

## Adaptation of Harter's Scale of Intrinsic Versus Extrinsic Motivational Orientation in the Classroom to Primary Schools in Turkey

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### Abstract

*Problem Statement:* Motivation can be defined as a combination of intrinsic and extrinsic forces that are fundamental to both teachers and students and are significant determinants of the quality and efficiency of education. There is no adapted or original measurement tool that can be used to determine the factors and levels of intrinsic and extrinsic motivation of primary school students in Turkey.

*Purpose of Study:* The aim of this study was to adapt the Harter's scale to Turkish primary school students between the 3<sup>rd</sup> and 8<sup>th</sup> grades, to assess its reliability and validity, and also to analyze differential item functioning (DIF) by school type, class level, school financial condition, gender, education level of mother and father, and family financial status.

*Methods:* A total of 979 students were selected from the 3<sup>rd</sup> through 8<sup>th</sup> grades of the public and private primary schools in Ankara. To assess the dimensionality of Harter's Scale, confirmatory factor analysis (CFA) for categorical data was carried out for intrinsic and extrinsic motivation components each. After CFA, the internal construct validity of the subscales of these components was analyzed by rating scale model. Internal consistency was assessed by Cronbach's alpha.

*Findings and Results:* CFA confirmed the unidimensional structure of the intrinsic motivation component and the three-dimensional structure of the extrinsic motivation component. The internal consistency of the intrinsic motivation component was found to be 0.91, whereas the internal

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consistencies of the subscales (desire for easy work, desire to please the teacher, dependence on the teacher) of the extrinsic motivation component were 0.78, 0.81 and 0.78, respectively. Except for one item for intrinsic and extrinsic motivation components each, the internal construct validities of the scales were good. Some items for both components showed DIF by school type, class level, school financial condition, and family financial status, but there was no DIF by gender or education level of mother and father.

*Conclusions and Recommendations:* Harter's scale has been successfully adapted, and the adapted scale can be used in Turkey. However, the suitability and applicability of the adapted scale to secondary and higher education should be determined, and its cross-cultural validity should be analyzed.

*Keywords:* Motivation, student motivation, intrinsic and extrinsic motivation, confirmatory factor analysis, rating scale model

Education not only enables individuals to acquire positive attitudes, but also improves individuals' abilities and prepares them for their futures. The educational process is extensive, continuous, and multi-dimensional. It continues throughout life and is gained through experience, as well as class room instruction. It is not limited by time or space and creates societies' cultures.

The educational process is based on learning. It starts with birth and family and continues at school in a planned and organized manner. Schools are institutions responsible for making people acquire positive behaviours. In this sense, schools directly contribute to personal improvement and education. Without a doubt, they are the establishments that exert the most influence on individuals. They shape their conduct and, therefore, their futures. For this reason, school administrators should actively and eagerly reform the procedures currently used at their institutions, since the educational activities put into practice at schools directly determine the quality of people who enter society as adults and who have a great influence on the future.

Primary education, the first educational stage in Turkey, is compulsory. It is also very important for children between the ages of 7 and 14. For the first time, individuals are faced with planned, programmed, supported, and compulsory education. They start to learn new knowledge, skills, and behaviours. Therefore, primary education has a significant influence on personal improvement. It not only affects individual performance on other educational activities, but also enables people to attain knowledge, abilities, and manners that are indispensable to success.

In efficient and effective teaching and learning processes, motivation is a significant determinant of the quality and efficiency of education. Derived from the Latin verb "movere", which means "to move", motivation is fundamental to both teacher and student performance. Since it contains a psychological element, motivation has been analyzed from different perspectives and defined in a variety of ways. When all definitions of "motivation" are examined, however, it can be defined

as the intrinsic and extrinsic forces that drive an organism towards particular types of conduct, influence actions, and ensure the continuity of these actions (Öztuna & Gökçe, 2006).

The importance of student motivation and research on student motivation has increased over the years. Researchers are interested in how and why some students easily learn and succeed at school, while others try to be successful but fail, must consider motivation. Most motivated students display three attitudes. First and foremost, they find value in their school experiences. Second, they believe they have the skills to be successful. Third they trust their environments and expect that they can succeed in them. When students pay attention to tasks and their outcomes and believe that they will succeed, they are more likely to do the following: (a) Implement self-regulated behaviours, (b) determine realistic expectations, and (c) apply strategies appropriate to the attainment of academic success.

There are certain duties that students should fulfill during their educations. Students engage in a task for two basic reasons: Either they enjoy the activity or they value its outcome or by-product. While students may not enjoy an activity, they may value the reward it generates (Siegle & McCoach, 2005). Reasons for engaging in tasks form the basis of individual motivation, which may be intrinsic or extrinsic. Students are intrinsically motivated when learning or performing is a goal in itself. They are extrinsically motivated to the extent that the activities they perform are done for the sake of the material or for other rewards that are not intrinsically related to school learning.

