

Available online at www.sciencedirect.com**ScienceDirect**

Procedia - Social and Behavioral Sciences 106 (2013) 282 – 288

Procedia
Social and Behavioral Sciences4th International Conference on New Horizons in Education

Academic motivation levels of technical high school students

S.Muge Yukseloglu^{a*}, M.Hulya Karaguvan^b^aMarmara University, Faculty of Technology 34722, "Istanbul", Turkey^bMarmara University, Atatürk Faculty of Education 34722, "Istanbul", Turkey

Abstract

Motivational problems are very widely seen in education. One of the greatest frustrations mentioned by many teachers is that their students are often not motivated to learn. Determination of effective factors on students' academic motivation levels can be helpful in order to improve student academic performance. The aim of this study is to identify the effective factors on a group of high school students' academic motivation. Study group of this research consists of 300 high school students. A Turkish form of the Academic Motivation Scale was used to collect data. Additionally, Communal-Mastery Scale and a nine item questionnaire were also used in this study. Results indicated that a group of demographic characteristics and communal mastery were effective in academic motivation levels of students.

© 2013 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](http://creativecommons.org/licenses/by-nc-nd/3.0/).

Selection and peer-review under responsibility of The Association of Science, Education and Technology-TASET, Sakarya Universitesi, Turkey.

Keywords: academic motivation, technical high school students, communal-mastery

1. Introduction

The recent statistics results showed that achievement levels of technical high school students was very low in the university entrance exam and it was also observed that low academic achievement, low expectation and unwillingness to learn were very common among technical high school students. Determination of effective risk factors on students' academic motivation levels may help to improve academic motivation and academic achievement. The aim of this study is to identify the effective factors on students' academic motivation by working with a group of technical high school students within the concept of self-determination theory.

* Corresponding author. Tel.: +90 216 336 57 70; fax: +90 216 337 89 87.

