

Motivation and Learning Strategies of Students in Turkey

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ABSTRACT

The purpose of the study is to compare the level of motivation and strategies on two different groups of students in Turkey. One group of students consists of all four level (freshmen to senior) in the public universities and all four level in the private universities. Random sampling was conducted concentrating on a total number of 152 freshmen, sophomore, junior, and senior students. The study used a motivated strategy learning questionnaire (MSLQ) with 18 categories. Six categories were motivation, and 9 learning strategy scales. The responses of students were analyzed based on an independent T-test. The results indicated that there is a significant difference between the types of universities (public/private) in multiple items of motivational strategy. Additional comparisons such as gender (male vs female) and year level (freshmen and sophomore vs junior and senior) showed that a significant differences exist respectively. Results of this study may be used towards development of appropriate plan of actions to improve quality in higher education.

INTRODUCTION

Due to the race for technological advancement, it is imperative for students to retain as much information as they can from the classroom. Not only is the retention of the information important, but one must also have an in-depth understanding of what is going on in the presented teaching. Essentially, students must learn how to learn, while responding to endlessly changing technologies and social, economic, and global conditions (Barron & Darling-Hammond, 2008). This can all be linked to two things, how the information is being relayed to the students and how the students prepare themselves for in-class works and exams.

While old fashioned learning relied solely on pure memorization, recent studies have shown that students who engage in self-regulated learning monitor their own progress toward self-set goals and are therefore able to reflect on the effectiveness of their learning approaches (Credé & Philips, 2011). When

compared with students who doubt their learning capabilities, those who feel efficacious for learning or performing a task participate development of academic self-efficacy more readily, work harder, persist longer when they encounter difficulties, and achieve at a higher level (Schunk & Pajares, 2002 cited by Meral, Colak, & Zereyak, 2012).

HYPOTHESIS

To evaluate motivation and learning strategies of high school students and university students, two hypotheses were examined in the current work.

1. There is no significant difference in learning strategies between public and private university students in Turkey.
2. There is no significant difference in learning strategies between males and females in both college and high school level students in Turkey.
3. There is no significant difference in learning strategies between students at a freshman/sophomore level versus a junior/senior level standing in Turkey.

LITERATURE REVIEW

Motivated Strategies for Learning is a complex construct that has inspired innumerable research in recent years (Feiz, Hooman & Kooshki, 2013). One of the major aspects looked at includes self-regulation. Self-regulation refers to processes that learners use to activate and maintain cognitions, emotions, and behaviors to attain personal goals. These goals enable learners to create self-oriented feedback loops to monitor their effectiveness and to adapt their functioning (Zimmerman & Kitsantas, 2014). Self-regulation can help researchers in various motivated strategy learning questionnaires.

Self-regulation is seen as situation specific, and self-regulated learning can therefore be used to explain why one student performs better on an academic task than another student (Credé & Philips, 2011). However, it can also be used to compare the works of students academically. The motivational strategies in which students learn and retain information reflect on their overall performance in the classroom. The most key factors to this are potentially that of self-regulation and efficacy. Studies such as this can be used by professors to better understand how their students learn their teachings, allowing

them to alter the way they relay information to their pupils. Therefore, showing an increase in test scores as a result.

RESEARCH METHODOLOGY

Questionnaire:

The Motivated Strategies for Learning Questionnaire (MSLQ) is a self-report instrument designed to assess college students' motivational orientations and their use of different learning strategies for a college course (Pintrich, Smith, Garcia & McKeachie, 1991). While the original version of the survey included only 15 categories, the survey presented here has a total of 18. Changes in the questionnaire are to be expected as “the MSLQ has been under development formally since 1986” (Pintrich, Smith, Garcia & McKeachie, 1991).

The presented questionnaire (see APPENDIX A) is divided into 18 categories, including: Rehearsal, Elaboration, Organization, Critical Thinking, Meta-cognitive self-regulation, Intrinsic Goal Orientation, Extrinsic Goal Orientation, Task value, Control of learning, Self-efficacy, Test Anxiety, Time/Study Management, Effort Regulation, Peer learning, Help Seeking, Theory of intelligence, Achievement Goal Questionnaire, and Percentage of Instrumentality. Each one of these categories is then divided into sub-categories in which students were asked to rank their level of confidence in each area. The ranking system varied from 1-7 with 1 being the least confident and 7 being the most.

