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Procedia Social and Behavioral Sciences 12 (2011) 562–567

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**Procedia**  
Social and Behavioral Sciences

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International Conference on Education and Educational Psychology (ICEEPSY 2010)

## The Adaptation Study of Academic Motivation Scale into Turkish

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### Abstract

In this study, by translating the Academic Motivation Scale (AMS) developed by Leeper, Corpus and Ivengar (2004) into Turkish, it was aimed to investigate the validity and reliability of the concerning evidence. The scale is made up of two sub-scales called Extrinsic Motivation Subscale (EMS) and Intrinsic Motivation Subscale (IMS). Both two subscales have 3 sub-dimensions. The sub-dimensions of EMS are; easy work, pleasing teacher, dependence on teacher. The sub-dimensions of IMS are; challenge, curiosity, independent mastery. The scale was administered to 4 – 8th grade primary school students, to 190 students (93 female, 97 male) in Giresun. To test the validity and reliability of the scale confirmatory factor analysis (CFA), Cronbach's alpha, test-retest correlations were made. The findings concerning the validity of the scale are seemed to be supporting the 3 factor-structure in the original sub scales.

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Selection and/or peer-review under responsibility of Dr. Zafer Bekirogullari of Y.B.

*Keywords:* Motivation; Academic motivation; instrinsic motivation; extrinc motivation

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### 1. Motivation

Motivation which is a concept in English, has derived from the French word “motive”. From a conceptual perspective, motivation was defined as the process of promotion and sustainment towards a purposeful activity by Pintrich and Schunk (1996).

Motivation is putting an individual into an action under the effects caused from outside or within the organism that determines the priority, strength and the direction of the action (Koç, 1994).

Keller explained motivation as the intrinsic power and the direction of the aim that causes the student to be willing to learn (Keller, 2000; Warren, 2000)

Motivation can be defined as the total power that transforms the individual towards fulfilling a certain behavior. The concept of motivation is a very complex one and every definition carries missing sides. Motivation which is a psychological factor that generally directs the individual towards a specific aims and fulfilling specific behavior, represents a change or tension that activates the organism, the tension of the organism results by performing the

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actions that will end this tension. Therefore motivation, seems like a internalized concept (needs, desires, aims) that refers an individual to behave in certain way (Bilgin, 2003).

According to H. Gardner (1999), if e person has conditioned herself to learning, because of her own curiosity and interest she would work more, would be more insistent, would not give up in the situation of obstacles, get motivated and even though without having to keeps on learning.

## **2. The Importance of Student Motivation**

In the process of learning, the willing of the students is one of the most important concepts that affect the learning. The preschool children are seen to be willing in learning. To bind their shoes, to fasten their buttons they work for hours and at the end they succeed. At home if there is a big brother or sister that goes to school, while they study the kid takes a pen and paper and writes something on it even though they do not understand they take a book and spend some time. They feel willing for going to school. It is seen that the preschool children do not have the problem of motivation for learning. But after some years after starting the school their willing for learning decreases and the subject of learning starts to become a problem. The students mention that most of the subjects are boring, silly, flat and useless in daily life. According to the results of researches made in various subjects and with different scales, the unwillingness of learning in school starts at least the 3rd degree in primary school and continues crescendo until the high school and even university level (Harter, 1981). The problem of motivation towards learning that starts in the school years affects the academic success of the students and together decreases the life quality.

To reach the specific goal in education and to realization of qualified education the students willing in learning is very important (Selçuk, 1996). In the process of learning, every student has to participate willingly to the process of learning-teaching, adapt to the rules that learning necessitates, and have responsibility in learning and study (Sünbül & Kesici, 2003). Learning is very closely related to motivation, because motivation forces the organism to have some specific responses and as a result to learn something. In accordance with motivation is one of the preconditions of learning. A student who is not motivated sufficiently is not ready for learning. Parallel to this, if there is not important reason that would promote learning the person does not improve the interest for learning (Selçuk, 1996).

It is set forth in the researches made that motivation is an important factor in learning of the individual and in arrangement of the learning environment. In the process of learning and teaching, it is important to know the motivation sources and problems of students to increase the quality and create solutions for the problems.

Academic motivation which can be shortly defined as producing the necessary energy for academic works, the vision based on the sources of this energy changes from theory to theory. This differentiation shows itself in the measurement of the motivation. In the measurement of motivation both different methods and different ingredients are seen (Amabile; Hennessey & Tighe; 1994; Dicintio & Gee, 199; Donohue & Wong, 1997).

## **3. Ideas That Explain the Student Motivation**

There are various approaches, definitions, concepts about motivation. Many numbers of theories are developed to explain motivation. The most known of these are: Impulse decreasing theory, Maslow's Hierarchy of Needs Theory, McClelland's Need for Success Theory, Hunter's Intrinsic/Extrinsic Motivation Theory, Festinger's Social Comparison Theory, Festinger's Cognitive Dissonance Theory, Motivation and Scientific Learning Cycle Theory, Deci and Ryan's Essence Determination Theory (Kalafat, 2004; Önen & Tüzün , 2005, Yaparel, 1995). Motivation put forward as a different area of study in 1930s, follows a parallel improvement line from behaviorism to cognition with the learning concepts.