E-mail address: myukseloglu@marmara.edu.tr

Motivation can be defined as the process whereby goal-directed activity is instigated and sustained. Researchers agree to the one generic definition of motivation, which is a mental state that stimulates the behaviour and arouses goal-oriented desire in human mind (Harris, 1940; Eysenck, 1970; Pintrich & De Groot, 1990). Motivation also known as an academic engagement which identify as the most influential of all the factors that affect student performance and academic motivation has been found positively associated with academic achievement, academic performance and ‘will to learn’ (McClelland, Atkinson, Clark & Lowell 1953; Entwistle 1968; Frymier et. al. 1975; Pintrich & Schunk, 2002; Woolfolk, 2004). These kinds of results emphasize that academic motivation is one of the basic factors for academic performance. It is described as “The cognitive, emotional, and behavioral indicators of students’ investment in and attachment to education” (Tucker, Zayco, & Herman, 2002, p.477). Additionally, it is suggested that academic motivation is the only factor that directly impacts academic achievement; all other factors affect performance through their effect on motivation (Tucker, Zayco, & Herman, 2002). Another factor is the student’s perception of themselves as being intrinsically or extrinsically motivated to engage in learning activities within educational environments (Barron & Harackiewicz, 2001; Elliot & Thrash, 2001). There has been a dialectical relation between people, as innately active organisms, and the social environment according to self-determination theory (Deci & Ryan, 1985). In this theory, humans are assumed to be active, growth-oriented organisms that have an innate desire for stimulation and learning from birth, which is either supported or discouraged within their social environment (Deci & Ryan, 1985; 2000). Within the social environment people attempt to satisfy their three basic needs. These three innate or fundamental psychological needs are competence, autonomy and relatedness (Ryan, & Deci, 2000). In this theory; at the end of the interaction between these needs and the environment three specific types of motivation are differentiated. Firstly, intrinsic motivation; the drive to pursue an activity simply for the pleasure or satisfaction derived from it, secondly, extrinsic motivation; pursuing an activity out of a sense of obligation, or as a means to an end and thirdly, amotivation; the absence of intent or drive to pursue an activity due to one’s failure to establish contingencies between the activity and their behavior (Deci & Ryan, 1985; 2000). Additionally, Deci and Ryan (1985) distinguished four types of extrinsic motivation: external regulation, introjected regulation, identified regulation and integrated regulation. These four types of extrinsic motivation show differences in the degree of self-determination that the individual associates with the behavior. More internalized or more integrated behaviours produce a greater sense of self-determination. Based on one of the propositions that intrinsic motivation may be driven by specific, differentiated factors (Deci, 1975); three types of intrinsic motivation have been added to this original theory by Vallerand and his colleagues (1992). Firstly, to know; the desire to perform an activity for the enjoyment one receives while learning new things. Secondly, to accomplish; the desire to perform an activity for the satisfaction one receives from accomplishing or creating new things. Thirdly, to experience stimulation; the desire to perform an activity for the experience one receives while experiencing sensory stimulation which may reflect either intellectual or physical sensations (Vallerand et al. 1992). Thus, academic motivation can be examined within eight subtitles. Vallerand and his co-workers (1992) developed a scale which is measures seven subtitles of academic motivation on the bases of Self-Determination Theory and named as Academic Motivation Scale (AMS). In this study, academic motivation studied with AMS which is evaluates academic motivation as intrinsic and extrinsic motivation. According to Self-determination Theory environment has an important role in motivation. For example: “at the end of interaction between needs and the environment tree specific types of motivation are differentiated”, “social contexts either stifle or promote intrinsic motivation” (Deci & Ryan; 2000). Motivation may be mediated by individual differences in social competence and mastery. Communal-mastery may be viewed as a form of social competence. Communal-mastery is defined as the belief that one is capable of successful goal attainment by virtue of being closely interconnected with others by Hobfoll and his colleagues (Hobfoll, Schroder, Wells, & Malek, 2002). A scale was developed by these researchers namely “Communal Mastery Scale” to assess communal mastery and used in this study.

1.1. Problem statement

The recent statistics results showed that achievement levels of technical high school students was very low in the university entrance exam. And it was also observed that low academic achievement, low expectation, and unwillingness to learn were very common among the technical high school students. The aim of this study is to investigate academic motivation levels of technical high school students. Additionally, communal-mastery levels were also examined.

2. Method

2.1. Participants

The sample is consisted of 300 students from vocational and technical high schools, in this work. Participation was arranged voluntarily, with informed consent in the classroom environment. Enough time were given to all students to complete each instrument. Average age was 18 (range 17-22). 49% of the participants were male and 51% were female. This sample may be considered as a very representative one of vocational and technical high school students in Istanbul.

2.2. Measures

A nine item questionnaire was developed by researcher and used for demographic variables. Examples for the items; age, gender, whether he/she was happy from his /her school and whether the school was chosen by himself/herself or not. Additionally, two scales were also used in this study.

2.2.1. Academic Motivation Scale (AMS): The AMS (Vallerand et al., 1992) consists of 28 items and seven subscales. The scale adapted from English to Turkish (Ünal-Karagüven, 2012) and Turkish form named as Akademik Motivasyon Ölçeği (AMÖ). The scale consists of seven subscales, reflecting one subscale of amotivation, three subscales of intrinsic motivation and three subscales of extrinsic motivation. The items are rated on a seven point scale, ranging from 1 (does not correspond at all) to 7 (corresponds exactly). Examples for the items; “Because I need at least a high-school degree in order to find a high-paying job later on” or “Because I experience pleasure and satisfaction while learning new things” The scale has also one total score. Total score can range from twenty-eight to one hundred ninety six. A high score on scale indicates high endorsement of academic motivation. Total scores of the scale used in this study for each sample. Cronbach's alpha for this group is 0.89 (N=300, n=28).

