

Learning Motivation

A Frame of Reference for Seating Preference and Academic Achievement

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Abstract: Mastery learning in a classroom is one of the many goals of every committed teacher. However, transforming the status of this priority from a dream to reality, calls for seating students in a conducive manner, so as to draw out the best in each of them. The access to different resources and increased monitoring provided by sitting at the front of the class is known to provide students with an added edge over those occupying the rear seats. Learning motivation could be a forerunner of academic achievement, as students who are intrinsically inspired to learn would aim for higher grades. The present study attempted to evaluate the factors responsible for students' seating choices and sought to analyze whether their preferred positioning had any association with their learning motivation and academic achievement. The sample comprised of 407 students of the secondary section of an English medium S.S.C. school in Mumbai. The Seating Preference Scale and Learning Motivation Scale were administered to collect the required data. Results indicated that front and middle benchers secured better grades academically and had higher learning motivation compared to the back benchers. Further, their seating preference was governed by learning motivation, thus proving that they are intrinsically driven to academic success. This study could have beneficial implications in evolving smart classrooms wherein academic performance would inevitably improve by sparking off enthusiasm in students. In this manner educators could usher in an era where students yearn to learn and score better grades in turn.

Index Terms - Academic Achievement, Learning Motivation, Physical Needs, Seating Preference, Social Orientation.

I. INTRODUCTION

An extensive body of research exists regarding the delivery of course content in the teaching-learning process with little or no emphasis on the performance effect of seating position within a classroom. A student's position with respect to the entrance, distance from the blackboard and teacher, and accessibility to aisles, may affect the student's educational performance. Kathleen Wulf (1977) examined the relationship of seating location, GPA, and several other factors. For the purpose of the analysis, the room was divided into zones and several rows near the front formed the action zone. An outside observer recorded the extent and nature of student participation. The analysis revealed that the mean performance (responses, GPA, or class grade) of the students across rows or across zones varied. Students in the action zone had higher response rates, higher class grades, and higher GPAs. The research supports the hypothesis that the better students are likely to be found near the front of the classroom. Increased involvement in learning tasks or communication with the teacher has the ability to promote learning. Higher participation levels can then lead to higher academic achievement. These traits are commonly represented in students who desire to sit closer to the front of the classroom. In more recent research (Marshall and Losonczy-Marshall, 2010; Mercincavage and Brooks, 1990; Pedersen 1974) there has been a shift away from traditional attitudes towards education psychology. Shao-Bei and Qulin (2011) found that the students in more central areas were equally as motivated and achieved grades on a par with students who sat in the front of class. According to Taglioacollo et al. (2010), achievement has led teachers to move students closer to the chalkboard with a view toward raising their grades, but that outcome may not always be realized. The study suggested that motivation to learn is the mediating factor between seat position and student academic achievement, and hence there exists no direct effect of seat position on student academic performance. The present study sought to analyse whether positioning of young students in the classroom is associated with academic performance, as well as to diagnose factors like learning motivation which could be involved in such association. It also shed light on the factors governing students' seating preference. The results of such an endeavor could well serve to fill existing lacunae in the area of classroom dynamics and bring about the much awaited renaissance in the field of academics.

II. AIM AND OBJECTIVES

The aim of the study was to assess the likely impact of Students' Seating Preference on Classroom Dynamics. The objectives were as follows:

- To identify students' seating preferences in a classroom (i.e. front, middle or back benchers).
- To classify the predominant reason (i.e. physical needs, learning motivation or social orientation) for seating preference.
- To compare the academic achievement and learning motivation of students based on their seating preferences.

- To ascertain the combined relationship of seating preference of students with their academic achievement and learning motivation.

III. HYPOTHESIS

The following null hypothesis was formulated for the study:

There is no significant combined relationship of seating preference of students with their academic achievement and learning motivation.

IV. RESEARCH METHODOLOGY

The research design employed was descriptive and included a survey. Moreover, the present study is of the co-relational type because it sought to study the combined relationship of the mentioned variables with seating preference.

4.1 Population and Sample

The sample comprised of 407 students of the secondary section (standards V to IX) of a private-aided English medium school in Mumbai, affiliated to the S.S.C Board of Education selected by the convenience sampling technique.

4.2 Data and Sources of Data

At first, the researcher obtained the permission of school authorities to conduct the study. Data were kept confidential and all ethical principles of conducting research were followed. The Seating Preference Scale and the Learning Motivation Scale were administered to the students after explaining instructions clearly.

- The Seating Preference Scale comprised of 2 parts.
 - a. A classroom map providing a diagrammatic representation of the physical layout of the classroom. The students were asked to indicate their preference for a seat on the same.
 - b. A 4 point Likert scale comprising of 21 items related to 3 dimensions governing seating preference, namely, Physical Needs, Learning Motivation and Social Orientation.
- The Learning Motivation Scale comprised of a 5 point Likert Scale with twenty statements relating to the students' motivation to learn.
- The Academic Achievement Score comprised of the grand total obtained by each student in his/her First Terminal Examination. These marks were procured from the respective class teacher.

