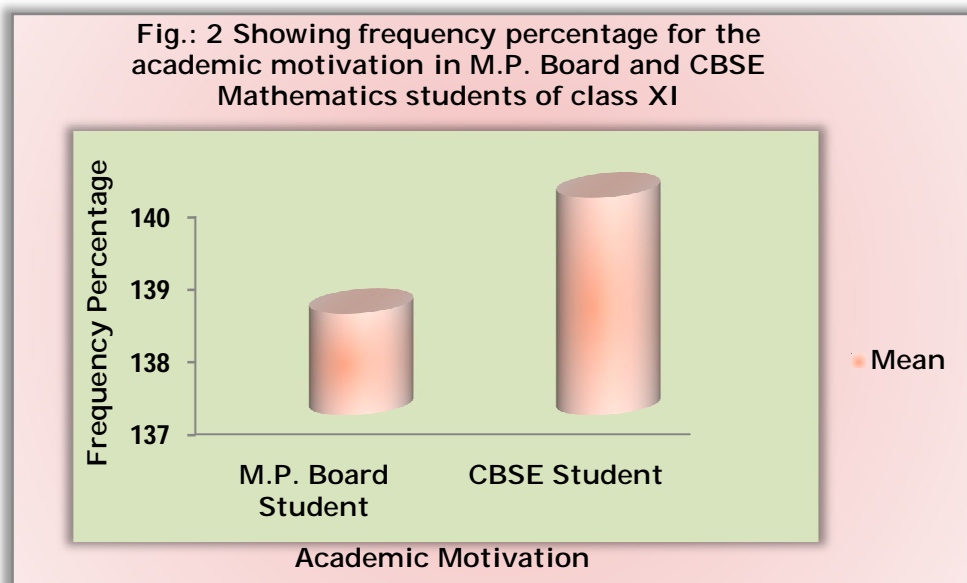
- (ii) **Interpretation:** Table No. 2 shows that the mean score of Academic motivation in M.P. Board Mathematics students is 138.4 and CBSE Mathematics students are 140.00. This shows that the Academic motivation of CBSE Mathematics students have more as compared to M.P. Board Mathematics students.

CBSE Mathematics students in academic motivation. This implies that the M.P. Board Mathematics students and CBSE Mathematics students do not differ in their academic motivation.

Thus null hypothesis No. 2 is accepted.

Fig. No. : 2 Graphic representation of the academic motivation in M.P. Board and CBSE Mathematics students of class XI.

Table shows that the computed 't' value 1.84 is less than the critical value 1.96 at .05 level for $df = 548$. It means $1.96 > 1.84$. The results indicate that there is no significant difference between M.P. Board Mathematics students and



(c) Analysis of Hypothesis 3

- (i) **Hypothesis: 3** there is no significant correlation between school culture and

academic motivation of M.P. Board Mathematics students of class XI.”

Table 3
Analysis of Hypothesis 3

S. No.	Variable	No. of Cases	Mean	Std. Dev. (σ)	Std. error	Coefficient t of Correlation (r) value	Table (r) Value	Significance (.05 Level)
1	School Culture	275	58.65	3.22	.194	.023	.113	Not Significant
2	Academic Motivation		138.4	10.16	.613			

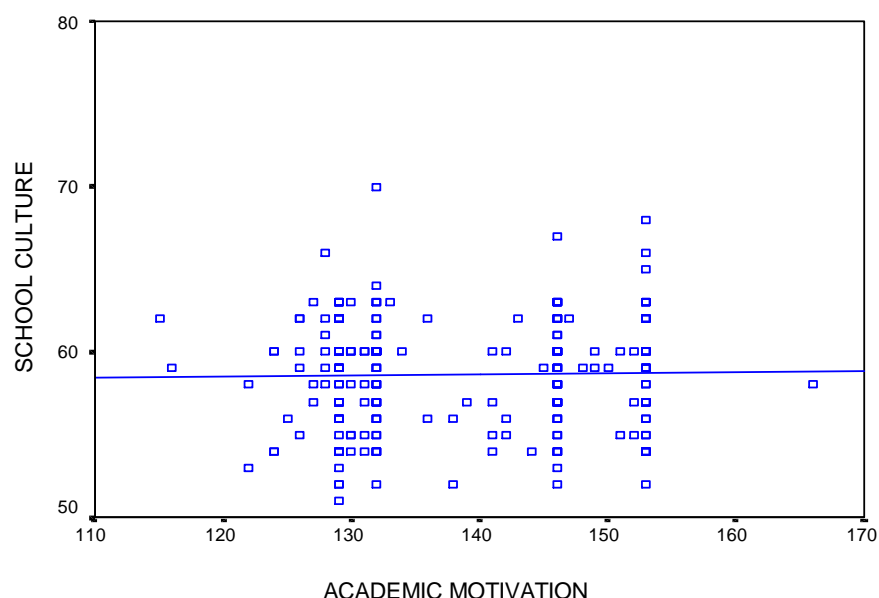
(ii) **Interpretation:** Table No. 3 shows that the mean score of school culture of M.P. Board Mathematics students is 58.65 and academic motivation of M.P. Board Mathematics students is 138.4.