Motivational research in educational psychology stresses the importance of students being intrinsically motivated and underlines the role of extrinsic motivation. Total motivation to learn is a combination of intrinsic and extrinsic motivation (Lens & Tsuzuki, 2005). As other researchers have paid attention to the influence of individual differences on motivational orientations, intrinsic and extrinsic motivation have tended to be characterized as opposing poles of a single dimension. Indeed, the most famous of these individual difference scales – Harter’s scale – assesses intrinsic motivation in opposition to extrinsic motivation (Corpus, Lepper, & Iyengar, 2005).

According to Pintrich and Schunk, intrinsic motivation refers to motivation to engage in an activity for its own sake. People who are intrinsically motivated work on tasks because they find them enjoyable (Solotki, 2005). Intrinsic motivation, which is related to personality, attitudes, and values, refers to the eagerness with which people fulfill activities. An intrinsically motivated person enjoys doing work and feels that working is its own reward. Generally, students are intrinsically motivated to pursue activities that are interesting, enjoyable, exciting, and optimally challenging. Material that is either too hard or too easy can be anti-motivational. When schoolwork is too easy, students get bored. When tasks are too difficult, students may get frustrated and anxious (Siegle & McCoach, 2005). Intrinsic motivation is more permanent than extrinsic motivation and is directed by the individual.

According to Pintrich and Schunk, extrinsic motivation is motivation to engage in an activity as a means to an end. Individuals who are extrinsically motivated work on tasks because they believe that participation will result in desirable outcomes, such as rewards, teacher praise, or the avoidance of punishment (Solotki, 2005). Extrinsic motivation is the force that makes individuals act to get rewards or to receive positive reinforcement. Extrinsic motivators include such rewards as stickers, praise, grades, special privileges, prizes, money, material rewards, attention, and peer admiration. However, teachers should use extrinsic motivators carefully, because providing extrinsic rewards for an intrinsically-motivating activity may decrease a person's subsequent intrinsic motivation to engage in that activity (Siegle & McCoach, 2005).

Both intrinsic and extrinsic motivation have a determining impact on primary school students' acquisition of necessary self-improvement skills and on attitudes towards school. Motivation and focus on educational activities are prerequisites to educational success. Motivated students eagerly go to school and participate in class activities. Determining the effects of factors related to intrinsic and extrinsic motivation is very important to the academic success of students. By analyzing the influence of intrinsic and extrinsic motivation factors on the quality of individual projects, homework, social interactions, and class participation, researchers can begin to identify ways to increase student motivation. Consequently, it is important to determine the factors that contribute to the intrinsic and extrinsic motivation of students in primary schools.

Among the scales most commonly used to examine the relationship between intrinsic and extrinsic motivation and academic behaviour during the elementary and primary school years is Harter's scale. Harter's scale of intrinsic versus extrinsic orientation in the classroom provides separate measures of student-reported intrinsic and extrinsic motivation. The scale provides child respondents with examples of academic activities (e.g., reading books) and asks them to indicate why they engage in those activities – for intrinsic (e.g., enjoyment) or extrinsic (e.g., pleasing the teacher) reasons.

Harter's scale has two components. The intrinsic motivation component is based on subscales that measure preference for challenging, focus on curiosity, and desire for independent mastery. The extrinsic motivation component is based on subscales that measure preference for easy work, focus on pleasing the teacher and getting good grades, and dependence on the teacher guidance. There are a total of 33 items, each with its own five-point Likert scale, ranging from "not at all true for me" to "very true for me". The first 17 items are related to intrinsic motivation, and the other 16 items are related to extrinsic motivation (Corpus et al., 2005).

The importance of determining the factors that affect intrinsic and extrinsic motivation has long been recognized by Turkish educators. Consequently, it is necessary to adapt and use these scales in schools. The primary purpose of this study was to adapt Harter's scale to the Turkish population and examine the reliability and validity of Harter's scale for use in Turkish primary schools. First (Stage I), the scale was translated into Turkish. Two bilingual professionals translated the original scale

using recent guidelines for cross-cultural adaptation. One professional had an educational background and was thus an “informed” translator. The other translator was an English teacher (educated in England) and thus an “uninformed” translator. Inconsistencies in the translations were resolved (Stage II) by discussions between the translators. Back translation (Stage III) and further expert review (Stage IV) were also undertaken. After pretesting for face validity (Stage V) with Turkish students, general modifications were made to incorporate nuances in the Turkish language (Küçükdeveci, Tennant, Elhan, & Niyazoğlu, 2001).

## Method

### *Participants*

This study was carried out in public and private primary schools in Ankara with students between the 3<sup>rd</sup> and 8<sup>th</sup> grades. Sampling was performed in two stages using stratified sampling method. In the first stage, after categorizing the schools into 3 groups (underdeveloped, developing, developed) according to their financial conditions, 6 schools were selected randomly. In the second stage, from these schools, 979 students were selected using stratified random sampling.

