

A Comparative Study of Motivation and Learning Strategies Between Public and Private University Students of Bangladesh

*Quamrul H. Mazumder and Kawshik Ahmed
Mechanical Engineering
University of Michigan-Flint, USA
qmazumde@umflint.edu*

Abstract

Motivational Strategy and Learning Questionnaire (MSLQ) is an assessment tool to evaluate the learning approaches used by students. A comparative study of motivation and learning strategies was conducted between public and private universities of Bangladesh. A total of 164 students from 143 private and 21 students from public university students participated in this study. The MSLQ survey questionnaire consists of 18 categories using six motivation scales and nine learning strategy scales. Descriptive statistics and independent sample t- test of student responses showed a significant difference in one motivational scale. No significant difference was observed in learning strategies between students of these two groups. Significant difference was also observed between male and female students in private universities in two motivational strategy scales. There was no significant difference between male and female students in public students of Bangladesh.

Introduction

Extensive research evidence has shown that motivation and learning strategies significantly affect student-learning outcomes. A comparative study of motivation and learning strategies among different public and private universities helps to develop a better understanding of how diverse cultural backgrounds and experiences shape students learning, and thus help to develop appropriate pedagogy and course curriculum to maximize students learning outcomes in different institutions. Such a comparative study is particularly meaningful and important now as online and distance education expands rapidly across national borders to reach a global audience.

A total of 164 students from eight (8) private universities and two (2) public universities in Bangladesh participated in this study. This survey is a 115- item self- reporting instrument for students to assess their motivational orientations and their use of different learning strategies in a college course. The 115- items of MSLQ survey includes nine motivation scales (61 items) and six learning strategy scale (31 items). Each item can be rated form 1 to 7. Descriptive statistics and independent sample t- test are performed to analyze students' response with the help of SPSS.

Hypothesis

- There is no significant difference between public and private universities in Bangladesh.

Literature Review

The MSLQ is based on a general thought process pointing to the motivation and learning strategy. In an effort to address the multifaceted concept of learning, Pintrich, Smith, Garcia and McKeachie designed the Motivational Strategy and Learning Questionnaire^[1]. Self-regulated learning is a dimensional construct that contains at least three aspects. Those aspects include, but are not limited to cognition, individual motivation and goal directed behavior^{[2][3][4]}. A strategy is the process (or sequence of processes) that, when matched to the requirement of the task facilitates performance^[5]. Self-regulation strategies include but not limited to self-evaluation, seeking information, organizing and transforming information, goal setting and planning, record keeping and self-monitoring, environmental structuring, self-consequences, persistence, rehearsing and memorizing, seeking assistance, and reviewing notes, tests or textbooks^{[5][6][7][8]}^[9]. Most dispositional and situational variables influence students' motivation individually and inter- activity. Because motivation and learning are so interrelated^[10], researchers regularly seek better understanding of the differential effects of various classroom variables on students' motivation to learn^[11].

Learning strategies are also differs student to student as well as teachers. There is significant relationship between self-regulated strategy and achievement^[12]. Among the undergraduate student classes, rehearsal is used for the primary study strategy and effort regulation is used by the students for increasing the understanding of the course taught by the faculty^[13]. Motivational strategies are closely related to the grades of the university students. However, the most robust factors for motivation and learning strategies could be self-efficacy and effort regulation. The most powerful factor for freshmen and upper class student was self-efficacy^[14]. Because of the perceived beneficial nature, intrinsically motivated students are more mastered on the course material. Task relevancy is closely associated with intrinsic motivation of the students, whereas, control beliefs and self-efficacy both of them are on the top motivational group^[15]. The failure rate of the university students of South Africa as well as the other countries are very high and factors behind the succeeded needs to be explored. Extrinsic goal orientation, task value, control of learning beliefs, and self-efficacy factors are came out in the high ranked for the motivational strategy^[16].

Research Methodology

Questionnaire

There was 115 questions including motivational and learning strategy and each questions was rated in a scale of 1- 7. Rating was designed from not important to very important including neutral option. There were 18 different categories including 9 categories from Motivation, which summed up 61 questions and 6 categories from Learning Strategy consisting of 31 questions.

