

Motivational Effects on Attention to Class Participation

Amineh Danaee¹, Atiyeh Familifard²

¹Young Researchers Club, Garmsar Branch, Islamic Azad University, Garmsar, Iran

²Semnan Branch, Islamic Azad University, Semnan, Iran

Abstract: It is challenging for the teachers to gain and maintain their students' attention to maximize learning potential. It is assumed that our personal goals and motivational environment determine our attention on a task. However, we still know little about the relationship between underlying cognitive processes and different types of motivation. The purpose of this paper is to examine the effects of motivation on attention to class participation. This study will test learners in two different motivational conditions, and then measure their levels of attention to participation. In the first stage, 50 university students will be tested under lab conditions to establish the relationship between motivational types and attention measures. In the second stage, 50 university students in a classroom setting. Students at the laboratory conditions retain better levels of participation attention, so this would suggest that teachers should focus on using this type of motivation.

[Amineh Danaee, Atiyeh Familifard. **Motivational Effects on Attention to Class Participation.** *J Am Sci* 2018;14(7):50-57]. ISSN 1545-1003 (print); ISSN 2375-7264 (online). <http://www.jofamericanscience.org>. 8. doi:[10.7537/marsjas140718.08](https://doi.org/10.7537/marsjas140718.08).

Key words: motivation; attention; class participation; university students

Introduction

Turner and Patrick (2004) stated that participation in lessons facilitates learning. Students can participate overtly in a number of ways, including offering their ideas and thoughts spontaneously, volunteering to answer questions, answering questions when called on, demonstrating at the chalkboard, talking to peers or the teacher about tasks, and completing written work. Students may also participate without these behavioral indicators of involvement by watching, listening, and thinking. In the current study we focus on observable participation.

Participation, as a valuable work habit, has a lot of advantages. It provides students with opportunities to learn and practice new knowledge and strategies, to explain their reasoning, and to examine their thinking processes and recognize the need to revise thinking. It also allows teachers a window into student thinking processes and learning, allows them to diagnose learning problems or evaluate student progress, and provides teachers an opportunity to scaffold, or provide cognitive and affective supports, for students' understanding (Turner and Patrick, 2004).

Despite these benefits, participation varies among students, and for some opportunities to learn do not arise. Important factors regarding whether students participate include students' motivation to learn and the kinds of environments and supports for participation offered through classroom instruction.

Smith (200) presented the Motivation Questionnaire (MQ). The report provided a way of analyzing how your motivation style along with people's personality and abilities may be influencing their current job performance. Use the results

alongside their organization's competency framework to identify their strengths and areas where further development would improve their performance.

The study conducted by Tuner and Patrick (2004) examined how one type of student work habit—classroom participation—is related to a combination of both student factors (math achievement, personal achievement goals, perceptions of classroom goal structures, and teacher support) and features of the classroom context (teachers' instructional practices, average perceptions of classroom goal structures). They focused on the participation of two students in mathematics class during both sixth and seventh grades. Differential teacher expectations, calling patterns, and instructional and motivational support and nonsupport interacted with beliefs and behaviors of both students, and those interactions were associated with different patterns of participation each year. Results suggest that student participation is malleable rather than stable and emphasize the potential of teacher practices to both support and undermine the development of student work habits.

Findings from the study of Smith (2008) indicated that club members were motivated to participate in club sports for a number of reasons because of the four motivational factors that were analyzed in their study, competency-mastery resulted in the primary reason subjects participated in campus club sports. The competence-mastery motivational statements were the highest ranked factors for 59 participation. Upon analysis of the social motivations for participation among gender, it was found that females generally indicated higher mean scores than

males specified for statements regarding building relationships with others in their clubs.

In our research, we focused on the effect of motivation on attention to participation. We assumed that by providing a motivating environment in a laboratory, we can help students develop more participation desire. This environment will help some smart students, who do not develop productive work habits, as well as students with lower achievement. We hope that our good teachers, who fail to engage some students, can develop strong motivation.