2.2.2. Communal Mastery Scale (CMS): Communal mastery assessed via the CMS (Hobfoll, Schröder, Wells & Malek, 2002) which was developed from two commonly employed measures of mastery (Pearlin, Lieberman, Menaghan & Mullan, 1981) and self-efficacy (Schwarzer, 1993). Turkish form of CMS named as Çevresel Destek Ölçeği (ÇDÖ) (Ünal-Karagüven, 2005; Ünal-Karagüven, 20013).The scale consists of 10 items. Responses were based on a four-point scale from 1 (strongly disagree) to 4 (strongly agree). Students were asked to indicate the degree to which they agreed with the statements. For example, “With the help of those close to me I have more control over my life” or, “I can meet my goals by helping others meet theirs”. Cronbach's alpha was .64 in this study (N=300, n=10).

3. Findings

Sample sizes, means, standard deviations and intercorrelations among variables used in the study can be seen from the Table 1. As seen in column 5; academic motivation significantly correlated with all independent variables; gender ($r=.178$, $p<.05$), school chosen by himself ($r=.159$, $p<.05$), happy from his/her school ($r=.229$, $p<.01$), and communal mastery ($r=.319$, $p<.01$). All intercorrelations among academic motivation and independent variables were mostly positively significant.

Table 1. Means, standard deviations and bivariate correlations among variables

Variable	M	SD	1	2	3	4	5
1. Gender			1	-0.035	0.111	-0.068	0.178*
2. School chosen by himself				1	0.250**	0.047	0.159*
3. Happy from his/her school					1	0.140	0.229**
4. Communal Mastery	28.79	3.79				1	0.319**
5. Academic Motivation	118.59	26.25					1

** $P\leq.01$, * $P\leq.05$

Hierarchical multiple regression was used to predict academic motivation and communal mastery from three predictor variables. The relative importance of variables in each predictor block was determined by examining significant beta. Beta weights provide an appropriate criterion about predictors. Table 2 depicts these results.

Table 2. Hierarchical regression analysis for communal mastery and academic motivation

Variables	Communal Mastery	Academic Motivation
	Beta(β)	Beta(β)
Gender	-0.083*	0.16*
School chosen by himself	0.008*	0.12*
Happy from his/her school	0.144**	0.18**
Total R²	0.2%**	0.8%**

** $P\leq.01$, * $P\leq.05$

As it can be seen from the Table 2, communal mastery and academic motivation are dependent variables. The independent variables are gender, school chosen by himself and happy from his/her school. As seen in Table 2, academic motivation and communal mastery were separately regressed on the three predictor variables. The absolute magnitude of beta coefficients indicates the relative strength of three variables as predictors of academic motivation and communal mastery. Communal-mastery and academic motivation subscales were separately regressed on three predictor variables. All independent variables are important predictors of communal mastery and academic motivation levels of technical high school students. These findings show that; being happy from his/her school a substantially important predictor of academic motivation and communal mastery, even when other predictors are statistically controlled. It explains a significant amount or increment especially in academic motivation (0.8%, ** $P\leq.01$).

Additionally, significant findings for academic motivation showed that the Academic Motivation mean scores were significantly related with gender ($t=-2.50$, $p=0.01$), whether the school was chosen by himself/herself or not ($t=-2.23$, $p=0.02$) and whether he/she was happy from his /her school ($t=-3.26$, $p=0.001$). Boys' academic motivations were significantly higher than the girls. Additionally, willingly and happier students' academic motivations levels were significantly higher than the others. On the other hand, communal mastery scale results were significantly related with being happy from his/her own department of school ($t=-0.918$, $p=0.05$). Happier students' means scores were significantly higher than the others.

