

## An Application of the Self-Determination Theory - Academic Motivations of the First-Year University Students for Two Successive Years

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### Abstract

The Self-Determination Theory argues that motivation is a function of the ability of the individual to regulate his/her activities intrinsically, extrinsically or in an amotivated fashion. This theory has found widespread acceptance in almost all fields of endeavor including education. For measuring the extent of the Self Determination Theory in education, the Academic Motivation Scale (AMS) was constructed. This application borrows from the theory the three levels – intrinsic, extrinsic and amotivation, all measurable by AMS. The purpose of the current study is to investigate the academic motivations of the two separate populations of the first- year- students using this scale. Statistical procedures such as descriptive statistics, ANOVA and t-tests were used for analyzing data. The effects of gender, different faculties and different years are explored. As the results indicate that students are more oriented towards external stimulations than the intrinsic values, conversion of such a mind-set to intrinsic self-regulation is recommended.

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**Keywords:** intrinsic, extrinsic , amotivation , self-determination , academic motivation scale

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### INTRODUCTION

As have been born out by the fecundity of relevant theories, the fact that motivation has a potent influence on human behavior has long been recognized by psychologists and educators (Ryan & Deci, 2000a). Without that influence, individuals would be less likely to persist in face of challenge and the students would be less likely to wrestle with their studies. Given choices, individuals may engage in activities that they find inherently satisfying or they may prefer activities instrumental to their or activities for which they perceive they are adequately equipped to handle successfully or activities they have previously been successful in. More specifically, among theories of motivation about education, probably one of the most renowned is the self-determination theory (Deci & Ryan, 1985). This theory claims that motivation is a function of freedom of choice, meaning that motivation may increase or decrease in intensity according to the extent to which behavior is volitional.

### Self-Determination Theory

Self-determination theory is a complex approach designed to explain motivation and personality (Deci & Ryan, 1985). The approach is based on three premises of the Basic Needs Theory, Cognitive Evaluative Theory, and Organismic Integration Theory. Basic Needs Theory assumes that human behavior is guided by three fundamental needs which are the needs for competence, autonomy and relatedness (Deci & Ryan, 2001 ; Reeve, Deci, & Ryan, 2004). Self-determination theory asserts that in

order to maintain psychological well being, all of these three basic needs should be adequately met.

Cognitive Evaluation Theory assumes that people have a natural need for self-determination (Deci & Ryan, 1985). From this perspective; an individual's motivation depends upon his or her ability to guide or control his or her own behavior. Therefore, environments that fulfill students' needs for competence, autonomy and relatedness may be regarded as self-determining environments, those that impede them represent controlling environments (Hardre & Reeve, 2003; Reeve, Deci, & Ryan, 2004).

Third premise is the Organismic Integration Theory which recognizes that human behavior is not always purely intrinsically driven and also that extrinsically motivated behaviors could be converted to intrinsic through the developmental processes of internalization and regulation.

### Intrinsic and Extrinsic Motivation

One key aspect of self-determination theory is its portrayal of human motivation along a continuum ranging between two extremes of intrinsic to extrinsic (Reeve, Deci, & Ryan, 2004). Intrinsic motivation is observed in individuals who are engaged in an activity or behavior for its own sake because the activity is inherently fulfilling to them (Deci & Ryan, 2001). For example, students who are intrinsically motivated to learn would probably engage in learning-related activities even in the absence of perceived rewards. That intrinsically motivated individuals perform at higher levels and that they are

more likely to persist in the face of challenge as compared to extrinsically motivated individuals have been explored in the literature (Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan & Deci, 2000a; Vallerand, Fortier, & Guay, 1997). Intrinsic motivation is classified into three stages. In the first stage called experiencing stimulation, the intrinsic component is at a minimum. The second stage named toward accomplishment is followed by the third referred to as to know, in which the individual experiences self-determination fully.

At the other end of this continuum lie extrinsic motivation in which individuals are found to be engaged in activities conducive to a specific outcome and these activities involve deeds that are governed by forces that the individual cannot control (Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan & Deci, 2000a). Whereas intrinsically motivated individuals tend to focus on the processes of particular tasks, extrinsically motivated individuals generally focus on the end-results. At the intrinsic level, an athlete may practice persistently because he is personally interested in that sport and readily accepts the fact that only by practicing, his performance and knowledge will improve. The same individual would be enticed by a gold medal and everything else that a gold medal would bring at the extrinsic level (Vallerand R., 2004). A student may select a certain profession because the salary may be excellent, because it may provide an excellent standing for himself in the community or probably because everyone in the family may be in that line of work. Whatever the motivation of that student may be, it would be considered extrinsic because the outcome (salary, standing, proving himself worthy of that family or the legacy) becomes the student's primary urge for considering that profession.

