

**Editor's Choice: Selected Keynote Speech****Transformational Leadership in Educational Context: A Fantasy of Education Scholars\*****Hasan ŞİMŞEK\*****Suggested Citation:**

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Education is a global concern. The post-industrial society demand different skills and mind-set from their citizens. Transforming technologies bring new possibilities whereas education is still a highly low-tech sector. Current global economic crisis and political instabilities bring new problems to educational systems. These challenges also call for new solutions from educational systems.

These deep transformations reassure the importance of leadership in educational organizations. Simply stated, those organizations that would renew themselves will survive and prosper whereas the ones which hold tightly on the traditional ways of thinking and of doing things will be the casualties of this deep transformation. As a number of emerging conditions force organizations to renew themselves, we also need to change our traditional ways of thinking about organizations. No doubt, leadership has an important role in creating and maintaining this transformation.

Traditionally, we have tended to view leadership as if it is an entirely unique substance within itself. When the leadership concept is isolated from the context in which it functions, this legitimizes the types of approaches that deal with individual traits or behaviors that make an individual a leader. The implicit assumption behind this perspective is the one that sees leadership as a capacity. Some saw the origin of this built-in capacity as a set of inherited characteristics from the birth. Some others, on the other hand, approached the origin of this capacity from a behaviorist theme, and argued that through a careful study of individual and behavioral qualities of effective leaders, we could raise effective leaders through the processes of training and behavioral modification strategies.

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This line of inquiry in leadership studies has long been practiced under different labels such as leadership in relation to interaction patterns or role relationships with the followers, leadership in relation to the follower or the follower perceptions. With the advancement of more recent approaches to leadership such as transformation, culture and symbolic perspectives, we now tend to view leadership as a culture creation process or a process of symbolic interaction to create better functioning organizations.

For example, such questions have never been carefully dealt within the leadership studies: How are change and leadership interconnected in organizations? Is transformational leadership an always effective style of leadership? When do the organizations most demand transformational leadership? What are the organizational conditions that may call for a transactional style? What are the fundamental differences between transformational and transactional leaders in terms of their cognitive style?

Even more, how do we relate these questions to creating new educational systems and processes responding to the needs and demands of stakeholders of educational systems?

**Proposition 1: There is a strong association between the mode of institutional change and the style of leadership: Incremental and adaptive mode of change requires maintenance or transactional leadership skills, whereas dramatic and discontinuous organizational change demand transformational leadership skills.**

As widely proposed, organizational change involves two entirely different phases: evolutionary and revolutionary. The evolutionary phase is characterized by relative stability and adaptation. Usually there is a well established pattern of thought, perception and picture of reality as well as a set of tried and proved organizational strategies. All these reduce ambiguity and uncertainty. Under these circumstances, transactional or managerial skills of leaders fit well to the leadership demands of the organization, that is, the qualities of maintenance.

However, excesses in a number of strategic behaviors, changes in the environment, and misfit between the organization and the environment create anomalies that force the dominant mind-set into crisis. The crisis period breaks down the established order in organizations. The boundaries between the organization and the environment become permissive and a great deal of information flows in and out. The organization as system stabilizes in a non-equilibrium state.

*The question at this point is whether or not educational systems in Turkey and elsewhere show the qualities of equilibrium or non-equilibrium state?*

School organization itself and educational systems in general show "system" characteristics; that is, school and educational systems take "inputs" from the "external environment," they "process" these inputs through certain pre-established mechanisms and procedures, then they export the final product as "output" to the external environment. All this process is also used as "feedback" to the others. This is a symbiotic relationship. Both environment and system itself have capacity to change the "other." However, the rate and the timing of this change capacity are highly contextual. In the shorter time line, the external environment (economic structure, culture, values, religion, ideology, etc.) shows high probability of change over school

and educational systems. The schools' capacity of modifying social, cultural and ideological aspects of a society is rather a long term process. In this sense, school and educational systems play a "conservative" role in this relationship. So to say, "school mirrors the society."

For example, structural-functionalists who have a long legacy in the field of sociology define school and educational systems as a functional part of larger socio-economic apparatus. Society as a larger system desires to protect itself through a slow change process by keeping the parts and internal processes intact. Radical change is not a desired mode of change since it involves surprises and ambiguity, no matter how small the change is. School and educational organizations in this system are expected to behave as an integral part of this slowly evolving system. Primary function of the school system is to protect the society! For the structural functionalists, schools do serve two primary functions in relation to the larger external environment: First, school is an agent of social and political "socialization." Second, the primary function of school is to train manpower required to improve and sustain economic growth (Scimecca, 1980, s. 7-9).

One of the greatest names in the field of sociology, Henry Levin, used the "principle of correspondence" in explaining this relationship:

"...schools, rather than changing the society, are always used to reproduce the existing society. This means, educational reforms cannot be used to change social, economic and political relationships. These reform initiatives have always lost as soon as they have started threatening the "dominant ideology" (Levin, 1974, s. 304).

On the other hand, the second theoretical line of inquiry in the field of economy, education and sociology; the radical theory, also admits the "protector" role of school and education systems, of course, with quite different reasons. Being an extent of Marxist methodology, the Radical theorists accept school and educational systems as part of a "superstructure," that corresponds to the dominating socio-economic class, which is the bourgeoisie class. The proponents of the Radical theory assert that, interestingly very similarly to Henry Levin's assertion, modern school and educational systems "reproduce" existing society with its unequal economic and social structure. A great Radical economist Samuel Bowles argues that schools and educational systems in general in the modern capitalist societies are the tools of teaching young generations the required economic and social skills to function in a capitalist economy as well as being the operative agents of "political indoctrination."

If these two opposing traditions in social sciences provide as a glimpse of truth, schools and education systems in modern societies play a secondary role with respect to change or a role of "dependent variable" in the complex relation of school and society. If important reforms to initiate from the school system in order to change the larger socio-economic structure, then what type of leadership potential we are supposed to expect from the educators. We must have all the reasons to look very suspiciously at any arguments of exercise or evidence of "transformational leadership" in the field of education! With this evidence at hand, we should always be careful to detect the signs of reform or radical transformations coming to the school or educational system from "outside," not the vice versa!

**Proposition 2: Transformational leaders are both norm-breakers and norm-setters, whereas the transactional leaders are good practitioners and developers within the already set norms.**

Transformational leaders focus on building and strengthening new organizational norms and attitudes. They mainly engage in the creation and the establishment of new common “meaning systems.” This type of leadership makes major changes in the mission, structure and human resources management of the organization. They suggest fundamental changes in the organization's political and cultural systems.

It is mostly proposed that a transformational leader is highly normative in cognitive style. By this, they become the most important catalyst in the construction of a new man-made or “enacted reality” for the members of their organization. In this sense, transformational leaders are *norm-setters*. On the other hand, transformational leaders are *norm-breakers*, as well. Drastic institutional change or transformation becomes an opportunity for organizations to learn new things. By being a catalyst in the creation of a new enacted reality during this transformation, transformational leaders also teach their organizations to unlearn habitual, traditional and customary ways of doing and seeing things.

By contrast, transactional leadership maintains the organization but is incapable of generating significant change. Under existing organizational culture, the concerns of transactional leaders are the things to be carried out and the goals to be attained.

*The question here is whether or not educational leaders are supposed to be norm-breakers and norm-setters, and what are the embedded norms in our educational systems that need to be transformed?*

As cultural artifacts, norms represent observable aspects of, first, beliefs; than values in organizations. Beliefs and values define how an organization as an entity sees the world. That is, what is the nature of men, good or evil? Where the truth comes from, an outside source; God, elderly, boss; or from inside by the contribution of humans involved? Why we act the way we act; is it because of our innate and unchangeable nature or because of the way we constructed it as involved humans with free will?

Norms represent behavioral regularities that make organizations as well as life orderly. They are the unwritten rules, a code of conduct among us, no matter how much we know or how close to each other. They are distilled from embedded beliefs and values in a system.

Modern school and educational systems are locked by two realities: On the one hand and as I explained under the previous heading, educational systems and schools are expected to be the agents of “socialization” that involves economic, social and political attitudes and skills. It is clear that even the modern school and educational systems are universally given the task of “guardianing” the society! On the other hand, school and educational systems are expected to educate “creative, innovative” individuals who can change their closer environment and society. When we consider the deep and historical imprints of social, economic and political “socialization” role of schools, we have good reasons to believe that “innovative and creative” individuals are expected to be important only in the economic domain.

They may simply become “political and social dissidents” if their “creative and innovative” character exceeds the boundaries of economic utilitarianism. Of course, no educational system *is designed* to produce economic and social dissidents!

Educational and school systems in the world are the most “regularized” ones. Since the time of Adam Smith, the best economic model is free market economy for economic liberals. The new liberalism which has revolutionized social, economic, political and cultural spheres of modern societies since the 1980s has had the weakest impact on education and school systems. In the eyes of many, education is a public good. Interestingly, public education is still the largest sector in many parts of the world. A public good must be “common,” “accessible,” “conservative,” “normal,” and “pedagogically acceptable.” As the “institutional theory” teaches us, educational systems in the world are getting similar to each other because of instant diffusion of theories, norms, techniques, rules, and methods.

Is there a room for the possibility of a transformational or radical change in this picture? How relevant is it to expect the act of transformational leadership by public and private school principals and educational managers around the world? Could it be somewhat irrelevant to apply such management models, concepts, theories and applications to school and educational systems? Don't we need to revise or modify these management theories and models to make them meaningful in a specific context such as schools in specific and education system in general?

**Proposition 3: Transformational leaders deal with an ambiguous and uncertain world, whereas the tasks of transactional leaders are eased by the boundary set by the transformational leaders.**

As very well stated in the leadership literature, the fundamental task of the transformational leaders is future oriented. The desired future direction of history, what we call the "vision" thing, is essentially an ambiguous and uncertain initiative. It is taking risks, gambling with the extraordinary, the unusual, and the new. In this sense, transformational leaders function in an extremely chaotic environment.

Transactional leaders, on the other hand, best function during the period of equilibrium or evolution where there are clear-cut and commonly agreed norms and rules to run the organization. Change is incremental and adaptive, and the level of ambiguity and uncertainty is low. This may explain why transactional leaders engage more in pragmatic adjustments. While transformational leaders initiate new organizational culture, transactional leaders accept it as it is. They maintain the organization by getting the daily routines done. They explain the role and task requirements for their employees and provide contingent reinforcement to influence their performance, to attain desired outcomes. Clearly, this is a less ambiguous and uncertain task compared to the task of transformational leader.

*The question here is whether or not transformational leadership is a viable alternative in initiating and securing change in education? To answer this, we need to clarify where the ambiguity is located in relation to education? Is it the ambiguity that resides in the educational system per se, or is it a reflection of an ambiguous situation or crisis of the larger system, that is, larger socio-economic and political order?*

We may address this question at two levels: The schools as single organizations that could be seen as micro level of the educational system, and the educational

systems as macro level large structures. At the micro level, as I have discussed in the previous part, life in schools is highly regulated and structured. There are deeply embedded routines and traditions in every school's daily operations. Interestingly, these are carefully observed by all important stakeholders of schools such as parents and educational authorities who supervise the system. There are also normative pedagogic principles that run across all levels of educational fields as well as shaping the mindset of involved stakeholders. This is why, basic educational reforms come from outside. Moreover, radical transformations in the larger socio-political system have always been the primary source of radical paradigm shifts in schools and education systems. Social, economic and political revolutions throughout the history have always been the moments of reform and radical change in the structure and organization of education.

I need to conclude this talk by underlining four things:

First, pure managerial models may not serve our needs of understanding the deep structures and processes of change in education and schools.

Second, dependent and independent structures need to be treated differently in relation to change and transformation: Dependent structures such as education and school system cannot transform itself; rather they are open to externally imposed change and transformation.

Third, because of the nature of schools and education as I have tried to elaborate here as well as considering the organic culture of schools, "transactional leadership" may be the right terminology to be used in school settings. The reason is simple if we know what transactional leadership is about? As Bass and Burns explained; rules, procedures and standards are essential in transactional leadership. Followers are not encouraged to be creative or to find new solutions to problems. Research has found that transactional leadership tends to be most effective in situations where problems are simple and clearly-defined. Don't you think that all these very well describe our working conditions and culture in schools?

Finally, any national and international evidence of educational and school-related reform and change that are presumed to be the result of transformational or visionary leadership initiatives of educational leaders need to be treated suspiciously.

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## Saudi Arabian Science Teachers and Supervisors' Views of Professional Development Needs

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### Abstract

*Problem Statement:* Teacher professional development is a prominent feature in the educational landscapes of both developed and developing countries. Teacher development can be conceptualised as a mechanism for driving change in educational systems and/or as a strategy for empowering teachers to improve their professional knowledge and pedagogy. To ensure effective teacher professional development, Science teachers need to be more in control of their own PD. More studies of teacher professional needs have been carried out in Western societies rather than Arab societies. In addition, supervisors' voices in regard to the PD of teachers have not been emphasised by international or national studies. Changing the research contexts might introduce a new understanding of the priority of professional needs.

*Purpose of the Study:* This study aimed to identify and explore science teachers' needs for both pedagogical and content knowledge as a first step toward making decisions and recommendations about the elements of

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CPD programme(s) required for science teachers. The purpose of the study was to determine the professional development needs perceived by science teachers and their supervisors in Saudi Arabia.

*Methods:* The main instrument used was a questionnaire. The validity and reliability of the instrument were systematically established through relevant test procedures. The questionnaire seeks feedback on the main aspects of science teachers' needs, including generic pedagogical knowledge and skills, knowledge and skills in science subjects, managing and delivering science instruction, diagnosing students' needs, evaluating students' work, planning science instruction, administering the use of facilities and equipment, integrating multimedia technology, and informal science learning. Additionally, the questionnaire covers the key science subject domains in which science teachers might need professional development (PD).

*Findings and Results:* This study argues that science teachers' voices concerning their PD needs are the key guide for their CPD. While science teachers may share a number of perceived needs with science supervisors, teachers have distinct pedagogical and content knowledge needs that may differ according to individual interests.

*Suggestions and Recommendations:* Attention should be given to ensure that individual teachers' differing needs are met because providing the same programme for all teachers may not meet the needs of them all. Science teachers, supervisors, policy makers, and in-service and pre-service training planners need to work together to consider the recommendations that have been identified in the teachers' PD research.

**Keywords:** Teachers' Professional Development (PD) Needs - Continuing Professional Development (CPD) - Teacher Education.

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## Introduction

Teacher professional development is a prominent feature in the educational landscapes of both developed and developing countries. Teacher development can be conceptualised as a mechanism for driving change in educational systems and/or as a strategy for empowering individuals and teams to improve their professional knowledge and pedagogy (Day & Sachs, 2004). Dillon (2010) argues that teacher



development can either play a critical role in meeting teachers' needs and wants, or it can frustrate teachers and keep them from reaching their full potential. He also argues that teachers might both want and need PD. In contrast, someone in a different profession, such as an inspector or a line manager, might identify that an employee has a need that they themselves are unaware of, such as a need for training in different questioning techniques. Nevertheless, for the purposes of this paper, we will explore the difference between the needs required for teaching science effectively, represented by the inspectors' opinions, and the needs of teachers.

Professional development is an intensive, ongoing, and systemic process that aims to enhance teaching, learning, and school environments (Elmore, 2002; Fenstermacher & Berliner, 1985). Rubba (1981) devoted his studies to determining science teachers' in-service needs and concluded that while science teachers might share a number of perceived needs, they also have distinct needs depending on the science discipline taught and possibly the geographic region. In this study, we adopt Hewson's (2007) definition of teacher PD in science:

First, it [professional development] is about teachers and their teaching activities involving curriculum, instruction and assessment. Second, it is about teachers being professional who have an extensive knowledge base of conceptions, beliefs, and practices that they bring to bear on the unique complexities of their daily world lives, a knowledge base that is shared within a professional community. Third, it is about teachers as adult learners who have an interest in and control over the continuing development of their professional practice throughout their working lives. Finally, it is about science and the epistemologies, methodologies, and bodies of knowledge about the natural world that give scientific disciplines their distinctive character. (p.1181)

From the professional development point of view, Borko and Putnam (1995) argue that current educational reform recommends a shift toward a student-centred paradigm. This entails a substantial departure in teacher approach from a traditional transmission of knowledge to a cognitive and social construction of knowledge. David Hargreaves (1994) identified the shifts in culture, values, and practices of teachers in a knowledge society:

At its core, the new professionalism involves a movement away from teacher's traditional professional authority and autonomy towards new forms of relationships with colleagues, with students and with parents. These relationships are becoming closer as well as more intense and collaborative, involving more explicit negotiation of roles and responsibilities. (p. 424)

The tradition of 'in-service days' as the norm in PD has been criticized as inadequate and inappropriate in the context of current educational reform efforts; it has also been criticized as being out of step with current research about teacher learning (Darling-Hammond & McLaughlin, 1995). One possible reason for the unsatisfactory results of in-service teacher training might be that the objectives of

programmes were not congruent with teachers' personal and classroom needs. It might be reasonable to better understand the target audience before prescribing any intervention. Thus, to simply impose a training programme on teachers without considering their needs makes little sense (Noh, Cha, Kang, & Scharmann, 2004). Baird and Rowsey (1989) also highlight teachers' complaints that much time spent during in-service programmes and activities was wasted when such programmes did not meet their respective classroom needs. Loughran and Invarson (1993) argue that it is important that as a profession we are able to articulate what science teachers need to know and be able to do.

Science teachers need to be more in control of their own PD. They need real opportunities to participate in meaningful PD that meets their needs and influences their classroom practice. Therefore, in developing a strategy for PD, it is important to talk to science teachers to ascertain their views on what they want in the future. The concept of need has diverse interpretations. In the literature, 'need' is used variously to mean a discrepancy, a recognized problem, the requirement for more services, and the wants of people (Packwood & Whitaker, 1988; Stufflebeam, Mc Cormick, Bronkerhoff, & Nelson, 1985). For this study, need is defined as the wants or preferences of an individual or a group of people. Need in this context is seen as a want (which implies interest or motivation) felt by an individual or group to eliminate a lack (Queeney, 1995; Stufflebeam et al., 1985).

Science teachers in Saudi Arabia, as in many other parts of the world, are considered as among the nation's greatest assets. As such, teachers must be able to play their roles and fulfil their responsibilities to their utmost capabilities. To be able to do so, teachers must be well prepared for the profession, but they must also maintain and improve their skills through lifelong career learning (Osman, Halim, & Meerah, 2006). To this end, Baird and Rowsey (1989), based on their survey of secondary school science teachers' needs, conclude that without accurate data on teachers' needs, planning is not only difficult, but results generated are likely to be disappointing to both teachers and those who offer science teacher education.

### **The Rationale and Purpose of the Study**

A major shift in the development of science education in Saudi Arabia occurred in the mid-1970s when science education experts at the American University in Beirut developed the science curricula. With the wide implementation of these curricula from the mid-1970s until recently, Saudi science educators increasingly expressed concerns that these curricula did not reflect the current and future social, cultural, and economic needs of Saudi society and were not serving the needs of all students (Alabdulkareem, 2004; Al-Ghanem, 1999). As a result of this type of critique and of the pressure created by the emergence of new trends in science education such as science education standards and scientific literacy (AAAS, 1993; NCATE, 1998), as well as the low achievement of Saudi Arabian students recorded in Trends in International Mathematics and Science Study-2003 (Mullis, Martin, Gonzalez, & Chrostowski, 2004, 2004b; Mullis, Martin, & Foy, 2008), the goals for science teacher education in Saudi Arabia have been reshaped to better reflect the nature and goals

of inquiry-oriented instruction in science - a reform of science education that began in 2003. As part of such reform, the ministry of education translated and modified the McGraw-Hill series for the preparation of the new science curricula through a project called 'Mathematics and Natural Sciences Project' (Obikan for Research and Development, 2010).

These new curricula are being implemented gradually and will cover all school grades by 2013. However, effective implementation cannot be achieved unless science teachers are prepared and equipped with the skills and knowledge required to teach these new curricula (Alshamrani, 2010; Mansour, 2010; Van Driel, Beijaard, & Verloop, 2001). Therefore, any mature reform of science education should emphasise science teacher professional development programmes (Garet, Porter, Desimone, Birman, & Yoon, 2001). These programmes should help teachers develop an in-depth knowledge of their disciplines as well as pedagogical content knowledge and skills (Mansour, 2010). Consequently, the professional development of science teachers is widely recognised as a national priority (Obikan for Research and Development, 2010). In this sense, Alshamrani (2010) conducted a study trying to identify science education research priorities in Saudi Arabia. Alshamrani's study stressed that science teacher PD is the main research priority in the field of science education in Saudi Arabia and aims to effectively put the reform of the science curricula into action in the science classroom. More studies of teacher professional needs have been carried out in Western societies than Arab societies (Loughran & Invarson, 1993; Van Driel et al., 2001). Changing the research contexts might introduce a new understanding of the priority of professional needs. This research might also explain the unique requirements of professional needs for teachers in particular settings to teach new curricula in different settings. In addition, we explore the differences between the needs required for teaching science effectively as expressed by the opinions of supervisors and teachers. This focus of research on supervisors' voices in regard to the PD of teachers has not been emphasised by international or national studies.

Accordingly, this study aimed to identify and explore science teachers' needs in both content and pedagogical knowledge and skills as a first step toward making decisions and recommendations about the elements of CPD programme(s) required for science teachers.

The purpose of the study was to determine the professional development needs perceived by science teachers and their supervisors in Saudi Arabia. The following research questions were used:

1. What professional development needs in science content knowledge are identified by science teachers and their supervisors in Saudi Arabia?
2. What professional development needs in pedagogical knowledge and skills are identified by science teachers and their supervisors in Saudi Arabia?
3. Is there a difference among teachers' professional development needs related to variables such as gender, teaching experience, and school level (elementary, intermediate, high school)?