Method

Participants

100 university students were the participants of this study. 50 of them were located at the laboratory and another 50 in the class. They were among freshmen and sophomores. A motivation questionnaire was conducted that was extracted from Smith (2004)'s study. While Smith (2004) applied the questionnaire in a work place, we utilized it to check a sample of university students' motivation.

Instrumentation and Data collection procedures

A Motivation Questionnaire (MQ) was used to help teachers understand and explore the conditions that will tend to increase or reduce students' enthusiasm and motivation. This reports five motivation factors - Drive, Control, Challenge, Relationships and Rewards.

Drive section contained four Statement. Control, Challenge and Relationships sections contain four, three, three and two questions respectively. There were 15 statements. The questionnaire was based in a Likert scale (Likert, 1932) *lower, average, and higher*.

It was given to two experts to check the content of the questions and the correlation was significant. Then, the reliability of the questionnaire was examined after giving it to five students, so Cronbach's alpha showed the reliability of the questionnaire. When validity and reliability of the questionnaire were checked, it was handed to main participants after the experiment.

Data analysis

NPar tests are conducted to make sure that the distribution of data in the samples is normal.

Table1. One-Sample Kolmogorov-Smirnov Test (laboratory)

		Drive	Control	Challenge	relationships	Rewards
N		50	50	50	50	50
Normal Parameters ^{a,b}	Mean	10.3600	9.8200	7.4200	4.8000	4.9600
	Std. Deviation	1.04511	1.06311	.94954	.88063	.66884
	Absolute	.190	.200	.209	.238	.324
Most Extreme Differences	Positive	.175	.200	.191	.238	.296
	Negative	-.190	-.166	-.209	-.174	-.324
Kolmogorov-Smirnov Z		1.342	1.412	1.480	1.684	2.290
Asymp. Sig. (2-tailed)		.054	.037	.025	.007	.000

Table2. One-Sample Kolmogorov-Smirnov Test (class)

		Control	Challenge	relationships	rewards	Drive
N		50	50	50	50	50
Normal Parameters ^{a,b}	Mean	6.5800	4.9600	3.0400	3.3000	6.1800
	Std. Deviation	1.08965	.83201	.80711	.70711	1.06311
	Absolute	.183	.221	.260	.264	.186
Most Extreme Differences	Positive	.183	.221	.260	.264	.186
	Negative	-.170	-.219	-.220	-.239	-.180
Kolmogorov-Smirnov Z		1.292	1.561	1.837	1.869	1.319
Asymp. Sig. (2-tailed)		.071	.015	.002	.002	.062

According to both samples of class and laboratory and Kolmogorov and Smirnov, it can be said that all the elements which are related to the questionnaire except the element of *reward* in the laboratory sample have a normal distribution. Although the distribution of sample is not normal for

every question, it is proper for a collection of questions that constitutes an element.

Presuppositions of parametric test could be applied to refer to independency of data. For that, the sign test is used. By putting median as our basis, we could determine the sign.

Table 3. Runs Test (laboratory)

	Drive	Control	Challenge	relationships	Rewards
Test Value ^a	10.00	10.00	7.00	5.00	5.00
Cases < Test Value	10	21	8	21	10
Cases >= Test Value	40	29	42	29	40
Total Cases	50	50	50	50	50
Number of Runs	17	32	11	28	20
Z	.000	1.948	-1.862	.775	1.356
Asymp. Sig. (2-tailed)	1.000	.051	.063	.439	.175

According to bidirectional level, independency of data could be concluded.