The Data

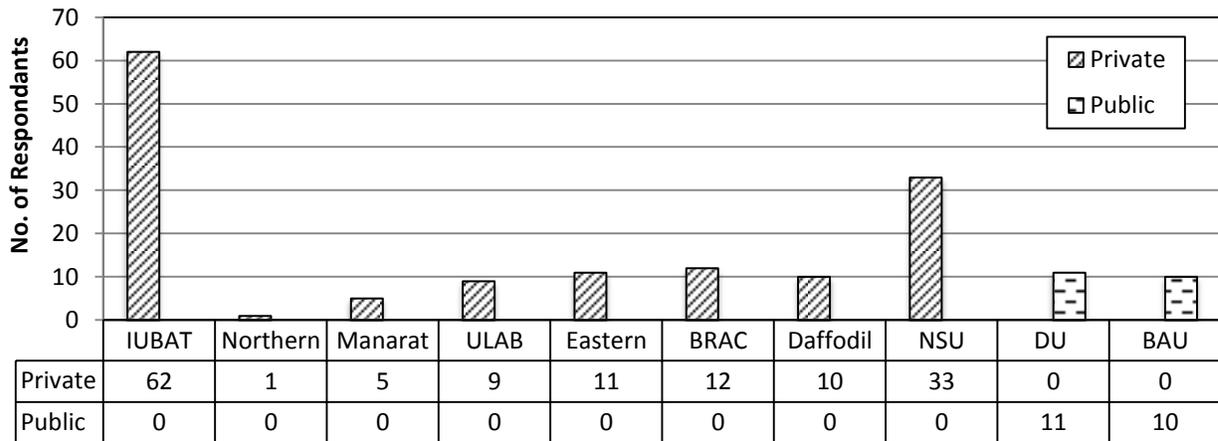


Figure 1: Number of Respondents Reported by Students

A total of 164 students participated in this study. Among them 143 students are from eight private universities and 21 students are from 2 public universities. Figure 1 represents that the distribution of respondents in each of the public and private universities. From figure 1, it is clear that most of the respondents from private universities are from IUBAT and NSU. There was only one respondents were found in Northern university. The number of respondents from two public universities is almost equal.

Table 1: Gender Information for Participants

University Type	Male	Female	Not Respondents
Private	87	51	3
Public	13	6	2
Total	100	57	7
Percent	61%	35%	4%

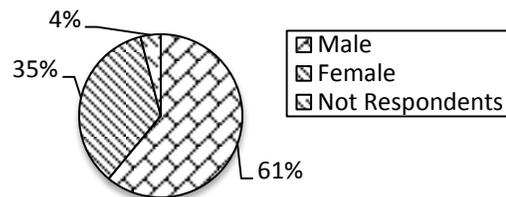


Figure 2: Gender Information for Participants

Table 1 and Figure 2 represent the gender distribution of the respondents. There were more male participants responded in the survey than female. There is 61% respondents are male and 35% respondents are female and about 4% respondents didn't provide their gender information.

Procedure

SPSS software was use to analyze the data. Independent sample t-tests were conducted to determine the mean values of 18 categories among students. The purposes of this test were to determine if there is a significant difference in public and private universities regarding those 18

categories. Results of the independent sample t-tests were then summarized in tables by dividing into two groups, descriptive statistics and t-test.

Results

After obtaining the data from SPSS we can summarize some tables. Table 2 shows the result of descriptive statistics for the hypothesis and table 3 shows the independent sample t-tests respectively for each MSLQ scale. Negative t- score means that the Mean score of private universities are lower than the public universities (refer to table 3).

The scales in which statistically significant differences ($P < 0.05$) exist between public and private universities of Bangladesh are highlighted. Size effect (SE) is also listed in the last column in each of the table of independent sample t- test. SE is calculated as:

$$\text{Size Effect} = \sqrt{\frac{t^2}{t^2 + df}} \quad (1)$$

Table 2: Descriptive Statistics for Public and Private Universities

Categories	MSLQ Scales	Private		Public	
		Mean	SD	Mean	SD
Motivation	Rehearsal	5.29	1.12	5.73	0.76
	Elaboration	5.21	1.13	5.48	0.78
	Organization	5.17	1.24	5.63	0.60
	Critical Thinking	5.03	1.06	5.15	0.63
	Metacognitive Self-regulation	4.87	0.97	4.97	0.65
Learning Strategy	Intrinsic Goal Orientation	5.06	1.38	5.30	0.69
	Extrinsic Goal Orientation	5.18	1.38	5.20	1.17
	Task Value	5.43	1.20	5.60	0.75
	Control of learning	5.30	1.31	5.51	0.94
	Self-efficacy	5.21	1.17	5.17	0.69
	Test Anxiety	4.62	1.43	4.78	1.36
Motivation	Time/Study Management	4.98	0.98	5.00	0.70
	Effort Regulation	4.90	1.10	4.73	1.02
	Peer learning	5.19	1.23	4.95	1.15
	Help seeking	4.67	1.10	4.42	0.76
Other	Theory of intelligence	4.44	1.48	3.99	1.57
	Achievement goal Questionnaire	5.11	1.14	4.96	0.83
	Percentage of Instrumentality	4.91	1.13	4.76	0.87