## Method

### *Sample*

The population of this study included 2701 Saudi science teachers and 66 science teacher supervisors located in four educational districts in different parts of Saudi Arabia (Jeddah, Alkarj, Alzulfi, and Almeqwah districts). These districts were chosen because they were part of the partnership programme with the Centre of Science and Mathematics Education, which is the sponsor for this study. All science teachers in these districts were considered to be the population and the sample of this study; a contact person was hired in each educational district to distribute the questionnaires to all science teachers and supervisors in each educational district.

*Science teachers:* A total of 499 out of a possible 2701 Saudi science teachers and 61 out of 66 science teacher supervisors responded to the questionnaire. For science teachers, the respondents included both genders: 209 (42%) were women and 290 (58%) were men. However, this does not mean that this is the case throughout all the schools in Saudi Arabia. The majority of the questionnaire sample, 411 (82%), held qualifications in education, and the other 88 (18%) held qualifications in pure science but not in education. Respondents were divided into five groups according to their years of experience, as follows: less than 5 years' experience, 31.7%; 6 - 10 years' experience, 21.6%; 11-15 years, 21.6%; 16-20 years, 12.8%; and more than 21 years, 9%. Concerning subject specialism, it was found that the respondents were drawn from the following disciplines: biology 33.3%, physics 16.6%, chemistry 16.4%, earth sciences 2.0, and other subjects (those who teach science for elementary students, but are not specialized in science) 27.1%. In terms of qualifications, the majority of the sample had a bachelor's degree (89.2 %), 8.0% had a diploma in education, and 1.0% had a master's degree in education.

*Science supervisors:* In the context of Saudi Arabia, each teacher is assigned a science supervisor; however, each supervisor is in charge of tens of science teachers based on the number of science teachers in the educational administration. The role of the supervisor is to monitor the teacher through regular visits, evaluate teacher performance, and provide feedback. The supervisor is also responsible for organizing seminars and peer observations among the teachers whom he or she supervises.

In the study, 61 science teacher supervisors included both genders: 48 (78.7%) were female and 13 (21.3%) were male. The majority of the science teacher supervisors, 54 (88%), were certified in education, but 7 (12%) were not. In terms of teaching experience, science teacher supervisors were divided into five experience groupings: less than five years experience, 8.2%; 6-10 years experience, 15.5%; 11-15 years, 16.4%; 16-20 years, 26.2%; and more than 21 years, 34.4%. Concerning their content discipline, they were specialized as follows: biology 41%, physics 26.2%, chemistry 29.5%, and other subjects 3.3 %. In terms of qualifications, the majority of science teacher supervisors had a diploma in education (96.7%).

### *Research instrument and procedure*

To collect the data, the researchers developed a questionnaire based both on their experiences and on a review of a related study (Chval, Abell, Pareje, Musikul, & Ritzka, 2008). The initial version consisted of 39 items related to two domains: (1)

science content knowledge needs and (2) pedagogical knowledge and skills needs. To validate the survey, ten science educators reviewed the initial version and provided their comments and suggestions, and then the survey was modified according to their feedback. Their feedback included linguistic suggestions, deleting two items and adding three items. The final version of the survey includes 40 items (21 items in the science content knowledge domain and 19 items in the pedagogical knowledge and skills domain).

#### *Validity and reliability*

A pilot study with 50 science teachers was used to determine the reliability of the questionnaire. Cronbach's coefficient alpha was used to calculate the internal consistency coefficients of the questionnaire. Results of the reliability analysis showed that the items in the instrument had a satisfactory discriminating power. The reliability coefficient alpha obtained for the whole instrument was 0.97; however, the coefficient alpha for its two domains were 0.98 and 0.97, respectively, for the science content knowledge domain and the pedagogical knowledge and skill domain.

#### *Data Analysis*

Statistical data were coded and analyzed using the Statistical Package for the Social Sciences (SPSS15.0). Descriptive statistics (frequencies, means, and standard deviations) were used to analyze data. For data analysis of the need items, mean values of the responses for 40 items were calculated. Ranking of means were used to determine the most and least pressing of the perceived needs of teachers. Before carrying out the parametric statistical tests, preliminary analyses were conducted in several steps, including missing data analysis and the identification of outliers. Also, a normality test was carried out to decide on the type of statistical analysis that fits the data, 'parametric' or 'non-parametric'.

## **Results**

### **Perceived Professional Development Needs**

The teachers were asked about their professional development needs concerning "needs in science content knowledge" and "needs in pedagogical knowledge and skills".

#### **The needs in science content knowledge perceived by teachers**

The level of needs for each science domain as perceived by the 499 Saudi Arabian science teachers who participated in this study was studied. More than 40% of the science teachers marked 'needed' and 'greatly needed' in all 19 items that were included in the science domain dimension.

The highest percentages of the 'needed' and 'greatly needed' scales are seen in the following domains: nature of science and scientific inquiry and modern physics (each 52%). These are followed by genetics and evolution (51%); chemical reactions (50%); Earth properties and physical processes, energy and chemical changes, and electricity and magnetism (each at 49%); energy, forces and motion, and structure and function of human systems (each at 48%). In climate and weather, only 17% of

the science teachers expressed a great need for this discipline, while 26% of them expressed a moderate need.

The science teachers who participated in this study perceived that their needs in science subjects were mainly related to physics topics (e.g., modern physics, electricity and magnetism). This result might be explained by the fact that one-third of the participants in this study are specialists in biology.

The results indicate that the highest percentages of the 'needed' and 'greatly needed' scales are found in the following categories: teaching science through field trips and scientific visits (57%). These are followed by teaching science for gifted students (56%); teaching science for special needs students (56%); developing creative thinking among students (55%); using labs in teaching science, developing science concepts among students, and using technology in the science classrooms (each at 53%); the use of scientific inquiry (52%); problem solving in science (50%); teaching theory based on constructivism (49%); using concept mapping (48%); and assessment skills, e.g., assessing students' learning, (44%). Finally, the least needed skills are in classroom management (43%), connecting science to students' real lives (43%), and questioning and classroom discussion techniques (43%). Even though these last skills are perceived as the least needed, a very high percentage of respondents expressed a strong need for them.

#### **The Needs In Science Domains Perceived By Teachers And Supervisors**

Regarding the comparisons between the needs perceived by science teachers and those perceived by their supervisors, Tables 1 and 2 clearly show that there was a great gap and inconsistency between teachers and their supervisors.

#### ***Comparisons between teachers' and their supervisors' perceptions of needs in the science domains***

Table 1 summarizes the perceived needs of science teachers and their supervisors for professional development in various science subjects. As shown in Table 1, the ten top-ranked needs perceived by teachers were the following, in order according to their means: nature of science and scientific inquiry (3.53), modern physics and structure and function of human systems (3.46), genetics and evolution (3.45), electricity and magnetism (3.43), earth properties and physical processes (3.42), chemical reactions (3.41), forces and motion (3.41), energy (3.40), and energy and chemical changes (3.39). In contrast, the ten top needs perceived by science supervisors were the following; the solar system and the universe (4.51), nature of science and scientific inquiry (4.41), forces and motion (4.25), plants (4.15), climate and weather (4.02), structure and properties of matter (3.98), genetics and evolution (3.94), chemical reactions (3.89), earth properties and physical processes in modern physics (3.80), and energy and chemical changes (3.78).

Six out of the top ten perceived needs were the same for both science teachers and their supervisors. These six needs are genetics and evolution, energy, forces and motion, energy and chemical changes, chemical reactions, Earth properties and physical processes, and the nature of science and scientific inquiry. However, as shown in Table 1, the priority among these six perceived needs was different for science teachers and science supervisors, except for energy and chemical changes, which was ranked 10th by both science teachers and science supervisors.

**Table 1**  
*Comparison of The Needs for Science Subject Knowledge Perceived by Science Teachers and by Supervisors*

No	Items	Science teachers		Science supervisors		t	df	Sig. (2-tailed)
		M	SD	M	SD			
1	Structure and function of human systems (biology)	3.46 (3)	1.088	3.75	1.004	1.673	546	.095
2	Epidemics: Causes and ways of prevention (biology)	3.38	1.115	3.48	1.047	.476	548	.634
3	Living things (biology)	3.33	1.103	3.49	.984	.772	545	.440
4	Plants (biology)	3.32	1.145	4.15 (4)	.951	4.954	541	.000
5	Genetics and evolution (biology)	3.45 (4)	1.159	3.94 (7)	.826	3.188	551	.002
6	Electricity and magnetism (physics)	3.44 (5)	1.102	3.73	1.056	1.910	545	.057
7	Energy (physics)	3.40 (9)	1.088	3.47	1.112	1.081	549	.280
8	Structure and properties of matter (chemistry)	3.32	1.101	3.98 (6)	.975	4.130	549	.000
9	Forces and motion (physics)	3.41 (8)	1.098	4.25(3)	.888	5.571	549	.000
10	Modern physics (physics)	3.47 (2)	1.149	3.77	.890	1.945	547	.052
11	Light and sound (physics)	3.40	1.137	3.72	.951	2.043	549	.042
12	Energy and chemical changes (chemistry)	3.39 (10)	1.120	3.78(10)	.937	2.359	550	.019
13	Chemical reactions (chemistry)	3.41 (7)	1.165	3.89 (8)	.958	-2.959	551	.003
14	Structure of matter and chemical bonding (chemistry)	3.36	1.125	3.46	1.104	.562	545	.574
15	Environment and the effect of environmental pollution (biology)	3.36	1.127	3.75	.943	2.483	548	.013
16	Climate and weather (Earth science)	3.30	1.132	4.02 (5)	.956	4.514	541	.000
17	Earth properties and physical processes (Earth science)	3.42 (6)	1.115	3.80 (9)	.953	2.423	544	.016
18	The solar system and the universe (Earth science)	3.37	1.141	4.51 (1)	.698	7.468	547	.000
19	Nature of science and scientific enquiry	3.53 (1)	1.138	4.41 (2)	.761	5.732	550	.000

Note. Note. M= means, SD=Standard Deviation, t=T-test, df=degree of freedom; The number in parentheses represents the priority of the perceived needs

These findings may raise important questions about the validity of the science supervisors' voice regarding the CPD required for teachers. They may also raise a question about the science supervisors' awareness of the science teachers' needs.

An independent sample t-test was conducted to see whether there was a difference between teachers and supervisors in their perceptions of teachers' CPD needs in science domains. As shown in Table 1, there was only a statistically significant difference on three subject knowledge questions: living things, energy and structure of matter, and chemical bonding. The means of supervisors' responses in these three domains (3.33, 3.47, and 3.46, respectively) were higher than those of teachers' perceived needs in the same topics (3.33, 3.40, and 3.36, respectively). This might be attributed to the fact that the supervisors do not hold sufficient knowledge about teachers' needs concerning the science domains

#### *Comparisons of responses of teachers and their supervisors to pedagogical knowledge and skills*

Table 2 summarizes the perceived needs of science teachers and science supervisors for professional development on pedagogical knowledge and skills. As shown in Table 2, the ten top-ranked needs perceived by teachers were the following: teaching science through field trips and scientific visits (3.68), developing creative thinking among students (3.66), teaching science for gifted students (3.64), developing the science concept among students (3.60), associating technology with teaching (3.57), planning for teaching (3.55), scientific enquiry instruction based in science (3.54), teaching science for special needs students (3.52), instruction based problem solving in science (3.51), and using concept mapping (3.50). Alternately, the ten top needs perceived by science supervisors were the following: teaching science through field trips and scientific visits (4.74), connecting science to students' real life (4.70), scientific enquiry instruction based in science (4.69), developing the science concept among students (4.68), content analysis (4.60), teaching science for gifted students (4.56), developing creative thinking among students (4.52), using labs in teaching science (4.46), questioning and classroom discussion technique (4.42), and classroom management skills (4.38).

Six of the top ten perceived needs were the same for both science teachers and supervisors. The six needs are the following: using labs in teaching science, scientific enquiry instruction based in science, teaching science through field trips and scientific visits, developing creative thinking among students, developing science concepts among students, and teaching science for gifted students. However, as shown in Table 2, the priority among these six perceived needs by both science teachers and science supervisors was different except for teaching science through field trips and scientific visits, which was ranked 1st by both science teachers and science supervisors.



**Table 2**

*The needs for professional development of pedagogical knowledge and skills as perceived by in-service science teachers and supervisors*

No	Items	Science teachers		Science supervisors		t	df	Sig. (2-tailed)
		M	SD	M	SD			
1	Teaching theory, such as constructivism, behaviourism	3.50 (10)	1.038	4.28	.878	5.756	549	.000
2	Classroom management skills	3.28	1.155	4.38 (10)	.840	7.271	554	.000
3	Associating technology with teaching	3.57 (5)	1.122	4.36	.817	5.497	547	.000
4	Using labs in teaching science	3.55 (6)	1.189	4.46 (8)	.773	5.823	549	.000
5	Assessing students' learning	3.33	1.127	4.16	.970	5.520	548	.000
6	Planning for teaching	3.28	1.148	4.13	.903	5.748	551	.000
7	Connecting science to students' real lives	3.32	1.207	4.70 (2)	.691	8.688	550	.000
8	Scientific enquiry instruction based in science	3.54 (7)	1.113	4.69 (3)	.564	7.794	547	.000
9	Instruction based on problem solving in science	3.51 (9)	1.091	4.05	.884	3.894	549	.000
10	Using concept mapping	3.45	1.102	4.16	.840	5.072	544	.000
11	How to teach specific science topics, such as magnetism or writing chemistry equations	3.38	1.099	4.30	.955	6.138	554	.000
12	Questioning and classroom discussion techniques	3.32	1.176	4.42 (9)	.747	6.968	553	.000
13	Teaching science through field trips and scientific visits	3.68 (1)	1.111	4.74 (1)	.480	7.230	547	.000
14	Developing creative thinking among students	3.66 (2)	1.041	4.52 (7)	.748	6.066	546	.000
15	Developing science concepts among students	3.60 (4)	1.018	4.68 (4)	.596	7.873	541	.000
16	Teaching science for gifted students	3.64 (3)	1.074	4.56(6)	.643	6.771	540	.000
17	Teaching science for special needs students	3.52 (8)	1.183	3.98	.904	2.904	545	.004
18	Content analysis	3.42	1.040	4.60 (5)	.588	8.634	544	.000
19	Teaching science using learning cycles	3.49	1.052	3.95	.825	3.256	542	.001
20	Connecting science to other courses	3.41	1.093	4.00	.876	3.968	540	.000
21	Connecting science topics to each other	3.44	1.110	4.28	.878	389	484	.697

Note. M= means, SD=Standard Deviation, t=T-test, df=degree of freedom; The number in parentheses represents the priority of the perceived need

An independent sample t-test was conducted to see whether there was a difference between teachers and the supervisors in terms of teachers' CPD needs for pedagogical knowledge and skills. As shown in Table 5 there was a statistically significant difference between teachers' and supervisors responses, except that there was no significant difference on one item - connecting science topics to each other. The mean of supervisors' responses in these three domains ( $M = 4.28$ ) was higher than that of teachers' perceived needs for this skill ( $M = 3.44$ ). This can be explained by the possibility that the supervisors may not have sufficient knowledge about teachers' needs concerning science topics.

*Teachers' needs compared with their backgrounds*

The teacher independent variables selected in this study were teaching experience, school level, gender, and specialism. The results indicated that there were no statistically significant differences among teachers. This means that teachers' developmental needs are the same regardless of their teaching experience, school level, gender, and specialism. Also, this reflects the significance of the need for developing CPD for teachers.

### **Discussion and Conclusion**

The findings of the study indicate that there was no significant difference among primary, middle and secondary science teachers. All of the groups expressed a strong need for PD in both science content knowledge needs and pedagogical knowledge and skills needs. This finding concurs with the findings of a number of researchers who have examined the perceived needs of secondary level science teachers (e.g., Chval et al., 2008; Osman, 2006; Rubba1981; Stronck, 1974).

The majority of the teachers in the current study expressed a great need for academic and pedagogical training. The findings reflected the teachers' perception that they lack some basic knowledge (e.g., chemical bonding, structure and properties of matter, forces and motion, and the structure and function of human systems) and skills (e.g., planning for teaching, using labs in teaching science, and scientific enquiry instruction in science) to best teach science. These findings have raised questions regarding the roles of teacher educators (those who train teachers) in developing teachers' CPD, as well as questions about teacher educators' roles in meeting teachers' professional needs over many years.

The results from this study indicate that there is a mismatch between teachers' perceptions of their own CPD needs and their supervisors' perceptions. While teachers are particularly concerned with the quality of science education, other stakeholders may have different priorities, such as science supervisors, as revealed in this study. These findings have raised questions regarding the roles of teacher educators (those who train teachers) in developing teachers' CPD, as well as questions about teacher educators' roles in meeting teachers' professional needs over many years. In this sense, the findings of the current study concur with Park Rogers et al.'s (2006) study that it is the difference in beliefs among the stakeholders of

professional development (PD) that has contributed to the gap between ideal and actual PD practice. A balance is required that addresses the concerns of everyone involved by reconciling competing interests. In this sense, these findings raise concerns over the different views about PD among both teachers on one hand and their supervisors on the other hand. These findings may also raise questions about the science supervisors' awareness of the science teachers' needs or the communication between the teachers and supervisors about the professional needs. Additionally, teachers' voices should be heard and taken into account concerning their perceived professional needs and the practical problems they face when implementing new ideas in the classrooms. Therefore science teachers, supervisors, policy makers, and in-service and pre-service training planners need to work together to consider the recommendations that have been identified in the teachers' PD research (Hewson, 2007; Mansour, 2008; Van Driel, 2001).

The findings from this study could have implications for science teachers' CPD. When planning in-service programmes, consideration should be given to the areas where needs are the greatest. Attention should be given to ensure that individual teachers' differing needs are met because providing the same programme for all teachers may not meet the needs of them all. Often CPD initiatives for the PD of science teachers appear to treat teachers as a homogeneous group rather than as diverse individuals. In the end, CPD is all about people, and it's as simple and as complex as that. Therefore, when planning CPD for teachers, we need to consider teachers' beliefs, experiences, and expectations about their CPD. Teachers do not enter into CPD as empty vessels. They bring existing experiences, practices, perspectives, insights and, most usually, anxieties about the highly complex nature of their work (Mansour, 2013). They come with differences, disagreements, preconceptions, uncertainties, and missions. It is necessary to repeat the needs assessment from time to time so as to modify and adapt the existing design of the CPD programmes to meet the emerging and changing needs of teachers. The findings of this study also provide directions for further research related to the perceived needs of science teachers. Qualitative research into needs should also be conducted for all pre-service and in-service science teachers. Also, further research is needed into the role, views, and practice of supervisors and their epistemological and pedagogical views of science and science education.

### **Conclusion**

The findings from this study elucidate a significant characteristic of Saudi Arabian science teachers' needs. While science teachers may share a number of perceived needs with science supervisors, they also have distinct pedagogical needs (e.g. teaching science for special needs students and instruction based on problem-solving in science) that possibly vary according to individual interests. That difference reinforces the necessity for those who direct science teacher in-service programmes to attend to the primary axiom of in-service education: the needs of every science teacher who will participate in an in-service programme must be assessed prior to planning and instituting the activities (Rubba, 1981).

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## Educational Supervisors' Locus of Control

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### Abstract

*Problem Statement:* In social open systems, there are basically two determinants of organizational behavior: "organizational" and "personal." The former is mostly related to the aim of the organization, the necessities of the work, whereas the latter is concerned with the traits of the employee. Various studies have focused on the traits of the employee along with their different dimensions. One of these is the locus of control, which can be measured and evaluated as a dimension of personal trait. Although there are some studies that were carried out with students, teachers, and principals regarding locus of control, so far no research has been done with educational supervisors who are crucial actors in the current educational process.

*Purpose of Study:* The purpose of this study is to determine the locus of control of educational supervisors.

*Methods:* The research consisted of 340 educational supervisors working in 18 cities, which are located in the fourth and fifth educational service regions of Turkey. The data collection tool consists of two parts. The first is "General Information Form," which aims to collect personal information concerning educational supervisors. The second part is the 29-item Rotter's Internal-External Locus of Control Scale (I-E-LOC Scale), which aims to determine the locus of control of educational supervisors. In data analysis, techniques such as Kolmogorov Smirnov test, independent sample t-test, one way ANOVA, and Scheffe test were used.

*Findings and Results:* According to the results, there was no significant effect of variables such as field, faculty, education level, teaching tenure, and incentives ( $p>.05$ ) on locus of control of the participants. However, supervisory tenure did have a significant effect on locus of control ( $p<.05$ ).

*Conclusions and Recommendations:* It was determined that educational supervisors had a tendency to internal locus of control ( $M=9.09$ ). Having

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an internal locus of control for an educational supervisor may contribute to the task performance, which is determined by legal regulations and ethical principles of the profession. In addition, it can create an environment that reinforces the tendency of having internal locus of control for the target population. To enable supervisors to have more internal locus of control, mainly two things can be suggested. First, applicants for supervisory positions should be chosen among already internal locus of control teachers and/or administrators. To realize this, some practices must be abolished. These practices are about the perceptions of unjust processes in which proficiency is not a criterion to be selected and appointed, and which can be manipulated and predictable. Second, another perception of supervisors may be changed. It is the perception that they play a role that is heavily dependent on external supervision during their task performances, in terms of authority they have. This perception can be positively changed during pre-service or in-service periods.

*Keywords:* Locus of control, internal external LOC, I-E-LOC, educational supervisor

Man, born with limited qualifications, has to acquire new knowledge, skills, and attitudes at the least to exist in the world. School is the place where this is the most systematically achieved. School is an open system that gets the majority or all of inputs from the environment, and gives the majority or all of output to the environment. It is also a social system since a human being determines the quality of the output.