Participants:

The only group considered in this survey were those pursuing a degree in the engineering field. There were a total of 78 students that participated in the survey from a combination of public and private universities in Turkey. Of these 78 students 31 came from public universities, 47 from private, a total of 16 males and 62 females. Figure 1 shows that there was a total of 20.15% male respondents and 79.49% female. A change was noted between freshman/sophomore students to junior/senior standing students, therefore the classes were added together respectively to better understand any changes in learning. There was a total of 51 freshman/sophomore students and 27 junior/senior standing students from combined public and private universities.

Student respondents were from the following public universities: Selçuk, Firat, Marmara, Cumhuriyet, Erciyes, and Istanbul University. The only private university with feedback from students was Fatih

University; however, this single private university contributed to over half of the presented data, having a total of 47 respondents when compared to the 78 total. Although this is such a small sample size, the results could not be controlled. Surveys were given to each of the engineering students in the given universities, and only 78 were returned.

Table 1: Gender Information for Participants

University Type	Male	Female
Public	9	22
Private	7	40
Total	16	62
Percentage	20.51%	79.49%

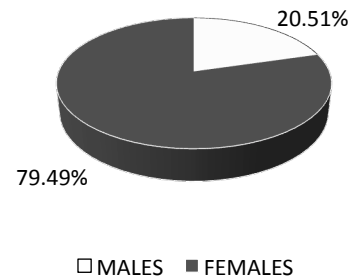


Figure 1: Gender by Percentage

Table 2 and Figure 2 represent the distribution of students, with there being 65% freshman/sophomore students and 35% junior/senior standing students.

Table 2: School Year Information for Participants

	Freshman/Sophomore	Junior/Senior
Public	18	14
Private	33	13
Total	51	27
Percentage	65.38%	34.62%

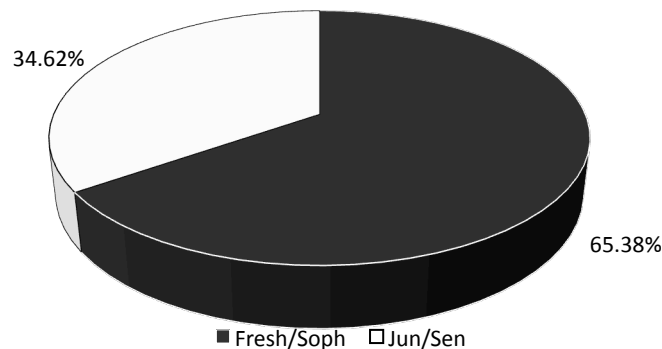


Figure 2: Percentage of Students by Year

This survey was given to a number of students from public and private universities in Turkey. As shown in the graph below, there were several more students who attend a private school that responded to the survey. In total there were 78 respondents; 31 of which attend public universities and 47 attend private universities.