Table 4. Runs Test 2 (laboratory)

	Drive	Control	Challenge	relationships	Rewards
Test Value ^a	10.3600	9.8200	7.4200	4.8000	4.9600
Cases < Test Value	27	21	26	21	10
Cases >= Test Value	23	29	24	29	40
Total Cases	50	50	50	50	50
Number of Runs	30	32	28	28	20
Z	1.197	1.948	.584	.775	1.356
Asymp. Sig. (2-tailed)	.231	.051	.559	.439	.175

Table 5. Runs Test 3 (laboratory)

	Drive	Control	Challenge	relationships	Rewards
Test Value ^a	10.00	9.00	8.00 ^b	4.00	5.00
Cases < Test Value	10	5	26	2	10
Cases >= Test Value	40	45	24	48	40
Total Cases	50	50	50	50	50
Number of Runs	17	9	28	5	20
Z	.000	-.825	.584	.339	1.356
Asymp. Sig. (2-tailed)	1.000	.409	.559	.734	.175

Table 6. Runs Test (class)

	Drive	Control	challenge	relationships	Rewards
Test Value ^a	6.00	7.00	5.00	3.00	3.00
Cases < Test Value	16	24	15	13	6
Cases >= Test Value	34	26	35	37	44
Total Cases	50	50	50	50	50
Number of Runs	21	26	19	24	11
Z	-.580	.011	-1.025	1.405	-.390
Asymp. Sig. (2-tailed)	.562	.991	.306	.160	.696

According to bidirectional covering level, independency of data in class sample could be concluded.

Table 7. Runs Test 2 (class)

	Drive	Control	challenge	relationships	Rewards
Test Value ^a	6.1800	6.5800	4.9600	3.0400	3.3000
Cases < Test Value	30	24	15	37	30
Cases >= Test Value	20	26	35	13	20
Total Cases	50	50	50	50	50
Number of Runs	23	26	19	22	25
Z	-.596	.011	-1.025	.658	.000
Asymp. Sig. (2-tailed)	.551	.991	.306	.511	1.000

Table 8. Runs Test 3 (class)

	Drive	Control	challenge	Relationships	Rewards
Test Value ^a	5.00	7.00 ^b	5.00	3.00	3.00
Cases < Test Value	1	24	15	13	6
Cases >= Test Value	49	26	35	37	44
Total Cases	50	50	50	50	50
Number of Runs	3	26	19	24	11
Z	.204	.011	-1.025	1.405	-.390
Asymp. Sig. (2-tailed)	.838	.991	.306	.160	.696

Table 9. Tests of Between-Subjects Effects: Drive (class)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	55.380 ^a	4	13.845	.	.
Intercept	1435.998	1	1435.998	.	.
q1	11.653	1	11.653	.	.
q2	10.066	1	10.066	.	.
q3	10.976	1	10.976	.	.
q4	12.456	1	12.456	.	.
Error	.000	45	.000		
Total	1965.000	50			
Corrected Total	55.380	49			

Table 10. Tests of Between-Subjects Effects: Control (class)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	58.180 ^a	7	8.311	.	.
Intercept	402.206	1	402.206	.	.
q5	17.913	2	8.956	.	.
q6	14.909	2	7.454	.	.
q7	14.726	2	7.363	.	.
q8	10.434	1	10.434	.	.
Error	.000	42	.000		
Total	2223.000	50			
Corrected Total	58.180	49			

Table 11. Tests of Between-Subjects Effects: Challenge (class)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	33.920 ^a	4	8.480	.	.
Intercept	310.164	1	310.164	.	.
q9	11.836	1	11.836	.	.
q10	8.200	1	8.200	.	.
q11	15.958	2	7.979	.	.
Error	.000	45	.000		
Total	1264.000	50			
Corrected Total	33.920	49			

Table 12. Tests of Between-Subjects Effects: Relationship (class)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	31.920 ^a	3	10.640	.	.
Intercept	175.462	1	175.462	.	.
q12	16.050	2	8.025	.	.
q13	11.644	1	11.644	.	.
Error	.000	46	.000		
Total	494.000	50			
Corrected Total	31.920	49			

Table 13. Tests of Between-Subjects Effects: Rewards (class)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	24.500 ^a	3	8.167	.	.
Intercept	184.151	1	184.151	.	.
q14	13.578	2	6.789	.	.
q15	12.282	1	12.282	.	.
Error	.000	46	.000		
Total	569.000	50			
Corrected Total	24.500	49			

There is an interaction between variables and questions related to them that all support homogeneity hypothesis of regression slope; however, homogeneity multiplication has no difference with adjusted homogeneity coefficient. Therefore, there is no increase in the independent variable and estimated

amount in the data. Its being one means that there is complete homogeneity between independent variables (questions) and dependent variables (their related elements).