In systems where both main input and output are human, he/she is the crucial element of the socially open system. It is the behaviors of employees towards the aim that determines the quality of output and there are different determinants of these behaviors. In fact, in almost all organizations, there are two determinants of observed organizational behaviors. One is related to the aim of the organization and the necessities of the task, while the other is concerned with personality traits of an employee. The former is described as "organizational dimension", while the latter is "personal dimension" (Aydın, 2010).

Organizational dimension means expected behaviors of the employee in the position that she/he holds. Employees are expected to behave and make contributions according to their positions in the workplace, and the aim of their institution. Organizations are careful when employing those who are willing to make contributions to the organizational aim. They get them to work wherever needed. Every position requires behaviors for the position itself. Any attempt to show the needed behaviors is considered as a determinant of organizational behavior. It is more or less under the control of the organization and can be directed through changes or improvements by organizational powers.



However, the “personal” side of organizational behavior is not as open to the effect and control of the organization as the “organizational” side of it is. The personal side is more like a trait that is made up of necessities and expectations of the person. Personality traits are one of the main factors explaining the different organizational behaviors of employees who are in similar positions and have similar role expectations. For this reason, it may be misleading to assess the organizational contribution of the employee by not taking the trait into account.

Personality traits with various dimensions have been the subject of several studies (Day, Schleicher, Unckless & Hiller, 2002; Hogan, Curphy & Hogan, 1994; Judge, Bono, Ilies & Gerhardt, 2002; Judge, Piccolo & Kosalka, 2009; Lord, De Vader, & Alliger, 1986; Nahrgang, Morgeson & Ilies, 2009; Peterson, Smith, Martorana & Owens, 2003; Silverthorne, 2001; Stewart, 2001; Snyder & Monson, 1975; Zaccaro, Foti & Kenny, 1991; Zaccaro, Gilbert, Thor & Mumford, 1991; Zanna, Olson & Fazio, 1980). One of these is locus of control, which was proved to be a personality trait that can be measured and used in many cases, as a result of a great deal of empirical research designed to determine the relationship with various variables, for different individuals, and in different research areas from health to education, from principal to student, from stress to problem solving (Arlotto, 2002; Armstrong, 2001; Bağlum, 2000; Dibekoğlu, 2006; Dilekmen, Alver, Ada, & Akçay, 2009; Jooa, Lima & Kimb, 2013; Hodges & Winstanley, 2012; Konan, 2013; Lindströma & Rosvalla, 2012; Özdemir, 2009; Yeşilyaprak, 2004). Locus of control, examined as a personal trait in researches, is considered as a tendency of taking the life-affecting events, good or bad, as a result of his/her skills, qualities and behaviors or as a result of luck, fate, and other powers. It is indicated that the ones who believes that life-affecting events are within their control area have internal locus of control, whereas the ones who believe that they are the results of other powers rather than himself/herself have external locus of control (Rotter, 1966).

The first researches on measuring locus of control were done by Phares and James. Following these attempts, several scales were developed to measure the locus of control. The locus of control scale developed by Rotter is definitely the most well-known. His scale, “internal-external locus of control” (I-E-LOC Scale) is the most commonly used scale of all (Dağ, 1991).

By means of this scale, locus of control of human resources in educational settings has been a research subject for several studies. While some studies about locus of control focused on students (Aqeel, Masood, Muhammad & Nabiha, 2010; Arslan, Dilmaç & Hamarta, 2009; Daniel, 1993; Dilmaç, 2008; Gan & Shang, 2007; Ruibyte, 2007; Williams & Andrade, 2008; Wu & Elliott, 2008; Yaşar, 2008), teachers (Akça & Yaman, 2010; Arogundade & Itua, 2010; Canbay, 2007; Kapıkıran, 2007; Munir & Sajid, 2010; Rose & Meadway, 1981) and principals (Dibekoğlu, 2006; Dilekmen, Alver, Ada & Akçay, 2009; Klein & Wasserstein-Warnet, 2000) in different countries at different teaching levels, no research has yet been found that focused on educational supervisors who are crucial in the educational process.

Educational supervisors are those who do the supervision in which the aim is to improve the teaching-learning process. Although it is being practiced in different ways in different institutions in different countries, the supervision is universal regardless of its aim and institution, and a necessity for any institution (Başaran, 2006). For educational institutions it is irreplaceable (Aydın, 2000; Aydın, 2005; Başar, 2000; Taymaz, 2005). Supervision in educational settings focuses on determining the accomplishment of organizational aim, and reasons for failure to accomplish the aim, and above all, it focuses on being efficient and productive as an entire unit.

In the Turkish education system, according to article 42 of the constitution of the Turkish Republic, teaching and learning are performed under the control and supervision of the state. The National Ministry of Education (MoNE) is responsible for this control and supervision of the whole process on behalf of the state (MoNE, 1973). The Ministry carries out this responsibility with a supervisory board at elementary and high school education levels. In every province, as responsible to the National Ministry Directorate, there is an Elementary School Supervisory Department consisting of a president, a vice president, educational supervisors, assistant supervisors, and a supervisory bureau (MoNE, 1999). Educational supervisors and assistant supervisors working at the Elementary School Supervisory Department carry out tasks such as guidance, on-the-job training, supervision, assessment, examination, investigation, and inquiries for any formal and informal educational institutions at various levels in addition to National Ministry Directorates for the province and its counties (MoNE, 2011).

Educational supervisors, while performing the supervision, may be in a position in which they may teach, inspire, question, judge, and dispense justice by playing various roles such as a teacher, principal, or sometimes a leader. One of the critical determinants while performing these responsibilities efficiently is legal regularities of the job itself, the other is his/her personality traits. Thus, research is needed on locus of control, a factor of educational supervisors' personality traits, being one of the effective constituents during supervision processes.

On the basis of this rationale, the aim of the present research is to examine the locus of control of educational supervisors in terms of some variables.

To this end, answers to the following questions were sought:

1. Do educational supervisors' locus of control scores significantly differ in terms of field?
2. Do educational supervisors' locus of control scores significantly differ in terms of faculty?
3. Do educational supervisors' locus of control scores significantly differ in terms of education level?
4. Do educational supervisors' locus of control scores significantly differ in terms of teaching tenure?
5. Do educational supervisors' locus of control scores significantly differ in terms of supervisory tenure?
6. Do educational supervisors' locus of control scores significantly differ in terms of incentives for the last three years in a supervisory position?

## Method

### *Research Design*

The study is a descriptive research since it aims to determine the present status of locus of control for educational supervisors with regard to some independent variables such as field, faculty, educational level, teaching tenure, supervisory tenure, and incentives within the last three years of supervisory service.

### *Research Group*

The research group of the study is comprised of 340 educational supervisors working in 30 provinces that are in eastern and southeastern Anatolia, which are classified as 4<sup>th</sup> and 5<sup>th</sup> service regions of Turkey in which there are socioeconomically less developed cities, in 2010-2011 academic year. Eighteen provinces were randomly chosen, 9 from the 4<sup>th</sup> and 9 from the 5<sup>th</sup> service regions of Turkey. These educational supervisors, who filled out the data collection tools voluntarily and according to the instructions, are working in 18 provinces (Adiyaman, Ağrı, Batman, Diyarbakır, Elazığ, Erzincan, Erzurum, Gümüşhane, Hakkari, Iğdır, Kahramanmaraş, Kastamonu, Muş, Mardin, Siirt, Sivas, Şanlıurfa and Van).

### *Research Instruments*

*General information form.* The form, developed by the researcher, consists of 6 items aiming to determine the participants' personal characteristics (field, faculty, educational level, teaching tenure, supervisory tenure, and incentives within last three years as a supervisor).

*Internal-external locus of control scale.* To determine the level of internal-external locus of control for educational supervisors, 29-item Internal-External Locus of Control (I-E-LOC) was used. It was developed by Rotter (1966) and then Dağ (1991) adapted it into Turkish and performed validity and reliability tests. The scale's Spearman-Brown and KR reliability coefficients range from .65 and .79, with split half techniques using the data obtained from four different samples with the size of 2,100 subjects; also from various samples test-retest reliability coefficients that range from .49 to .83 (Rotter, 1966).

In the scale, each item has two alternatives, identified as "a" and "b". The respondent is asked to choose the most suitable sentence for himself/herself and then to choose it. During scoring, 6 items out of 29 (1, 8, 14, 19, 24, 27) were excluded since they are just filling items so as to conceal the aim of the scale. Out of the remaining questions, for numbers 2, 6, 7, 9, 16, 17, 18, 20, 21, 23, 25, and 29 the alternative "a" gets 1 point, while for the rest, 3, 4, 5, 10, 11, 12, 13, 15, 22, 26, and 28 the alternative "b" gets 1 point. Thus, the respondent can acquire points from 0 to 23. The higher the point is, the more the person's external locus of control.

In Turkey, Dağ (1991) tested the validity and reliability. Test-retest reliability coefficient of I-E-LOC Scale was found as .83. Reliability coefficient of scale, using KR-20 technique is .68; Cronbach's Alpha coefficient is .70. For convergent validity

of the scale, Pearson correlation value was reported as .69 between the mean score of LOC - interview and I-E-LOC Scale. Just like the original one, the Turkish version of the I-E-LOC scale has also adequate reliability coefficient value and acceptable validity indicators (Dağ, 1991), thereby it is used in a considerable number of studies in Turkey.

To evaluate model-data relationship concerning one-factor scale structure, CFA was done. CFA analysis was done using Lisrel 8.71 (Jöreskog & Sörbom, 2004). In analysis maximum likelihood technique was used. The results of CFA are as follows:  $\chi^2=382.32$ ,  $SD=229$ ,  $\chi^2/Sd=1.66$ , GFI:.90, AGFI:0.88, RMSEA:0.046, RMR:.014 and SRMR: .061. In evaluation of goodness of fit, some accepted criteria within the literature were used. It is accepted as perfect goodness of fit to be 2 or lower " $\chi^2/Sd$ " ratio, ".95" or above GFI, AGFI results, and ".05" or lower RMSEA, RMR and SRMR results. However, it is taken as acceptable goodness of fit to be 2-5 " $\chi^2/Sd$ " ratio, ".90" or above GFI, AGFI results, and ".08" or lower RMSEA, RMR and SRMR results (Brown, 2006, Çokluk, Şekercioğlu & Büyüköztürk, 2010; Şimşek, 2007; Tabachnick & Fidell, 2007). As a result of these findings, it may be said that model-data fitness is within acceptable limits, and the scale is a valid and reliable one to measure educational supervisors' locus of control.

#### *Procedure*

The researcher himself or educational supervisors in Educational Administration and Supervision who hold a master's degree and were already informed about administrating the scale carried out the data collection procedure. A total of 340 educational supervisors who completed the information form and the scale according to the instructions were taken as the sample of the study, while 16 forms due to missing info or mistakes were not included in the analyzing process. Each educational supervisor personally answered the data collection tools and it took about 14 minutes to complete the forms.

#### *Data Analyses*

Normality test was performed for scores of locus of control using Kolmogorov Smirnov normal distribution formulas. In the study, independent sample t-test, One-Way-ANOVA and Scheffe test were used to compare groups. All calculations were done using SPSS 17.0. For all analysis, significance level was taken as .05 (Büyüköztürk, 2010).

## **Results**

The study aimed to determine the relation between educational supervisors' internal-external locus of control and the independent variables such as field, faculty, educational level, teaching tenure, supervisory tenure, and incentives within the last three years of supervisory service. The findings are as follows:

The results of the t-test performed to determine whether there is any significance between locus of control mean scores of educational supervisors in terms of field variable are presented in Table 1.

**Table 1**

*T-test Results, according to Field for Scores of LOC Scale for Educational Supervisors*

<i>Field</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Df</i>	<i>t</i>	<i>p</i>
Classroom Teacher	212	9,29	3,907	338	1.212	.226
Field Teacher	128	8,76	3,904			

As can be seen in Table 1, it was found that mean score of locus of control scale for educational supervisors whose field is classroom teacher was 9.29, while it was 8.76 for educational supervisors who were field teachers. From the table, it can be said that field causes no significant difference [ $t(338)=1.21, p>.05$ ] on the scores of locus of control scale for educational supervisors.

The results of the t-test performed to determine whether there is any significance between locus of control mean scores of educational supervisors in terms of faculty variable are presented in Table 2.

**Table 2**

*T-test Results, according to Faculty, for Scores of LOC Scale for Educational Supervisors*

<i>Institution</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Df</i>	<i>t</i>	<i>p</i>
Education Faculty	275	9.12	3.882	338	.300	.765
Other Faculties	65	8.95	4.048			

It was found that mean score of locus of control scale for educational supervisors who graduated from Education Faculty was 9.12, while it was 8.95 for educational supervisors who graduated other faculties. From the table, it can be said that faculty causes no significant difference [ $t(338)=.30, p>.05$ ] on the scores of locus of control scale for educational supervisors.

The results of the t-test performed to determine whether there is any significance between locus of control mean scores of educational supervisors in terms of education level variable are presented in Table 3.

**Table 3**

*T-test Results, according to Education Level, for Scores of LOC Scale for Educational Supervisors*

<i>Education Level</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Df</i>	<i>t</i>	<i>p</i>
Undergraduate	267	9.13	3.860	338	.340	.734
Graduate	73	8.95	4.106			

In Table 3, it can be seen that mean score of locus of control scale for educational supervisors who graduated from a faculty was 9.13, while it was 8.95 for educational supervisors who completed graduate school. Also, according to education level, no significant difference [ $t(338)=.34, p>.05$ ] was found on the scores of locus of control scale for educational supervisors.

The results of One-Way ANOVA performed to determine whether there is any significance between locus of control mean scores of educational supervisors in terms of teaching tenure variable are presented in Table 4.

**Table 4**

*ANOVA Results, according to Teaching Tenure, for Scores of LOC Scale for Educational Supervisors*

<i>Locus of Control ANOVA Results</i>	<i>Sum of squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>p</i>
Between Groups	36.932	2	18.466	1.210	.299
Within Groups	5142.421	337	15.259		
Total	5179.353	339			

As can be seen from Table 4, the mean score of locus of control scale for educational supervisors whose teaching tenure is 10 years or less is 8.86, and it is 9.37 for educational supervisors whose teaching tenure is 11 to 15 years, and it is 8.58 for educational supervisors whose teaching tenure is 16 years or more. From ANOVA results it can be said that teaching tenure causes no significant difference [ $F(2-337)=1.21, p>.05$ ] on the scores of locus of control scale for educational supervisors.

The results of One-Way ANOVA performed to determine whether there is any significance between locus of control mean scores of educational supervisors in terms of supervisory tenure variable are presented in Table 5.

**Table 5**

*ANOVA Results, according to Supervisory Tenure, for Scores of LOC Scale for Educational Supervisors*

<i>Locus of Control ANOVA Results</i>	<i>Sum of squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>p</i>	<i>Significant differences</i>
Between Groups	131.912	2	65.956	4.404	.013*	1-2
Within Groups	5047.440	337	14.978			
Total	5179.353	339				

As can be seen from Table 5, the mean score of locus of control scale for educational supervisors whose supervisory tenure is 2-5 years is 9.66, more than that of educational supervisors' whose teaching tenure is 1 year or less, 8.23. Analysis results indicate that there is significant difference on the scores of locus of control scale for educational supervisors in terms of supervisory tenure [ $F(2-337)=4.40$ ,  $p<.05$ ]. In other words, locus of control of educational supervisors changes significantly with relation to supervisory tenure. According to Scheffe test results, done to determine the difference between groups, it was found that there was a significant difference between those whose supervisory tenure is 2-5 years and those whose supervisory tenure is 1 year or less.

The results of the t-test performed to determine whether there is any significance between locus of control mean scores of educational supervisors in terms of incentives variable are presented in Table 6.

**Table 6**

*T-test Results, according to Incentives, for Scores of LOC Scale for Educational Supervisors*

<i>Incentives</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Df</i>	<i>t</i>	<i>p</i>
Received	105	9.16	3.698	338	.239	.811
Not Received	235	9.06	4.007			

It was found that mean score of locus of control scale for educational supervisors who received an incentive was 9.16, while it was 9.06 for educational supervisors who did not receive any incentives. From Table 6, it can be said that incentive causes no significant difference [ $t(338)=.23$ ,  $p>.05$ ] on the scores of locus of control scale for educational supervisors.

### Conclusions and Recommendations

One of the significant elements is the supervision subsystem that makes and maintains a system characteristic to education. There is a need to focus on an effective and productive supervision of education, which determines each and every contribution to the general aim, when found not adequate, and reveals the possible causes and finds solutions, and intends to develop the process as a whole. Educational supervisors are the critical agent to make supervision effective and productive. They are expected to behave according to legal regularities and in the light of professional ethical principles. It is not realistic to expect educational supervisors to behave without the influence of personal traits while doing what they are expected to do. In this respect, the fact that educational supervisors' personality trait may influence the supervision process should not be ignored. Attitudes and behaviors of educational supervisors during supervision may be affected by locus of control, which is a dimension of personality trait.

In this research, 340 educational supervisors' locus of control was examined in terms of several variables. This group was working in the 4<sup>th</sup> and 5<sup>th</sup> service regions in which there are 30 socioeconomically less developed provinces, mostly in eastern and southeastern Anatolia. Eighteen provinces were randomly chosen, 9 from the 4<sup>th</sup> and 9 from the 5<sup>th</sup> service regions of Turkey. According to the results, there was no significant effect of variables such as field, faculty, educational level, teaching tenure, and incentives ( $p>.05$ ) on locus of control of the participants. However, supervisory tenure had a significant effect on locus of control of the participants ( $p<.05$ ).

According to Scheffe test results, done to determine the difference between groups, it was found that there was significant difference between those whose supervisory tenure is 2-5 years and those whose supervisory tenure is 1 year or less. That is, locus of control for beginners in educational supervision is mostly internal. When compared with the first year of supervisory tenure, the second group (2-5 years) of supervisory tenure has a tendency towards external locus of control.

The reason for this is that educational supervisors may be affected by previous positions, such as teacher and principal, rather than a newly appointed position, especially in the first year. In researches done in Turkey, mean scores of locus of control for teachers range from 6.34 to 8.70 (Canbay, 2007; Çetin, Çağlayan & Erkmen, 2008; Çolak, 2006; Demirtaş, 2006; Erdoğan & Ergün, 2011; Erkmen & Çetin, 2007; Küçükkaragöz, 1998; Tümkaya, 2000; Sarıkaya, 2007), and mean scores of locus of control for school principals range from 6.94 to 10.72 (Akça & Yaman, 2009; Dibekoğlu, 2006; Dilekmen, et al., 2009; Özdemir, 2009; Türkoğlu, 2007).

Those who have higher internal locus of control scores have an upward tendency (Solmuş, 2004; Yeşilyaprak, 2004) while at the same time, to accomplish this goal, they have upper level academic success compared with the ones who have higher external locus of control (Dilmaç, 2008; Yeşilyaprak, 2004). This leads to an expectation that scores of locus of control for teachers and principals who intend to become educational supervisors should come near internal locus of control. In view of this expectation, teachers and principals who intend to be educational supervisors



or to realize it are expected to have internal locus of control. This can be an explanation for the score of those whose supervisory tenure is 1 year or less having significantly lower (internal LOC) than those whose tenure is 2-5 years.

The finding that mean score of locus of control for educational supervisors is 9.09 can be compared with the findings of the researches in which participants are Turkish teachers (Canbay, 2007; Çetin, et al., 2008; Çolak, 2006; Demirtaş, 2006; Erdoğan & Ergün, 2011) and principals (Akça & Yaman, 2009; Dibekoğlu, 2006; Dilekmen, et al., 2009; Özdemir, 2009; Türkoğlu, 2007), in view of the fact that scores of locus of control may differ in various cultures. According to the findings of these researches, mean score of locus of control for teachers was 8.08, while it was 8.43 for principals. In the researches done in Turkey, mean score for teachers is 8.08 and mean score for principals is 8.43, whereas mean score of locus of control for educational supervisors is 9.09. These findings suggest that educational supervisors have more external locus of control scores than teachers and principals. Considering the fact that the ones who have higher internal locus of control scores have an upward tendency (Solmuş, 2004; Yeşilyaprak, 2004) while at the same time, to accomplish this goal, they have an upper level of academic success compared with the ones who have higher external locus of control (Dilmaç, 2008; Yeşilyaprak, 2004), it can be expected that teachers and principal with internal locus of control should become educational supervisors, thereby educational supervisors would have less locus of control scores. Yet, this finding of the research is not supported by the findings of the literature. The reason for this may be two-sided. First, due to perceptions of unjust processes in which proficiency is not a criterion to be selected and appointed, teachers and principals with internal locus of control do not think of becoming an educational supervisor. The perception of a process that can be manipulated and predictable makes it appropriate for those with external locus of control instead of those with internal locus of control. Second, it may be the result of the perception of educational supervisors towards their own profession. They may think that they play a role that forces them to use external control while they exercise their authority. This perception towards their position may be a cause of higher score of locus of control for educational supervisors than that of teachers and principals. Both possible reasons do not justify that educational supervisors should have higher scores (external) than teachers and principals.