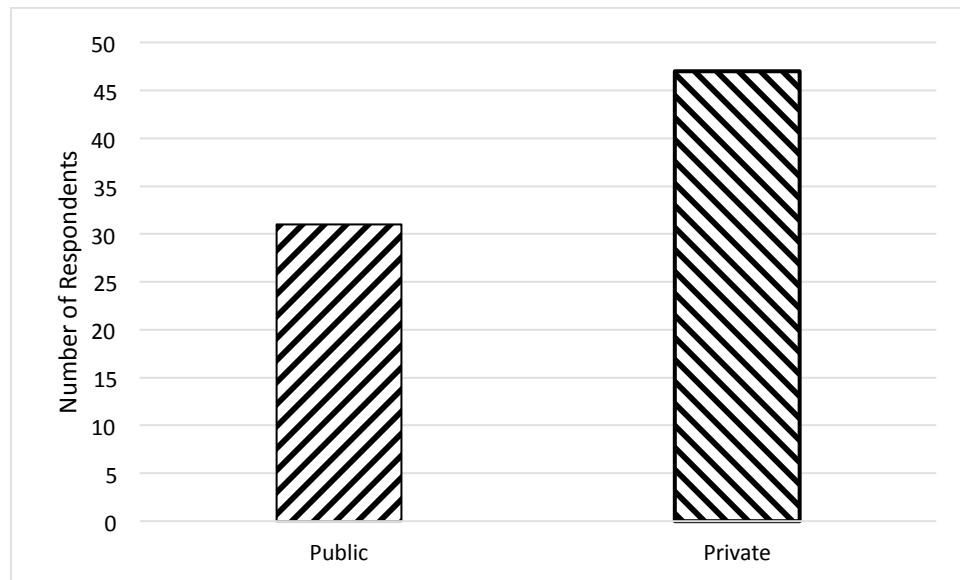


Figure 3: Respondents by Institution

DATA ANALYSIS/PROCEDURE

IBM SPSS 22 ® software was used to perform the Independent sample T-test. Both were used to determine the mean values of 18 categories among students. The purposes of this test were to determine if there are significant differences in learning. The following categories were grouped and compared:

- ✓ Public and private universities regarding those 18 categories.
- ✓ Male and female respondents
- ✓ Freshmen/sophomores and juniors/seniors.

RESULTS

Results of statistical analyses are summarized in descriptive and independent t-test in Tables 3, 4, 5, 6, 7 & 8. Tables 3 & 4 show the result of descriptive statistics first hypothesis and independent sample t- test respectively for each MSLQ scale. Independent sample t – test (Table 4) showed that private and public university students have a significant difference in Organization. The average mean resulted in a slightly higher value (5.86) for private university while the public university's mean was 5.71 (Table 3). Additionally, significant differences were observed in Test Anxiety and Achievement Goal Questionnaire with p-values ($p=0.001$ and $p=0.00$) lower than alpha level of 0.05 respectively.

Table 3: Descriptive statistics for Institution Types

		Group Statistics			
School Type		N	Mean	Std. Deviation	Std. Error Mean
Organization	Public	31	5.71	1.39	.25
	Private	47	5.86	.88	.12
Test Anxiety	Public	31	3.24	1.34	.24
	Private	47	3.65	1.70	.24
Achievement Goal Questionnaire	Public	31	5.40	.56	.10
	Private	47	5.08	1.07	.15

Independent sample t-Test results suggest that students in private universities in Turkey have higher Test Anxiety compared to their fellow students in public universities (Table 3). However, public university students have higher level of goal achieving motivations (Goal Achievement ($p=0.00$) Mean Public =5.40 > Mean Private = 5.08) than public university students.

Table 4: t-Test results for Institution Types

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Organization	Equal variances assumed	13.19	0.00	-0.58	76.00	0.57	-0.15	0.26	-0.66	0.36
	Equal variances not assumed			-0.53	45.78	0.60	-0.15	0.28	-0.72	0.42
Test Anxiety	Equal variances assumed	6.87	0.01	-1.13	76.00	0.26	-0.41	0.36	-1.14	0.32
	Equal variances not assumed			-1.18	73.41	0.24	-0.41	0.35	-1.10	0.28
Achievement Goal Questionnaire	Equal variances assumed	15.75	0.00	1.55	76.00	0.12	0.33	0.21	-0.09	0.74
	Equal variances not assumed			1.75	72.94	0.08	0.33	0.19	-0.05	0.70

Tables 5 and 6 below illustrate the descriptive statistics for Male and Female students both in private and public universities. The t-Test results showed that four categories resulted in significant difference between males and females in Extrinsic Goal Orientation, Self-Efficacy, Peer Learning and Theory of Intelligence (Table 6).

Table 5: Descriptive statistics for Gender

		Group Statistics			
Gender		N	Mean	Std. Deviation	Std. Error Mean
Extrinsic Goal Orientation	Male	16	5.31	0.74	0.19
	Female	62	4.89	1.36	0.17
Self-Efficacy	Male	16	5.08	0.55	0.14
	Female	62	5.23	1.17	0.15
Peer Learning	Male	16	4.49	0.76	0.19
	Female	62	4.36	1.34	0.17
Theory of Intelligence	Male	16	4.65	0.91	0.23
	Female	62	4.00	1.62	0.21

Descriptive statistic and Independent Sample t-Test results (Table 5 & 6) illustrate that the Male students have significantly higher extrinsic goal orientation (Male Mean=5.31> Female Mean=4.89) than female students both in public and private universities. Significant difference between genders in Self-Efficacy ($p=0.03$) shows that Female students believe in their own capacity more than male students (Mean Female=5.23>Mean Male=5.08). This is validated with Peer Learning category, where male students depend on their peers more than their female fellow students (Male Mean=4.49>Female Mean=4.36). Additionally, male students have higher Theory of Intelligence with mean = 4.65 compared to female students, whose Theory of Intelligence Mean resulted in 4.00 (Table 5).

