

Full Length Research Paper

Primary school teachers' realization levels of self-regulated learning practices and sense of efficacy

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The purpose of this study is to investigate primary school teachers' realization levels of self-regulated learning practices and sense of efficacy and the relationship between their realization levels of self-regulated learning practices and sense of efficacy. Survey research was conducted on 400 primary school teachers from 20 elementary schools in Mersin, a city in Turkey. The schools in the sample were determined randomly. The research data were collected by "Self-Regulated Learning Inventory for Teachers" developed by Lombaerts et al. and adapted into Turkish by the researcher and "Teachers' Sense of Efficacy Scale" developed by Tschannen-Moran ve Woolfolk Hoy and adapted into Turkish by Çapa et al. According to the results of the research, teachers realized self-regulated learning practices at the "very often" level and perceived themselves as quite efficient. It was also found that there was a significant relationship between primary school teachers' realization of self-regulated learning practices and their sense of efficacy.

Key words: Primary school teacher, self-regulated learning, sense of efficacy.

INTRODUCTION

The life-long learning process emphasizes individuals' needs for the skill to regulate their own learning activities and puts the notion of self-regulation in learning to the forefront. Self-regulation, based on Bandura's social cognitive learning, Piaget's cognitive constructivist and Vygotsky's social constructivist theories (Jarvela and Niemivirta, 1999), is defined as the students playing an active role in their learning processes in a behavioural, cognitive and motivational sense (Zimmerman, 1989). In this definition based on social cognitive theory learning is taken up as a cyclical activity that consists of forethought, performance control and self-reflection phases. The forethought phase during which the learning foundation is prepared is about pre-learning processes, thoughts and beliefs. In the performance control phase, however, the processes and events during learning take place. This phase includes the processes affecting concentration and performance. In the third phase called self-reflection, however, post-learning processes take place. This phase includes the reactions of a student to the learning

processes (Zimmerman, 2002).

Since self-regulation is an important aspect of the students' academic performance and their success in the classroom environment (Heo, 2000), it is important to develop students' self-regulation skills in a classroom environment. Although there are different views as to whether children's self-regulation skills can be developed during the early years of elementary grades, it is stated that teacher's behaviour encouraging students' self-regulation development during the elementary grades is important (Lombaerts et al., 2007). The research carried out shows that primary school teachers' instruction practices have positive effects on students' self-regulation development (Perry et al., 2002; Perry et al., 2004; Perry et al., 2006). Nonetheless, it is stated that few teachers prepare students for effective learning, encourage them to set learning goals and evaluate their own engagement and motivational beliefs in learning (Zimmerman et al., 1996; Zimmerman, 2002). In such cases, it is thought that it is important to conduct studies

to determine the capacity of teachers to develop and increase students' self-regulation.

Teachers' realization levels of self-regulated learning practices are related to many variables. Lombaerts et al. (2009) have determined in their research that there are positive relationships between teachers' characteristics such as their beliefs regarding self-regulated learning in elementary schools, school context satisfaction, personal self-regulated learning experience and the realization of self-regulated learning practices. The research shows that the realization of self-regulated learning practices is mostly linked to personal teachers' characteristics. In the context of teachers' personal characteristics, it is thought that teachers' sense of efficacy could be one of the variables related to self-regulated learning practices. This is because social cognitive theory stresses that teachers' sense of efficacy is an important factor shaping teachers' behaviour (Henson, 2001).

The self-efficacy belief is people's beliefs about their performance to an important extent on events which will affect their lives. These beliefs are the main determinants of how people feel, think, motivate themselves and behave (Bandura, 1994). Teachers' self-efficacy, however, is defined as the teacher's perception of the extent to which he holds the necessary capacity for affecting the students' performance (Tschannen-Moran et al., 1998). Bandura (1993) states that teachers' beliefs concerning their own personal capabilities in motivating students and ensuring learning affect the development of the learning environment and students' academic success. The research conducted also shows that there are positive relationships between teachers' sense of efficacy and teachers' development of innovative and creative ideas in the working environment (Hsiao et al., 2011), student centred instruction practices (Czerniak, 1990; Schriever and Czerniak, 1999), their motivation in instruction (Gibson and Dembo, 1984; Schunk, 1985) and students' success (Ashton et al., 1983; Gibson and Dembo, 1984; Ross, 1994).