### *Methods*

After the pilot (face validity) study with 60 students, the Harter’s scale was self-completed by students. Gender, school type (public/private), class level (3<sup>rd</sup> through 8<sup>th</sup> grades), school financial condition (underdeveloped, developing, developed), education level of mother and father (illiterate, primary school, high school, university, postgraduate), and family financial status (very low, low, moderate, high, very high) were also collected.

### *Statistical Analysis*

*Assessment of reliability and validity.* The scientific quality of a scale is determined through a range of analyses. These include tests for reliability and validity. Reliability is concerned with the consistency of the scale. Validity is concerned with whether the scale measures the characteristic it purports to measure.

The most common form of reliability for a self-completed scale in a Likert format, such as the scale used in this study, is internal consistency that has been tested by Cronbach’s alpha coefficient (Cronbach, 1951).

The validity of a scale is examined by both confirmatory factor analysis (CFA) and Rasch analysis.

*Confirmatory factor analysis.* To assess whether the data would fit the models proposed for intrinsic and extrinsic motivation components each, CFA for categorical data was applied with a weighted least squares estimation with robust standard errors and mean- and variance-adjusted (WLSM)  $\chi^2$  statistics. Items with path weights below 0.40, or those with an explained variance ( $R^2$ ) that was below 0.30, were eliminated. The following goodness-of-fit indices were used to assess the degree of fit between the model and the sample: Comparative Fit Index (CFI; >0.90

acceptable, >0.95 excellent), Tucker-Lewis Index (TLI; >0.90 acceptable, >0.95 excellent), and root-mean-square error of approximation (RMSEA; <0.08 acceptable, <0.05 excellent) (Pai et al., 2007). Although there were no acceptable limits for these indices in categorical data, the values near the limits determined for continuous data are considered adequate for model-data fit (Hart et al., 2006, Coster et al., 2008, Fliege et al., 2005).

*Rasch analysis.* The internal construct validity of the scale was examined within the framework of the Rasch measurement model (Wright & Stone, 1979). Internal construct validity was assessed by fitting the data to the one-parameter rating scale model (RSM). The RSM, one of the Rasch measurement models, assumes that the data from a scale are unidimensional and thus that the model can be used to test whether the items in the scale belong to a single underlying construct. Testing the fit of the data to the RSM is equivalent to testing the theoretical construct validity and adequacy of the scale. Fit is assessed by two mean square (MNSQ) fit statistics. These statistics are derived for every item and, taken together; provide information on the consistency of the responses to each item. The outlier-sensitive MNSQ fit statistic (OUTFIT) is more sensitive to abnormal responses to items far from the person's ability level – for example, those from a very able person responding to a very easy item. This statistic is weighted to derive an information weighted statistic (INFIT). As the influence of outliers is reduced, the INFIT is able to provide information about more central responses, that is, individual responses to items that are of the same difficulty level as responders' ability levels. MNSQ values between 0.6 and 1.4 reflect adequate fit with a given model for a given sample size. Values >1.4 indicate unexpected responses to items and may indicate that items are poorly understood or do not belong to the same construct. Values <0.6 indicate items to which responses are more deterministic, in that there is less variation than expected. The data derived from Harter's scale were fitted to the RSM, which was operationalized by the unconditional maximum likelihood approach.

Another important aspect of a scale's internal integrity is the absence of item bias or differential item functioning (DIF). At a given level of variable of interest, it is important that the response to any item is unaffected by group membership. For example, at the same level of variable of interest, it is important that both girls and boys have the same probability of affirming an item. If this probability differs, then the scale works in different ways by gender, rendering comparison between groups difficult. Relevant groups should be evaluated for DIF as a matter of routine. For this study, DIF was examined for school type (public/private), class level (3<sup>rd</sup> through 8<sup>th</sup> grades), school financial condition (underdeveloped, developing, developed), gender, education level of mother and father (illiterate, primary school, high school, university, postgraduate), and family financial status (very low, low, moderate, high, very high). Items are said to display DIF if there is a significant difference between groups in the residuals that result from the RSM. This means that there should be no group-related patterns in the data once the primary variable of interest has been removed (Küçükdeveci et al., 2001). Because of the number of tests undertaken, Bonferroni correction was applied (Bland & Altman, 1995).

Data were analyzed using the Statistical Package for the Social Sciences (SPSS 11.5), MPlus (Muthen & Muthen, 1998-2007), and a Rasch-Model Computer program WINSTEPS 3.39 (Wright & Linacre, 1998).

### Findings and Results

Participants were 979 third-through-eighth-grade students from six different schools, four of them public and two of them private. In terms of grade levels, the distribution of the total sample was third 203 (20.7%), fourth 148 (15.1%), fifth 164 (16.8%), sixth 196 (20.0%), seventh 155 (15.8%) and eighth 113 (11.5%). There were 536 girls (54.8%) and 443 boys (45.2%).

#### *Confirmatory Factor Analysis*

In our study, the 17 intrinsic motivation and 16 extrinsic motivation items were subjected to separate CFA to confirm the structure of these two components. According to Harter (1981), the intrinsic motivation component is unidimensional, while the extrinsic component is three-dimensional. We performed two different CFAs to confirm that the intrinsic motivation component has a unidimensional structure and the extrinsic motivation component has a three-dimensional structure.