More recently, however, four levels of extrinsically motivated behavior have been identified – external regulation, introjected regulation, identified regulation and integrated regulation- in line with Organismic Integration Theory mentioned above. The four levels are arranged according to the extent the behavior is internalized and regulated by the individual, with external regulation containing no internal component. As a result, the traditional dichotomous depiction gave way to a more continuous portrayal of motivation (Deci, Vallerand, Pelletier, & Ryan, 1991; Reeve, Deci, & Ryan, 2004).

It must also be recognized that multiple motivations for engaging in a single activity may exist. The student mentioned above may select a certain profession not only because the salary may be excellent but also because he cannot imagine doing anything else. Thus he may choose to enter that profession for both intrinsic and extrinsic reasons (Covington & Müeller, 2001).

### **Amotivation**

Furthermore, in addition to intrinsic and extrinsic constructs, a third type named amotivation has been conceived and it has been defined as the case in which the individual does not appreciate the relationship between his or her activities and their outcomes (Vallerand, Pelletier, Brière, Sénechal, & Vallières, 1992). A typical example may be a student who questions the reasons behind his or her going to school regularly.

### **The Academic Motivation Scale (AMS)**

In order to explore the reasons behind the choices of students for attending a university, a scale is designed and developed further by Vallerand et al. (1992) based on the self-determination theory. Although other scales are available for determining the type of motivation of the university students such as the Achievement Goal Questionnaire of Finney (2004), the Mastery, Performance and Alienation Goal Scale of Archer (1994), the Academic Motivation Scale (AMS) developed by Vallerand and his colleagues (1992) has been among the top contenders ever since its conception (Grouzet, Otis, & Pelletier, 2006). The AMS scale is designed to assess the extent to which an individual's academic motivation is intrinsically or extrinsically driven. It has been used mostly in Canadian, Australian, American and British universities (see, for example, Barkousis, Harambolos, Grous, & Sideris, 2008; Grouzet, Otis, & Pelletier, 2006; Noels, Pelletier, Clément, & Vallerand, 2000; Spittle, Jackson, & Casey, 2009; Vallerand et al., 1992). Besides these investigations, various studies have been carried out in Turkey such as those of Arioğul (2009), Umay (2002), Şirin (2012), (Sungur & Senler, 2010).

The current study adds to this literature by attempting to answer questions such as to what extent academic motivation changes from year to year, to what extent it varies according to departments, to what extent gender influences motivation, and to what extent external regulations impact motivation.

### **THE PURPOSE AND THE METHOD**

The purpose of this study is to investigate comparatively the academic motivations of the university students from a multidimensional perspective using the Academic Motivation Scale (AMS). There are four research questions:

1. Does the academic motivation differ from year to year?
2. Does the academic motivation differ according to gender?
3. To what extent do external supports such as scholarships affect academic motivation?
4. Does the academic motivation differ according to departments?

**Participants**

This particular study has been carried out in a non-profit university in İstanbul, Turkey, with the AMS administered twice in 2011 and 2012 to two different student samples. Those who participated in the survey were all first-year students. As the language of instruction is English, the scale used was in English as well. The total numbers of valid questionnaires were 1450, with 729 from male students and 721 from females. The ages of the students ranged from 18 to 22.

Table 1 – Distribution of Valid Questionnaires According To Departments

department	2011			2012		
	male	female	total	male	female	total
Science and Lit.	56	59	115	47	45	92
Bus Admin	68	73	141	82	78	160
Communications	52	67	119	48	62	110
Engineering	101	86	187	132	83	215
Architecture	40	67	107	37	52	89
Law	32	30	62	28	25	53
<b>total</b>	<b>349</b>	<b>382</b>	<b>731</b>	<b>374</b>	<b>345</b>	<b>719</b>