The teacher's sense of efficacy is one of the most important factors determining the teacher's classroom practices, and there is a need to determine the related variables with teachers' sense of efficacy. From this point of view, it is thought that examining primary school teachers' sense of efficacy and students' self-regulation capacity development practices is important with respect to increasing the effectiveness of the instruction process. The aim of this research is to examine primary school teachers' realization levels of self-regulated learning practices and sense of efficacy and the relationship between their realization of self-regulated learning practices and sense of efficacy.

MATERIALS AND METHODS

Model of the research

The Survey Model was used for this research, which aimed to

determine primary school teachers' realization levels of self-regulated learning practice and sense of efficacy and the relationship between their realization levels of self-regulated learning practices and sense of efficacy.

Participants

The research was carried out on 400 primary school teachers working at 20 elementary schools located in the center of Mersin, a city in Turkey during the 2011-2012 school year. The schools in the sample were determined randomly. 194 of the teachers participating in the research were females, while 206 of them were males. 75 of the teachers were first grade primary school teachers, 76 of them were second grade primary school teachers, 92 of them were third grade primary school teachers, while 75 of them were fourth grade primary school teachers and 82 of them were fifth grade primary school teacher. 100 of the teachers have 1-10 years length of service, 119 have 11-20 years length of service, 109 have 21-30 years length of service, while 72 of them have a service length of 30 years and above.

MATERIALS

The research data were collected by "Self-Regulated Learning Inventory for Teachers" and "Teachers' Sense of Efficacy Scale".

Self-Regulated Learning Inventory for Teachers (SRLIT) was developed by Lombaerts et al. (2007) to assess teachers' realization of self-regulated learning practices. The SRLIT comprises three subscales representing the cyclical phases of the self-regulated learning process: forethought (7 items), performance control (8 items), and self-reflection (8 items). The SRLIT comprises 23 items (Lombaerts et al., 2007). The measuring tool has been adapted to Turkish within the scope of this research by the researcher. Instrument was formulated as statements to which teachers can respond on 4-point Likert type scale ranging from 1 (*never*) to 4 (*always*).

A linguistic equivalence study was primarily carried out for the adaptation of the measuring tool to Turkish. In the linguistic equivalence study, the measuring tool was translated into Turkish by five people with an undergraduate degree in English teaching and the Turkish form was constructed by the examination of the translations by two experts. The Turkish form constructed and original measuring tool were applied to 30 pre-service teachers continuing their fourth academic year at the Mersin University Department for English Teaching at three week intervals. The correlation coefficients were observed on both an item and a subscale basis between the application of the Turkish and English forms. Pearson Correlation Coefficient was calculated as .79 for forethought subscale; .85 for performance control subscale; and .87 for self-reflection subscale. Similarly, it was observed that all items present in the measuring tool have a meaningful relationship at the $p < .01$ level.

For the purpose of testing the structure validity, the measuring tool was applied to 303 primary school teachers and the confirmatory factor analysis was done by using the LISREL 8.51 programme. In the confirmatory factor analysis done, the model fit index was examined (NFI=.83; NNFI=.89; GFI=.87; AGFI=.84; RMSEA=0.064). In addition to these fit indices being under the expected value (Schermele-Engel et al., 2003), the RMSEA fit index is stated to be an important indicator of model fit (Thompson, 2000). The RMSEA is calculated as .064. The data acquired in this study show that the model fit is partial.

According to the result of the factor analysis, the factor load for the items in the forethought subscale took a value between .29 and .72; the factor load for the items in the performance control

Table1. Primary school teachers' realization levels of self-regulated learning practices.

| | Min | Max | \bar{x} | Sd |
|---------------------------|-------|-------|-----------|----------|
| Forethought scale | 11.00 | 28.00 | 2.896 | 3.22766 |
| Performance control scale | 11.00 | 32.00 | 2.831 | 4.24538 |
| Self-reflection scale | 13.00 | 32.00 | 3.093 | 3.98341 |
| General Scale | 41.00 | 92.00 | 2.942 | 10.11779 |

N=400.

subscale took a value between .44 and .75; and the factor load in the self-reflection subscale took a value between .56 and .72. The measuring tool, Cronbach's Alpha internal consistency coefficient, however, was calculated as .92 for the whole measuring tool: .78 for the forethought subscale; .84 for the performance control subscale and .86 for the self-reflection subscale. The internal consistency coefficient being higher than .70 shows that the test is homogenous (Tavşancıl, 2002).