Table 1

#### *Items and Factor Loadings for the Intrinsic Motivation Component*

Items	Factor Loadings
1. I like hard work because it's a challenge.	0.692
2. I like to learn as much as I can in school.	0.552
3. I like to go on to new work that's at a more difficult level.	0.651
4. I like those school subjects that make me think pretty hard and figure things out.	0.613
5. I like difficult problems because I enjoy trying to figure them out.	0.660
6. I like difficult schoolwork because I find it more interesting.	0.656
7. I ask questions in class because I want to learn new things.	0.516
8. I do extra projects because I can learn about things that interest me.	0.602
9. I read things because I am interested in the subject.	0.663
10. I do my schoolwork to find out about a lot of things I've been wanting to know.	0.810
11. I work really hard because I really like to learn new things.	0.785
12. I work on problems to learn how to solve them.	0.737
13. I like to try to figure out how to do school assignments on my own.	0.683
14. When I don't understand something right away I like to try to figure it out by myself.	0.652
15. When I make a mistake I like to figure out the right answer by myself.	0.685
16. If I get stuck on a problem I keep trying to figure out the problem on my own.	0.693
17. I like to do my schoolwork without help.	0.604

According to factor loadings,  $R^2$ , and goodness-of-fit statistics, the intrinsic motivation component does, indeed, have a one-factor structure. Items and factor loadings for the intrinsic motivation component are given in Table 1. Each of the 17 intrinsic items loaded 0.52 or higher on this factor. The data showed a reasonable fit to the model, in which CFI=0.875, TLI= 0.972, and RMSEA= 0.083.

The three-factor structure of the extrinsic motivation component was confirmed by examining factor loadings,  $R^2$ , and goodness-of-fit statistics. Items and factor loadings for the extrinsic motivation component are given in Table 2. All six of the items representing a “desire for easy work” loaded on 0.40 or higher on the first factor, all four items representing a “desire to please the teacher” loaded on 0.64 or higher on the second factor, and all six items representing a “dependence on the teacher” loaded on 0.41 or higher on the third factor. However, one item that measured the desire for easy work – “I don’t like to figure out difficult problems” – and one item that measured dependence on the teacher – “When I don’t understand something right away I want the teacher to tell me the answer” – were dropped because their  $R^2$  values were very low – 0.165 and 0.167, respectively. The data showed a reasonable fit to the model, in which CFI=0.900, TLI= 0.957, and RMSEA= 0.094.

Table 2

*Items and Factor Loadings for Subscales of the Extrinsic Motivation Component*

Subscale	Items	Factor Loading		
		Factor1	Factor2	Factor3
<b>Desire for Easy Work</b>	19. I like to learn just what I have to in school.	0.520	-	-
	20. I don't like difficult schoolwork because I have to work too hard.	0.631	-	-
	21. I like easy work that I am sure I can do.	0.795	-	-
	22. I like to stick to the assignments which are pretty easy to do.	0.864	-	-
	23. I like school subjects where it's pretty easy to just learn the answers.	0.786	-	-
<b>Desire to Please the Teacher</b>	24. I read things because the teacher wants me to.	-	0.775	-
	25. I do my schoolwork because teacher tells me to.	-	0.832	-
	26. I work on problems because I'm supposed to.	-	0.868	-
	27. I ask questions because I want the teacher to notice me.	-	0.636	-
<b>Dependence on the Teacher</b>	29. I like to have the teacher help me with my schoolwork.	-	-	0.690
	30. When I make a mistake I like to ask the teacher how to get the right answer.	-	-	0.726
	31. If I get stuck on a problem I ask the teacher for help.	-	-	0.769
	32. I like the teacher to help me plan what to do next.	-	-	0.666
	33. I like to ask the teacher how school assignments should be done.	-	-	0.637



*Rasch Analysis*

*Intrinsic motivation component.* The internal consistency of the intrinsic motivation component was high, with a Cronbach's alpha of 0.91. The Harter's intrinsic motivation component showed an adequate fit to the RSM, except for item 2, "I like to learn as much as I can in school" (Table 3). When teachers cannot efficiently put into practice active teaching methods during lessons, students find it difficult to participate in activities and think that they can learn by themselves.

Except for item 2, there was no DIF by the factors mentioned above. Item 2, "I like to learn as much as I can in school", showed DIF by school type, class level, school financial condition, and family financial status. Those who were educated in private schools, who were in the 5<sup>th</sup> or 7<sup>th</sup> grade, whose educational institutions were in better financial condition, and whose families had better financial status were more motivated than others. Because item 2 did not fit to the RSM and demonstrated DIF by school type, class level, school financial condition, and family financial status, it was removed from the Turkish version of the intrinsic motivation component.