## **4. Self-determination Theory**

Ryan (1995) defines motivation as the power which activates the action to the aim, continues, and directs it. In this means, motivation which shapes the behavior has a very important place in the study of learning and teaching. In this process of educational motivation is a precondition.

Deci and Ryan with the theory of self-determination defined the psychological needs of individuals (sufficiency, relation and autonomy) who focus on the desire of fulfilling the main psychological needs that is based in the nature

of the individual. Self-determination theory focuses on the need that comes from birth in the area of autonomy, relation and sufficiency. Sufficiency focuses on how and what way the individual will perform the duties that are psychologically necessary. The need for relation explains the need of the individual for setting relationship with his/her environment. Individual want his/her relation to be suitable with his/her desires and also wants to be in safe and ensure satisfaction from it. While the individual resolves the need of relationship, he/she wants to be independent and most of all wants the control and start of the relationship under his/her hands. In the need of autonomy the individual wants to act according to his/her feelings and feels the desire to enter or start a duty (Deci & Ryan, 2000; Krapp, 2005; Lundberg, 2007; Ryan & Deci, 2006).

People in their life may get motivated to perform different actions in result of different effects. They may also act according to their benefit or they may act because they cannot object to pressure or they may be forced to do so. Thereby in most of the conditions the contrast between “being motivated intrinsically” and “forced extrinsically” are mostly well known to us (Ryan & Deci, 2000). So, the theory of self-determination adopts an approach that classifies the motivation in itself and questions which type of motivation would be performed in specific time. With this aim the theory does not see any difference between intrinsic or extrinsic motivation. According to intrinsic motivation, the main reason in performing the specific is the individual’s pleasure and satisfaction. According to theory intrinsic motivation is functional when the action of the individual is autonomous. Intrinsic is not possible under the condition of control and repression because self-determination is necessary for intrinsic motivation (Deci & Ryan, 1985). Sufficiency, self determination, proximity and excitement are accepted as the main determinants of the intrinsic motivation. In other words these factors are evaluated as intrinsic awards (Reeve, 1988). In the case of extrinsic motivation, the individual performs an action to get important results for him/her or for extrinsic award.

The researches made show that the actions of intrinsic motivation are separated from ones done because of extrinsic reasons (Deci & Ryan, 1985). The most important thing that causes a person to perform a work or action is the motivation that comes intrinsically. For having better motivation an performance the motivation should be turned into intrinsic motivation (Doğan, 2005). With extrinsic motivation while students perform learning action they might show unwillingness, unconcern and resistance, but intrinsic motivation causes creative and high quality learning and this is why academics accept it as an important source of learning (Ryan & Stiller, 1991).

According to self determination theory, the teachers who support the autonomy strengthen the intrinsic motivation of the students, the students who get educated in control lose their control on their behaviors’ and they cannot learn very well (Ryan & Deci, 2000). When a educational setting w is created that control the students, the extrinsic motivation, the awards that come foreground and the performances of students are controlled with extrinsic factors. Controls bring together the awards and force. In an autonomous education atmosphere that has self-determination there are no extrinsic factors such as forcing, and students control their own behavior (Grolnick & Ryan, 1987).

## 5. The Need for Scale

In Turkey, although there are scales that measure the motivation of students in the area of science, English and music, there is no scale that measures the academic motivation, determines intrinsic or extrinsic motivation of primary school students. This situation necessitates a warning study.

## 6. Features of Scale

The academic motivation scale which was developed by Lepper, Corpus and Ivengar (2004), is formed of 17 articles of intrinsic motivation subscale, 13 article of extrinsic motivation subscale, 5 points Likert type scale. The extrinsic motivation scale (EMS) is formed of three sub dimensions that include easy work, pleasing teacher and depending on teacher. Intrinsic (IMS) motivation scale is formed of three sub dimensions which include challenge, curiosity and independent mastery.

The extrinsic motivation subscale of original academic motivation scale ( $\alpha = .78$ ) as well as three component scales: easy work ( $\alpha = .77$ ), pleasing teacher ( $\alpha = .73$ ), and dependence on the teacher ( $\alpha = .67$ ). Test–retest reliability was adequate for the extrinsic motivation composite ( $r = .74$  ;  $p = .001$ ) as well as for the three extrinsic subscales easy work ( $r = .71$  ;  $p = .001$ ) ; pleasing teacher ( $r = .65$ ;  $p = .001$ ) ; dependence on teacher ( $r = .65$ ,  $p = .001$ ). Analyses are not reported for the original subscales of intrinsic motivation because the subscale structure was not supported by our factor analysis. It is interesting to note that most subsequent researchers who have made use of

Harter's (1980, 1981) scale also seem to have focused their analyses on the overall composite rather than the three component scales (e.g., Boggiano, 1998; Boggiano & Barrett, 1985; Ginsburg & Bronstein, 1993; Harter & Jackson, 1992; R. M. Ryan & Connell, 1989; Tzuriel, 1989).