Teachers' Sense of Efficacy Scale (TSES) was developed by Tschannen-Moran and Woolfolk-Hoy (2001) and adapted into Turkish by Çapa et al. (2005). Assessment instrument consists of 24 items and 3 subscales aimed at students' engagement (8 items, Cronbach's Alpha= .82), instructional strategies (8 items, Cronbach's Alpha= .86), classroom management (8 items, Cronbach's Alpha = .84). Cronbach's Alpha value for the overall measuring tool, however, has been calculated as .93. In conformity with the purpose of the research, the replies to be given to the measuring tool have been graded between (1) "nothing" and (5) "a great deal". In the context of this research, Cronbach's Alpha coefficient has been calculated as .93 for the whole scale; .85 for students' engagement subscale; .83 for instructional strategies subscale; .85 for classroom management subscale.

Procedure

Data were collected during 2011 to 2012 school year for a two terms period. "Self-Regulated Learning Inventory for Teachers" and "Teachers' Sense of Efficacy Scale" were applied together on sample by researcher.

Data analysis

In the determination of primary school teachers' self-regulated learning practices realization levels and sense of efficacy, the arithmetic mean and standard deviation values of the replies given by teachers to SRLIT and TSES measure were examined. The relationship between the realization levels of primary school teachers' self-regulated learning practices and sense of efficacy was determined by the Pearson's Correlation Analysis.

FINDINGS

In this research, data were primarily tested to comply with the normal distribution. One Sample Kolmogorov-Smirnov Test showed that data were normally distributed. According to the first research problem, it was aimed at the determination of primary school teachers' self-regulated learning practices realization levels. For this purpose,

arithmetic mean and standard deviation values of the replies given by teachers to the SRLIT measures are presented in Table 1. When the table is examined, it is seen that primary school teachers realize their self-regulated learning practices at the "very often" level (\bar{x} =2.942). Similarly, forethought, performance control and self-reflection practices are also very often realized by teachers.

For the determination of primary school teachers' sense of efficacy, the arithmetic mean and standard deviation values of the replies given by teachers to the TSES measure are presented in Table 2. When the table is examined, it is seen that primary school teachers perceive themselves as quite efficient in students' engagement (\bar{x} =3.995). Similarly, primary school teachers' sense of efficacy in teaching strategies (\bar{x} =4.211), classroom management (\bar{x} =4.152) and general sense of efficacy is also at a relatively sufficient level.

For the purpose of determining the relationship between the primary school teachers' realization levels of self-regulated learning practices and sense of efficacy, Pearson Correlation was applied to the data during research and the results are presented in Table 3. The results of the research show that there are meaningful relationships between primary school teachers' realization levels of self-regulated learning practices and their sense of efficacy, both on the total scale basis and on the subscale basis at a $p < .01$ level. When Table 3 is examined, it is seen that there is a positive correlation between primary school teachers' realization levels of self-regulated learning practices and their self-efficacy at the ($r = .460$) $p < .01$ level. As seen in the table, the highest correlation levels were determined between the self-reflection practices and efficacy in students' engagement ($r = .513$, $p < .01$). This correlation level is moderate. The lowest correlation, however, was determined between performance control practices and efficacy in classroom management ($r = .244$, $p < .01$). R values of ≤ 0.35 are generally considered to represent low correlations, 0.36 to 0.67 moderate correlations (Weber and Lamb, 1970; cited in Taylor, 1990). The moderate correlation levels were determined between the general point of teachers' realization levels of self-regulated learning and general point of their sense of efficacy ($r = .460$, $p < .01$).

Table 2. Primary school teachers' sense of efficacy.

| | Min | Max | \bar{x} | Sd |
|--------------------------------------|-------|--------|-----------|----------|
| Efficacy in student engagement | 21.00 | 40.00 | 3.995 | 4.14867 |
| Efficacy in instructional strategies | 23.00 | 40.00 | 4.211 | 3.78016 |
| Efficacy in classroom management | 20.00 | 40.00 | 4.152 | 3.95148 |
| General scale | 69.00 | 120.00 | 4.119 | 10.79427 |

N=400.