4. Conclusion

This study presents the effective factors on a group of high school students' academic motivation levels which is based on Deci and Ryan's self-determination theory. Results indicate that demographic characteristics were more effective than communal mastery in their academic motivation levels. AMS has satisfactory levels of internal consistency (alpha value= 0.89). Significantly different results obtained in some variables such as: gender, being willingly to go to this kind of school and being happy to be educated in these kind of departments such as computer or electricity education. Gender differences confirmed that boys' academic motivation levels were significantly higher than the girls. This may be due to the subjects, that are studied; which are found more interesting by the boys rather than the girls. We found that students have high academic motivation and communal-mastery levels if the school is chosen by themselves. Additionally, students have high academic motivation and communal-mastery levels if they are happy from their school. In addition, being happy or satisfied from school was found to be more effective than gender and choosing the school by themselves. This results confirmed that students' academic motivation have been affected by some factors. Findings provide support for the view that demographic characteristics are important for academic motivation. It was reported that motivation levels of university students are affected by some demographic factors such as; their reason to choose the school, the probability of finding a job after graduation, order of preferences, future expectations, distinctive power of testing and measurement activities at school and their desire to do master degree, probability of finding a job, attitude towards the teacher, social circle, level of income, appropriateness of the classrooms, efficiency of the educational material and number of siblings (Celikoz, 2009). Results related with communal-mastery also consistent with previous study that women have high level communal-mastery (Hobfoll, et al., 2002). Findings of this study were similar with other studies' findings as well. It was found that; demographic variables were significant predictors of communal mastery (Ünal-Karagüven, 2005). Subsequent studies of academic motivation should examine different factors not only demographic characteristics but also teaching style and classroom environment. In order to prevent negative effects of motivational problems on academic achievement motivating factors should be used by teachers in the classroom environment as much as possible.

In sum, we believe that the current study provides adequate support for the AMS and gives useful information on the technical high school students' educational research on motivation. Replication with different subjects to determine the influence of different variables on academic motivation and communal mastery is necessary to increase confidence of findings. Similar studies were suggested for the future.

Acknowledgements

The authors are grateful for the funding by Scientific Research Project Unit (EGT-D-120613-0289) of Marmara University.