Frequency tables of the laboratory sample are as follows:

Table 14. Frequency table: Drive

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 8.00	2	4.0	4.0	4.0
9.00	8	16.0	16.0	20.0
10.00	17	34.0	34.0	54.0
11.00	16	32.0	32.0	86.0
12.00	7	14.0	14.0	100.0
Total	50	100.0	100.0	

Table 15. Frequency table: Control

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 8.00	5	10.0	10.0	10.0
9.00	16	32.0	32.0	42.0
10.00	14	28.0	28.0	70.0
11.00	13	26.0	26.0	96.0
12.00	2	4.0	4.0	100.0
Total	50	100.0	100.0	

Table 16. Frequency table: Challenge

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 5.00	1	2.0	2.0	2.0
6.00	7	14.0	14.0	16.0
7.00	18	36.0	36.0	52.0
8.00	18	36.0	36.0	88.0
9.00	6	12.0	12.0	100.0
Total	50	100.0	100.0	

Table 17. Frequency table: Relationships

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 3.00	2	4.0	4.0	4.0
4.00	19	38.0	38.0	42.0
5.00	16	32.0	32.0	74.0
6.00	13	26.0	26.0	100.0
Total	50	100.0	100.0	

According to the tables and their comparison, the amount of repetition, frequency and center of data gravity in the laboratory is average or especially higher in the questions while the sample of class is opposite.

Table 18. Frequency table: Rewards

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 3.00	1	2.0	2.0	2.0
4.00	9	18.0	18.0	20.0
5.00	31	62.0	62.0	82.0
6.00	9	18.0	18.0	100.0
Total	50	100.0	100.0	

Changing and heterogeneity range was more in class compared with the laboratory. Similarly, distribution is more in lower and average level. For example, the two groups of relationship and control

have less heterogeneity while they are homogeneous and balanced in the laboratory.

Frequency tables of class sample are as follows:

Table 19. Frequency table: Drive

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 4.00	1	1.0	2.0	2.0
5.00	15	14.7	30.0	32.0
6.00	14	13.7	28.0	60.0
7.00	14	13.7	28.0	88.0
8.00	6	5.9	12.0	100.0
Total	50	49.0	100.0	
Missing System	52	51.0		
Total	102	100.0		

Table 20. Frequency table: Control

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 4.00	1	1.0	2.0	2.0
5.00	6	5.9	12.0	14.0
6.00	17	16.7	34.0	48.0
7.00	17	16.7	34.0	82.0
8.00	8	7.8	16.0	98.0
10.00	1	1.0	2.0	100.0
Total	50	49.0	100.0	
Missing System	52	51.0		
Total	102	100.0		

Table 21. Frequency table: Challenge

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 3.00	1	1.0	2.0	2.0
4.00	14	13.7	28.0	30.0
5.00	22	21.6	44.0	74.0
6.00	12	11.8	24.0	98.0
7.00	1	1.0	2.0	100.0
Total	50	49.0	100.0	
Missing System	52	51.0		
Total	102	100.0		

Table 22. Frequency table: Relationships

	Frequency	Percent	Valid Percent	Cumulative Percent
	2.00	13	12.7	26.0
	3.00	24	23.5	48.0
Valid	4.00	11	10.8	22.0
	5.00	2	2.0	4.0
	Total	50	49.0	100.0
Missing	System	52	51.0	
Total		102	100.0	

In each of the above tables that are related to the elements, we can observe frequency, that is, the repetition of each factor of three levels in the questions, frequency of congestive percent or percent

of a level of people in two samples that is lower or higher than a definite number, and relative frequency that shows the data of frequency part more indicative.