Table 3. Relationship between the primary school teachers' realization levels of self-regulated learning practices and sense of efficacy.

| Variable | | Forethought | Performance control | Self-reflection | General SRLIT |
|--------------------------------------|---|-------------|---------------------|-----------------|---------------|
| Efficacy in student engagement | r | ,419** | ,405** | ,513** | ,506** |
| Efficacy in instructional strategies | r | ,347** | ,301** | ,429** | ,406** |
| Efficacy in classroom management | r | ,276** | ,244** | ,372** | ,337** |
| General scale | r | ,383** | ,350** | ,483** | ,460** |

** p<.01;N=400.

RESULTS AND DISCUSSION

According to the results of the research, teachers realize self-regulated learning practices at the "very often" level. In this case, teachers participating in the research encourage students' goal setting and strategy planning and sense of efficacy for the forethought phase; support their self-control and self-observation processes for the performance control phase; and frequently support metacognitive self-evaluations and affective and motivational reactions to the performance result for the self-reflection phase. According to another result yielded by the research, primary school teachers' sense of efficacy in students' engagement, teaching strategies, classroom management and general sense of efficacy is at a quite efficient level. This result is parallel with the results of the research on teachers' self-efficacy in Turkey (Senemoğlu et al., 2009; Gençtürk and Memiş, 2010; Tanrıseven, 2012).

In conclusion, it has been determined that there are meaningful relationships between primary school teachers' realization of self-regulated learning practices and sense of efficacy. According to this result, it is possible to say that while teachers' perception of the extent to which they have the necessary capacity to affect their students' performance increases, the students' capacities to develop their self-regulation skills also increase. This is because it is stated that teachers with a high-level sense of efficacy generally use effective teaching approaches in their classes and are more willing to implement new teaching practices (Hsiao et al., 2011). In parallel to this view, Tcshanen-Moran et al. (1998) also stated that teachers' sense of efficacy affects the efforts they show for school teaching, the goals they set and their will to teach. The research conducted also showed that there

are positive relationships between teachers' sense of efficacy and teachers' development of innovative and creative ideas in the work environment (Hsiao et al., 2011), student centred instruction practices (Czerniak, 1990; Schriever and Czerniak, 1999), their motivations in learning (Gibson and Dembo, 1984; Schunk, 1985). Similarly, the result of the International Teaching and Learning Research (TALIS) showed that there is a meaningful relationship between teachers' student-centred instruction practices and their sense of efficacy in Turkey (OECD, 2009).

It is suggested that research be carried out on how to increase primary school teachers' sense of efficacy and their self-regulated learning practices realization level. This study has been limited to primary school teachers. It is thought that the determination of instructors' sense of efficacy and realization levels of self-regulated learning practices at the secondary, high school and higher educational level and making comparisons according to rank are also important. Although various studies have been carried out on teachers' sense of efficacy, there are no studies on the realization levels of self-regulated learning practices present in Turkey. In that respect, it is suggested that teachers' self-regulated learning practices are evaluated in different contexts.

REFERENCES

- Ashton P, Webb R, Doda C (1983). A Study of Teachers' Sense of Efficacy. Final Report, Executive Summary. Gainesville, FL: University of Florida.
- Bandura A (1994). Self-efficacy. In: Ramachandran VS (Ed.), Encyclopedia of Human Behavior New York: Academic Press 4:71-81.
- Bandura A (1993). Perceived Self-efficacy in Cognitive Development and Functioning. *Educ. Psychol.* 28(2):117-148.