Table 3  
*Fit of the Intrinsic Motivation Items to the RSM*

Items	Item Calibration (SE)	Infit MNSQ	Outfit MNSQ
1. I like hard work because it's a challenge	0.08 (0.04)	1.06	1.01
2. I like to learn as much as I can in school	-0.39 (0.04)	<b>1.55</b>	<b>1.64</b>
3. I like to go on to new work that's at a more difficult level	-0.24 (0.04)	1.18	1.13
4. I like those school subjects that make me think pretty hard and figure things out	0.21 (0.04)	1.00	1.10
5. I like difficult problems because I enjoy trying to figure them out	0.45 (0.03)	0.92	0.93
6. I like difficult schoolwork because I find it more interesting	0.38 (0.03)	1.00	1.05
7. I ask questions in class because I want to learn new things.	0.43 (0.03)	1.04	1.26
8. I do extra projects because I can learn about things that interest me.	0.06 (0.04)	1.04	1.06
9. I read things because I am interested in the subject.	-0.26 (0.04)	1.10	1.09
10. I do my schoolwork to find out about a lot of things I've been wanting to know.	-0.22 (0.04)	0.81	0.76
11. I work really hard because I really like to learn new things.	-0.15 (0.04)	0.73	0.66
12. I work on problems to learn how to solve them.	-0.10 (0.04)	0.84	0.92
13. I like to try to figure out how to do school assignments on my own.	-0.10 (0.04)	0.92	0.93
14. When I don't understand something right away I like to try to figure it out by myself.	-0.02 (0.04)	0.98	1.09
15. When I make a mistake I like to figure out the right answer by myself.	-0.06 (0.04)	1.02	1.00
16. If I get stuck on a problem I keep trying to figure out the problem on my own.	-0.07 (0.04)	0.99	0.92
17. I like to do my schoolwork without help	0.02 (0.04)	1.23	1.24

**Bold numbers indicate miss-fitting items.** MNSQ = mean square, SE= standard error

*Extrinsic motivation component.* The internal consistencies of the subscales for the extrinsic motivation component were also high: Desire for easy work (5 items, Cronbach's alpha=0.78), desire to please the teacher (4 items, Cronbach's alpha=0.81), and dependence on the teacher (5 items, Cronbach's alpha=0.78). Harter's extrinsic motivation subscales showed adequate fit to the RSM, except for item 19, "I like to learn just what I have to in school" (Table 4). Because educational programs in Turkey are very intensive, students have a tendency not to learn more than they have to.

With regards to the "desire for easy work" component, item 19 showed DIF by school type and class level. Levels of reported extrinsic motivation were highest for students who attend private schools and for older students. Item 20 also showed DIF by class level. Younger students liked doing difficult schoolwork more than older students. Because item 19 did not fit to the RSM and demonstrated DIF by school type and class level, it was removed from the "desire for easy work" subscale of the Turkish version of the extrinsic motivation component.

With regards to the "desire to please the teacher" component, there was DIF by class level for items 24 and 27. Younger students were more likely than older students to read to please their teachers. Older students were more likely to attract their teachers' attention by asking questions.

Table 4  
Fit of Subscales of the Extrinsic Motivation Items to the RSM

Subscale	Items	Item Calibration (SE)	Infit MNSQ	Outfit MNSQ
<b>Desire for Easy Work</b>	19. I like to learn just what I have to in school	0.06 (0.03)	<b>1.54</b>	<b>1.61</b>
	20. I don't like difficult schoolwork because I have to work too hard	0.73 (0.03)	1.18	1.15
	21. I like easy work that I am sure I can do	-0.44 (0.03)	0.85	0.83
	22. I like to stick to the assignments which are pretty easy to do	-0.09 (0.03)	0.65	0.63
	23. I like school subjects where it's pretty easy to just learn the answers	-0.26 (0.03)	0.84	0.84
<b>Desire to Please the Teacher</b>	24. I read things because the teacher wants me to	-0.17 (0.03)	1.04	0.98
	25. I do my schoolwork because teacher tells me to	0.21 (0.04)	0.82	0.76
	26. I work on problems because I'm supposed to	-0.09 (0.04)	0.76	0.74
	27. I ask questions because I want the teacher to notice me	0.05 (0.04)	1.40	1.47
<b>Dependence on the Teacher</b>	29. I like to have the teacher help me with my schoolwork	0.01 (0.03)	1.09	1.08
	30. When I make a mistake I like to ask the teacher how to get the right answer	0.01 (0.03)	0.96	0.93
	31. If I get stuck on a problem I ask the teacher for help	0.19 (0.03)	0.84	0.84
	32. I like the teacher to help me plan what to do next	-0.15 (0.03)	0.97	0.97
	33. I like to ask the teacher how school assignments should be done	-0.05 (0.03)	1.18	1.16

**Bold numbers indicate miss-fitting items.** MNSQ = mean square, SE= standard error

## Conclusions and Discussion

Both intrinsic and extrinsic motivations play a significant role in the process of teaching and learning. In Turkey, there is no adapted or original measurement tool to determine students' levels of intrinsic and extrinsic motivation or the factors that affect such motivation. In this study, Harter's scale, which has been widely used to examine the factors that determine the intrinsic and extrinsic motivation of students, was adapted to the Turkish population. This adaptation was carried out using modern psychometric methods, such as CFA for categorical data and Rasch analysis, using RSM. In this sense, this study can be regarded as the first study of the levels of motivation and the factors that influence motivation in primary schools in Turkey.