Table 6: t-Test results for Gender

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Extrinsic Goal Orientation	Equal variances assumed	6.09	0.02	1.17	76.00	0.24	0.42	0.35	-0.29	1.12
	Equal variances not assumed			1.64	44.17	0.11	0.42	0.25	-0.09	0.93
Self-Efficacy	Equal variances assumed	4.62	0.03	-0.50	76.00	0.62	-0.15	0.30	-0.75	0.45
	Equal variances not assumed			-0.74	52.52	0.46	-0.15	0.20	-0.56	0.26
Peer Learning	Equal variances assumed	7.11	0.01	0.37	76.00	0.71	0.13	0.35	-0.57	0.83
	Equal variances not assumed			0.51	41.96	0.61	0.13	0.26	-0.39	0.65
Theory of Intelligence	Equal variances assumed	4.51	0.04	1.54	76.00	0.13	0.65	0.42	-0.19	1.49
	Equal variances not assumed			2.11	42.50	0.04	0.65	0.31	0.03	1.27

Table 7: Descriptive statistics for Class/Year Level

		Group Statistics			
Class		N	Mean	Std. Deviation	Std. Error Mean
Elaboration	Freshmen/Sophomore	51.00	5.52	0.70	0.10
	Junior/Senior	27.00	5.46	1.34	0.26
Critical Thinking	Freshmen/Sophomore	51.00	5.59	0.73	0.10
	Junior/Senior	27.00	5.25	1.41	0.27
Meta Cognitive Self-Regulation	Freshmen/Sophomore	51.00	4.86	0.68	0.10
	Junior/Senior	27.00	4.65	1.04	0.20
Time Study Management	Freshmen/Sophomore	51.00	4.91	0.74	0.10
	Junior/Senior	27.00	4.53	1.14	0.22
Help Seeking	Freshmen/Sophomore	51.00	4.21	0.95	0.13
	Junior/Senior	27.00	3.66	0.52	0.10

The authors observed significant difference in various categories in motivational learning between class levels in both private and public universities (Table 7 & 8). Five categories (Elaboration, Critical Thinking, Meta Cognitive Self-Regulation, Time Study Management and Help Seeking) suggest that freshmen and sophomore students have significantly different learning motivations compared to junior and senior students. Table 7 shows that Freshmen/Sophomore students have higher mean values in all categories except in Time Study Management. This could mean that higher level students have a better understanding and control over the optimal utilization of their studying time. Freshmen and sophomore students tend to seek more help than junior and senior students (Table 7). Additionally, freshmen and sophomore students relate their class material to the readings while they study for the classes.

Table 8: t-Test results for Class/Year Level

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Elaboration	Equal variances assumed	10.38	0.00	0.23	76.00	0.82	0.05	0.23	-0.40	0.51
	Equal variances not assumed			0.19	33.70	0.85	0.05	0.27	-0.51	0.61
Critical Thinking	Equal variances assumed	15.93	0.00	1.36	76.00	0.18	0.33	0.24	-0.15	0.81
	Equal variances not assumed			1.14	33.58	0.26	0.33	0.29	-0.26	0.92
Meta Cognitive Self-Regulation	Equal variances assumed	7.22	0.01	1.10	76.00	0.27	0.22	0.20	-0.17	0.61
	Equal variances not assumed			0.97	37.98	0.34	0.22	0.22	-0.23	0.67
Time Study Management	Equal variances assumed	5.12	0.03	1.77	76.00	0.08	0.38	0.21	-0.05	0.80
	Equal variances not assumed			1.56	37.89	0.13	0.38	0.24	-0.11	0.87
Help Seeking	Equal variances assumed	5.51	0.02	2.79	76.00	0.01	0.55	0.20	0.16	0.94
	Equal variances not assumed			3.30	75.89	0.00	0.55	0.17	0.22	0.88

SUMMARY AND CONCLUSION

The study revealed important information about two groups of students. Significant differences were observed in multiple categories for male/female, freshmen/sophomore/junior/senior for both public and private universities. The results indicated female students believe the material to be more relevant and useful to other classes compared to students at an individual class level standing. Freshmen and sophomore students also have higher recognition of class material as relates to their learning and academic success.