Table 2 shows the descriptive data for the public and private university students. It represents the differences for mean in each of the items for public and private universities. The higher mean values differences indicate the significant difference in public and private

universities. For example, in the organization scale, the mean value for private is 5.17 and for public is 5.63. There is a difference between these two values but we can only say that this is significant after evaluating t-test results.

Table 2 also showing the Standard Deviation (SD) which emphasizes that how much variation or dispersion is occurred for each of the category from the average or mean value. A low standard deviation indicates that the data points tend to be very close to the mean. A high standard deviation indicates that the data points are spread out over a large range of values. As we can see from table 2, almost all the categories for private universities, values are more spreader than public universities ($SD > 1$). This pointed out that the responses from private university students fluctuate more than the public university students. It was noted that responses from public university students varies ($SD > 1$) only on four categories- Extrinsic Goal Orientation, Test Anxiety, Peer learning, Theory of intelligence.

Table 3: Independent Sample t- test for Public and Private Universities

Categories	MSLQ Scales	t	df	p	SE
Motivation	Rehearsal	-1.73	162	0.09	0.13
	Elaboration	-1.04	162	0.30	0.08
	Organization	-2.71	50	0.009	0.36
	Critical Thinking	-0.73	39	0.47	0.12
	Metacognitive Self- regulation	-0.48	162	0.63	0.04
Learning Strategy	Intrinsic Goal Orientation	-1.23	48	0.22	0.17
	Extrinsic Goal Orientation	-0.06	162	0.95	0.00
	Task Value	-0.65	162	0.51	0.05
	Control of learning	-0.68	162	0.49	0.05
	Self-efficacy	0.29	39	0.77	0.03
	Test Anxiety	-0.49	162	0.62	0.04
Motivation	Time/Study Management	-0.04	162	0.96	0.01
	Effort Regulation	0.61	162	0.54	0.05
	Peer learning	0.92	162	0.36	0.06
	Help seeking	1.31	33	0.20	0.22
Others	Theory of intelligence	1.31	162	0.19	0.10
	Achievement goal Questionnaire	0.59	162	0.55	0.05
	Percentage of Instrumentality	0.59	162	0.55	0.05

Table 3 represents the summary of the t- test output for hypothesis 1. For finding the significant differences between public and private universities we found in table 3 that there is a significant difference in one of the motivational category (organization).

The significance (p) value of “organization” is 0.009, which is less than 0.05 ($p < 0.05$). As we can see from table 3 that, for “organization”, the t-value is negative and much smaller than other MSLQ scales, which means that the mean value for private universities is lower than

public universities in “organization” scale. It can be predicted that public university students are more organized than private university students.