Besides, in both a national and an international sense, this is an original study that questions, by means of RSM, whether any item shows DIF by school type, class level, school financial condition, gender, education level of mother and father, or family financial status. In the light of this study, it was justified that the item in the intrinsic motivation component "I like to learn as much as I can in school" showed DIF by school type, class level, school financial condition, and family financial status. Those who are educated in private schools, who are in the 5<sup>th</sup> or 7<sup>th</sup> grade, whose educational institutions are in better financial condition, and whose families have better financial status are more motivated to learn.

Students in private schools, which operate in better social and economic conditions, prefer to learn lessons in school because the activities they engage in are interesting, because their interactions with teachers are effective, and because their time is spent efficiently. Moreover, since families who have better social and economic opportunities are aware of the importance of activities performed at school, they pay special attention to the necessity of learning lessons in class. Several studies have proven that parents play a key role in shaping students' aspirations and achievements. The relationship between a parent's education level and a child's motivation to achieve may exist because more-educated parents may be more involved in their children's education than less-educated parents. Then, if more-educated parents pay special attention to their children's education, it is not surprising that their children have higher levels of motivation. However, Hossler, Schmit, and Vesper have established that parents' education and income levels are not important determinants of student educational aspirations, though parental support and encouragement is (Maya, 2003). Thus, the results of our study are consistent with those of Hossler, Schmit, and Vesper, in terms of parental education level, but are inconsistent with regard to parental income level.

Since students do not complete their self-improvement in the beginning of the primary education, the tendency to learn in school increases as students grow up. This is the expected result of the process of individual education and self-improvement. Research related to the relationship between student age, achievement, and motivational orientation indicates that children's confidence in their achievements generally declines as they grow older (Renchler, 1992). However, it has also been found that older students are more likely to learn outside of school,

e.g., to read more for the purpose of improving themselves. Furthermore, students become more observant of their environments as they grow up. They become more responsible and gain the ability to reach the milestones necessary to achieve their goals. On the other hand, they start to dislike difficult tasks and complicated homework and start to ask questions both to attract their teachers' attention and to prove their identities.

In our country, people have become obsessed with obtaining opportunities to continue their educations in better educational institutions. As a consequence, they feel compelled to solve more problems and to study harder and pass the exams that gain them admission to educational centres. Unlike private primary school students, students in public primary schools have a tendency to learn just what they are supposed to. This finding is very challenging and can be explained by the fact that the activities in public school classes are not interesting and effective enough to attract students' attention, as well as by the fact that these students do not use their time in school efficiently.

In conclusion, this study has shown that Harter's scale can be applied to the educational system in our country and can efficiently be used to determine the intrinsic and extrinsic motivation levels of primary school students, after a few modifications. After these minor revisions, it is obvious that the Turkish version of Harter's scale is a robust measure that works well with Turkish primary school students. The final Turkish version of the scale is included in the Appendix. It should be analyzed in depth, to determine whether it is applicable to secondary and higher education and whether it exhibits cross-cultural validity.

#### **Appendix: The Turkish Version of Harter's Scale**

1. Zor işleri severim, çünkü mücadele etmeyi gerektirir.
2. *Mümkün olduğunca derisi, derste öğrenmeyi tercih ederim\**.
3. Zor işleri başarmayı severim.
4. İnsanı düşündüren, zaman ve emek harcamayı gerektiren konuları severim.
5. Zor problemler tam bana göredir, onlarla uğraşmayı severim.
6. Öğretmen tarafından verilen zor ödevleri severim, çünkü onları daha ilgi çekici bulurum.
7. Yeni şeyler öğrenmek istediğim için sınıfta sürekli sorular sorarım.
8. Proje ödevleri alırım, ilgimi çeken konular hakkında bilgi edinirim.
9. İlgimi çeken konular hakkında kitap okumaktan hoşlanırım.
10. Yeni bilgiler öğrenmek için ödevlerimi istekle yaparım.
11. Yeni bilgiler öğrenmek istediğim için çok çalışırım.
12. Problemlerin nasıl çözüldüğünü öğrenmek için çok çalışırım.
13. Verilen ödevlerin nasıl yapılacağını, kendi kendime bulmaya çalışırım.
14. Bir konuyu anlamadığım zaman, üzerinde tekrar düşünüp, kendi başıma anlamaya çalışırım.
15. Bir soruyu yanlış yaptığım zaman, doğrusunu yine kendim bulmak isterim.
16. Bir problemi kendi başıma çözemesem bile, yine de çözmek için uğraşırım.
17. Genellikle ödevlerimi kimseden yardım almadan yapmayı severim.
18. Zor problemleri çözmeyi sevmiyorum.