**The Scale**

The same Academic Motivation Scale was handed out in two consecutive years along with a demographic questionnaire. The scale was developed originally in French, then translated to English and is a 28-item form with a 7-point Likert scale that ranges from 1, which implies no correspondence, to 7, which indicates perfect correspondence with the comments that comprise the motivation scale. The scale consists of three parts – intrinsic motivation, extrinsic motivation and amotivation. The intrinsic part contains three subscales – to know, toward accomplishment and to experience stimulation. The part on extrinsic motivation comprises the subscales of identified, extrinsic and external. The third part, motivation, stands by itself. Vallerand et al. (1992) maintained that the internal consistency of the Academic Motivation Scale ranged in 0,80s and displayed a test/retest correlation value of 0,79. In addition, Spittle (2009), who carried out a similar investigation, reported an internal consistency that ranged from 0,72 to 0,86. Cronbach’s alphas of Arıoğul (2009) were reported to be 0,770 and 0,801. Still in another study, Fairchild, Horst and Finney (2005) evaluated new and existing validity evidence for the Academic Motivation scale. The figures for

reliability obtained after a factor analysis for this study are given below :

Table 2 – Cronbach’s Alpha Coefficients

Subscale	Alpha ( n=731) 2011	Alpha ( n=719) 2012
Intrinsic – to know	0,78	0,71
Intrinsic–toward accomplishment	0,84	0,84
Intrinsic – to experience stimulation	0,79	0,76
Extrinsic – identified	0,74	0,69
Extrinsic – introjected	0,77	0,72
Extrinsic – external regulation	0,72	0,75
Amotivation	0,76	0,72

The demographic section of the questionnaire dealt with gender, scholarships and the departments.

**COLLECTION OF DATA**

The study was conducted during regular class time. The students were informed that their participation was voluntary and that their responses would remain confidential. No time limit was imposed.

**ANALYSIS OF THE DATA**

Descriptive statistics, ANOVA and the independent sample t-test were the statistical tools used for analyzing the data. No weights were attached to any one of the items.

**RESULTS**

In the following sections, the results obtained are presented:

**Does Academic Motivation Differ From Year To Year?**

In order to answer that question, data collected for two consecutive years from two independent populations were analyzed for ascertaining whether or not the academic motivation differed from year to year was carried out. The results obtained are given in table 3. Levene’s test was used for determining homogeneity of variances for the subscales ( $p \geq 0,05$ ), with the findings showing no difference in variances. Moving on to assessing the mean values using the t-test, the p values of all the subscales turned out to be less than 0,05, rejecting the hypothesis of mean values being equal and denoting that academic motivations may differ from year to year.

Table 3 – Descriptive Statistics and T-Test Results for the Years of 2011 and 2012

Motivational Subscale	2011		2012		Levene		t-test	
	mean	sd	mean	sd	F	Sig	t	p
Intrinsic – to know	5,106	0,120	4,720	1,170	18,873	0,071	6,396	0,000
Intrinsic – toward accomplishment	4,570	1,050	5,010	1,050	16,967	0,066	3,161	0,002
Intrinsic- to experience stimulation	4,520	1,130	4,350	1,130	15,071	0,065	2,840	0,005
Extrinsic – identified	5,320	1,010	6,960	1,100	21,166	0,084	6,105	0,000
Extrinsic – introjected	6,640	1,130	6,480	1,500	23,402	0,052	2,080	0,037
Extrinsic – external regulation	6,280	1,120	5,890	1,230	11,871	0,051	6,010	0,000
Amotivated	5,710	1,050	5,190	1,380	0,766	0,082	5,620	0,000

**Does Academic Motivation Differ According To Gender?**

In a similar fashion, the data collected were analyzed for determining whether or not the academic motivation differs according to gender. The results obtained are given in tables 4 and 5. Levene’s test was used for determining the homogeneity of variances for the subscales ( $p \geq 0,05$ ), with the

findings indicating no differences in variances . Moving on to evaluating the mean values using the t-test, the p values of the subscales turned out to be less than 0,05, eliminating the hypothesis of mean values being equal and suggesting the acceptance of the alternative, that gender may affect academic motivation .