If it is appropriate for people who have internal locus of control to perform supervisory jobs (Spector, 1982), educational supervisors are expected to have more internal locus of control than teachers and principals do. Considering personality traits of people having a tendency of internal locus of control, it can be realized how vital it is for educational supervisors to have these characteristics. Researches (Cüceloğlu, 1993; Dağ, 1991; Dönmez, 1983, 1984, 1986; Yeşilyaprak, 2004) suggest that there are some common personality qualities for internal locus of control when compared with external locus of control. According to these researches, people with internal locus of control are more at peace with themselves and society, inclined to make changes in their environment, to join social and political activities, and to help others, and are more comfortable and successful in personal activities. On the other

hand, they are less liable to conform to pressure of others, rely more on their judgment, give more positive reactions in the face of blocking, react harshly to limiting freedom, and prefer to be independent, less dependent to outer surroundings, and self-sufficient. At the same time, they are the people who spend more time on intellectual and academic pursuits, make efficient use of time, have high academic achievements, have outstanding success especially on competitive occasions, are success-oriented, risk-lovers, self-confident, have a creative sense of self, are resistant, organized, systematic, have auto-control, are trustworthy, more objective and consistent. They can concentrate more on what they do or problems they encounter, accept difficulties easily, and they are self-assertive when it comes to long-term planning, realizing and choosing different alternatives. They can perceive and evaluate easily hints and environmental stimulus in solving problems. Since they have more of a sense of responsibility, they see others from the point of their responsibility. Not only do they seek responsibility, but they do not avoid giving responsibility as well. They are the ones who perceive themselves as more influential, trustworthy, and self-directed, having a highly positive sense of self-esteem, are venturesome, undertakers, active, combative, healthy and balanced emotionally, use fewer defense mechanisms, are more comfortable in interpersonal relations, self-assured, peacemakers, have high motivation, job satisfaction and organizational commitment, low alienation, and are more productive and creative. The fact that educational supervisors should be internal locus of control may contribute to what is necessary in their tasks, which are the results of legal regulations and professional ethical principles, and also may create an environment in which they make targeted people more internal locus of control. This may spark an output effect contributing to developing the educational system as a whole.

Although educational supervisors have higher mean scores of locus of control than teachers and principals, their score ( $M=9.09$ ) may be interpreted from a different point of view. Rotter's internal-external locus of control scale scores range from 0 to 23 points and having a higher score means external locus of control. However, in some researches (Akça & Yaman, 2009; Çolak, 2006; Saracaloğlu, Serin & Bozkurt, 2005; Sulu, 2007; Tokat, Kara & Ülkün, 2007) scores between 0 and 11 indicated internal locus of control, while scores between 12 and 23 indicated external locus of control. Taking this point into account, it can be said that mean score ( $M=9.09$ ) of educational supervisors shows that they have internal locus of control.

For educational supervisors who are a crucial element in the educational process, playing an effective role is parallel with being internal locus of control. That's why some measures should be taken for educational supervisors to have more internal locus of control. To achieve this goal, two suggestions can be offered. First, the process of selection of educational supervisors can be restructured in order to choose people with high internal locus of control. The practices that are based on the perceptions of unjust processes in which proficiency is not a criterion to be selected and appointed, and which can be manipulated and predictable must be carefully eliminated. As a result of this, teachers and principals who have internal locus of control may think of becoming an educational supervisor and can make it a reality. Second, another perception of educational supervisors must be changed. It is the

perception that they play a role that is heavily dependent on external supervision during their task performances, in terms of authority they have. Essentially, when it comes to authority and responsibility of educational supervisors, the source of which comes from legal regulations and professional ethical principles, it means having those people work, who do their duties without any external supervision. The paradigm shift in perception towards their job can be carried out during either pre-service or in-service training. As a result of such training, behavior of an educational supervisor that is objective, consistent, success-oriented, encourages new practices, is supportive and confidential rather than fault-seeking, argumentative, oppressive, and penalizing will improve, thereby creating an environment in which perception of internal locus of control for teachers and principals will develop.

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## Eğitim Denetmenlerinin Denetim Odağı

### Atıf:

- Konan, N. (2013). Educational supervisors' locus of control. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 45-64.

### (Özet)

#### *Problem Durumu*

Toplumsal açık sistemlerde sistemin çıktısının niteliğini belirleyen temel etmen, çalışanların amaca yönelik davranışlarıdır. Bu davranışların farklı belirleyicileri bulunmaktadır. Ancak, hemen her örgütte, çalışanın örgütte, örgüte ilişkin olarak, gözlenen davranışının temelde "kurum" ve "birey" olmak üzere iki belirleyicisi



vardır. Bunlardan ilki, daha çok, örgütün amacı, yapılacak işlerin niteliği ile ikincisi ise, daha çok, çalışanın kişilik özellikleriyle ilişkilidir. Kurum boyutu, örgütün az ya da çok kontrolündedir ve örgütsel güçler tarafından değiştirilerek, geliştirilerek yönlendirilebilir. Oysa örgütsel davranışın "birey" boyutu, örgütün etkisine, kontrolüne, "kurum" boyutu kadar açık değildir. "Birey" boyutu, daha çok, bireyin gereksinimleri ve beklentilerinden oluşan bir kişilik özelliği niteliğindedir. Kişilik özellikleri, aynı konumda bulunan ve aynı rolü yerine getirmesi beklenen çalışanların birbirlerinden farklı örgütsel davranışını açıklayan temel etmenlerden biridir. Bu nedenle, çalışanın örgüte yaptığı katkının kişilik özelliklerinden yalıtılmış olarak değerlendirilmesi yanıltıcı olacaktır. Kişilik özellikleri, farklı boyutlarıyla, birçok araştırmanın konusu olmuştur. Bunlardan biri de, bir kişilik boyutu olarak ölçülüp değerlendirilebilen, denetim odağıdır. Denetim odağı araştırmaları farklı ülkelerde ve farklı öğrenim düzeylerinde öğrencileri, öğretmenleri ve yöneticileri konu edinmişken, kritik bir öge olan eğitim denetmenlerini konu edinen hiçbir araştırmaya rastlanmamıştır. Eğitim Denetmenlerinin işgörülerini etkili biçimde yerine getirebilmede belirleyici olan öğelerden biri görev alanının yasal dayanakları ise diğeri de kişilik özellikleridir. Bu nedenle, denetim uygulamalarında etkin olan önemli öğelerden birinin de eğitim denetmenlerinin kişilik özelliklerinin bir boyutunu oluşturan denetim odağı olması araştırma konusu edilmesini gerektirmiştir.

#### *Araştırmanın Amacı*

Bu araştırmanın temel amacı Eğitim Denetmenlerinin içten- dıştan denetim odağı ile branşı, en son tamamladığı öğrenim kurumu, öğrenim düzeyi, öğretmenlik mesleğindeki toplam hizmet süresi, eğitim denetmenliğindeki toplam hizmet süresi ve eğitim denetmenliğindeki son üç yılda herhangi bir ödül alması arasındaki ilişkiyi belirlemektir.

#### *Araştırmanın Yöntemi*

Araştırmanın çalışma grubunu, Türkiye'nin coğrafi olarak daha çok doğu ve güney doğu; sosyo-ekonomik olarak da daha az gelişmiş illerinin bulunduğu dördüncü ve beşinci hizmet bölgesinde yer alan 18 ilde (Adıyaman, Ağrı, Batman, Diyarbakır, Elazığ, Erzincan, Erzurum, Gümüşhane, Hakkâri, Iğdır, Kahramanmaraş, Kastamonu, Muş, Mardin, Siirt, Sivas, Şanlıurfa ve Van) görev yapan 340 eğitim denetmeni oluşturmaktadır. Araştırmada eğitim denetmenlerine ilişkin kişisel bilgileri toplamak amacı ile araştırmacı tarafından hazırlanan "Genel Bilgi Formu" ve eğitim denetmenlerinin iç dış denetim odaklarının düzeylerini belirlemeyi amaçlayan, toplam 29 maddelik Rotter'ın İç Dış Denetim Odağı Ölçeği (I-E LOC Scale) kullanılmıştır. Veriler, Kolmogorov Smirnov Normal Dağılıma Uygunluk testi, İlişkisiz Örneklem T- Testi (Independent Sample T-Testi), İlişkisiz Örneklem İçin Tek Faktörlü Varyans Analizi (One-Way ANOVA) ve Scheffe Testi ile değerlendirilmiştir.

#### *Araştırmanın Bulguları*

Yapılan analizler sonucunda; branşın, öğrenim kurumunun, öğrenim düzeyinin, öğretmenlikteki kıdemin ve ödül alma değişkenlerinin eğitim denetmenlerinin denetim odakları üzerinde anlamlı bir farklılığa neden olmadığı saptanmıştır ( $p>.05$ ).

Denetmenlikteki kıdemin ise eğitim denetmenlerinin denetim odakları üzerinde anlamlı düzeyde bir farklılığa neden olduğu belirlenmiştir ( $p<.05$ ).

#### *Araştırmanın Sonuçları ve Önerileri*

İçsel denetim odağı inancı yüksek olan kişilerin yükselme eğilimlerinin daha üst düzeyde oldukları, bu amaçlarını gerçekleştirebilmek açısından da, dışsal denetim odağı inancı yüksek olanlara kıyasla daha üst düzeyde bir akademik başarıya sahip oldukları dikkate alınacak olunursa, daha çok iç denetim odağı yönelimli öğretmen ve okul yöneticilerinin eğitim denetmeni olmaları, dolayısıyla eğitim denetmenlerinin öğretmen ve okul yöneticilerinden daha az denetim odağı ortalamasına sahip olmaları beklenirdi. Oysa araştırma sonucu ulaşılan bu bulgu alanyazındaki bulgularla desteklenmemektedir. Türkiye’de yapılan araştırmalarda, öğretmenlerin denetim odağı ortalama puanı  $M=8.08$ , okul müdürlerinin denetim odağı ortalama puanı ise  $M=8.43$  olarak belirlenmişken, eğitim denetmenlerinin denetim odağı ortalama puanı  $M=9.09$  olarak ortaya çıkmıştır. Bu durum eğitim denetmenlerinin öğretmen ve okul müdürlerinden daha dış denetim odağı inancına sahip olduklarını göstermektedir.

Eğitim denetmeninin iç denetim odağı eğilimli olması, hem yasal düzenlemeler ve mesleğin gerektirdiği etik ilkelerden kaynaklanan görevinin gereklerini yerine getirmesine katkı sağlayacak, hem de hedef kitesindeki kişilerin iç denetim odağı eğilimli olmasına ortam yaratabilecektir. Eğitim denetmeninin iç denetim odağı eğilimli olmasını sağlamak amacıyla temelde iki yol önerilebilir. Bunlardan ilki, eğitim denetmenliğine yeni atanacakların seçimine yönelik olarak yapılacak düzenlemelerle gerçekleştirilebilir. Eğitim denetmenliğine seçilme ve atanmada yeterliği esas alan bir sürecin olmadığı, sonucu önceden kestirilebilen ve dış denetmenlerin kontrolünde bir süreç olduğu algısına dayanak oluşturan uygulamaların özenle ortadan kaldırılması gerekir. Bunun sonucunda iç denetim odağı yönelimli öğretmen ve okul yöneticilerinin eğitim denetmeni olmayı düşünmeleri ve bunu gerçekleştirmeleri mümkün olabilir. İkincisi ise, eğitim denetmenlerinin yasal düzenlemelerle kendilerine verilen yetkilerini kullanırken, görevlerinin gereği olarak daha çok dıştan denetimi gerçekleştiren bir rolü yerine getirdikleri algısının değiştirilmesi ile gerçekleştirilebilir. Eğitim denetmenlerinin, yasal düzenleme ve mesleki etik ilkelerden kaynaklanan görev ve sorumluluklarının özünde, hedef kitlelerindeki herkesin kendi görev ve sorumluluğunu dıştan bir denetime gerek duymadan yerine getirebilecek bilinç düzeyine çıkarmak yer almaktadır. Eğitim denetmenlerinin görevlerine ilişkin bu algı değişikliği, gerek hizmet öncesi eğitim, gerekse hizmetiçi eğitim yoluyla gerçekleştirilebilir. Bunun sonucunda açık arayan, eleştirci, baskıcı ve cezacı bir denetim uygulaması yerine objektif, tutarlı, başarı yönelimli, yeni uygulamaları özendiren, destekleyici ve güven veren eğitim denetmeni davranışlarının artacağı, bunun da özellikle öğretmen ve okul yöneticilerinin içten denetim algısının gelişmesi üzerinde etkili olabileceği beklenebilir.

*Anahtar Sözcükler:* Denetim odağı, iç dış denetim odağı, kontrol odağı, eğitim denetmeni,

## Interpersonal Cognitive Distortions and Stress Coping Strategies of Late Adolescents

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### Abstract

*Problem Statement:* Adolescence is a stage of major growth and development in terms of significant cognitive, behavioral, psychological, and physiological changes. For adolescents, these developmental changes could be accompanied by stressful situations. Adolescents need to cope with these stressors successfully, yet the developmental period of adolescence involves an increase in interpersonal conflicts and negative emotions. Cognitive distortions play significant roles in exacerbating distress levels and negative conflict behavior. Consequently, the main focus of this study is an investigation into interpersonal cognitive distortions on adolescents' stress coping strategies.

*Purpose of Study:* The aim of this study was to examine stress coping strategies and the interpersonal cognitive distortions of late adolescents. The relations between interpersonal cognitive distortions and stress coping strategies of late adolescents were tested as well.

*Methods:* A total sample of 391 adolescents from public and private universities participated in this study. The descriptive statistical findings regarding the sub dimensions and t-test results indicating the difference between the means of males and females from "Interpersonal Cognitive Distortions" and "Stress coping Strategies with Stressful Experiences" scales were used. After this, findings related to interpersonal cognitive distortions and stress coping strategies were investigated by using path analysis in the research.

*Findings and Results:* Results revealed that adolescents use the strategies of problem solving and seeking social support more than the strategies of self-blame, imagination, and avoidance. Also, it was found that the strongest predictors of interpersonal rejection among stress coping

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strategies are avoidance, self-blame, and seeking social support. In the unrealistic relationship expectation dimension, it can be seen that seeking social support, imagination, and avoidance strategies explain with a moderate effect. The interpersonal misperception dimension can only be explained by the self-blame strategy as a small effect.

*Conclusion and Recommendations:* It was concluded that adolescents have a low level of interpersonal cognitive distortions and use problem solving and seeking social support strategies more than self-blame, imagination, and avoidance strategies. This means that adolescents use effective stress coping strategies and have low level interpersonal cognitive distortions. Another finding was that the strongest predictors of interpersonal rejection among stress coping strategies are avoidance, self-blame, and seeking social support. During the period of adolescence there are many stressful situations, such as future anxiety, career and occupation anxiety, romantic relationships, and the dimension change of relationships with family. Using effective stress coping strategies is important for overcoming stressful situations. Therefore, effective stress coping strategies should be taught to adolescents, especially for overcoming the stress they face in the period of adolescence.

*Keywords:* Interpersonal cognitive distortions, adolescent stress, coping strategies, late adolescents

Adolescence is a transitional period during which a variety of changes occur. Zarrett and Eccles (2006) mentioned that major developmental changes and challenges are seen during the period of adolescence because youths have gained and developed the competencies, attitudes, and values to make a successful transition into adulthood. Erikson (1968) defined the adolescence period as the developmental process in which "identity" is the primary psychosocial crisis. Adolescents begin to separate themselves from their parents, and they feel closer to peers and give importance to peer relationships. According to Seiffge-Krenke (2011), increased autonomy from parents, the development of closeness and intimacy in friendship, and the emergent interest in romantic relationships are the major changes of the adolescent period. In addition, the developmental tasks in adolescence are identity formation, redefinition of parent-child relationships, and strong attachment with a peer group (Vashchenko, Lambidoni, & Brody, 2007). Therefore, Seiffge-Krenke (2011) concluded that involvement in a new relationship exposes the adolescent to additional stress because the inevitable relational challenges raise the need to find a compromise between self and partner wishes while at the same time maintaining other social relationships.

Most adolescents suffer from stressful situations in their everyday lives, such as making more egalitarian relationship with parents and extending their social network with friends and romantic partners (Seiffge-Krenke, Aunola, & Nurmi, 2009). For adolescents, all these interpersonal relationships could be accompanied by

stressful situations. Other stressors for adolescents could be their own identity, such as dissatisfaction about changes in appearance, characteristics, and traits. Moreover, adolescents could have future anxiety about their educational and career goals and expectations from life.

Experiencing stress has an important function in adolescent development. Stress creates an imbalance between individuals and their environment (Seiffge-Krenke, Aunola, & Nurmi, 2009). According to Seiffge-Krenke (2004), stress could represent a significant and extending risk factor for psychopathology, depending on how adolescents deal with it. In some cases, coping with stress can have a major role in how stress impacts an adolescent's adjustment and helps him or her to understand personal strengths and properties (Seligman & Csikszentmihalyi, 2000). Lazarus and Folkman (1984) describe coping as the cognitive and behavioral efforts to manage psychological stress. Later, Lazarus (1993) defined coping as an active, purposeful process by which an individual responds to stimuli appraised as taxing or exceeding his or her resources. This includes the behavioral, emotional, and cognitive attempts to manage the demands imposed by such stressors.

Generally, researchers are interested in three different coping styles of adolescents. One of them is the active coping style, which is demonstrated by attempts to seek and receive support from others. The second one is the cognitive coping or internal coping style, which is considered as embodying adaptive coping behaviors. The third coping style -emotion focused, avoidant, or withdrawal coping- is characterized by withdrawal from the stressors or the venting of emotions (Seiffge-Krenke, 1995; Seiffge-Krenke et al., 2009; Seiffge-Krenke et al., 2010). Most of the researchers agree that coping is a complex and multidimensional process that includes both the environment and the personality of the individual.

Most of the researchers reported in their research that an increase in interpersonal conflicts, negative emotions, and maladaptive coping patterns has been observed during the developmental period of adolescence (Yıkılmaz & Hamamcı, 2011; Hampel & Petermann, 2006; Seiffge-Krenke, 1995). Furthermore, Stackert and Bursik (2003) asserted that empirical research has clearly demonstrated the negative consequences of irrational beliefs for both individual adjustment and relationship success. It was also mentioned that unrealistic expectations and irrational beliefs play significant roles in exacerbating distress levels and negative conflict behavior (Baucom, Epstein, Sayers, & Sher, 1989; Eidelson & Epstein, 1982; Epstein, 1982; Moller & Van Zyl, 1991).

Interpersonal cognitive distortions were defined as highly exaggerated, rigid, illogical, absolutist beliefs about the nature of relationships and about themselves and others in a relationship (Ellis, 2003). Also, interpersonal conflicts in both parents and peer relationships increase during adolescence, with conflict being broadly defined as a state of incompatible behaviors, disagreement, and opposition (Smetana, Yau, Restrepo, & Roeges, 1991; Vashchenko, Lambidoni, & Brody, 2007). Research on adolescence focuses on typical, everyday stressors during adolescence (Seiffge-Krenke, Aunola, & Nurmi, 2009), the relations between characteristics of adolescents'

relationships with family and peers and behavioral problems, and whether this relationship is influenced by risk factors in the person or the environment (Buysse, 1997), gender differences in coping behavior, age-related differences in coping (Kavsek & Seiffge-Krenke, 1996), and coping strategies in male and female students in early, middle, and late adolescence.

In Turkish literature, interpersonal cognitive distortions have been studied in different variables, such as research conducted by Güven and Sevim (2007) to determine the predictors of marital satisfaction in terms of sex, age, and interpersonal cognitive distortions with marital problem solving skills. They found that marital satisfaction is affected by problem solving skills and unrealistic relationship expectations. Kalkan (2012) examined correlations between problematic Internet use and interpersonal cognitive distortions among university students. It was found that interpersonal cognitive distortions are the significant predictor of problematic Internet use. Another study was conducted by Hamamcı and Çoban (2010). They found that interpersonal cognitive distortions were related with adjustment to university among university students. Hamamcı and Duy (2007) investigated the possible associations between loneliness and other psychological constructs such as social skills, dysfunctional attitudes, irrational beliefs, and interpersonal cognitive distortions. They found that cognitive distortions have negative consequences on the experience of loneliness.

In addition, it was said that stress coping strategies were investigated in many research studies. Özen and Aktan (2010) examined the role of parental attachment style of adolescence in the exposure to bullying and sought to explicate the intermediary role of the coping strategies in this relation. Keskin and Orgun (2006) compared the students' coping strategies and self-efficacy. They found a positive correlation between coping strategies and self-efficacy. Temel, Bahar, and Çuhadar (2007) examined the relation between depression and stress coping strategies of students. Stress coping strategies and interpersonal cognitive distortions were examined by the researchers in many ways in Turkish literature, too. In other words, for adolescents' stressors and coping, lots of related factors including gender, age, types of stressful events like interpersonal or intrapersonal, coping styles, and the relationship between stress and coping have been investigated in detail in the research. However, no study on the relationship between interpersonal cognitive distortions and coping strategies for stressful experiences of late adolescents has been encountered in the related literature. However, Persike and Seiffge-Krenke (2011) mentioned that there is increasing interest in the coping behaviors of youths from different cultures, although little is known about their perception of stressful events and the situations in their lives. Therefore, this particular study is expected to contribute to the literature in this respect by focusing on Turkish adolescents.

In this study, the aim is to determine the stress coping strategies and interpersonal cognitive distortions of adolescents. According to cognitive behavioral therapy, the individual's ways of thinking as well as the content of their thoughts exert a deep influence on their adjustment within a relationship. Stackert and Bursik (2003) emphasized that irrational thinking leads to self-defeating behavior and thus

was seen to affect poorer adjustment. According to Lazarus, cognitive processes are used in stress coping strategies. It is assumed that the adolescents with low interpersonal cognitive distortions use effective stress coping strategies. In order to test this hypothesis, a path analysis was run, and a model was created to determine the relations between stress coping strategies and interpersonal cognitive distortions. Also, gender differences were examined in terms of coping strategies and interpersonal cognitive distortions to see the differences between male and female students.

## Method

### *Participants*

The participants were 391 undergraduate students (109 males, 282 females) who were randomly selected from various departments of public and private universities. The age of the participants ranged from 19 to 25 years. The mean age of the participants was 22.36 years (SD = 1.57).