- Çapa Y, Çakıroğlu J, Sarıkaya H (2005). The Development and Validation of a Turkish Version of the Teachers' Sense of Efficacy Scale. *Educ. Sci.* 30(137):74-81.
- Czerniak CM (1990). A Study of Self-efficacy, Anxiety, and Science Knowledge in Preservice Elementary Teachers. Paper presented at the National Association for Research in Science Teaching, Atlanta, GA.
- Gençtürk A, Memiş A (2010). An Investigation of Primary School Teachers' Teacher Efficacy and Job Satisfaction in Terms of Demographic Factors. *Elementary Educ. Online* 9(3):1037-1054.
- Gibson S, Dembo MH (1984). Teacher Efficacy: A Construct Validation. *J. Educ. Psychol.* 76(4):569-582.
- Henson RK (2001). Teacher Self-efficacy: Substantive Implications and Measurement Dilemmas. ERIC Document Reproduction Service No. ED 452208.
- Heo H (2000). Theoretical Underpinnings for Structuring the Classroom as Self-regulated Learning Environment. *Educ. Technol. Intentional* 2(1):31-51.
- Hsiao H, Chang J, Tu Y, Chen S (2011). The Influence of Teachers' Self-efficacy on Innovative Work Behavior. International Conference on Social Science and Humanity. IPED. Singapore: IACSIT Press.
- Jarvela S, Niemivirta M (1999). The Changes in Learning Theory and the Topicality of the Resent Research on Motivation. *Res. Dialogue Learn. Instr.* 1(2):57-65.
- Lombaerts K, Engels N, Athanasou J (2007). Development and Validation of the Self-regulated Learning Inventory for Teachers. *Perspect. Educ.* 25(4):29-47.
- Lombaerts K, Engels N, Van Braak J (2009). Determinants of Teachers' Recognitions of Self-regulated Learning Practices in Elementary Education. *J. Educ. Res.* 102(3):163-173.
- OECD (2009). Creating Effective Teaching and Learning Environments: First Results from TALIS-ISBN 978-92-64-05605-3, retrieved from <http://www.oecd.org/education/preschoolandschool/43023606.pdf>.
- Perry NE, Karen O, Vandecam KO, Mercer LK, Nordby CJ (2002). Investigating Teacher-Student Interactions that Foster Self-regulated Learning. *Educ. Psychol.* 37(1):5-15.
- Perry NE, Phillips L, Dowler J (2004). Examining Features of Tasks and Their Potential to Promote Self-regulated Learning. *Teachers College Record* 106(9):1854-1879.
- Perry NE, Phillips L, Hutchinson L (2006). Mentoring teachers to support self-regulated learning. *Elementary Sch. J.* 106(3):237-254.
- Ross JA (1994). The Impact of an Inservice to Promote Cooperative Learning on the Stability of Teacher Efficacy. *Teach. Teacher Educ.* 10:381-394.
- Schermelleh-Engel K, Moosbrugger H, Müller H (2003). Evaluating The Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods Psychol. Res. Online* 8(2):23-74.
- Schriever M, Czerniak CM (1999). A Comparison of Middle and Junior High School Teachers' Level of Efficacy and Knowledge of Developmentally Appropriate Curriculum and Instruction. *J. Sci. Teacher Educ.* 10(1):21-42.
- Schunk DH (1985). Self-efficacy and classroom learning. *Psychol. Sch.* 22:208-223.
- Senemoğlu N, Demirel M, Yağcı E, Üstündağ T (2009). Elementary School Teachers' Self-Efficacy Beliefs: A Turkish Case. *Hum. Soc. Sci. J.* 4(2):164-171.
- Tanrıseven I (2012). Examining Primary School Teachers' and Teacher Candidates' Sense of Efficacy Paper Presented at Cyprus International Conference on Educational Research, 08-10 Feb, Güzelyurt, Cyprus.
- Tavşancıl E (2002). Tutumların Ölçülmesi ve SPSS ile Veri Analizi. Ankara: Nobel Yayınları.
- Taylor R (1990). Interpretation of the Correlation Coefficient: A Basic Review. *JDMS* 6(1):35-39.
- Thompson B (2000). Ten commandments of structural equation modeling. In: Grimm L & Yarnell P (Eds.), Reading and understanding more multivariate statistics. Washington, DC: Am. Psychol. Assoc. pp.261-284.
- Tschannen-Moran M, Woolfolk-Hoy A, Hoy WK (1998). Teacher Efficacy: Its Meaning and Measure. *Rev. Educ. Res.* 68(2):202-248.
- Tschannen-Moran M, Woolfolk-Hoy A (2001). Teacher Efficacy: Capturing and Elusive Construct. *Teach. Teacher Educ.* 17:783-805.
- Zimmerman BJ (1989). A Social Cognitive View of Self-regulated Academic Learning. *J. Educ. Psychol.* 81(3):329-339.
- Zimmerman BJ (2002). Becoming a Self-regulated Learner: An Overview. *Theory Practice* 41(2):64-70.
- Zimmerman BJ, Bonner S, Kovarch R (1996). Developnig Self-regulated Learners: Beyond Achievement to Self-efficacy. Washington, DC: American Psychological Association.