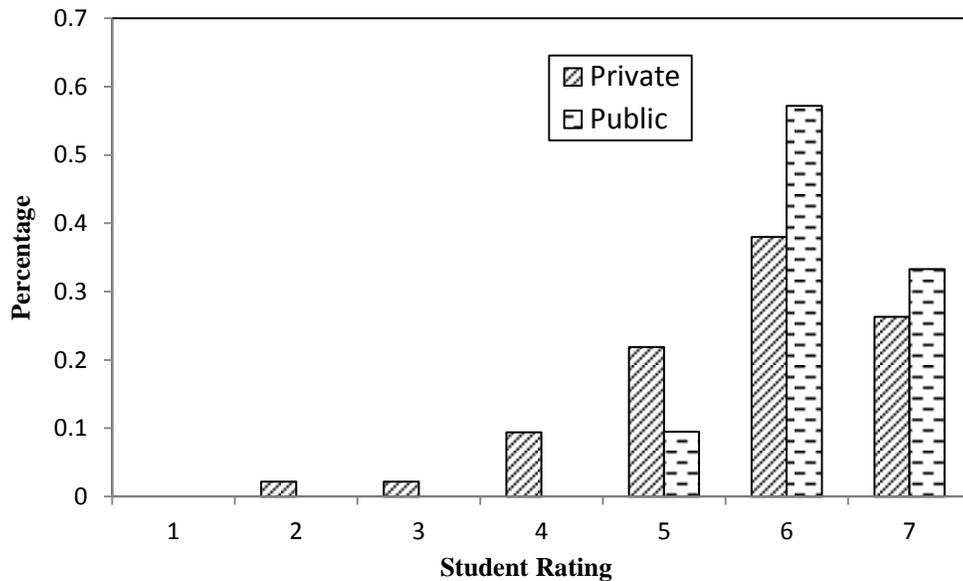


Figure 3: Comparison of Organization Skills of Public and Private Universities

As a representative sample, figure 3 shows the comparison of histogram for organization category between public and private university students of Bangladesh. As seen clearly that, a higher percentage of public students provided higher ratings for their organization skills than private university students. The number of students is responded from public universities are very low compared to private universities. We might be get better result if the number of respondents from public universities getting higher.

Conclusion

Based on the data collected from 164 students from eight private universities and two public universities of Bangladesh, it is noticed that there is a statistically significant differences between public and private students in organization scale. It is also clear that there is a significant difference between male and female students of private university students in two learning strategy scale- time/study management and help seeking.

References

- ¹ Pintrich, Paul R., Smith, David A. F., Garcia, Teresa & McKeachie, Wilbert J (1991). “ A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ)”
- ² Pintrich, Paul R. (1995). Understanding self-regulated learning. *New directions for teaching and learning*, (63), 3-12.
- ³ Zimmerman, B. J., & Paulsen, A. S. (1995). Self-monitoring during collegiate studying: An invaluable tool for academic self-regulation. *New directions for teaching and learning*, 1995(63), 13-27.
- ⁴ McKeachie, W. J., Pintrich, P. R., & Lin, Y. G. (1985). Teaching learning strategies. *Educational Psychologist*, 20(3), 153-160
- ⁵ Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of educational psychology*, 81(3), 329.
- ⁶ Zimmerman, B. J., Bonner, S., & Kovach, R. (1996). *Developing self-regulated learners: Beyond achievement to self-efficacy*. American Psychological Association
- ⁷ Zimmerman, B. J. (1986). Becoming a self-regulated learner: Which are the key subprocesses? *Contemporary educational psychology*, 11(4), 307-313.
- ⁸ Howard-Rose, D., & Winne, P. H. (1993), “Measuring Component and Sets of Cognitive Processes in Self-Regulated Learning”. *Journal of Educational Psychology*, 85, 591 -604.
- ⁹ Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of educational psychology*, 82(1), 33.
- ¹⁰ Schunk, D. H., & Pintrich, P. R. (2002). *Motivation in education: theory, research, and applications* 2nd ed.; United States of America: Merrill.
- ¹¹ Deci, E.L. & Ryan, R. M. (2002) ‘The Paradox of Achievement: The Harder You Push, the Worse it Gets’, in J. Aronson (ed.) *Improving Academic Achievement: Contributions of Social Psychology*, pp. 59–85. New York: Academic Press.
- ¹² Lewis, Joel P., Litchfield, Brenda C. (2011), “Effects of Self Regualted Learning Strategies on Preservice Teachers in an Educational Technology Course”, *Education*, 455- 464, *Education Full Text* (H.W. Wilson), Print, 12 sep 2013.
- ¹³ Samms, Chevanese L., Friedel, Curtis R.. (2012), “Relationship Between Dissimilar Cognitive Styles and Use of Learning Strategies in Undergraduate Students”. *Academy of Educational Leadership Journal*, 113-130, *Education Full Text* (H.W. Wilson), Print, 12 Sep 2013.
- ¹⁴ Lynch, D. J. (2006).Motivational Factors, Learning Strategies and Resource Management as Predictors of Course Grades”. *College Student Journal*, 40(2).
- ¹⁵ Quible, Z. (2006). Analysis of the Motivational Orientation of and Learning Strategies used by Students in a Written Business Communication Course. *Delta Pi Epsilon Journal*, 48(3).
- ¹⁶ Watson, M., McSorley, M., Foxcroft, C., & Watson, A. (2004). Exploring the motivation orientation and learning strategies of first year university learners. *Tertiary Education & Management*, 10(3), 193-207