From table 3 it can be seen that the obtained 'r' value of .023 is less than the table value of .113 for df=273 at the .05 level. Hence it is concluded that

there is no significant correlation between school culture and academic motivation of M.P. Board Mathematics students of class XI.

Therefore, null hypothesis no. 3 is accepted.

Fig. No. 3 Graphic representation of correlation between school culture and academic motivation of M.P. Board Mathematics students of class XI.



(d) Analysis of Hypothesis 4

(i) **Hypothesis: 4** There is no significant correlation between school culture and academic motivation of CBSE Mathematics students of class XI.

Table 4
Analysis of Hypothesis 4

S. No.	Variable	No. of Cases	Mean	Std. Dev. (σ)	Std. error	Coefficient t of Correlation (r) value	Table (r) Value	Significance (.05 Level)
1	School Culture	275	59.97	3.58	.216	.256	.113	Significant
2	Academic Motivation		140.0	9.88	.596			

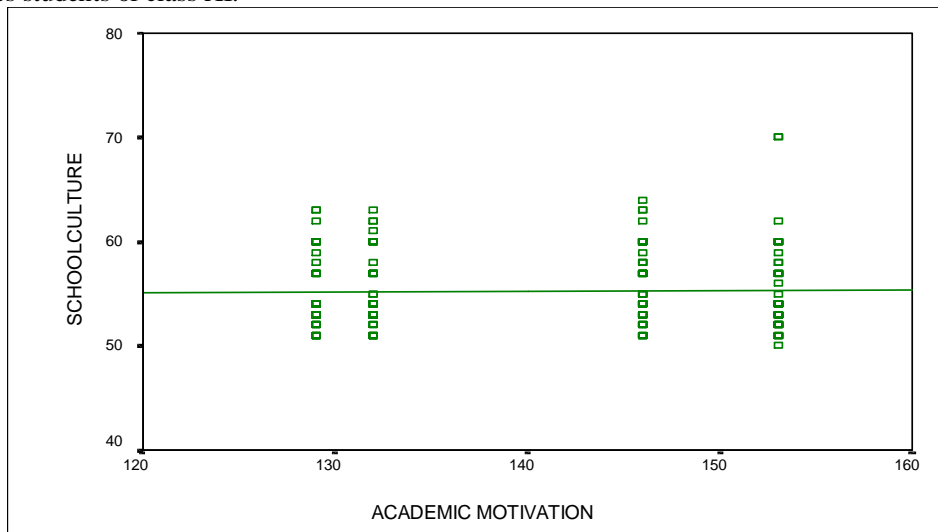
(ii) **Interpretation:** Table No. 4 shows that the mean score of school culture of CBSE Mathematics

students is 59.97 and academic motivation of CBSE Mathematics students is 140.0.

From table 4 it can be seen that the obtained 'r' value of .256 is more than the table value of .113 for $df=273$ at the .05 level. Hence it is concluded that there is significant correlation between school culture and academic motivation of CBSE Mathematics students of class XI.

There for null hypothesis no. 4 is rejected.

Fig. No. 4 Graphic representation of correlation between school culture and academic motivation of CBSE Mathematics students of class XI.



VI FINDINGS OF THE STUDY

The following major findings are reported.

- There is significant difference between the mean score of the school culture in M.P. Board and CBSE Mathematics students of class XI.”
- There is no significant difference between the mean score of the academic motivation in government M.P. Board and non government M.P. Board students of Mathematics of class XI.”
- There is no significant correlation of school culture on the academic motivation of M.P Board mathematics students of class XI.
- There is significant correlation of school culture on the academic motivation of CBSE mathematics students of class XI.

The administrator or the management of the school creates and tries to sustain the schools environment that is then perceived as good or bad by the students. The study does indicate a positive correlation between accomplishment and mission dimension of school culture and motivation.

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VII CONCLUSION

School culture and Academic motivation of Madhya Pradesh Board Mathematics student of Class XI, in many Government Madhya Pradesh Board schools it was found that middle school mathematics teachers were teaching higher classes (X, XI), Part time teachers, guest teachers were taking classes, it results in a poor state of facility provided by the school, later on it results in a bad situation where the performance of the children of mathematics of Class XI was not up to the mark. Described the way motivation of a student is shaped by the school psychological environment.