### *Research Instruments*

***Interpersonal Cognitive Distortions Scale (ICDS).*** The ICDS was developed by Hamamcı and Büyüköztürk (2004) to measure dysfunctional beliefs related to interpersonal relationships. The scale consists of the following three subscales with 19 items: Interpersonal Rejection (8 items), Unrealistic Relationship Expectation (8 items), and Interpersonal Misperception (3 items). It is a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). ICDS scores range from 19 to 95. A higher score indicates greater adherence to dysfunctional relationship beliefs. Cronbach alpha internal consistency coefficient is .67 for the total scale. For the Interpersonal Rejection subscale, the Cronbach alpha internal consistency coefficient is .73; for the Unrealistic Relationship Expectation subscale, it is .66; and for the Interpersonal Misperception subscale, it was calculated as .43. The correlation coefficients measured for a randomly split sample ranged from .56 to .73 for the three subscales. The test-retest coefficient in 15 days was .74. Convergent validity was obtained with correlations among the ICDS subscales and the Turkish versions of the Automatic Thoughts Scale ( $r = .54, p < .001$ ) and the Irrational Belief Scale ( $r = -.54, p < .001$ ). Construct validity was obtained with correlations with the Conflict Tendency Scale ( $r = .53, p < .001$ ).

***Coping Strategies with Stressful Experiences Scale (CSSES):*** The CSSES (Aysan, 1988) was developed by using the Ways of Coping Checklist (WCCL) based on Lazarus' transactional model of stress (Lazarus & Folkman 1984). The CSSES consists of 45 items assessing the behaviors displayed in potential stress experiences in different areas. There are 5 independent subscales of the CSSES: problem solving (9 items), seeking social support (9 items), self blame (9 items), imagination (9 items), and avoidance (9 items). It is a 5-point Likert-type scale ranging from 1 (not at all appropriate) to 5 (completely appropriate). The scale assesses the cognitive expectations that direct the emotions and behaviors of an individual. There is no total score for the scale. Each subscale was calculated separately. A higher score in the problem solving and seeking social support subscales indicates that the individual

can control the undesirable effects of stress and the individual copes actively. In addition, a higher score in the self blame, imagination, and avoidance subscales shows that the individual uses ineffective cognitive efforts to cope.

The CSSES was found to be internally consistent in each subscale. Cronbach alpha internal consistency coefficient is .85 for problem solving subscale. For the seeking social support subscale, Cronbach alpha internal consistency coefficient is .72, for the self blame subscale it is .70, for the imagination subscale it is .74 and lastly for the avoidance subscale Cronbach alpha is calculated as .70.

#### *Procedure*

The participants all volunteered to participate in the study in 2010. In their regular class time, the questionnaires and a demographic information sheet were given to the students by the researcher and their participation was requested. The researcher made all explanations about the questionnaires. Participants completed the questionnaires in approximately 30 min.

## Results

In this section, the descriptive statistical findings regarding the sub dimensions and the t-test results indicating the difference between the means of males and females from “*Interpersonal Cognitive Distortions*” and “*Stress Coping Strategies with Stressful Experiences*” scales are given, respectively. After that, findings related with interpersonal cognitive distortions and the stress coping strategies of late adolescents were investigated by using path analysis in the research.

**Table 1**

*Mean and Standard Deviation of Dimensions of Two Scales*

<i>Coping Strategies with Stressful Experiences Scale Dimensions</i>	<i>M</i>	<i>SD</i>
Problem Solving	31.8082	5.35475
Social Support Seeking	32.7519	5.62707
Self-Blame	24.4271	5.87120
Imagination	25.5192	6.46244
Avoidance	24.4783	5.67395
<i>Interpersonal Cognitive Distorsions Scale Dimensions</i>	<i>M</i>	<i>SD</i>
Interpersonal Rejection	17.9003	5.28983
Unrealistic Relationship Expectation	23.5448	5.26502
Interpersonal Misperception	9.6343	2.61882



As seen in Table 1, the mean scores were calculated to determine the stress coping strategies and interpersonal cognitive distortions of adolescents. It was mentioned before that a higher score indicates greater adherence to interpersonal cognitive distortions and coping strategies. The average in the problem solving dimension is found to be 31.81 (SD = 5.35), while the average in the seeking social support dimension is found to be  $M=32.75$  (SD= 5.63). The average of adolescents in the self-blame dimension is calculated as 24, 43 (SD=5.87), while the average in the imagination dimension is calculated as 25.52 (SD= 6.46) and the average in the avoidance dimension is found to be 24.48 (SD=5.67). The adolescents' means from the three dimensions of cognitive distortions related with relationships are as follows: Interpersonal rejection ( $M=17.90$ ; SD=5.29), unrealistic relationship expectation ( $M=23.54$ ; SD= 5.26), and interpersonal misperception ( $M=9.63$ ; SD= 2.62).

**Table 2**

*Mean, Standard Deviation and T-Test Results of Adolescents in Terms of Gender*

<i>Coping Strategies with Stressful Experiences Scale Dimensions</i>	<i>Gender</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Problem Solving	male	109	30.9358	5.28848	-2.011
	female	282	32.1454	5.35137	
Seeking Social Support	male	109	30.5229	6.21318	-4.618*
	female	282	33.6135	5.14172	
Self-Blame	male	109	24.9450	6.68031	.998*
	female	282	24.2270	5.52686	
Imagination	male	109	24.9817	6.44777	-1.023
	female	282	25.7270	6.46754	
Avoidance	male	109	25.0183	5.91292	1.171
	female	282	24.2695	5.57559	
<i>Interpersonnel Cognitive Distorsions Scale Dimensions</i>	<i>Gender</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Interpersonal Rejection	male	109	18.5780	4.91086	1.578
	female	282	17.6383	5.41486	
Unrealistic Relationship Expectation	male	109	23.7890	4.65290	.613*
	female	282	23.4504	5.48820	
Interpersonal Misperception	male	109	9.7523	2.64979	.554
	female	282	9.5887	2.61006	

\* $p < .05$

In Table 2, the t-test results indicated that the seeking social support [ $t = -4.618$ ;  $p < .05$ ] and self-blame [ $t = .998$ ;  $p < .05$ ] dimensions showed significant differences between males and females. The mean score for females in seeking social support is found to be ( $M=33.61$ ;  $SD= 5.14$ ), while it is ( $M= 30.52$ ;  $SD = 6.21$ ) for males. Females received a higher number of social support seeking points than males. In the dimension of self-blame, although the difference is very little, it can be seen that the males' mean scores ( $M= 24.95$ ;  $SD = 6.68$ ) are higher than females ( $M= 24.23$ ;  $SD = 5.53$ ). Looking at the data obtained related with cognitive distortions, a significant difference is found between males and females in the unrealistic relationship expectation dimension [ $t = .613$ ;  $p < .05$ ]. Here, the points of males ( $M= 23.79$ ;  $SD = 4.65$ ) are higher than females. ( $M= 23.45$ ;  $SD = 5.59$ ).

In this section, initially the zero order correlations between variables and then the findings related with standardized coefficients representing the relations between models and variables are introduced. Secondly, findings related with model wellness compatibility and findings related with the evaluation of the model are given. The correlations between variables are shown in table 3.

**Table 3**  
*Zero-Order Correlations Between Variables*

Dimensions	Problem Solving	Social Support Seeking	Self-Blame	Imagination	Avoidance	Interpersonal Rejection	Unrealistic Relationship Expectation	Interpersonal Misperception
Problem Solving	1	.355(**)	-.224(**)	-.018	-.305(**)	-.123(*)	.004	.060
Social Support Seeking		1	-.002	.200(**)	-.061	-.138(**)	.171(**)	.068
Self-Blame			1	.575(**)	.578(**)	.391(**)	.164(**)	-.050
Imagination				1	.510(**)	.345(**)	.280(**)	.037
Avoidance					1	.370(**)	.220(**)	-.010
Interpersonal Rejection						1	.251(**)	.187(**)
Unrealistic Relationship Expectation							1	.234(**)
Interpersonal Misperception								1

\*  $p < .05$  \*\*  $p < .01$

As seen in table 3, a significant negative relation is calculated between problem solving and interpersonal rejection ( $r = -.123$ ). While a significant inverse relation is

found between seeking social support and interpersonal rejection ( $r = -.138$ ), a positive relation is found between seeking social support and unrealistic relationship expectation ( $r = .171$ ). A positive relation is determined between the dimensions of self-blame and interpersonal rejection ( $r = .391$ ) and unrealistic relationship expectation ( $r = .164$ ). A positive correlation exists between the dimensions of imagination and interpersonal rejection ( $r = .345$ ) and unrealistic relationship expectation ( $r = .280$ ). In addition, a significant correlation is observed between the avoidance dimension and the interpersonal rejection ( $r = .370$ ) and unrealistic relationship expectation ( $r = .220$ ) dimensions.

In designing the model, the compliance statistics and modification indexes of the model were examined without setting any limit or connection. When these values were examined, although the compliance indexes such as CFI, IFI, and NNFI were within acceptable values,  $\chi^2/sd$  ratio being more than 5/1 and RMSEA value being not smaller than 0.08, modification was needed by checking the compliance indexes.

After necessary modifications were made, the new values were obtained, and these are shown in table 4. Although the compliance values of the model are not in perfect compliance, they are at an acceptable level. The compliance wellness values of structures forming the model (overcoming stress and cognitive distortions) are  $sd = 10$ ,  $\chi^2=27.98$  ( $p=0.00$ ),  $SRMR=0.042$ ,  $RMSEA=0.068$ ,  $GFI= 0.98$ ,  $AGFI=0.94$ ,  $CFI=0.98$ ,  $NNFI=0.93$ ,  $IFI= 0.98$ . These values show that the compliance level of the measurement model is acceptable (Kline, 2005). The standardized resolution methods regarding each parameter are shown in figure 1. The general compliance coefficients of the model are shown in table 4.

**Table 4.**

*General Compliance Coefficients Regarding Post-Hoc Model Changes*

<i>Wellness index</i>	<i>compliance</i>	<i>Perfect compliance</i>	<i>Acceptable compliance</i>	<i>Observed value in the model</i>
chi (27.98/10)	square/df*	$\chi^2/d < 3$	$3 < \chi^2/d < 5$	2.79
RMSEA		$0 < RMSEA < 0.05$	$0.05 < RMSEA < 0.08$	0.068
NNFI		$0.97 \leq NNFI \leq 1$	$0.95 < NNFI < 0.97$	0.93
CFI		$0.97 \leq CFI \leq 1$	$0.95 < CFI < 0.97$	0.98
GFI		$0.95 \leq GFI \leq 1$	$0.90 < GFI < 0.95$	0.98
SRMR		$0 \leq S-RMR \leq 0.05$	$0.05 < S-RMR < 0.1$	0.042
AGFI		$0.90 \leq AGFI \leq 1$	$0.85 < AGFI < 0.90$	0.94
IFI		$0.95 \leq IFI \leq 1$	$0.90 < IFI < 0.95$	0.98

\*  $p < .01$

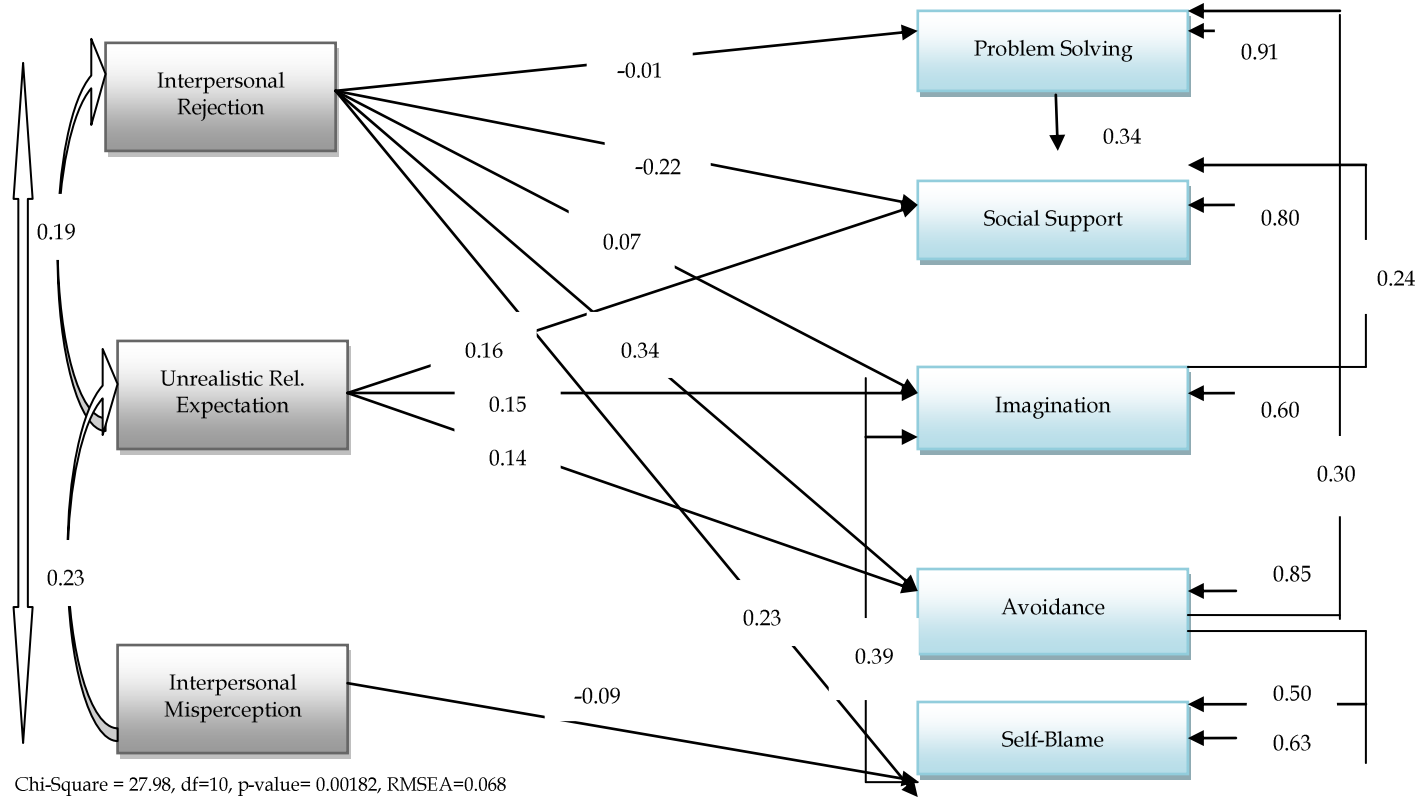


Figure 1. Model of interpersonal cognitive distortions and stress coping strategies

Path model standardized coefficients are used while describing the effects of predictor variables and cognitive distortions to explain coping with stress. If the standardized path coefficients are lower than .10, they are described as small, if lower than .30, they are described as medium, and if higher than .50, they are described as high effect (Kline, 2005). As seen in figure 1, the standardized path model coefficients expressing the relations between dependent and independent variables of the research vary between .01 and .34 ( $p < .01$ ). Therefore, the strongest predictors of interpersonal rejection are avoidance (standardized coefficient = .34), self-blaming (standardized coefficient = .23), and seeking social support (standardized coefficient = -.22). In other words, an adolescent with interpersonal rejection uses avoidance and self-blaming among stress coping strategies rather than seeking social support. As interpersonal rejection increases, the usage of avoidance and self-blaming strategies increase and seeking social support decreases. Other predictors of interpersonal rejection related with cognitive distortions are imagination (standardized coefficient = .07) and problem solving (standardized coefficient = -.01).

The stress coping dimensions related with unrealistic relation expectancy are seeking social support (standardized coefficient = .16), imagination (standardized coefficient = .15), and avoidance (standardized coefficient = .14). It is understood that individuals use seeking social support, imagination, and avoidance strategies in stress coping. Finally, the variable predicted by interpersonal misperception, which is the last dimension of interpersonal cognitive distortions, is self-blaming (Standardized coefficient = -.09). It can be said that individuals with a high score in the interpersonal misperception dimension use a self-blaming strategy for stress coping.

### Conclusions and Recommendations

In the present study, the aim was to examine the relations between the interpersonal cognitive distortions and coping strategies of late adolescents. Although the role of various interpersonal cognitive distortions and coping strategies with stressful experiences subscales has been investigated separately in the literature, the relationship between the two has not yet been investigated. Thus, in this study, there was an attempt to reveal adolescents' interpersonal cognitive distortions and coping strategies during stressful experiences, to measure the differences between males and females in terms of these two factors, and lastly, to find out the relationship between the two variables.

The results show that adolescents have the highest score in the seeking social support and problem solving subscales of the Coping Strategies with Stressful Experiences scale. It means that adolescents use problem solving and seeking social support strategies more than self-blame, imagination, and avoidance strategies. This means that adolescents use effective coping strategies more than ineffective strategies. This finding is consistent with Gelhaar et al.'s (2007) study. They found that the coping behavior of adolescents from seven European countries was

significantly more functional than dysfunctional. In other words, in all investigated cultures, the proportion of the two functional coping styles was higher than dysfunctional coping. However, it cannot be said that adolescents completely use effective coping strategies; in this study, the mean scores showed that they also use ineffective coping strategies like self-blame, imagination, and avoidance. Lazarus (1993) focused on two opposite approaches to coping. One of them is personality characteristics, and the other is the coping process which incorporates efforts to deal with stress that change over time and are shaped by the adaptational context out of which it is generated. This result that comes out at the end of this study shows that stress coping strategies are different for every individual. Personalities, environment, and effort influence strategies for stress coping, so it was thought that adolescents may use different stress coping strategies in different time and situations. The findings of this study are also parallel with this consideration.

Furthermore, it can be seen that the seeking social support and problem solving, which are effective stress coping strategies, are higher than average, and the means they received on the cognitive distortions scale are lower or slightly higher than the average mean score. According to this result, adolescents mostly use effective stress coping strategies, and their interpersonal cognitive distortions are lower. On the other hand, if the adolescents using effective stress coping strategies have low levels of interpersonal cognitive distortions, this will support the hypothesis of this study. This means that the interpersonal cognitive distortions of adolescents using effective stress coping strategies will be low. Stackert and Bursik (2003) conducted a research study to examine how individual differences in adult attachment style were associated with irrational beliefs in the context of young adult romantic relationships. They found that participants who described themselves as having either an anxious-ambivalent or an avoidant adult attachment style endorsed significantly more relationship-specific irrational beliefs than those with a secure adult attachment style. It seems natural that individuals who have low cognitive distortions about relationships use more effective strategies in coping with stressful experiences.

The finding on differences between male and female's interpersonal cognitive distortions and strategies with stressful experiences showed that there is a significant difference between male and female adolescents' mean scores in terms of seeking social support and self-blame strategies. Females use the seeking social support strategy more than male adolescents, while males use self-blame strategies more than female adolescents. The findings of this study were supported by some research studies. Compas, Connor-Smith, Satzman, Harding-Thomsen, & Wadsworth (2001) found that females showed higher levels of active coping and seeking social support than males. Moreover, Gelhaar et al.'s (2007) study of cross cultural research showed that female adolescents have tended to cope more actively with their problems. In addition, Türküm (2002) found that female students use seeking social support coping strategies more than male students. It can be said about this result that males culturally tend to keep their problems to themselves, and they thought that seeking social support could imply weaknesses.

In terms of the interpersonal cognitive distortions, there is a significant mean difference between male and females' unrealistic relationship expectation subscale. The male's mean score is higher than the female's mean score in this subscale. Türküm, Balkaya, and Karaca (2005) found that females who are high school students have more irrational beliefs than male high school students.

Lastly, it was found that the strongest predictor of interpersonal rejection among stress coping strategies is avoidance, self blame, and seeking social support. However, as interpersonal rejection increases, avoidance and self-blame used as stress coping strategies increase and seeking social support decreases. Although they have little effect, imagination and problem solving are seen as two other variables explaining the interpersonal rejection dimension. In the unrealistic relationship expectation dimension, it can be seen that seeking social support, imagination, and avoidance strategies explain with a moderate effect. The interpersonal misperception dimension can only be explained by self-blame strategy as a small effect. In literature, according to some researchers, there is no consistency in stress coping strategies used by individuals. Depending on the property and structure of the stressful situation, the selected stress coping strategies and their effectiveness show variety (Compas, Malcarne, & Fondacaro, 1988; Lazarus & DeLongis, 1983). Generally, Compas, Forsythe and Wagner (1988) mentioned that most individuals systematically vary their coping efforts and choices to fit a given stressor. According to DeLongis and Holtzman (2005), an individual may have engaged in moderately high levels of a given coping strategy over time but do not use this strategy at all when coping with a given type of stressor.

In the adolescence period, there are many stressful situations faced by the individual. Future anxiety, job and occupation anxiety, romantic relationships, and changes in family relationships can be sources of stress for adolescents. Using effective stress coping strategies is important for overcoming stressful relationship situations. Otherwise the adolescent may enter a path that includes alcohol, drugs, and crime. In this context, effective stress coping strategies should be taught to adolescents especially for overcoming the stress they face in the adolescence period. In cognitive therapy, cognitive processes have an effect on our thought and belief systems, and irrational or dysfunctional beliefs affect our thoughts and our evaluation regarding relations. In this context, it is important to create a rational thought system and a positive belief system regarding relations. Also, in order to reach adolescents, education programs should be prepared by universities and public services where positive and rationalistic thinking skills will be redounded.

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## Geç Ergenlerin İlişkilerle İlgili Bilişsel Çarpıtmaları ve Stresle Baş Etme Stratejileri

### Atıf:

Coban, E. A. (2013). Interpersonal cognitive distortions and stress coping strategies of late adolescents. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 65-84.