References

- Atkinson, J. W., & Feather, N. T. (1964). *A theory of achievement motivation*. New York: Wiley.
- Barron, K. E., & Harackiewicz, J. M. (2001). Achievement goals and optimal motivation: Testing multiple goal models. *Journal of Personality and Social Psychology*, 80 (5), 706-722.
- Cunningham, G. K. (2003). *Can education schools be saved?* Retrieved February 19, 2009, from http://www.vestibular.uerj.br/vest2004/files/2004ef_d1_ing.pdf
- Çeliköz, N. (2009). "An Analysis of Pre-School Teachers' and Student Teachers' Attitudes to Inclusion and Their Self-Efficacy", *International Journal of Special Education*, 29-44 pp., 2009.
- Deci, E.L. (1975). *Intrinsic motivation*. New York: Plenum.
- Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E.L., & Ryan, R.M. (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.
- Elliot, A. J., & Thrash, T. M. (2001). Achievement goals and the hierarchical model of achievement motivation. *Educational Psychology Review*, 13 (2), 139-156.
- Entwistle, N. J. (1968). Academic Motivation and School Attainment, *British Journal of Educational Psychology*, Vol.38, No.2, 181-188.
- Evans, L. (2000). The effects of educational change on morale, job satisfaction and motivation. *Journal of Educational Change*, 1, 173-192.
- Eysenck, H. J. (1970). *The structure of human personality* (3rd ed.). London: Methuen.
- Francis, A., Goheer, A., Haver-Dieter, R., Kaplan, A. D., Kerstetter, K., Kirk, A. L. (2004). Promoting academic achievement and motivation: a discussion & contemporary issues based approach. Retrieved November 9, 2009, from http://www.wepapers.com/Papers/57793/Promoting_Academic_Achievement_and_Motivation-A_Discussion_%26_Contemporary_Issues_Based_Approach
- Frymier, J. R. et al (1975). A Longitudinal Study of Academic Motivation. *The Journal of Educational Research*, Vol. 69, No.2.
- Harris, D. (1940). Factors affecting college grades: a review of the literature, 1930-1937. *Psychological Bulletin*, 37, 125±166.
- Hobfoll, S. E., Schröder, K. E. E., Wells, M., & Malek, M. (2002). Communal versus individualistic construction of sense of mastery in facing life challenges. *Journal of Social and Clinical Psychology*, 21, 362–399.
- Hobfoll, S. E., Jackson, A., Hobfoll, I., Pierce, C. A. & Young, S. (2002) The Impact of Communal-Mastery Versus Self-Mastery on Emotional Outcomes During Stressful Conditions: A prospective Study of Native American Women, *American Journal of Community Psychology*, 30, 6.
- Keceli-Kaysılı, B. (2008). Akademik başarının artırılmasında aile katılımı. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi, Özel Eğitim Dergisi*, 9 (1), 69-83.
- McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, F. L. (1953). *The achievement motive*. New York: Appleton-Century-Crofts.
- McCaslin, M., & Hickey, D. T. (2001). Self-regulated learning and academic achievement: A Vygotskian view. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (pp. 227-252). Mahwah, NJ: Erlbaum.
- Schwarzer, R. (1993). *Measurement of perceived self-efficacy: Psychometric scales for cross-cultural research*. Berlin: Freie Universität Berlin, Institut für Psychologie.
- Pearlin, L. I., Lieberman, M. A., Menaghan, E. G., & Mullan, J. T. (1981). The stress process. *Journal of Health and Social Behavior*, 22, 337-356.
- Oliver, J.S. ve Simpson, R.D. (1988). Influences of attitude toward science, achievement motivation and science self-concept on achievement in science: A longitudinal study. *Science Education*, 72 (2): 143-155.
- Pearlin, L. I., Lieberman, M. A., Menaghan, E. G., & Mullan, J. T. (1981). The stress process. *Journal of Health and Social Behavior*, 22, 337-356.
- Pintrich, P. R. & De Groot E. V. (1990). Motivational and self-regulated learning components of classroom academic performance, *Journal of Educational Psychology*, 82 (1), 33-40.
- Pintrich, P. R., & Schunk, D. H. (2002). *Motivation in Education: Theory, research, and Applications*, 2nd Edition. New Jersey: Prentice Hall.
- Renchler, R. (1992). Student motivation, school culture, and academic achievement. ERIC/CEM Trends and Issues Series, Number 7, USA.
- Ryan, R. M. & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68- 78.

- Tucker, C. M., Zayco, R. A., & Herman, K. C. (2002). Teacher child variables as predictors of academic engagement among low-income African American children. *Psychology in the School*, 39 (4), 477-488.
- Ünal-Karagüven, M. H. (2005, July). Communal mastery of technical high school students. Paper presented at the 25th *International STAR Conference, Stress and Anxiety Research Society*, Germany.
- Ünal-Karagüven, M. H. (2012). The Adaptation of Academic Motivation Scale to Turkish. *Educational Sciences: Theory & Practice* -12(4), 2599-2620.
- Ünal-Karagüven, M. H. (2013). Psychometric properties of Turkish Form of the Communal-Mastery Scale, Paper presented at the *International Conference Psychology Education, Guidance & Counselling-ICPEG*, Istanbul.
- Vallerand, R.J., Pelletier, L.G., Blais, M.R, Brière, N.M., Senécal, C., & Vallières, E.F. (1992). The academic motivation scale: a measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52, 1003-1017.
- Vallerand, R.J., Pelletier, L.G., Blais, M.R, Brière, N.M., Senécal, C., & Vallières, E.F. (1993). On the assessment of intrinsic, extrinsic and amotivation in education: Evidence on the concurrent and construct validity of the academic motivation scale. *Educational and Psychological Measurement*, 53, 159-172.
- Woolfolk, A. E. (2004). *Educational psychology*. 9th Edition. New York: Pearson.