Table 4 – Descriptive Statistics and T-Test Results according to gender (2012)

Motivational Subscale	Male		Female		Levene		t-test		
	mean	sd	mean	sd	f	Sig	t	df	p
Intrinsic – to know	4,130	1,150	5,010	0,060	12,252	0,061	-2,960	718	0,033
Intrinsic – toward accomplishment	5,110	1,065	4,580	1,040	15,006	0,093	-3,122	718	0,035
Intrinsic- to experience stimulation	4,840	1,140	4,860	0,140	23,220	0,063	-3,714	718	0,027
Extrinsic – identified	5,990	1,090	5,220	1,130	16,820	0,078	-5,708	718	0,002
Extrinsic – introjected	5,740	1,480	6,600	1,320	21,025	0,085	-3,415	718	0,011
Extrinsic – external regulation	5,010	1,240	5,190	1,220	17,027	0,087	-2,898	718	0,043
Amotivated	5,110	1,380	4,770	1,370	9,001	0,097	4,677	718	0,036

Table 5 – Descriptive Statistics and T-Test Results according to gender (2011)

Motivational Subscale	Male		Female		Levene		t-test		
	mean	sd	mean	sd	f	Sig	t	df	p
Intrinsic – to know	4,99	1,15	5,16	1,08	17,267	0,065	-3,206	730	0,013
Intrinsic – toward accomplishment	4,47	1,06	4,72	1,03	16,005	0,087	-3,277	730	0,021
Intrinsic- to experience stimulation	4,38	1,15	4,70	1,13	12,322	0,094	-3,747	730	0,018
Extrinsic – identified	6,08	1,12	6,61	1,03	21,024	0,074	-6,604	730	0,016
Extrinsic – introjected	5,51	1,32	5,79	1,33	12,032	0,053	-2,855	730	0,04
Extrinsic – external regulation	5,11	1,25	5,50	1,14	16,034	0,066	-4,409	730	0,038
Amotivated	4,95	1,40	4,43	1,24	15,003	0,078	5,293	730	0,025

**To What Extent Do External Supports Such As Scholarships Affect Motivation?**

Again, the data collected were utilized for establishing the extent to which academic motivation is affected by external events such as scholarships. The results obtained are displayed in tables 6 and 7 below. Levene’s test was used for determining the

homogeneity of variances for subscales ( $p \geq 0,05$ ), with the findings indicating no differences in variances. Evaluation of the mean values using the t-test resulted in values larger than 0,05 for all subscales confirming the hypothesis of mean values being equal.

Table 6 – Descriptive Statistics and T-Test Results for the effects of scholarships (2012)

Motivational Subscale	Scholarship		No scholarship		Levene		t-test		
	mean	sd	mean	Sd	f	Sig	t	df	P
Intrinsic – to know	4,820	1,240	4,680	1,160	12,186	0,067	2,550	718	0,061
Intrinsic – toward accomplishment	4,390	1,220	4,420	1,120	22,727	0,099	-0,086	718	0,092
Intrinsic- to experience stimulation	4,440	1,180	4,400	1,170	21,139	0,086	-0,715	718	0,075
Extrinsic – identified	5,990	1,220	5,750	1,150	19,190	0,063	0,541	718	0,058
Extrinsic – introjected	5,460	1,370	5,520	1,090	20,819	0,066	-0,371	718	0,074
Extrinsic – external regulation	6,860	1,080	5,950	1,300	21,940	0,075	-0,887	718	0,076
Amotivated	4,060	1,060	3,330	1,360	14,790	0,089	-2,280	718	0,081

Table 7 – Descriptive Statistics and T-Test Results for the effects of scholarships (2011)

Motivational Subscale	Scholarship		No scholarship		Levene		t-test		
	mean	sd	mean	Sd	f	Sig	t	df	P
Intrinsic – to know	5,065	1,344	4,987	0,875	11,234	0,077	2,550	730	0,091
Intrinsic – toward accomplishment	4,876	1,653	4,567	1,076	16,567	0,088	-0,086	730	0,073
Intrinsic- to experience stimulation	4,876	1,654	4,134	0,865	21,234	0,096	-0,715	730	0,075
Extrinsic – identified	6,543	1,234	5,850	1,231	20,786	0,074	0,541	730	0,058
Extrinsic – introjected	5,867	1,135	6,342	1,123	21,023	0,072	-0,371	730	0,071
Extrinsic – external regulation	6,234	1,354	6,150	0,765	17,087	0,079	-0,887	730	0,066
Amotivated	3,986	0,960	4,354	1,265	21,970	0,086	-2,280	730	0,061

**Do The Academic Motivations Of The Students Vary According To Faculties?**

The ANOVA process – analysis of variance - was utilized in order to answer this question. The null hypothesis was that the academic motivations of the

students do not change according to their faculties with the alternative hypothesis being the opposite , that at least in some of the faculties , the motivations differ.