4.3 Theoretical framework

Academic Achievement and Seating Preference were the dependent variables and Learning Motivation was the predictor/independent variable. The operational definitions of the key terms included in this study have been given below.

1. **Seating Preference:** The consistent fondness of a student for a given seat in the class based entirely on his/her personal choice.
2. **Front Bencher:** A student who by personal choice consistently prefers to occupy the benches situated closer to the front of the classroom.
3. **Middle Bencher:** A student who by personal choice consistently prefers to occupy the benches situated between the front and rear sections of the classroom.
4. **Back Bencher:** A student who by personal choice consistently prefers to occupy the benches situated at the rear end of the classroom.
5. **Physical Needs:** A student's requirement for material comforts ranging from space, lighting, ventilation and acoustics.
6. **Social Orientation:** The manner in which a student bonds/interacts/adapts or reacts to the teacher or other students in a classroom situation.
7. **Learning Motivation:** The enthusiasm of a student to remain focused on a given academic activity and to achieve the goal in question.
8. **Academic Achievement:** The accomplishment of the student in a given subject in terms of the number of marks scored by him/her in the school examinations.

4.4 Statistical Analysis

- **Descriptive analysis:** It included the summary of the number of students in each category of seating preference and the percentage of students governed by the three dimensions of seating preference. The magnitude of the variables Academic Achievement and Learning Motivation were also computed and tabulated.
- **Inferential Statistics:** As this study focused on determining the relationship between seating preference, academic achievement and learning motivation, a correlational research design was chosen where data were analyzed using regression analysis. The One Way ANOVA was employed to compute whether the measurement of the variables differed significantly between groups. When P value was less than 0.05, the difference was considered statistically significant and highly significant when P-value was less than 0.01 and 0.0001.

V. RESULTS AND DISCUSSION

5.1 Results of Descriptive Statistics of Study Variables

Table 1 provides a summary of the number of front, middle and back benchers comprising the total sample as indicated by the students on the classroom map.

Table 1

Summary of the Front, Middle and Back Benchers Comprising the Total Sample

SEATING PREFERENCE	NUMBER OF STUDENTS
Front Benchers	152
Middle Benchers	121
Back Benchers	134
Total Sample Size	407

Table 2 summarizes the Percentage of Students Governed by the 3 Dimensions of Seating Preference.

Table 2

Percentage of Students Governed by the 3 Dimensions of Seating Preference

Governing Dimension of Seating Preference	Number Of Students	Percentage
Physical Needs	50	12.29
Learning Motivation	278	68.30
Social Orientation	79	19.41

Table 3 shows the magnitude of the variables of the study

Table 3

Magnitude of the Variables of the Study

VARIABLE	GROUP	MEAN	PERCENT MEAN	MAGNITUDE
Academic Achievement	Front Benchers	394.03	78.80	SUBSTANTIAL
	Middle Benchers	385.40	77.08	SUBSTANTIAL
	Back Benchers	348.16	69.63	SUBSTANTIAL
Learning Motivation	Front Benchers	78.45	73.06	SUBSTANTIAL
	Middle Benchers	74.45	68.06	SUBSTANTIAL
	Back Benchers	71.60	64.5	SUBSTANTIAL

From Table 3 it can be concluded that Mean % Academic Achievement and Learning Motivation were the highest for Front Benchers, followed by Middle Benchers and then Back Benchers respectively.

5.2 Results of Inferential Statistics of Study Variables

Table 4 shows the inter-correlations between Seating Preference, Academic Achievement and Learning Motivation.

Table 4

Inter-correlations between Seating Preference, Academic Achievement and Learning Motivation

	Seating Preference	Academic Achievement	Learning Motivation
Seating Preference	1	0.209	0.3
Academic Achievement	0.209	1	0.273
Learning Motivation	0.3	0.273	1

The multiple regression equation is of the general form

$Y = a + b_1X_1 + b_2X_2 + \dots + b_kX_k$ where 'a' is the starting point constant analogous to the intercept in a simple two-variable regression, and b_1, b_2, \dots are the unstandardized regression weights for x_1, x_2 etc. each analogous to the slope in a simple two-variable regression. In the present analysis $a = 60.4606$ and the values of b are as indicated below. The values listed as B are the standardised regression weights.

	B	B	B X R _{XY}
X ₁	2.9059	0.2541	0.0762
X ₂	0.0229	0.2202	0.0602
Multiple R ² = 0.1364			
Adjusted Multiple R ² = 0.1321			
Standard Error of Multiple Estimate			8.9082

Table 5 shows the ANOVA summary for the given data.