Female students showed higher self-efficacy, higher theory of intelligence, higher extrinsic goal orientation compared to male students. Whereas, male students are more active in peer learning to improve their learning process.

From the data collected, one can see that higher level students are more motivated and better learners than freshmen/sophomore students and female students showed higher levels of motivation towards academic success. Although the results of the gender and class standing groups were clear, the population of students interviewed was too few to get a good understanding of the public/private university group. In further tests a larger population of engineering students will used to get a better understanding of this specific group of students.

APPENDIX A

Name of University:		Public Univ. <input type="checkbox"/> / Private Univ. <input type="checkbox"/>						
Male <input type="checkbox"/> / Female <input type="checkbox"/>		Class: I Year <input type="checkbox"/> / II Year <input type="checkbox"/> / III Year <input type="checkbox"/> / IV Year <input type="checkbox"/>						
Department:								
1. Rehearsal		Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
a. When I study, I practice saying the material to myself over and over								
b. When studying for classes, I read my class notes and the course reading over and over								
c. I memorize key words to remind me of important concepts when I study								
d. When I study, I make lists of important terms and memorize the lists.								
2. Elaboration								
a. When I study for this class, I pull together information from different sources such as lectures, reading and discussions								
b. I try to relate ideas in one subject to those in other courses whenever possible.								
c. When reading for classes, I try to relate the material to what I already know								
d. When I study, I write brief summaries of the main ideas from the readings and the concepts from the lectures								
e. I try to understand the material in classes by making connections between the readings and the concepts from the lectures								
f. I try to apply ideas from course readings in other class activities such as lecture and discussion.								
3. Organization								
a. When I study the readings for a class, I outline the material to help me organize my thoughts.								
b. When I study, I go through the readings and my class notes and try to find the most important ideas								
c. I make simple charts, diagrams, or tables to help me organize course material.								
d. When I study, I go over my class notes and make an outline of important concepts								
4. Critical Thinking								
a. I often find myself questioning things I hear or read in this class to decide if I find them convincing.								

b. When a theory, interpretation or conclusion is presented in the class or in reading, I try to decide if there is good supporting evidence.							
c. I treat the course material as a starting point and try to develop my own idea about it.							
d. I try to play around with ideas of my own related to what I am learning in a class							
e. Whenever I read or hear an assertion or conclusion in classes, I think about possible alternatives.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
5. Metacognitive self-regulation							
a. During class time I often miss important points because I am thinking of other things.							
b. When reading for this course, I make up questions to help me focus on my reading.							
c. When I become confused about something I am reading for this class, I go back and try to figure it out.							
d. If course readings are difficult to understand, I change the way I read the material							
e. Before I study new course material thoroughly, I often skim it to see how it is organized.							
f. I ask myself questions to make sure I understand the material I have been studying for this class.							
g. I try to change the way I study in order to fit the course requirements and the instructor's teaching style.							
h. I often find that I have been reading for this class but don't know what it was all about.							
i. I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying for this course.							
j. When studying for this course, I try to determine which concepts I don't understand well							
k. When I study for this class, I set goals for myself in order to direct my activities in each study period.							
l. If I get confused taking notes in class, I make sure I sort it out afterwards							
6. Intrinsic Goal Orientation							
a. I prefer course material that really challenges me so I can learn new things.							
b. I prefer course material that arouses my curiosity,							

even if it is difficult to learn.							
c. The most satisfying thing for me in classes is trying to understand the content as thoroughly as possible.							
When I have the opportunity, I chose course assignments that I can learn from even if they don't guarantee a good grade.							
7. Extrinsic Goal Orientation							
a. Getting a good grade is the most satisfying thing for me right now							
b. The most important things for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.							
c. If I can, I want to get better grade in this class than most of the other students.							
I want to do well in this class because it is important to show my ability to my family, friends, employer or others.							
8. Task value	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
a. I think I will be able to use what I learn in this course in other courses.							
b. It is important for me to learn the material in this class.							
c. I am very interested in the content area of this course							
d. I think the material in this class is useful for me to learn							
e. I like the subject matter of this course							
f. Understanding the subject matter of this course is very important to me.							
9. Control of learning							
a. If I study in appropriate ways, then I will be able to learn the material in this course.							
b. It is my own fault if I don't learn the material in this course.							
c. If I try hard enough, then I will understand the course material.							
d. If I don't understand the course material, it is because I dint try hard enough.							
10. Self-efficacy							
a. I believe I will receive an excellent grade in this class							
b. I am certain that I can understand the most difficult material presented in the readings for this course.							