Prior to the ANOVA for 2011, the Levene test was carried out for determining the homogeneity of the variances and this yielded the sets ( the subscales with  $p \geq 0,05$  and  $p < 0,05$  ) as displayed in table 8 below :

The analysis of variance for the subscales with homogenous variances (with  $p \geq 0,05$  ) was carried out and the results presented in table 9 :

Table 8 – results of the test of homogeneity of variances for 2011:

Subscale	Levene statistic	df1	df2	Sig
Intrin. – to know	20,795	5	730	0,153
Intrin. – accomplish.	21,024	5	730	0,162
Intrin. – stimulation	16,427	5	730	0,272
Extrin. – iden	15,024	5	730	0,178
Extrin. – introject	20,305	5	730	0,180
Extrin – ext reg	13,504	5	730	0,174
amotivated	12,974	5	730	0,037

Table 9 - The Results of the ANOVA with Homogenous Variances for 2011

Motiv. Subscale	Departments												F	df	p
	Sci.&Lit.		Bus. Man.		Commun.		Engin.		Arch.		Law				
	mean	s.d.	mean	s.d.	mean	s.d.	mean	$\sigma$	mean	s.d.	mean	s.d.			
Intrin. – to know	4,18	1,17	4,77	1,11	4,92	1,16	5,06	1,19	4,88	1,08	5,03	1,17	4,6	5/730	0,021
Intrin. – accomplish.	4,77	1,08	4,46	1,02	4,41	1,06	4,42	1,10	4,49	0,94	4,64	1,04	3,281	5/730	0,006
Intrin. – stimulation	4,58	1,28	4,42	1,14	4,46	1,08	4,48	1,14	4,35	1,11	4,75	1,14	2,210	5/730	0,056
Extrin. – iden	6,37	1,17	5,14	1,07	4,99	1,19	5,08	1,12	5,15	1,01	6,51	1,04	4,271	5/730	0,001
Extrin. – introject	5,56	1,37	6,46	1,33	5,43	1,34	6,62	1,56	5,54	1,24	6,91	1,36	1,845	5/730	0,071
Extrin – ext reg	5,40	1,19	5,15	1,17	5,75	1,31	5,03	1,25	5,12	1,20	5,48	1,15	7,340	5/730	0,004

Table 9 illustrates that in so far as the subscales of intrinsic – stimulated and the extrinsic – introjected subscales are concerned, the null hypothesis may be accepted . This is not the case for the other 4 subscales in which the results indicate that the motivations of the students do change according to their departments. The Scheffe test reveals that the

School of Communication leads with the departments of Business Administration, Engineering, Architecture and Science and Literature following in that order.

The subscale with non-homogenous variances is (Levene values  $< 0,05$  ) given in table 10 :

Table 10 - The Results of the ANOVA with non-Homogenous Variances for 2011

Motiv. Subscale	Departments												F	df	p
	Sci.&Lit.		Bus. Man.		Commun.		Engin.		Arch.		Law				
	mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.			
Amotivation	2,37	1,29	3,06	1,34	3,14	1,47	3,02	1,41	2,88	1,27	2,75	1,26	7,494	5/730	0,002

Replacing the one-way ANOVA with the Welch test, the results in table 11 have been obtained :

Table 11 - The Results of the Welch Procedure for Subscales with Non-Homogenous Variances for 2011

Motiv. Subscale	Faculties												Statistic	Df1	Df2	P
	Sci.&Lit.		Bus. Man.		Commun.		Engin.		Arch.		Law					
	Mean	s.d.	Mean	s.d.	Mean	s.d.	mean	s.d.	Mean	s.d.	Mean	s.d.				
Amotivation	2,37	1,29	3,06	1,34	3,14	1,47	3,02	1,41	2,88	1,27	2,75	1,26	4,529	5	730	0,000

The Welch test of table 11 confirms the rejection of the null hypothesis of homogeneity and the acceptance of the alternative. Similarly, prior to the ANOVA for 2012, the Levene test was carried out for determining the homogeneity of the variances and this yielded a single set (the subscales with  $p \geq 0,05$  ) as displayed in table 12 below :

Table 12 – results of the test of homogeneity of variances for 2012:

Subscale	Levene statistic	df1	df2	Sig
Intrin. – to know	12,597	5	718	0,267
Intrin. – accomplish.	22,822	5	718	0,152
Intrin. – stimulation	18,734	5	718	0,274
Extrin. – iden	17,224	5	718	0,261
Extrin. – introject	21,503	5	718	0,173
Extrin – ext reg	14,476	5	718	0,285
Amotivated	10,794	5	718	0,254

The results of the analysis of variance are listed in table 13 which displays that the means are not equal –

implying that the motivations do change according to departments:

Table 13 - The Results of the ANOVA with Homogenous Variances for 2012

Motiv. Subscale	Departments												F	df	p
	Sci.&Lit.		Bus. Man.		Commun.		Engin.		Arch.		Law				
	mean	s.d.	mean	s.d.	mean	s.d.	mean	$\sigma$	mean	s.d.	mean	s.d.			
Intrin. – to know	4,18	1,17	4,77	1,11	4,92	1,16	4,86	1,19	4,88	1,08	5,29	1,17	4,6	5/718	0,002
Intrin. – accomplish.	4,77	1,08	4,46	1,02	4,41	1,06	4,42	1,10	4,49	0,94	4,64	1,04	3,281	5/718	0,006
Intrin. – stimulation	4,58	1,28	4,42	1,14	4,46	1,08	4,48	1,14	4,35	1,11	4,75	1,14	2,210	5/718	0,036
Extrin. – iden	5,37	1,17	5,14	1,07	5,99	1,19	5,08	1,12	5,15	1,01	6,51	1,04	4,274	5/718	0,001
Extrin. – introject	6,56	1,37	6,23	1,33	6,43	1,34	5,62	1,56	6,54	1,24	6,91	1,36	1,845	5/718	0,101
Extrin – ext reg	5,40	1,19	5,15	1,17	6,75	1,31	5,73	1,25	5,12	1,20	5,48	1,15	7,340	5/718	0,021
Amotivated	5,64	0,96	4,85	1,01	4,94	1,01	4,69	0,96	5,66	1,12	4,94	1,09	6,98	5/718	0,032

### LIMITATIONS

A number of limiting factors may be taken into consideration for this study. The first limitation is the fact that the Academic Motivation Scale is employed at a single institution, a matter that hinders generalization. The second constraint is the lack of previous documented research which might have been used for comparison purposes. Although the Academic Motivation Scale has been used to assess student populations of other countries, only a number of attempts have been made in this country.

Therefore common premises for comparison are not available currently. The location of the institution in the study is another drawback. As this university is located in a large metropolitan city, results obtained can only be used to infer about universities in similarly sized metropolitan cities. No inferences should be drawn from this study for evaluating motivation in smaller urban areas. And the final limiting factor is confidentiality due to which the names, thereby the GPAs and the minimum admission levels of the students to the university were kept anonymous. Hence, no correlation between these and the motivational subscales were possible.

### DISCUSSION

This particular study was carried out with several purposes in mind. The first was to determine whether or not the academic motivation differs from year to year. The second objective was to ascertain whether or not gender plays a role in academic motivation. Discerning the effects of external events such as scholarships constituted the third aim. To what extent the academic motivation varies according to departments was the fourth question.

As depicted in table 3, all subscales of the two years under investigation had different mean values, indicating that academic motivations may change totally or partially from year to year. On the other hand, a comparison of the intrinsic and the extrinsic values show that the extrinsic constructs appeal more to the students rather than the intrinsic in both populations. For example, finding a high-paying job seems to be more inspiring than learning new things.

Information given in tables 4 and 5 suggests that gender does play a role in motivation, with female students having the edge in all subscales. This result basically agrees with Vallerand et al.'s (1992), Spittle et al.'s (2009) and Koseoglu's (2013) but disagrees with that of Arıoğul (2009), whose analysis "shows no significant difference between male and female pre-service English teachers in any of the subscales". Answers to questions such as "the university education will enable me to enter the job market in a field that I like" or "because I want to show that I can succeed in my studies" or "to have a better salary later on" show that the females relate more to these than males. Similar to changes in motivation from year to year, the extrinsic motivation seems to be more deeply rooted than intrinsic both for males and females.