19. Okulda sadece öğrenmem gerektiği kadarını öğrenmek isterim\*.
  20. Zor olan ödevleri sevmem, çünkü çok çalışmayı gerektirir.
  21. Yapabileceğimden emin olduğum kolay ödevleri daha çok severim.
  22. Yapılması oldukça kolay olan ödevleri her zaman tercih ederim.
  23. Cevabı bulmanın çok kolay olduğu sorular daha çok hoşuma gider.
  24. Öğretmen bir şeyi okumamı istediği için okurum.
  25. Ödevlerimi, öğretmen istediği için yaparım.
  26. Benden problemleri çözmem istendiği için onları çözerim.
  27. Derste öğretmenin dikkatini çekmek için soru sorarım.
  28. Bir konuyu anlamakta güçlük çektiğim zaman, öğretmenin hemen anlatmasını isterim.
  29. Ödevlerime öğretmenin yardım etmesi hoşuma gider.
  30. Bir soruyu yanlış yaptığımda, doğru cevabı nasıl bulacağımı hemen öğretmene sormak isterim.
  31. Bir problemi çözemediğim zaman hemen öğretmenden yardım isterim.
  32. Ne yapacağımı planlamada öğretmenin bana yardımcı olmasını isterim.
  33. Ödevlerimin nasıl yapılması gerektiğini, genellikle öğretmene sorarım.
- \*: These items were removed from the final version.

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**Harter'ın "Sınıf Ortamında İçsel Motivasyona Karşı Dışsal Motivasyon Ölçeğinin" Türkiye'deki İlköğretim Okullarına Adaptasyonu**  
(Özet)

*Problem Durumu:* Motivasyon, organizmayı harekete geçiren, bireylerin hareketlerine yön veren ve ısrarla sürdürmesini sağlayan iç ya da dış güçlerin bir kombinasyonu olarak tanımlanabilir. İç motivasyon, bir aktiviteyi bireyin kendi isteğiyle yapmak için gerekli olan motivasyon iken; dış motivasyon, bir aktiviteyi belirli bir sonuç elde etmek için yaptığımızda gerekli olan motivasyondur. İlköğretim öğrencilerinin hem kendilerini geliştirmeleri hem de okula ilişkin olumlu tutum ve davranışlara sahip olmalarında iç ve dış motivasyon faktörlerinin önemli bir etkisi vardır. Hem öğrenciler hem de öğretmenler için etkili öğrenme ve öğretim süreçlerinin önemli bir parçası olan motivasyon, eğitimde kalite ve verimliliğinin arttırılmasında önemli bir faktördür. Türkiye'de ilköğretim okullarındaki öğrencilerin iç ve dış motivasyon faktörlerinin ve düzeylerinin belirlenmesinde kullanılan adaptasyonu yapılmış ya da orijinal olarak geliştirilmiş bir ölçme aracı bulunmamaktadır.

*Araştırmanın Amacı:* Bu çalışmanın amacı, öğrencileri sınıf ortamında motive eden iç ve dış motivasyon faktörlerinin belirlenmesinde kullanılan Harter tarafından geliştirilen ölçeğin, Türkiye'de ilköğretim 3-8. sınıf düzeyindeki

öğrencilere adaptasyonunun yapılması, geçerlilik ve güvenilirliğinin değerlendirilmesi ve okul türü, sınıf düzeyi, okulun maddi statüsü, cinsiyet, anne eğitim düzeyi, baba eğitim düzeyi ve ailenin maddi durumu bakımından madde işlev farklılığı olup olmadığının analiz edilmesidir.

*Araştırmanın Yöntemi:* Bu kapsamda, Ankara ili merkez ilçelerindeki resmi ve özel okullarında öğrenim gören 3-8. sınıf öğrencileri arasından 979 öğrenci seçilmiştir. Bu öğrencilere iç ve dış motivasyon faktörlerinin belirlenmesinde kullanılan ve Harter tarafından geliştirilen 31 maddelik bir ölçek sunulmuştur. Harter tarafından geliştirilen ölçeğin önceden belirlenmiş olan boyutluluk yapısını doğrulamak için, iç ve dış motivasyon bileşenleri bazında olmak üzere iki farklı doğrulayıcı faktör analizi uygulanmıştır. Faktör analizi sonucunda faktör yükü 0.40'ın altında olan veya açıklanan varyans oranı 0.30'un altında olan maddeler ölçekten çıkarılmıştır. Model uyumunun değerlendirilmesinde karşılaştırmalı uyum indeksi (KUI) [Comparative Fit Index (CFI)], Tucker-Lewis indeksi (TLI) [Tucker-Lewis Index (TLI)] ve yaklaşımın hata kareler ortalaması karekökü (YHKOK) [Root Mean Square Error of Approximation (RMSEA)] kullanılmıştır. Faktör analizinin ardından, elde edilen ölçeklerin ya da alt ölçeklerin yapısal iç geçerliliği sıralama ölçekli model ile incelenmiştir. Rasch ölçüm modellerinden birisi olan sıralama ölçekli model, ölçekten elde edilen verinin tek boyutlu olduğunu varsayar ve böylece kurulan model ölçekteki maddelerin incelenen özelliği ölçüp ölçmediğini test etmek için kullanılır. Verinin sıralama ölçekli modele uyumunun test edilmesi, teorik kapsam geçerliğinin ve ölçeğin yeterliliğinin test edilmesine eşdeğerdir. Çalışmada uyumun incelenmesinde iki uyum istatistiği kullanılmış ve ölçekte yer alan maddelerin okul türü, sınıf düzeyi, okulun maddi statüsü, cinsiyet, anne eğitim düzeyi, baba eğitim düzeyi ve ailenin maddi durumu bakımından madde işlev farklılığı gösterip göstermediği incelenmiştir. İç tutarlılık Cronbach alfa katsayısı ile değerlendirilmiştir.