c. I am confident that I can understand the basic concepts taught in this course.							
d. I am confident that I can understand the most complex martial presented by the instructor in this course.							
e. I am confident that I can do an excellent job on the assignments and tests in this course.							
f. I expect to do well in this class.							
g. I am certain that I can master the skills being taught in this class.							
h. Considering the difficulty of this course, the teacher and my skills, I think I will do well in this class.							
11. Test Anxiety							
a. When I take a test, I think about how poorly I am doing compared with other students.							
b. When I take a test, I think about the items on other parts of the test I can't answer.							
c. When I take the tests I think of the consequences of failing.							
d. I have an uneasy, upset feeling when I take an exam							
e. I feel my heart beating fast when I take my exam.							
12. Time/Study Management							
a. I usually study in a place where I can concentrate on my course work							
b. I make good use of my study time.							
c. I find it hard to stick to a study schedule							
d. I have a regular place set aside for studying							
e. I make sure I keep up with the weekly readings and assignments for my courses							
f. I attend class regularly							
g. I often find that I don't spend very much time on school work because of other activities.							
h. I rarely find time to review my notes or readings before an exam	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
13. Effort Regulation							
a. I often feel so lazy or bored when I study that I quit before I finish what I planned to do.							
b. I work hard to do well even if I don't like what we are doing.							
c. When course work is difficult, I give up or only study the easy parts.							
d. Even when course materials are full and							

uninteresting, I manage to keep working until I finish								
14. Peer learning								
a. When studying for a class, I often try to explain the material to a classmate or a friend.								
b. I try to work with other students to complete the course assignments								
c. When studying for a class, I often set aside time to discuss the course material with a group of students from the class.								
15. Help Seeking								
a. If I were having trouble understanding the material in my course, I would ask someone who could help me understand the general ideas.								
b. The purpose of asking somebody for help in my course would be to succeed without having to work as hard								
c. I would prefer asking another student for help in my courses rather than ask an instructor								
d. If I don't understand something in my course, I would guess rather than ask for assistance.								
e. Even if the work was too hard to do on my own, I wouldn't ask for help with my course.								
f. Getting help would be one of the first things I would do if I were having trouble in my courses								
g. Getting help in my courses would be a way of avoiding doing some of the work.								
h. I would feel like a failure if I needed help in my courses.								
i. I would rather do worse on an assignment I couldn't finish than ask for help								
j. If I were to seek help in my courses I would ask the teacher rather than another student.								
k. I would get help in my courses to learn to solve problems by myself								
l. If I were to ask for help in my courses it would be to quickly get the answer I need.								
m. I would not want anyone to find out that I needed help in my courses								
n. Getting help in my courses would be an admission that I am just not smart enough to do the work on my own								
o. In my course, the teacher would be better to get help from than another student.								

16. Theory of intelligence	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
a. You have a certain amount of intelligence and you really can't do much to change it							
b. Your intelligence is something about u that you can't change very much							
c. You can learn new things but you can't really change your basic intelligence.							
17. Achievement Goal Questionnaire							
a. My aim is to completely master the material presented in this class							
b. I am striving to do well compared to other students.							
c. My goal is to learn as much as possible.							
d. My aim is to perform well relative to other students							
e. My aim is to avoid learning less than I possible could							
f. My goal is to avoid performing poorly compared to others							
g. I am striving to understand the content of this course as thoroughly as possible							
h. My goal is to perform better than the other students							
i. My goal is to avoid learning less that it is possible to learn							
j. I am striving to avoid performing worse than others							
k. I am striving to avoid an incomplete understanding of the course material							
l. My aim is to avoid doing worse than other students.							
18. Percentage of Instrumentality							
a. I will use the information I learn in my math class in other classes I will take in the future.							
b. What I learn in my math class will be important for my future occupational success							
c. The grade I get in my math class will not affect my ability to continue on with my education							
d. I will not use what I learn in my math class							
e. What grade I get in my math class will not be important to my future academic success							
f. I will use the information I learn in my math class in the future							
g. I must pass my math class in order to reach my academic goals							
h. The grade I get in my math class will affect my future.							

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