### (Özet)

#### *Problem Durumu*

Ergenlik dönemi bir geçiş dönemidir ve bu dönemde fiziksel, duygusal, sosyal birçok değişiklik olmaktadır. Yaşanan bu gelişimsel değişimler ergenler üzerinde stres kaynağı oluşturmaktadır. Gelecek kaygısı, akademik ve iş ya da kariyer kaygıları ve ilişkilerle ilgili kaygılarda eklendiğinde stres kaçınılmaz hale gelmektedir. Ergenlerin yaşadıkları bu stres ile başarılı bir şekilde baş etmeleri gerekmektedir. Etkili şekilde baş edemeyen ergenlerin depresyon, kaygı bozuklukları, bağımlılık gibi çeşitli sorunlar yaşaması kaçınılmaz olmaktadır. Ergenlik döneminde ilişkiler, özellikle romantik ilişkiler, anne ve baba ile olan ilişkiler önem kazanmaktadır. İlişkilerde yaşanan olumsuzlukların bir nedeni de kişinin ilişkilerle ilgili sahip olduğu bilişsel çarpıtmaları olabilmektedir. Örneğin, bireyin gerçekçi olmayan ilişki beklentisi, yakınlık kurmaktan kaçınma ve karşısındaki kişilerin zihinlerini okuduğunu sanarak yanlış çıkarımlarda bulunma gibi sahip olduğu akılcı olmayan inançları da stresin önemli kaynaklarından olmaktadır. Sonuç olarak bu çalışmada, ergenlerin ilişkilerle ilgili bilişsel çarpıtmaları ve stresle baş etmede kullandıkları stratejiler üzerine odaklanılmıştır.

#### *Araştırmanın Amacı*

Bu çalışma da ergenlerin bilişsel çarpıtmalarla ilgili inançları ve stresle baş etme stratejileri üzerine odaklanılmıştır. Bu amaçla, öncelikle ergenlerin stresle baş etmede hangi stratejileri daha fazla kullandığı ve ilişkilerle ilgili bilişsel çarpıtma düzeylerinin ne olduğu tespit edilmeye çalışılmıştır. Daha sonra ergenlerin ilişkilerle ilgili bilişsel çarpıtmaları ve stresle baş etme stratejileri arasındaki ilişkiye bakılmıştır.

#### *Yöntem*

Çalışmaya farklı üniversitelerde okuyan 391 kişi gönüllü olarak katılmıştır. "İlişkilerle İlgili Bilişsel Çarpıtmalar Ölçeği" ve "Stres Yaşantılarında Kullanılan Başa Çıkma Stratejileri Ölçeği" veri toplamak amacı ile ergenlere verilmiş ve elde edilen veriler analiz edilerek değerlendirilmiştir. Araştırmaya katılan ergenlerin ilişkilerle ilgili bilişsel çarpıtmalarının düzeyini belirlemek ve stres yaşantılarında hangi baş etme stratejilerini daha fazla kullandıklarını tespit etmek amacı ile betimsel istatistikten yararlanılmıştır. Erkek ve kadınlar arasındaki fark ise t-testi kullanılarak

tespit edilmiştir. Daha sonra ergenlerin bilişsel çarpıtmaları ile stresle baş etme stratejileri arasındaki ilişki path analizi ile test edilmiştir.

#### *Bulgular*

Ergenlerin ilişkilerle ilgili bilişsel çarpıtmaları ve stresle baş etme stratejilerinin ortalamaları hesaplanmıştır. Elde edilen sonuçlar, ergenlerin stresli yaşam deneyimleriyle baş etme stratejileri olarak sırası ile en çok sosyal destek arama, problem çözme, hayal kurma, kaçınma ve kendini suçlamayı kullandıkları tespit edilmiştir. Ergenlerin ilişkilerle ilgili bilişsel çarpıtmaları ölçeğinin üç boyutundan aldıkları puan ortalamaları ise şu şekildedir; yakınlıktan kaçınma ( $M=17,90$ ;  $SD=5,29$ ), gerçekçi olmayan ilişki beklentisi ( $M=23,54$ ;  $SD= 5,26$ ) ve zihin okuma ( $M=9,63$ ;  $SD= 2,62$ ). Ergenlerin cinsiyetlerine göre stres ile baş etme stratejileri ve bilişsel çarpıtmalarla ilgili aldıkları puanlarda anlamlı bir farklılığın olup olmadığını test etmek için yapılan t-testi sonuçlarına göre, baş etme stratejileri ile ilgili olan sosyal destek arama ve kendini suçlama boyutlarında kadınlar ile erkekler arasında anlamlı bir farklılığın olduğu tespit edilmiştir. Kadınların sosyal destek arama puanları erkeklerinkine göre daha yüksektir. Kendini suçlama boyutunda erkeklerin ortalama puanlarının kadınlara göre yüksek olduğu görülmektedir. İlişkilerle ilgili bilişsel çarpıtmalar ile ilgili elde edilen verilere bakıldığında, gerçekçi olmayan ilişki beklentisi boyutunda kadınlar ve erkekler arasında anlamlı bir farklılık bulunmuştur. Erkeklerin puanları kadınların puanlarına göre yüksektir. Ergenlerin ilişkilerle ilgili bilişsel çarpıtmaları ve stresle baş etme stratejileri arasındaki ilişki path analizi ile tespit edilmiştir. Elde edilen sonuçlara göre yakınlıktan kaçınmanın en güçlü yordayıcısı stresle baş etme stratejilerinden kaçınma, kendini suçlama ve sosyal destek aramadır. Bilişsel çarpıtmalarla ilgili yakınlıktan kaçınmanın diğer yordayıcıları ise hayal etme ve problem çözmedir. Modeldeki gerçekçi olmayan ilişki beklentisinin yordadığı stresle baş etme boyutları ise, sosyal destek arama, hayal etme ve kaçınmadır. Son olarak bilişsel çarpıtmaların son boyutu olan zihin okumanın yordadığı değişken kendini suçlamadır.

#### *Sonuç ve Öneriler*

Ergenlerin yakınlıktan kaçınma boyutunda ortalamalarının düşük olduğu ancak gerçekçi olmayan ilişki beklentisi ve zihin okuma boyutlarında ortalamaların yüksek olduğu görülmektedir. Stresle baş etme stratejilerine bakıldığında ise ergenlerin sosyal destek arama ve problem çözme stratejilerini öncelikle kullandıkları tespit edilmiştir. Kadınlar ve erkekler arasındaki anlamlı bir farklılık olup olmama durumuna göre ilişkilerle ilgili bilişsel çarpıtmalar ve stresle baş etme stratejilerine bakıldığında ise, kadınların sosyal destek arama ortalamaları erkeklere göre daha yüksek bulunurken erkeklerin kendini suçlama boyutunda ortalama puanları daha yüksek olduğu görülmüştür. İlişkilerle ilgili bilişsel çarpıtmalar boyutunda ise gerçekçi olmayan ilişki beklentisi boyutunda erkekler kadınlara göre daha yüksek ortalama puana sahiptirler. Bu sonuçlar erkeklerin kadınlara göre bilişsel çarpıtmalarının daha yüksek olduğunu ve baş etme stratejilerinde de etkisiz yöntemleri kullandıkları sonucuna götürmektedir. Path analizinden elde edilen

sonuçlara bakıldığında ise, yakınlıktan kaçınmanın en güçlü yordayıcısı stresle baş etme stratejilerinden kaçınmadır. Elde edilen bu sonuç, yakın ilişkiler kurmaktan kaçınan bir kişinin stresle baş etme stratejisi olarak kaçınmayı kullanması beklenen bir sonuç olarak görülürken, ergenlerin gerçekçi olmayan ilişki beklentisini yordayan stresle baş etme stratejisinin sosyal destek arama olması araştırmanın beklenen bir sonucu olarak görülmemektedir. Zihin okumanın yordadığı değişken kendini suçlama ise beklenen bir sonuç olarak değerlendirilmiştir. Literatürde bazı araştırmacılara göre bireylerin kullandığı baş etme stratejilerinde bir tutarlılık bulunmamaktadır. Stresli durumun özelliğine ve yapısına göre stresle baş etmek için seçilen stratejiler ve onların etkililiği ve ilişkili olduğu değişkenler farklılık göstermektedir. Bu çalışma sonucunda elde edilen bulgular ergenlerle ilgili eğitim programları hazırlanmasına ve stresle baş etmede daha etkili stratejileri kullanmalarına ilişkilerle ilgili bilişsel çarpıtmalarının ise az olmasına yardımcı olarak, onların yaşantılarındaki stresi azaltacağına inanılmaktadır.

*Anahtar Sözcükler:* İlişkilerle ilgili bilişsel çarpıtmalar, ergen stresi, baş etme stratejileri, geç ergenler.



## Comparison of Two Instructional Strategies for Students with Autism to Read Sight Words

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### Abstract

*Problem Statement:* Literacy skills are extremely important for all individuals, especially children with autism, because these skills provide a channel for educational assessment and learning as well as enhance vocational opportunities, promote self-expression, and facilitate independent living. Some individuals with autism cannot acquire academic literacy skills, though they can acquire the functional literacy skills that are essential for them to live, work and participate in social life. Word reading is the first step of functional literacy instruction. Previous studies in literature have compared the effectiveness of constant time-delay and stimulus fading procedures within sight word reading instruction. These studies included participants with mild and moderate mental retardation. However, it is surprising that there are so few similar studies conducted among individuals with autism. In addition, existing studies have revealed that teachers lack the specific information and skills necessary to teach literacy skills to individuals with autism. This study will contribute to literature comparing the effectiveness and efficiency of constant time-delay and stimulus fading strategies in teaching students with autism to read sight words.

*Purpose of Study:* The purpose of this study was to compare the effectiveness and efficiency of constant time-delay and stimulus fading strategies in assisting three students with autism to read sight words.

*Methods:* Participants were three students with autism, ranging in age from 12 to 14. A five-word set was determined for each teaching strategy, and both sets were taught to the participants. The teachers and mothers of the participants were interviewed before selecting the target words. An

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adapted alternating-treatments design was used to compare the effectiveness and efficiency of constant time-delay and stimulus fading strategies for students with autism to read sight words. Inter-observer and procedural reliability data were collected.

*Findings and Results:* Target words were acquired by students during the intervention sessions. All three participants were able to generalize reading these target words through the materials of different writing styles, font sizes and letter styles (upper- and lower-cases). Permanent effects of the instructional procedures were observed in maintenance sessions.

*Conclusions and Recommendations:* The results indicated that both strategies were effective; however, the constant time-delay strategy was more efficient in terms of the number of trials required to achieve performance criterion.

*Keywords:* Autism, sight word reading, constant time-delay, stimulus fading, single-subject design

Literacy skills are extremely important for all individuals, particularly for children with autism, because these skills provide a channel for educational assessment and learning, and also enhance vocational opportunities, promote self-expression, and facilitate independent living (Bureau of Instructional Support and Community Services, 2004; Light & Kent-Walsh, 2003). Nonetheless, individuals with autism experience serious difficulties in reading and writing due to problems related to attention, motivation, word decoding, and phonemic awareness (Hannah, 2001; Vacca, 2007). Individuals with autism therefore require literacy instruction to progress from emergent literacy to academic literacy. During this instruction, individuals with autism need to go through stages of development that are carefully matched with systematic, explicit, and multiple instructional strategies (Mirenda, 2003; Monroe, 2009; Rivera, Koorland, & Fueyo, 2002; Whalon, Otaiba, & Delano, 2009).

Literacy skills are discussed under two themes: functional literacy and academic literacy (Monroe, 2009; Ysselduke, Algozzine, & Thurlow, 1992). Functional literacy refers to reading the words necessary to perform daily routines in various environments by sight without decoding. A functional literacy program includes the following: (a) comprehending words needed to manage activities at home (e.g., food preparation, medication directions), within the community (e.g., understanding grocery vocabulary, restaurant menus), at work (e.g. following job schedule), and at school (e.g., recognizing classroom numbers); (b) responding safely when encountering warning words (e.g., "do not enter"); (c) making the right choices among the printed options (e.g., music or TV programs); (d) accessing new opportunities through increased reading skills (e.g., taking up hobbies that involve some reading; and (e) participating more attentively in general education lessons. Academic literacy refers to the ability to understand and manage academic materials. Academic literacy also includes word analysis, comprehension, and fluency skills to



derive information from adult reading materials in the general community (Bigge, Stump, Spagna, & Silberman, 1999; Browder, 2001, Browder & Snell, 2000; Monreo, 2009). While some individuals with autism cannot acquire academic literacy skills, they can acquire functional literacy skills (Alberto, Frederick, Hughes, McIntosh, & Cihak, 2007).

Word reading is the first step of teaching functional literacy (Laz, 2009; Whalon et al., 2009; Williams, 2001). It is significant in terms of forming a basis for reading comprehension and includes the ability to identify words through decoding or by sight. Decoding is an ability to identify words using knowledge of sound-symbol correspondence (Davis & Williamson, 2010). Sight word reading refers to the identification of words as distinct graphic configurations without any attempt to analyze the composition of the word in relation to the sound that it represents (Bigge et al., 1999; Davis & Williamson, 2010; Rivera et al., 2002; Williams, 2001). The presumed advantages of reading by sight are that when the phonetic principles involved in reading are not yet within the child's grasp, he or she is able to use sight words immediately. Sight words give beginner readers early success and help children to acquire decoding skills (William, 2001). The instruction of sight word reading is important in terms of forming a basis for teaching letter-sound relationships to the child via known words (Kaderavak & Rabidoux, 2004).

The acquisition of sight words involves recognizing words through discrimination training, which is a challenging task (Browder, Wakeman, Spooner, Ahlgrim-Dezell, & Algozzine, 2006; Fosset & Mirenda, 2006; William, 2001). There are several well-supported instructional strategies for teaching sight words (McDonnell & Copeland, 2011), two of which are "constant time-delay" and "stimulus fading" procedures (Snell & Brown, 2000).

Constant time-delay procedure is an approach that involves error-minimizing learning for students with disabilities (Browder & Snell, 2000). It begins by presenting the learner with several 0- second time delay trials in which the target stimulus (e.g., a printed word) and a controlling prompt (e.g., a spoken word and/or a pictorial clue) are paired. Over successive teaching opportunities, the teacher adds a latency of a few seconds between the target stimulus and the controlling prompt, thus giving the learner an opportunity to respond without assistance (Browder & Snell, 2000; Gast et al., 1990; Jones Ault et al., 1988). There have been studies that conducted this instructional strategy. The results of these studies established the efficacy of sight word reading instruction for most students with significant cognitive disabilities. For example, Browder, Hines, McCarthy and Fees (1984) taught sight words to the retarded adults. Jones Ault, Gast, and Wolery (1988) used the same procedure to read functional community-sign words. Gast, Wolery, Morris, Munson Doyle, and Meyer (1990) trained a small group of students with moderate disabilities to read environmental sight words. Schloss, Alper, Young, Arnold-Reid, Aylward, and Dudenhoefte (1995) used reaction activities to train individuals with mental retardation within a community setting. All of these studies revealed that the constant time-delay procedure was an effective teaching method.

Stimulus fading is a procedure in which the stimulus prompts are gradually reduced in size or intensity. In teaching sight words, the picture cue is gradually faded over instructional sessions until only the word itself remains. The stimulus fading strategies include placing a known stimulus (a picture) upon other unknown

stimulus and slowly fading the intensity, definition or clarity of the known stimulus until it becomes invisible (Snell & Brown, 2000; Tekin-İftar & Kırcaali-İftar, 2004). Dorry and Zeaman (1975) reported that children with moderate disabilities were able to learn simple words relatively easily by using this method, and McGee, Krantz, and McClannahan (1986) used the same method to enable children with autism to read toy labels. These studies all concluded that the stimulus fading strategies were effective to use with children with developmental disabilities.

In related literature, there are a few studies comparing the effectiveness and efficacy of constant time-delay and stimulus fading procedures within sight word reading instruction of children with mental retardation (Browder & Ping Xin, 1998; Lalli & Browder, 1993). On the other hand, there have been studies that focus on the effectiveness of either constant time-delay or stimulus fading procedures within sight word reading instruction to children with autism. For instance, McGee et al. (1986) taught two children with autism to match printed word-representing toys to spoken words by using stimulus fading and prompting only. Similarly, Hetzroni and Shalem (2005) used stimulus-superimposition and fading to train children with autism to match food logos to printed words and printed words to actual food items. On the other hand, Ledford, Gast, Luscre, and Ayres (2008) applied direct instruction using constant time delay and observational learning to teach six children with autism to read words on environmental signs. However, it seems that there have been no studies done to compare the effectiveness and efficacy of the constant time-delay and stimulus fading procedures.

On the other hand, existing literature seems to provide limited guidance regarding the comparison of constant time-delay and stimulus fading strategies for individuals with autism to read sight words. Therefore, the purpose of the present study was to compare the effectiveness and efficiency of constant time-delay and stimulus fading strategies in teaching students with autism to read sight words. This study is crucial in terms of providing an insight into literacy acquisition among children with autism and revealing the effectiveness and efficacy of the constant time-delay and stimulus fading procedures in supporting literacy related with development of children with autism. The following research questions were addressed:

1. Which instructional procedure is more effective in teaching word reading to children with autism?
2. Which instructional procedure is more efficient regarding:
  - the number of training sessions required
  - the number of training trials
  - the percentage of errors
  - total training timein order to achieve the performance criterion?
3. What do the teachers and mothers of the students think about the students' learning reading words?

## Method

### *Participants*

Participants of the study consisted of three students with autism, two boys and one girl, ranging in age from 12 to 14. These children had been receiving education at a training center for children with autism in Istanbul. Prerequisite skills for the participants were as follows: (a) speaking with comprehensible pronunciation at least with one word; (b) matching pictures; (c) pointing to the picture asked among two; (d) naming the picture shown; (e) remaining attentive to an activity for at least 10–15 min; (f) waiting when verbally instructed; (g) successfully following simple verbal instructions; and (h) having no prior skills to read words. Before beginning the study, the subjects' parents were informed about the study and written permission was obtained for each child's participation. Names of participants were replaced with pseudonyms in the article. The participants' chronological age, results of the tests administered, and intensity of training are presented in Table 1.

**Table 1.**

*The Participants' Chronological Age, Test Results and Intensity of Training*

<i>Participants</i>	<i>Chronological Age</i>	<i>Peabody Picture-Vocabulary Test</i>	<i>Gilliam Autistic Disorder Rating Scale-2</i>	<i>Autism Behavior Control List</i>	<i>Group training in autism training center per week</i>	<i>1:1 training in rehabilitation center per week</i>
<b>Can</b>	14;7	5	85	82	5 days	2 hour
<b>Metem</b>	13;8	4	90	87	5 days	2 hour
<b>Seda</b>	12;8	5	100	98	3 days	2 hour

Can was almost at the same level with his normally developing peers in self-care skills and gross motor skills. He could express himself by using two word clauses, including an object/subject and a verb. He possessed concepts of color, shape, position, and size. However, he was limited in fine motor skills and social skills.

Metem almost at the same level with his normally developing peers in self-care skills, gross motor skills, and receptive language. He could express himself using single words. He had the concepts of color, shape, contrast and quantity. He was limited in fine motor skills, pencil holding skill and social skills.

Seda was almost at the same level with his normally developing peers in self-care skills, fine and gross motor skills. She could express herself using single words. She rarely used phrases including noun-noun or noun-verb. She had concepts of color, shape, and position. She was limited in social skills.

#### *Trainers*

The author planned the research, prepared the materials, wrote procedural instructions, and video recorded the training sessions for efficiency and reliability. The implementation of the study was conducted by a teacher attending a graduate study program at the Department of Special Education, Faculty of Education at Marmara University. The teacher had previous experience at the Tohum Autism Foundation Special Training School (an extension team of the Princeton Child Development Institute). The teacher conducted all sessions with the participants.

#### *Setting*

The study was conducted in a classroom at the Education Center for Children with Autism. The classroom was approximately 9 square meters and contained two tables and three chairs. A handy-cam video camera was used to record the sessions. All sessions were conducted before (11-12 p.m) and after lunch (1-2 p.m) on Monday, Wednesday and Fridays. Each session lasted approximately 10 minutes. All sessions were conducted individually.

#### *Materials*

##### *Determining Target Words*

While selecting target words, it was taken into consideration that the words were functional and commonly encountered by children. We also benefited from a study by Bakır (2007), "Developments of the Turkish Quick Automatic Denotation Tests", when compiling the words used in the study. Bakır had identified the most commonly used words of children aged from 5 to 10.

The following points were taken into consideration to ensure that the words were of the same difficulty level: (a) words formed of 4-6 letters; (b) words formed of vowel-consonant-vowel-consonant or consonant-vowel-consonant-vowel letter combinations; (c) words dissimilar to each other in terms of phoneme and grapheme; (d) words with 2 or 3 syllables; (e) words compatible with the developmental level of the children; and (f) words that were not abstract. A series of 10 words were chosen for use in instruction with two distinct independent variables. Two teaching sets including 5 words each were used for all children in both strategies; five in the instruction with constant time-delay, and the other 5 with stimulus fading method. The words were randomly assigned to the teaching sets. The words are presented in Table 2.

**Table 2***Target Words*

<i>Instructional Procedure</i>	<i>Target Words (Turkish/English)</i>				
Constant time-delay	köpek/dog	ağaç/tree	kalem/pencil	aslan/lion	bulut/cloud
Stimulus fading	balık/fish	çiçek/ flower	çanta/bag	masa/table	kedi/cat

*Teaching Materials*

The cards were 15 × 20 cm in size. The words on the cards were written in black on a white background using bold lowercase 16-point Comic Sans font. Picture cards were the same size as the word cards. Picture cards had images of 10×10 cm that represented the associated word. CorelDRAW Graphic Suite professional graphic design software was used to achieve the picture fading. An example of these materials is shown in Figure 1. They were as follows:

- *1<sup>st</sup>set (F1)*: On the first card, there was a distinct picture of the target vocabulary with the associated word printed on it.
- *2<sup>nd</sup>set (F2)*: The second card included the same target picture-word combination gradually faded with the help of square blank divisions, but the word was clearly printed on it.
- *3<sup>rd</sup>set (F3)*: The third picture had more blank squares, which slightly gave the impression of the target item, but the associated word still remained distinct on the faded picture.
- *4<sup>th</sup> set(F4)*: On the fourth card, the picture was removed, but the word remained as distinct as it was printed on the previous cards.