*Araştırmanın Bulguları:* Doğrulayıcı faktör analizi sonucunda, iç motivasyon bileşeni için önceden de belirlendiği gibi tek boyutlu, dış motivasyon bileşeni için üç boyutlu yapının olduğu ortaya konmuştur. İç motivasyon bileşeni için model uyum istatistikleri KUI=0.875, TLI=0.972 ve YHKOK=0.083 iken; dış motivasyon bileşeni için KUI=0.900, TLI=0.957 ve YHKOK=0.094 olarak bulunmuştur. İç motivasyon bileşeninin iç tutarlılığı yüksek iken (Cronbach alfa=0.91), dış motivasyon bileşeninin alt ölçeklerinin tutarlılığı sırasıyla (kolay olan derslere karşı ilgi, öğretmeni memnun etme isteği ve öğretmene bağımlılık) Cronbach alfa= 0.78, 0.81 ve 0.78'dir. İç motivasyon bileşeninde yer alan "mümkün olduğunca dersi, derste öğrenmeyi tercih ederim" maddesi ve dış motivasyon bileşeninin 'kolay olan derslere karşı ilgi' alt ölçeğinde yer alan "okulda sadece öğrenmem gerektiği kadarını öğrenmek isterim" maddesi haricinde, ölçeklerin yapısal iç geçerlilikleri tatmin edicidir. İç motivasyon bileşenindeki "mümkün olduğunca dersi, derste öğrenmeyi tercih ederim"

maddesinin okul türü, sınıf düzeyi, okulun maddi statüsü ve ailenin ekonomik durumu bakımından farklı işleve sahip olduğu belirlenmiştir. Bu sonuca göre, özel okulda okuyanlar devlet okulunda okuyanlara göre, sınıf düzeyi yüksek olanlar düşük olanlara göre, yüksek statüde okulda eğitim görenler, orta-alt ve alt statüdekilere göre, ailenin ekonomik düzeyi yüksek olanlar düşük olanlara göre daha yüksek motivasyona sahiptir. Dış motivasyon bileşeninin 'kolay olan derslere karşı ilgi' alt ölçeğinde yer alan "okulda sadece öğrenmem gerektiği kadarını öğrenmek isterim" maddesinin okul türü ve sınıf düzeyine göre farklı işleve sahip olduğu, farklılığın özel okulda okuyan ve sınıf düzeyi yüksek olanların diğerlerine göre daha yüksek dış motivasyona sahip olmalarından kaynaklandığı belirlenmiştir. Cinsiyet, anne eğitim düzeyi, baba eğitim düzeyi açısından farklı işleve sahip madde bulunmamaktadır.

*Araştırmanın Sonuçları ve Önerileri:* Harter tarafından geliştirilen, öğrencileri sınıf ortamında motive eden iç ve dış motivasyon faktörlerinin belirlenmesinde kullanılan ölçeğin, iç ve dış motivasyon bileşenlerinde yer alan birer madde hariç (iç motivasyon bileşeninde yer alan "mümkün olduğunca dersi, derste öğrenmeyi tercih ederim" maddesi ve dış motivasyon bileşeninin 'kolay olan derslere olan derslere karşı ilgi' alt ölçeğinde yer alan "okulda sadece öğrenmem gerektiği kadarını öğrenmek isterim" maddesi) Türk eğitim sistemine adaptasyonu başarılı olmuştur ve bu ölçeğin Türkiye'de ilköğretim okullarındaki öğrencilerin içsel ve dışsal motivasyon düzeylerinin belirlenmesinde kullanılabilir olduğu görülmüştür. Ayrıca, bu ölçeğin ortaöğretim ve yükseköğretim düzeyinde de kullanılabilir olup olmadığının belirlenmesinin ve kültürler arası geçerlik bakımından da değerlendirilmesinin gerekli olduğu düşünülmektedir.

*Anahtar Sözcükler:* Motivasyon, öğrenci motivasyonu, iç ve dış motivasyon, doğrulayıcı faktör analizi, sıralama ölçekli model