Intrinsic and extrinsic motivation were only moderately negatively correlated ( $r = .24$ ;  $p = .01$ ). Although this correlation is statistically significant, the effect explains less than 6% of the variance, suggesting that children's intrinsic and extrinsic motivation in these classrooms can be viewed as two largely orthogonal constructs rather than as opposite ends of a single dimension. Indeed, further evidence of the lack of inherent opposition between the two is evident from the fact that the strength and direction of the relationship between intrinsic and extrinsic forms of motivation varied across the three subscales of extrinsic motivation. Thus, there was a strong negative correlation between intrinsic motivation and preference for easy work ( $r = .47$ ;  $p = .01$ ), no significant correlation between intrinsic motivation and desire to please the teacher ( $r = .06$ ), and a statistically significant but quite modest positive correlation between intrinsic motivation and dependence on the teacher ( $r = .08$ ;  $p = .05$ ).

## 7. Translation of the Scale into Turkish

Back-translation and committee approach were used in forming Turkish Academic Motivation Scale. The original materials taking place in the Academic Motivation Scale was translated into Turkish first by researchers and later by psychological counselors who worked in the English department. Later on, by regarding all the translations, a Turkish form was created. The created Turkish form, were analyzed and studied by the Turkish Language Specialists, was checked for the transparency and clarity and after the sufficient corrections the Turkish form was re-translated by the English academicians into English. By the specialists who worked in the area of psychological counselor and at the same time have language efficiency compared the original form and English translated form, and decided that two scales were equivalent. The created Turkish Academic Motivation Scale was done by a group of students to check whether the materials were easy to understand or not. It was confirmed that the materials were understood by the students.

The search group was formed of 190 students who were in grades of 4<sup>th</sup> and 8<sup>th</sup>. Both the factor analysis study and trustworthiness of test repetition study were done on this group.

## 8. Validity and Reliability Studies

### 8.1. Validity Study

The confirmatory factor analyses of the composed form are calculated on the results of the scale administration on research group. CFA are calculated separately for each subscale. The results of CFA analysis of EMS [ $\chi^2 = 153, 66$ ;  $GFI = 0, 89$ ;  $AGFI = 0, 86$   $RMSEA = 0.055$ ]. The items as shown at the result of CFA for intrinsic motivation subscale, decomposed three sub dimensions and provided model is confirmed. The results of CFA analysis of IMS [ $\chi^2 = 167.01$ ;  $GFI = 0, 89$ ;  $AGFI = 0,85$   $RMSEA = 0.054$ ]. The items as shown at the result of CFA for extrinsic motivation subscale, decomposed three sub dimensions and provided model is confirmed. The factorial structures of each subscales composed from 3 dimensions are verified.

### 8.2. Reliability Study

Cronbach Alpha of EMS for sub dimensions are; easy work ( $\alpha = .71$ ), pleasing teacher ( $\alpha = .72$ ), depending on teacher ( $\alpha = .70$ ) and IMS Cronbach Alpha for challenge ( $\alpha = .80$ ), curiosity ( $\alpha = .77$ ), independent mastery ( $\alpha = .78$ ).

Three weeks after the scale was applied by the students, t-retest was done to 190 students by applying the test on the students again. The test-retest reliability and internal consistency coefficients are calculated. Considering the results can differ according to the grades, t-retest correlation coefficients are calculated on the basis of grades. When we look at the t-retest values, the results being regular in the 4<sup>th</sup> grade, shows the usability of the scale in the small grades but in the values of 5<sup>th</sup> grade there is a problem. This difference is thought to be caused from the sample group. If both 4<sup>th</sup> and 5<sup>th</sup> grades low values were obtained, it can facilitate arriving to a conclusion such as the scale is not appropriate for small classes. But the situation isn't so. In the following studies by applying the scale on a different 5<sup>th</sup> grade, would give better information.

The size of the teacher commitment has lower reliability coefficients than extrinsic motivation sub-dimensions of sub-scale. Especially for the primary school students, sometimes their teachers can be fore from family and commitment to the teacher may be very high. Even though the students have intrinsic or extrinsic academic motivation this dependency is higher in the primary school when compared to the secondary or other level of school. The dimension of the commitment to teacher have lower coefficients is thought to be linked to this situation.

Table 1: Test – Retest correlation coefficients of EMS and IMS by grades

	4th Grade	5th Grade	6th Grade	7th Grade
1. Easy Work	.626	.402	.790	.791
2. Pleasing Teacher	.718	.431	.871	.823
3. Depending on Teacher	.640	.465	.699	.591
4.Challenge	.627	.529	.772	.765
5.Curiosity	.568	.423	.655	.863
6.Independent Mastery	.595	.486	.796	.887

## 9. Conclusion

Satisfactory results are obtained from the form Turkish of the scale and two sub-scale. The results gathered shows that the scale can be used in Turkish. But especially for the 5th grade it would be very suitable if the analysis are re-made. Also the similar studies that will be conducted later would increase the usability of the scale. The scale and research, as well as other scales developed to be used as similar to the idea of validity have been reached.

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