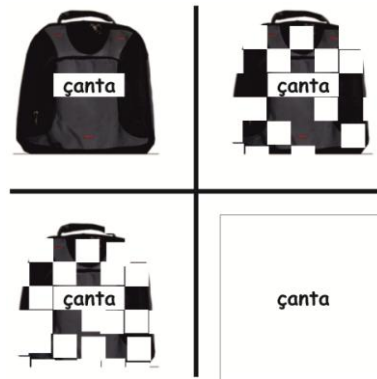


Figure 1. Materials of stimulus fading strategy

*Generalization Materials:* The font size and font used in the generalization sessions were changed for both instructional strategies. The word cards used in the generalization sessions were prepared by using 12-point Calibri font.

*Procedure*

*Reinforcers:* Interviews were conducted with mothers and teachers of participating students to identify reinforcements. The reinforcers used for each participant and the instructional procedures are shown in Table 3.

**Table 3**  
*Reinforcers and Instructional Procedure*

<i>Participants</i>	<i>Reinforcements</i>	<i>Instructional Procedure</i>
<b>Can</b>	bonbon, crisps	Constant time-delay
	Jelly bean, pretzel	Stimulus fading
<b>Metem</b>	Crisps, bueno, "Well done",	Constant time-delay Stimulus fading
	<b>Seda</b>	Chocolate, crisps candy, jelly bean

*Probe Sessions*

The study phases consisted of full probe, daily probe, training, maintenance and generalization sessions:

*Full probe sessions.* For each student, at least three probe sessions were conducted until baseline data were obtained. In each full probe session, ten trials were conducted in order to check each target word. Full probe sessions were conducted in the following order: (1) word cards and recording materials were placed on the material table in the experimental setting; (2) the trainer randomly selected one of the word cards without showing the student; (3) an attentional cue (i.e. "Are you ready?") was provided; (4) task direction (i.e. "Read") was provided; (5) 4 seconds waiting interval; (6) verbal praises were provided for correct responses (i.e., "well done, bravo"), whereas incorrect responses were ignored; and (7) the next trial was conducted after 4 seconds. At the end of the full probe conditions, participants were given a tangible reinforce to reward their attention and cooperation during the sessions.

*Daily probe sessions.* Daily probe sessions were conducted prior to each training session in order to collect the data. Each student was asked a series of 10 target words in random order. Daily probe sessions were conducted with three participants until they achieved 100% for at least three consecutive days. Participants were rewarded verbally for each correct response during daily probe sessions, while all

incorrect responses were ignored. Participants' attention and cooperation were reinforced at the end of each session.

*Training Sessions.* Constant time delay and stimulus fading procedures were randomly assigned to the word set and conducted in the same order with each student. In each training session, each of the target words was asked twice. Since there were five target words in each procedure set, a total of ten trials were conducted during the sessions. The training was repeated until 100% was obtained during at least three consecutive intermittent sessions. Correct responses (before and after prompting) resulted in verbal and social reinforcement, whereas incorrect responses resulted in error correction.

*Constant time-delay sessions:* Visual cue and modeling word reading were used as prompts during sessions. The trials used two kinds of response intervals: 0-second delay and 5-second delay. The initial instructional session used a 0-second delay interval, and in the subsequent sessions, the duration between the task direction and the prompt was increased to 5 seconds. The inter-trial interval was 2 seconds. Unprompted and prompted correct responses resulted in reinforcement, whereas unprompted incorrect responses, prompted incorrect responses and no-response cases resulted in error correction and repetition of the controlling prompts.

Training sessions were conducted as follows for the 0-second delay interval: (1) five target word cards were placed on the material table; (2) the trainer held up one of the word cards at the eye level of the student; (3) an attentional cue phrase was delivered to the student (e.g., "Metē, look at me"); (4) while the trainer was holding up the word card at eye level, task direction was delivered (i.e., "Read"); (5) the trainer immediately delivered the controlling prompt by holding up the picture card with the other hand and modeled the reading of the word; (6) a correct response by student was reinforced verbally and socially (i.e., "Well done, you read correctly), whereas incorrect responses were ignored (0-second delay interval); and (7) the subsequent instructional sessions were conducted using 5-second delay intervals between task directions and controlling prompts. In these trials, while the trainer was holding up the word card at eye level, the task direction was delivered (i.e., "Read") and the trainer waited 5 seconds for the student's response. If the student read correctly before the controlling prompt was delivered, the student's correct response was verbally praised (i.e., "well done, great job, etc.) and reinforced with the participant's preferred item (chocolate, chips, etc.). If the student read incorrectly, the trainer warned the student to wait for the prompts and a new trial was started after 2 seconds. If the student read correctly after the controlling prompt was delivered, his/her correct response was only verbally praised (i.e., "well done, great job, etc.). If the student read the word incorrectly even after the prompts were delivered, the mistake was corrected. If the student did not provide any response, a new trial was started.

*Stimulus fading sessions:* Stimulus fading was conducted in four stages, as previously explained in the teaching material section. Teaching materials in which the faded stimulus was used in a successive manner were used for each stage. The instruction was conducted in the same way in all the stages. Training sessions were conducted as follows: (1) five target word cards of the first set of materials were placed on the material table; (2) the trainer held up one of the word cards at the eye level of the student; (3) an attentional cue was delivered to the student (e.g., "Metē,

look at me); (4) while the trainer was holding the word card at eye level, task direction was delivered (i.e., "Read"); (5) the trainer waited 4 seconds for the participant's response; (6) a correct response was reinforced verbally and socially (i.e., "Well done, you read correctly). If the student read the word incorrectly, the error was corrected (i.e., "No, it is....."). If the student did not provide a response, a new trial was started; and (7) when the student scored 100% correctly on three subsequent sessions with the same level of materials, the trial progressed to the next level of material.

*Maintenance and generalization:* Maintenance data was collected 1, 2 and 3 weeks after completing the intervention sessions. Maintenance and generalization sessions were conducted in the same way as probe sessions, but the reinforcers were faded. Three generalization sessions were conducted immediately after the intervention sessions. Generalization data were collected across the material's writing style, font size and letter style (upper-case/lower-case).

#### *Experimental Design*

An adapted alternating-treatments design was used to compare the effectiveness and efficiency of two different procedures in teaching students with autism to read sight words. In adapted alternating-treatments, the effects of two or more variables on two or more dependent variables with non-reversible behavior are compared. The dependent variable was the percentage of correct responses of the target words, and the independent variables were constant time-delay and stimulus fading. There are some points to be taken into consideration when using an adapted alternating-treatments design (Alberto & Troutman, 1995; Cooper, Heron, & Heward, 1987; Gay, Mills, & Airasian, 2006; Kennedy, 2005; Richards, Taylor, Ramasamy, & Richards, 1999; Riley-Tillman & Burns, 2009; Tawney & Gast, 1984; Tekin-Iftar & Kircaali-Iftar, 2004). The first is the necessity of dependent and independent variables that are independent of each other and that are also similar in terms of function and difficulty levels. As described previously, difficulty level was taken into consideration when choosing the words to teach. Second, which strategy to be used for the target words was determined by using an objective assignment method. The numbers of sessions conducted with procedures were equal. Rapid cycling of the procedures was possible, with both instruction methods conducted at different times within a single day. Third, all other variables except for the independent variables should be equal. With the aim of meeting this condition, similar reinforcers and similar reinforcement methods were used during the training. Finally, there should be a one-hour break between the applications of independent variables in order to control for transition effect. Experimental control was achieved by comparing both methods via the number of attended sessions, the number of trials, the total time of instruction and the difference in terms of error percentage until meeting the criterion of the performances of samples.

#### *Reliability*

Inter-observer and procedural reliability data were collected during the study. Reliability data comprised random video records of selected sessions, which were examined independently by the trainer and the observer. Reliability data were collected for at least 20% of all experimental sessions. Inter-observer reliability was calculated by the number of agreements, divided by the number of agreements, plus disagreements and multiplied by 100 (Tawney & Gast, 1984; Tekin-Iftar & Kircaali-Iftar, 2004). The inter-observer reliability was between 97 and 100% for constant time-



delay sessions and between 98 and 100% for stimulus fading during the probe sessions. Reliability was between 90 and 100% for the constant time-delay sessions and between 91 and 100% for stimulus fading during the instruction sessions. In maintenance and generalization sessions, there was 98% agreement for constant time-delay sessions and 100% for stimulus fading sessions.

Procedural reliability data were collected to assess the implementation of the teaching plan. Data were calculated via the number of trainer behaviors observed divided by the number of behaviors planned and multiplied by 100 (Tekin-Iftar & Kırcaali-Iftar, 2004). The following steps were used to ensure procedural reliability: (1) the trainer had materials ready; (2) secured attention; (3) presented the word card; (4) gave task direction; (5) delivered the controlling prompt; (6) waited for the response interval; (7) gave appropriate feedback according to the students' responses; and (8) waited for the inter-trial interval. Analysis of the recordings showed that procedural reliability was 100%.

#### *Social Validity*

Social validity data were collected to determine the efficiency of both instruction methods in sight word reading and the importance of the results for teachers. Social validity data were collected via semi-structured interviews with the teachers of each of the three participants.

## Results

#### *Effectiveness*

The results indicate that both procedures were equally effective in teaching students to read words. All participants met the criterion. Figures 2, 3, and 4 show the percentages of correct reading responses during the baseline, intervention, and maintenance probe sessions for Can, Mete and Seda. As seen in these figures, although all participants met the criterion, the total number of training sessions differs.

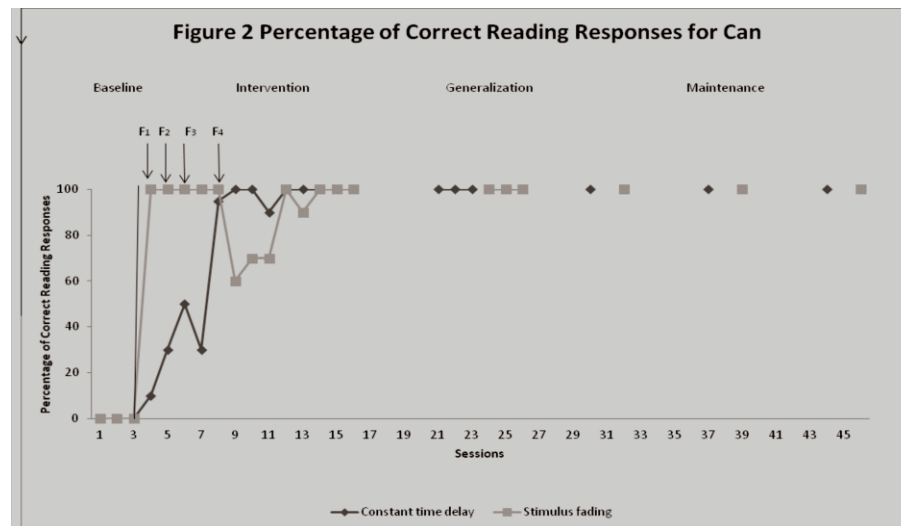


Figure 2. Percentage of correct responses of Can

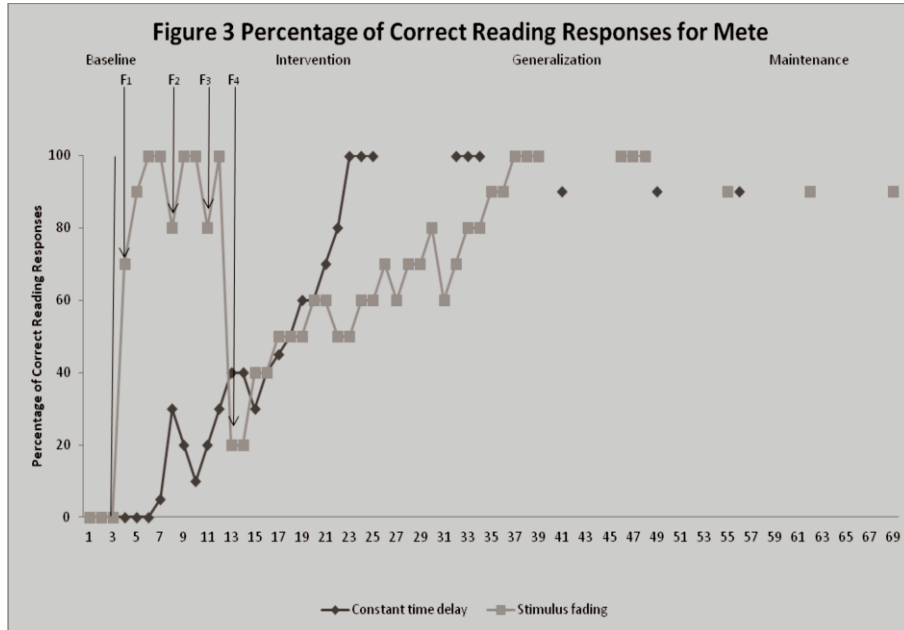


Figure 3. Percentage of correct responses of Mete

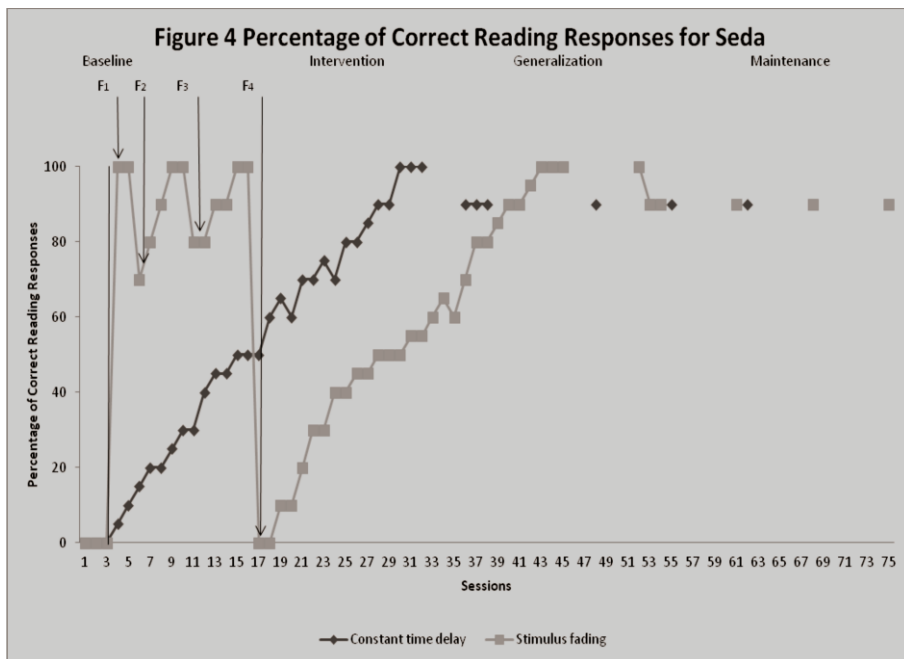


Figure 4. Percentage of correct responses of Seda

Can. During the baseline, Can read 0% of his target words correctly. During the intervention phase, Can achieved a mastery criterion of 100% after 14 constant time-delay sessions. Can's accuracy rate was 73.1% (range=10-100%) during the constant time-delay sessions. On the other hand, Can achieved the mastery criterion of 100% immediately when the Fading 1 (F1), Fading 2 (F2) and Fading 3 (F3) materials were presented at the stimulus fading sessions. However, when the Fading 4 (F4) material was presented, accuracy rate decreased to 60%. Can's accuracy rate reached 100% again with the Fading 4 material at the sixteenth stimulus fading session. Can's accuracy rate reached 91.5 on average (range=60-100) at the stimulus fading session. Can read 100% correctly across materials during the generalization sessions. Can maintained 100 % of the behavior taught during the maintenance sessions.

Metem. During baseline, Metem read 0% of his target words. During the intervention phase, Metem read 0% of his target words correctly during the first three sessions, and then he achieved a mastery criterion of 100% after 25 constant time-delay sessions. Metem's accuracy rate was 42.3% (range=5-100%) during the constant time-delay sessions. On the other hand, Metem achieved a mastery criterion of 100% immediately when the Fading 1 (F1), Fading 2 (F2), Fading 3 (F3) materials were presented during the stimulus fading sessions. However, when the Fading 4 (F4) material was presented, accuracy rate decreased to 20%. Metem's accuracy rate reached 100% again with the Fading 4 material at the thirty-ninth stimulus fading session. Metem's accuracy rate was 63.7% on average (range 20-100) during the stimulus fading session. Metem read 100% correctly across materials during the generalization sessions. Metem maintained the behavior taught 90 % during maintenance sessions.

Seda. During baseline, Seda read 0% of her target words. During the intervention phase, Seda achieved a mastery criterion of 100% after 32 constant time-delay sessions. Seda's accuracy rate was 58.2% (range=5-100%) at the constant time-delay sessions. On the other hand, Seda achieved a mastery criterion of 100% when the Fading 1 (F1) material was presented at the first two stimulus fading sessions. When the Fading 2 (F2) material was presented, her accuracy rate decreased to 70%. Seda's accuracy rate reached 100% again with the Fading 2 material at the sixth and seventh stimulus fading sessions. When the Fading 3 (F3) material was presented, her accuracy rate decreased to 80%. Seda's accuracy rate reached 100% again with the Fading 3 material at the end of the twelfth and thirteenth stimulus fading sessions. When the Fading 4 (F4) material was presented, her accuracy rate dramatically decreased to 0%. Seda's accuracy rate reached 100% again with the Fading 4 material at the forty-ninth stimulus fading session. Seda's accuracy rate averaged 66.3% (range 0-100) during the stimulus fading session. Seda read 90% correctly across materials during the generalization sessions. Seda maintained 90% of the behavior taught during the maintenance sessions.

#### *Efficiency*

Results showing the efficiency of instruction for the two training conditions are presented in Table 4. For each participant, the table shows the number of training sessions to achieve the acquisition criterion, the number of training trials, number of training errors and the training time to achieve the criterion. Table 4 presents the efficiency results.

**Table 4***Efficiency Data*

<i>Student</i>	<i>Training condition</i>	<i>Training sessions to criterion</i>	<i>Training trials to criterion</i>	<i>Training errors to criterion</i>	<i>Training time to criterion (minutes)</i>
<b>Can</b>	Constant time-delay	14	28	0	58
	Stimulus fading	16	32	11	51
<b>Mete</b>	Constant time-delay	25	50	0	72
	Stimulus fading	39	78	37	91
<b>Seda</b>	Constant time-delay	32	64	3	90
	Stimulus fading	45	90	24	140

The constant time-delay strategy seemed to be more efficient than the stimulus fading strategy for all three participants. The constant time-delay procedure seemed to be more efficient than the stimulus fading procedure in terms of the number of training trails, training errors and training time to achieve the targeted criterion.

When the number of training sessions required to achieve the criteria for the participants to read sight words was investigated, it was seen that all three participants needed fewer training sessions in constant time-delay compared with the stimulus fading teaching strategy. The most significant difference between the two methods was the number of training errors the students made before achieving the completion criterion. During the constant time-delay sessions, the number of training errors to achieve the criterion was 0 for Can and Mete and 3 for Seda. Training errors to reach the criterion of the participants ranged between 11 and 37 in the sessions with stimulus fading. When these two strategies were compared in terms of training errors, it was observed that constant time-delay resulted in significantly fewer incorrect responses. When the participants were compared in terms of training errors, it was observed that Can took less time for constant time-delay procedure than stimulus fading. However, the training times of Mete and Seda were significantly shorter with the constant time-delay method.

### *Social Validation*

Social validity findings indicated by the teachers were as follows: (a) the participants were more willing to engage in reading studies; (b) when the students realized they were able to read the words, they were motivated to practice more; and (c) skills such as turn taking, waiting and making an eye contact without warning improved.

### **Discussion**

This study was designed to compare the effectiveness and efficiency of constant time-delay and stimulus fading strategies in teaching students with autism to read sight words. The findings indicated that both strategies were effective in assisting students to acquire target words during the intervention sessions. All three participants were able to generalize reading these target words through materials of different writing styles, font sizes and letter styles (upper-case/lower-case). Permanent effects of the instructional procedures were observed in the maintenance sessions. However, constant time-delay was more efficient in terms of trials to meet the criterion. These results were consistent with the results of the studies that examined the effectiveness of constant time-delay strategies in teaching students with autism to read sight words (Alberto et al., 2007; Browder et al., 1984; Cuvo & Klatt, 1992; Gast et al., 1990; Jones Ault et al., 1988; Schloss et al., 1995).

Two instructional strategies were used to teach sight words in this study. One of them was constant time delay. All of the participants progressed steady during the intervention phase which constant time-delay implemented. There are several evident advantages of the constant time-delay strategy over the fading strategy (Browder & Xin, 1998; Browder et al., 2006; Gast et al., 1990). The constant time-delay strategy is teacher-friendly. It would be the simplest teaching approach to plan and implement for three reasons. First, preparing teaching material for this strategy is easier than for the stimulus fading strategy, which requires numerous materials per word, a time consuming process for teachers. Second, once the materials are prepared, they can be used for many students. Third, the constant time-delay strategy is easy to implement. The trainer knows what he/she must do, according to the students' response. This is very important for teachers with limited experience in using such instructional strategies. On the part of the learner, the constant time-delay strategy can be defined as student-friendly, resulting in few errors and therefore a high density of student reinforcement.