Table 23. Frequency table: Rewards

	Frequency	Percent	Valid Percent	Cumulative Percent
	2.00	6	5.9	12.0
	3.00	24	23.5	48.0
Valid	4.00	19	18.6	38.0
	5.00	1	1.0	2.0
	Total	50	49.0	100.0
Missing	System	52	51.0	
Total		102	100.0	

Discussion and Results

Drive

The Drive factor covers four personality dimensions that can increase or reduce a person's motivation at work - Activity, Achievement, Competition and Fear of Failure. Students that experienced the laboratory conditions stated higher activity rate, confessing that they were on a go and had a lot to do. The classroom conditions indicated a lower rate of activity. The Achievement part was at an average level for both samples. This can show both samples could demand responsibilities and new challenges. The competition part showed higher results in the laboratory and average results in class, so students in the laboratory believed that they worked in a competitive environment and strived for the best. Classroom conditions developed higher fear of failure because they let themselves down and would not be able to prove others.

Control

Due to not being able to see each other at the laboratory, the students exercised more power than being in class as if they could have more responsibility for people. The students in both samples were more recognized while students felt more important in the laboratory. Regarding the last point of this part, namely, ethics, both groups have the same idea in that

both could work in accordance with ethical standard and personal principles, so they rated it higher.

Challenge

At the laboratory, students proved to be interested, having creative work activities. They were less under pressure and could predict more progress. They could show higher flexibility as well. The answers of the laboratory sample were mainly around higher for this section. However, the class sample demonstrated average results for this part.

Relationships

Teamwork or operating as part of a team and management or supervising other people's task was higher in the laboratory sample.

Rewards

The students who spent their experience at the laboratory stated that they had more freedom and discretion to decide how to carry out their task. Meanwhile, the opportunities to acquire new knowledge and skills to grow professionally in the future was noticed to be average in both samples.

Conclusion

The aim of this study was to see the effect of motivational aspects in attention to participation. A motivation questionnaire was selected from Smith (2004) to examine the level of motivation after the

experiment. It was checked for reliability and validity, then it was handed to a sample of university students.

The results can be affected by students' strategy for answering the questionnaire - whether this was conscious or unconscious. This assessment is intended to help teachers clarify their view and help them to develop and achieve personal growth. However, mostly, students declared the positive aspect of the experiment.

The findings implied that if we can recognize the factors that motivate students and improve their attention, teachers will be able to alter their approaches accordingly to help keep their students' attention for longer and lead to more active participation. If students in one condition retain better levels of participation attention, this would suggest

that teachers should focus on using this type of motivation.

References

1. Turner, J.C. & Patrick, H. (2004). Motivational influences on student participation in classroom learning activities. *Teachers College Record*, 1759-1785.
2. Smith, B.D. (2008). Motivational factors for participation in collegiate club sports at Indiana University. Retrieved June 14, 2014 from <https://www.indiana.edu/~rpaross/proposal-smith.pdf>
3. Smith, J. (2004). Motivation questionnaire. Retrieved June 14, 2014 from www.Myskillsprofile.com.

Appendix

Motivation Questionnaire

Lower	Average	Higher	Motivation Dimension	
			Activity: Having a lot to do, being on the go, staying busy all the time.	Drive
			Achievement: Demanding responsibilities and new challenges.	
			Competition: Working in a competitive environment, striving to be the best, wanting	
			Fear of Failure: Not wanting to let self and others down, being able to prove others	
			Power: Being in charge, exercising control, having responsibility for people and	Control
			Recognition: Acknowledgment by bosses and colleagues of efforts, skills and competencies.	
			Status: Deriving standing and feelings of importance from work and job seniority.	
			Ethics: Working in accordance with ethical standards and personal principles.	
			Interest: Varied, stimulating and creative job objectives and work activities	Challenge
			Flexibility: Accommodating working conditions.	
			Progression: Opportunity to continually advance to more senior positions.	
			Teamwork: Operating as part of a team rather than as an individual contributor.	Relationships
			Management: Supervising other people's tasks, performance and personal	
			Autonomy: Freedom and discretion to decide how to carry out work.	Rewards
			Growth: Opportunities to acquire new knowledge and skills, reach personal	

7/25/2018