Table 5
ANOVA Summary of the Variables of the Study

SOURCE	SS (SUMS OF SQUARES)	DF (DEGREES OF FREEDOM)	MS (MEAN SQUARES)	F	P
Regression	5089.678	2	2544.839	31.91	< 0.0001
Residual	32218.3122	404	79.7483		
Total	37307.9902	406			

Interpretation: The null hypothesis states that there is no significant combined relationship of seating preference of students with their academic achievement and learning motivation. However, the high F and low p values ($p < 0.0001$) observed in Table 5 indicate that the null hypothesis is discredited. Thus it can be asserted that seating preference, academic achievement and learning motivation are significantly related.

5.3 Discussion: An analysis of the results obtained in Table 3 indicate that the academic achievement and learning motivation of front benchers is comparatively higher than that of middle and back benchers; though the difference between front and middle benchers is minimal. This suggests that the front and middle sections of the classroom are more conducive to learning in terms of both enthusiasm and performance, while back benchers lag behind. This finding is substantiated by the results in Table 1 and Table 2 which suggest that 278 students' seating preference was governed by learning motivation of which 273 of them were front and middle benchers. This implies that learning motivation is a determining factor of seating preference which in turn could affect academic achievement. This potential role of learning motivation has significant practical implications for teachers to usher in an educational renaissance in the field of academics.

Weinstein (1985) and Grump (1987) reported that personality and behavior of the students influence their choice of seat. Although the seat position can motivate, or disincentive the student for learning, students' interest for learning may also affect the position they choose in the classroom. The present study included an analysis on students' reasons for choosing a seat at the class. Such an analysis revealed that students at the front position are significantly more motivated for learning and score higher academically too. A parsimonious conclusion is that a students' motivation is the driving force behind seat choice. Learning-motivated students prefer be closer to the teacher. The findings in Table 4 indicate that the Inter-correlation coefficient of Learning motivation and Seating Preference is 0.3 which is higher than that of Academic Achievement and Learning Motivation which is 0.273. The relationship between Seating Preference and Academic Achievement is the lowest i.e. 0.209. This implies that Learning Motivation is a key determinant of seating preference and is also associated with academic performance.

5.4 Research Implications

Thus it follows that rotation of seats alone does not enhance academic achievement. Teachers must focus on building the intrinsic motivation of students so that they are stimulated to learn and thus achieve higher grades at school. Since the front and middle benchers display a higher level of Learning Motivation as compared to back benchers, it follows that a periodic rotation of seats in the classroom would provide all learners with the opportunity of occupying the front sections of the classroom; creating in them the desire to be involved in classroom interaction and activities. Special efforts need to be made by a classroom teacher to integrate the back benchers into the teaching-learning process so that they do not feel 'left out'. Tittle (1997) claims that students

seated in the rear sections of the class “experience a kind of anxiety that is related to test anxiety, fear of negative evaluation, and communication apprehension”. They also consider themselves as ‘not so smart’ students. They may have high intelligence but lack confidence in their ability to complete tasks successfully. If they lack confidence, they will approach learning challenges with dread. Low self-confidence is another reason why these ‘backbenchers’ behave the way they do. By sitting at the back they think they would be safe from being noticed by the teacher. Instructors can have significant impact on levels of student motivation. In the case of the ‘backbenchers’, teachers should create a sense of competence in these students as this could boost up their self-confidence. Increasing learners’ self-confidence is critical to maintaining motivation. In classroom learning it is natural for learners to have the tendency to get tired or bored and succumb to an attractive distraction. Therefore, the teacher should use her tact to foster approaches that could create a climate of learning and let go of some aspect of power to encourage ‘fun’ in the classroom (Hall, 2004). Biehler and Snowman (1990) suggested that students seem to respond more positively when their feelings and opinions are taken into account, and when they are invited to participate in making decisions. This action could also create some ‘fun’ in the classroom.

According to Thanasoulas (2002), when students have positive learning environment where they feel comfortable, they become motivated and begin to grow academically, socially as well as emotionally. In the case of the ‘backbenchers’, the instructor should permit students to sit wherever they feel comfortable and relaxed rather than confining them to fixed positions where they tend to be stressed. What needs to be emphasized is that the learning process takes place uninterrupted and these students participate in the class discussion and activities. It is important that the instructors envision and create a classroom climate that is conducive to learning. As anxious students are unlikely to develop motivation to learn, it is important that learning occurs within a relaxed and supportive atmosphere (Good and Brophy, 1994).

VI. CONCLUSION

Learning Motivation has a likely role in enhancing academic achievement as students perform better when they set internal standards for themselves in their success story. They are stimulated to occupy seating positions in the classroom which ensure they pay undivided attention to the teaching-learning process and participate whole-heartedly. Back benchers deserve added consideration from teachers so that they are made to feel important and involved in class. This would serve to boost their self-motivation and step up their academic scores. Seating position alone has no impact on academic performance, but coupled with Learning Motivation it can balance the equation of academic success.

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