Deliberation on the effects of external supports such as the scholarships of tables 6 and 7 may lead one to think that families would coerce the students and insist on success since scholarships represent improved financial standing. However, contrary to such expectations, the findings suggest that scholarships do not play an appreciable role in academic motivation. The results of the t-tests show that there is no significant difference between the mean values of the subscales, indicating that scholarships do not exert much of an influence; an outcome arrived at in a similar study of the author (2013). In general, promised rewards such as prizes and money and threatened punishments are often utilized as a means of procuring desired behaviors. Research on intrinsic motivation has consistently shown that although such external events may serve to manipulate behavior while they are operative, they also tend to undermine intrinsic motivation for interesting tasks and hinder internalization. Performance evaluations in educational systems, together with assigned deadlines and competition, have been found to decrease intrinsic motivation. Each of these external events is typically used to pressure the individual to think, feel or behave in a specific way. The presence of such a pressure signifies to the individual that he or she is being controlled, which leads to diminished sense of autonomy. These arguments are cited by other

researchers in Deci et al (1991) and Vallerand et al (1992).

Considering the subscale of amotivation, it may be surmised that since an amotivated student may feel that he or she may be wasting time in school, it may be superfluous to anticipate the impact of any external influence such as a scholarship nor of any intrinsic stimulus. A student is intrinsically motivated because of the pleasure and satisfaction he or she derives while learning new things, broadening his or her knowledge. As has been mentioned previously, such a motivation is observed in individuals who are engaged in an activity for its own sake with no intention of material gain. Perceived rewards such as scholarships do not alter their stance. A scholarship would probably be received as a result of the efforts put in, anyway.

Lastly, an analysis of the findings in tables 9, 11 and 13 may lead to the fact that the academic motivations of the students differ according to the faculties. Individuals in different faculties experience different motivations. For example, the answers to “because I experience pleasure and satisfaction while learning new things”, a comment related to intrinsic motivation-to know, varies from department to department and so do the answers to “because this will help me make a better choice regarding my career orientation”, a comment associated with extrinsic motivation – identified. The same is valid for “the pleasure I experience when I read interesting authors” and “to show myself that I am an intelligent person”. Even the answers of amotivated students in different department to “I cannot see why I go to university and, frankly, I could not care less” show significant fluctuations. As in other cases, the findings show that the students are more predisposed towards extrinsic rather than intrinsic. Further research may be advocated in order to establish the causes of such variability.

#### CONCLUSION AND RECOMMENDATIONS

In conclusion, it can be surmised that intrinsic motivation, extrinsic motivation and amotivation comprise a continuum that reflects the degree of self-determined behavior, where more internalized behaviors produce a greater sense of self-determination. Intrinsic motivation should be viewed as a valuable asset as it is closely related to several desirable outcomes such as increased attention, greater creativity, flexibility, spontaneity, persistence and study skills (Koestner, Ryan, Bernieri, & Holt, 1984). Previous research has revealed that if the autonomous behaviors of the students are supported, this in turn would lead to greater intrinsic motivation (Pelletier, Seguin-Levesque, & Legault, 2002; Reeve, Bolt, & Cai, 1999). Thus, in line with the Organismic Integration Theory, if the motivation level of an amotivated student who feels that he or she is wasting

his or her time in school can be converted to a level where he or she would be experiencing pleasure and satisfaction while learning new things, then the motivational level of that student would have been elevated to intrinsic, where the degree of self-determination is the highest.

Such a conversion requires belief, commitment, conscious and planned support on part of both the students and the teaching staff. Achieving such an outcome necessitates amendments not only in educational policy but also in the mind-set of the teaching staff who prefer to be controlling rather than supporting autonomy so that students’ needs for competence, autonomy and relatedness may be fulfilled and the controlling environments that impede them may be eradicated.

And also, further research comprising additional data and interdisciplinary research may be recommended in order to realize such an outcome.

Therefore, it can be stated that for optimal motivation level, feelings of competence, autonomy and relatedness should be in harmony with the educational environment. The intrinsic motivation of the students may be enhanced if their autonomies are promoted, if the academic performances of the students are viewed in a supportive and encouraging manner, and if the students learn what it means to relate to others socially. In other words, if the social-contextual conditions that would satisfy the need for competence, the need for autonomy and the need for relatedness are created, even amotivated students may attain intrinsic motivation (Deci & Ryan, 1985). The relevance of this becomes more apparent if the fact that a regular student receives about 15 000 hours of instruction within two decades of education is taken into consideration.

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