The second instructional strategy adopted in the present study was the stimulus fading strategy, which consists of a fading procedure. The fading procedure used in this study consisted of four steps incorporating pictorial cues that were eliminated in stages. For all of the three participants, Fading 1 through Fading 3 presented smooth transitions that enabled close to errorless transitions. Can thought that the task was easy to learn across all the fading stages, whereas Mete and Seda found all the fading stages relatively difficult. According to Seda, all fading stages become increasingly

difficult. When the participants reached the Fading 4 stage, all the pictorial clues were removed and only the target stimulus remained. Thus the last fading stage was the most difficult one, and all of the participants needed several attempts before they successfully completed this stage. The fading 4 stage took all of the participants longer to reach the goal, but all three participants could learn to read target words through stimulus fading strategy overall. Perhaps more steps would have made the task easier. These results support previous research that also found fading to be a suitable tool to teach sight words for teaching children with autism (McGee, Krantz & McClannahan, 1986; Hetzroni & Shalem, 2005).

Can's performance can be said to be better for each strategy than other two participants. Comparatively, Can has advantages on both the level of affecting from autism and language skills. Yet information about the intellectual level of the participants could not be obtained, and it can be said that the intellectual level could be influential for differentiation of participants' performances.

Constant time delay instruction needs 1:1 practice with the student. On the other hand, stimulus fading procedure's allowance for student's independent practice without a teacher's assistance can be advantageous. Both instructional methods are effective for visual word reading instruction, and they have their own advantages and disadvantages over each other.

The present study includes some limitations that may affect the results. First, the trainer and the observer were visitors to this school, so their unfamiliarity with this school context and the participants' level of acceptance of new instructors might be associated with the extended time taken to start the intervention sessions. Another limitation was the functional use of the target words. Once they were learned, they might be used to perform daily activities in the generalization sessions. Even with the limitations noted, the experimental design of the study allows the effect of the independent variables to be observed.

This study is the first to compare the effectiveness and efficiency of constant time-delay and prompt-fading strategies for enabling students with autism to read sight words. It is essential to design replication studies to compare both strategies in teaching different word-groups. The results of this study are also limited by the fact that only three participants who met the prerequisite skills were selected; thus, more studies are needed to be conducted with a large population. Studies are needed with a large number of students with autism and across populations (e.g., students with intellectual disabilities, students with learning disabilities).

The results of the present study lead to a number of suggestions for future research. First, future research might be directed at investigating the effects of similar implementation with different word-groups. Second, further research might examine whether additional fading stages enhance errorless transitions of target words. Third, it might be useful to examine the effects of the constant time-delay strategy within a small group format, again among children with autism. Finally, these strategies could be repeated and compared when applied within the community and in a general education context.

Learning sight words is an important skill to improve the literacy domain. However, it is not enough to develop literacy skills. Both constant time delay and stimulus fading are effective instructional strategies to teach sight word reading to children with autism, but the constant time delay strategy appears to be slightly more efficient. Besides sight word reading, alphabetic knowledge and word analysis skills are important skills for the acquisition of reading. Fluency, vocabulary and reading comprehension are three components of a literacy development program.

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## Ötizmli Öğrencilere Görsel Sözcükleri Okumayı Öğretmede İki Öğretimsel Stratejinin Karşılaştırılması

### Atıf:

- Akçin, N. (2013). Comparison of two instructional strategies for students with autism to read sight words. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 85-106.

### (Özet)

#### *Problem Durumu*

Okur-yazarlık becerileri tüm bireyler için olduğu gibi otizmli çocuklar için de, eğitsel değerlendirme ve öğrenme için bir kanal sağlaması, iş olanaklarını çeşitlendirmesi, kendini ifade etmeye teşvik ettiği ve bağımsız yaşamı kolaylaştırdığı için çok önemlidir. Otizmli bireylerin bazıları akademik okur-yazarlık becerilerini kazanamayabilirken, işlevsel okur-yazarlık becerileri onların yaşayabilmeleri, çalışabilmeleri ve topluma katılabilmelerini sağlamak için gereklidir. Sözcük okuma, işlevsel okur-yazarlık öğretimin ilk basamağını oluşturur. Görsel sözcük okuma henüz fonetik prensiplerin kavranmadığı dönemde çocuğa başarılı okuma yaşantıları sağlaması bakımından önem taşımaktadır. Görsel sözcük okuma, çocukların ilk sözcüklerini kolayca öğrenmelerini ve böylece okumaya karşı olumlu tutum kazanmaları bakımından önemlidir. Görsel sözcük okunmanın öğretilmesi, çocuğa bilinen sözcüklerden yola çıkarak harfleri tanıtmak ve harf-ses ilişkisini öğretmek için bir zemin oluşturması bakımından önemlidir.

Literatür incelendiğinde görsel sözcük okuma öğretiminde sabit bekleme süreli öğretim ile ipucunun silikleştirilmesiyle öğretim stratejilerinin etkililiğinin karşılaştırıldığı araştırmaların genellikle hafif ve orta zihin engelli katılımcılara uygulandığı ancak otizmli bireyler ile benzer çalışmaların oldukça az olması dikkati çekmektedir. Bunun yanı sıra, araştırmalar öğretmenlerinin otizmli bireylere okur-yazarlık becerilerini kazandırmak için gerekli etkili spesifik bilgi ve becerilerden yoksun olduğunu ortaya koymaktadır.

#### *Araştırmanın Amacı*

*Bu araştırmanın amacı, otizmli öğrencilere görsel sözcükleri okumayı öğretmede iki öğretimsel stratejinin karşılaştırılmasıdır.*

*Araştırmanın Yöntemi*

Araştırmanın katılımcıları İstanbul'da bir otistik çocuklar eğitim merkezinde eğitim görmekte olan, yaşları 12-14 arasında değişen, iki erkek ve bir kız olmak üzere üç otizmli öğrencidir. Katılımcılarda aranan ön koşul özellikler şunlardır; (a) en az tek sözcükle ve anlaşılır bir telaffuzla konuşabilen, (b) resim-resim eşleyebilen (c) gösterilen iki resimden ismi söylenen parmağı ile işaret ederek gösterebilen, (d) bir resim gösterilip onun ne olduğu sorulduğunda resmi isimlendirebilen, (e) bir etkinliğe dikkatini en az 10-15 dakika yöneltebilen, (f) beklemesi söylendiğinde bekleyebilen, (g) basit sözel yönergeleri takip edebilen, (h) sözcük okuma becerisine sahip olmayan.

Her iki öğretim stratejisinde öğretmek üzere beş sözcük belirlenmiş ve her üç öğrenciye bunlar öğretilmiştir. Hedef sözcüklerin belirlenmesinde, katılımcıların öğretmen ve anneleri ile görüşülerek çocukların ilgi alanlarına yönelik ve işlevsel sözcükler olmasının yanı sıra sözcüklerin eşit zorluk düzeyinde olmasına dikkat edilmiştir. Katılımcılar için etkili pekiştiricileri belirlemek amacıyla her katılımcının annesiyle ve öğretmeniyle görüşmeler yapılmıştır. Pekiştiricilere doygunluğu önlemek amacıyla her bağımsız değişken için farklı pekiştiriciler belirlenmiştir. Araştırma, toplu ve günlük yoklama oturumları, öğretim, kalıcılık ve genelleme oturumlarından oluşmaktadır. Otizmli öğrencilere görsel sözcükleri okumayı öğretmede sabit bekleme süreli öğretim ile ip ucunun silikleştirilmesiyle öğretimin etkililik ve verimliliğini karşılaştırmak için uyarlamalı dönüşümlü sağaltımlar modeli kullanılmıştır. Bu araştırmanın deneysel kontrolü, deneklerin yoklama oturumlarında göstermiş oldukları performansın sabit bekleme süreli öğretim ya da hedef uyarana ipucu eklenmesine dayalı öğretim oturumlarından biriyle yapılan öğretimde ölçüt karşılanıncaya kadar gerçekleşen oturum sayısı, ölçüt karşılanıncaya kadar gerçekleşen deneme sayısı, ölçüt karşılanıncaya kadar gerçekleşen toplam öğretim süresi ve ölçüt karşılanıncaya kadar gerçekleşen hata yüzdesi açısından farklılık olması ile sağlanmıştır.

Bu çalışmada, otizmli öğrencilere görsel sözcük okuma öğretiminde sabit bekleme süreli öğretim ve ipucunun silikleşmesi stratejilerinin etkililik ve verimliliğini karşılaştırmak için uyarlamalı dönüşümlü sağaltımlar modeli kullanılmıştır. Dönüşümlü sağaltımlar modeli, iki ya da daha fazla değişkenin, iki ya da daha fazla geriye dönüşü olmayan bağımlı değişken üzerindeki etkilerinin karşılaştırıldığı araştırmalardır. Bu araştırmanın deneysel kontrolü, deneklerin yoklama oturumlarında göstermiş oldukları performansın sabit bekleme süreli öğretim ya da hedef uyarana ipucu eklenmesine dayalı öğretim oturumlarından biriyle yapılan öğretimde ölçüt karşılanıncaya kadar gerçekleşen oturum sayısı, ölçüt karşılanıncaya kadar gerçekleşen deneme sayısı, ölçüt karşılanıncaya kadar gerçekleşen toplam öğretim süresi ve ölçüt karşılanıncaya kadar gerçekleşen hata yüzdesi açısından farklılık olması ile sağlanmıştır.

Gözlemciler arası güvenilirlik verileri toplanmıştır. Buna göre, güvenilirlik katsayıları sabit bekleme süreli öğretimin yoklama oturumları için 97-100%, öğretim oturumları için 91-100, kalıcılık ve genelleme oturumları için 98% olarak, ipucunun silikleştirilmesiyle öğretimin yoklama oturumları için 98-100%, öğretim oturumları

için 90-100%, kalıcılık ve genelleme oturumları 100% olarak hesaplanmıştır. Öğretim planının uygulanmasını değerlendirmek için uygulama güvenilirlik verisi toplanmış ve uygulama güvenilirliği 100% olarak hesaplanmıştır. Araştırmanın sosyal geçerlik verisi, öğretim uygulaması yapılan her üç deneğin öğretmeniyle yarı-yapılandırılmış görüşmeler yoluyla toplanmıştır.

#### *Araştırmanın Bulguları*

Araştırma bulguları, sabit bekleme süreli öğretim ve ip ucunun silikleşmesiyle öğretimin katılımcıların görsel sözcükleri okumayı öğrenmesinde eşit derecede etkili olduğunu göstermiştir. Katılımcıların tümü belirlenen ölçütlere ulaşmıştır. Sabit bekleme süreli öğretim, her üç öğrenci için de, ip ucunun silikleştirilmesiyle öğretimden ölçüt karşılanıncaya kadar geçen deneme sayısı, hata sayısı ve öğretim süresi bakımından daha verimli olduğu görülmektedir. Katılımcıların öğretim oturumlarında hedeflenen görsel sözcükleri okuma ölçütlerine erişebilmek için gereksinim duyduğu öğretim oturumu sayısı incelendiğinde ipucunu silikleştirmeye öğretime göre sabit bekleme süreli öğretimin daha avantajlı olduğu görülmektedir. Her iki öğretim stratejisi arasında verimlilik bakımından en belirgin farkın ölçüte ulaşıncaya kadar gerçekleşen öğretim oturumlarındaki hata sayısında olduğu dikkati çekmektedir.

Katılımcıların üçü de, bu hedef sözcükleri farklı yazı stili, punto ve büyük-küçük harfte okumaya genelledebilmiştir. Öğretimsel yöntemlerin kalıcı etkisi kalıcılık oturumlarında gözlenmiştir.

Araştırmadan elde edilen sosyal geçerlilik verileri şöyle özetlenebilir; katılımcıların öğretmenleri (a) katılımcıların okuma çalışmalarına daha istekli olduklarını, (b) öğrencilerin sözcük okumayı öğrenebildiklerini görmelerinin kendilerinin de bu tür çalışmalar yapmaya motive ettiğini, (c) bu çalışmalar sonrasında öğrencilerin sıra alma, bekleme ve kendiliğinden göz kontağı kurma becerilerinde artış olduğunu ifade etmişlerdir.

#### *Araştırmanın Sonuçları ve Önerileri*

Araştırma sonuçları her iki öğretimsel stratejinin de etkili olduğunu ancak sabit bekleme süreli öğretimin hedeflenen ölçütlere ulaşmada daha verimli olduğuna işaret etmektedir.

Bu araştırma, otizmli çocuklara görsel sözcük öğretmede sabit bekleme süreli öğretim ve ipucunun silikleştirilmesiyle öğretim stratejilerinin etkililik ve verimliliğinin karşılaştırıldığı ilk araştırmadır. Her iki stratejinin farklı sözcük gruplarını öğretmede karşılaştırmak için replikasyon çalışmaları yapılabilir. Bu araştırma sonunda gelecek araştırmalara yönelik öneriler sunulmuştur. Bunlardan ilki, benzer uygulamalar farklı sözcük grupları için yapılabilir. İkincisi, gelecekteki araştırmalarda, sabit bekleme süreli öğretim stratejisi, otizmli çocuklara görsel sözcük okumayı grup formatında öğretimin etkililiği incelenebilir. Üçüncü olarak da, gelecekteki araştırmalar, bu stratejilerin toplum ortamında ve genel eğitim bağlamında uygulanması incelenebilir.

*Anahtar Sözcükler:* Otizm, görsel sözcük okuma, sabit bekleme süreli öğretim, ip ucunun silikleştirilmesiyle öğretim, tek denek desen

## The Role of Computer-Assisted Language Learning (CALL) in Promoting Learner Autonomy

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### Abstract

*Problem Statement:* Teaching a language with the help of computers and the Internet has attracted the attention of many practitioners and researchers in the last 20 years, so the number of studies that investigate whether computers and the Internet promote language learning continues to increase. These studies have focused on exploring the beliefs and attitudes of learners and teachers towards computers and the Internet or on inquiring whether computers and the Internet increase the achievement levels of learners or enhance students' awareness of other cultures. Despite the widespread use of computers and the Internet in educational settings, a small number of research studies have investigated the role of Computer-Assisted Language Learning (CALL) in promoting learner autonomy. This study will contribute to the literature on the ways that CALL environments foster learner autonomy.

*Purpose:* The aim of this study is to utilize language learning environments equipped with technology to develop learner autonomy. There are four behavioural indicators of autonomy: using language learning strategies; a high motivation level to learn the English language; taking responsibility for one's own learning; and continued English language study outside the classroom.

*Method:* Forty-eight intermediate-level students at a private university in Ankara, Turkey participated in this study. The students were divided into two groups: the Strategy Training Group (STG) and the Non-Strategy Training Group (NSTG). The students in the STG received a five-week language learning strategy training through CALL, while the participants

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in the NSTG followed the university's regular curriculum. Data were collected by means of questionnaires, semi-structured face-to-face interviews, classroom observations, e-learning diaries, and the five-week language learning strategy training through CALL.

*Findings and Results:* The results of the study indicate that the students in the STG displayed improvement in their usage of language learning strategies, had higher motivation, were more willing to take responsibility for their own learning, and were engaged in extra-curricular study by means of CALL compared to the students in the NSTG.

*Conclusions and Recommendations:* Becoming autonomous learners necessitates readiness on the part of the students. Therefore, it is important for instructors to know whether their students are ready to develop autonomy. Autonomous learning differs from conventional foreign language education in the sense that the primary focus of autonomous learning is on the learners' individual awareness of the learning process. Therefore, it would be beneficial for curriculum units in language teaching institutions to revise course objectives and to design classroom activities that promote learner autonomy.

*Keywords:* CALL, learner autonomy, learning strategies, motivation, taking responsibility, extra-curricular study, language learning

The past few decades have witnessed a shift from a behaviourist mode of pedagogy to a constructivist mode of education. According to constructivist theorists, who emphasize learner-centered instruction, meaning making occurs in the individual and results from his or her experience and social interaction with others (Dawley, 2007, p. 3). Social constructivists believe that learning, especially language learning, is a social process and that it does not take place only within an individual. They also believe that it is not a passive development of behaviour that external forces determine. Instead, they propose that meaningful learning occurs when individuals are engaged in social activities, that is, when the learners interact with one another.

In this light, some researchers suggested that available information and communication technology might have an impact on the lives of educators and students, especially on the growth of the students' understanding and the development of their skills. Computer-Assisted Language Learning (CALL), which is "the search for and study of applications of the computer in language teaching and learning" (Levy, 1997, p. 1), has been a significant development in language teaching and learning. Parallel to the philosophy of social constructivism, this information and communication technology encourages learners to share their learning experiences and to build upon their previous knowledge, and therefore provides an appropriate framework for teachers to use to understand how learners become independent in learning and how they gain responsibility for their own learning, which is also referred to as learner autonomy (Hedge, 2000, p. 82). Shield, Weininger, and Davies (1999) illustrate the development of learner autonomy within constructivist

principles by referring to the Multi-User Domain Object Oriented (MOO) system of Computer-Mediated Communication (CMC) technology, as in the following:

Like other CMC environments, MOO allows learners to login at times convenient to themselves. Such "24/7" technologies are excellent vehicles to promote autonomous learning strategies since they offer learners the opportunity to connect at any time, whether or not their tutor is available... MOO also allows learners to work individually or collaboratively in customizable virtual workspaces which exist even when the occupiers are not online. With all these points in mind, then, we have developed learning activities to take advantage of the features of MOO which promote constructivist principles and autonomous learning strategies. (p. 4)

In literature autonomy has been defined in a variety of ways. For the purposes of this study, we define learner autonomy as acquiring learning strategies for language education and the ways of using these strategies. These strategies should lead learners to use the target language for learning and communication as well as encourage them to demonstrate their capacity to take control of their own learning. Many researchers have associated the notion of *autonomous learner* with *good learner*. To illustrate, Hedge (2000) views good learners as confident in their ability to learn, self-reliant, motivated, enthusiastic, aware of why they want to learn, unafraid of making mistakes, good risk takers, good guessers, and probably positive in their attitudes toward the target language and culture. Hedge also states that such students are willing to assume a certain responsibility for their own learning (p. 82).

Expecting learners to develop autonomy does not seem feasible in a traditional classroom where the teacher dominates the learning process so that the learners have almost no incentive to take responsibility for their own learning. Autonomy is both independence and interdependence. Independence is taking responsibility for one's own learning, setting goals, and evaluating one's own progress in the learning process. Learners show their independence within a specific sociocultural context where independence, through socialization and interaction with teachers and peers, impacts the levels of control they exercise and develop (Benson, 2001). The increasing advances in technology in education, such as computers and the Internet, have offered an appropriate environment for learning autonomy. Shetzer and Warschauer (2000, cited in Blin, 2004) connect the concepts of learner autonomy and technology in this way:

Autonomous learners know how to formulate research questions, and devise plans to answer them. They answer their own questions through accessing learning tools and resources on-line and off-line. Moreover, autonomous learners are able to take charge of their own learning by working on individual and collaborative projects that result in communication opportunities in the form of presentations, Web sites, and traditional publications accessible to local and global audiences. Language professionals who have access to an Internet computer classroom are in a position to teach students valuable lifelong learning skills and strategies for becoming autonomous learners. (p. 379)

The activities described by Shetzer and Warschauer demand that learners work cooperatively and collaboratively not only with the teacher but also with each other if they wish to work autonomously. Computers, the Internet, and their related tools such as e-mails, discussion forums, and online chat environments, provide language learners with sociable, collaborative, and authentic learning opportunities where they can develop autonomy and take increasing responsibility for their own learning.

Computer Mediated Communication (CMC), which is the transmission and reception of messages via computer networks, has evolved from the sending and receiving of text messages to the use of multimedia elements in the process of inter-human interaction (Khine, Yeap, & Lok, 2003, pp. 115-116). CMC, which is also known as Web 2.0, characterizes the types of technology in the World Wide Web and web design that aim to enhance creativity, information sharing, and, most notably, collaboration among users. CMC can be divided into two categories contingent with the timing of the communication. The first type of communication is synchronous communication during which the sender and the recipient engage in direct communication contemporaneously. Bowles (2004) asserts that the most common form of synchronous electronic communication is real time, two-way, text-based online chat, which is commonly used in CALL. The other type of CMC is asynchronous communication, which does not require all of the participants who are involved in the communication to be present and available contemporaneously. The most common asynchronous communication tools are electronic mail, blogs, and message boards.

Computer and Internet technology seems to encourage learner autonomy by allowing students to choose the time, place, and circumstances that are conducive to their learning. Additionally, computers and the Internet can raise learners' levels of motivation in language education by offering topics that are of interest to the learners and by introducing a diversity of study methods inside and outside the classroom. Moreover, the Internet can contribute to the development of learners' language learning strategies by exposing learners to a digital social environment with many native speakers to whom the students do not have access in their local community. Finally, students who learn with computers can work individually at a comfortable pace, so they are more likely to take personal responsibility for learning both inside and outside the classroom.

A variety of studies have been conducted to ascertain whether the academic application of computers and the Internet promotes language learning. Most of these studies have focused on four overarching topics: gender-related differences in attitudes towards the use of computers (e.g., Birol et al., 2008); the connection between conference of meaning in synchronous communication environments and second language vocabulary acquisition (e.g., Şahin, 2009); learners or teachers' opinions and attitudes towards the use of computers and the Internet (e.g., Aykaç, 2005); and whether the use of computers and the Internet raises learners' achievement levels or develops a profound understanding of foreign cultural attitudes and values in students.

Research on learner autonomy in CALL environments has focused on only the minor aspects of learner autonomy, such as student motivation in CALL



environments or extra-curricular study via CALL. However, this study focuses on the importance of the four components of learner autonomy: acquiring language learning strategies, motivation in language learning; taking responsibility for one's own learning; and extra-curricular study in CALL environments.

In this light, this research study sought to answer the following three research questions:

1. To what extent does the application of CALL in the classroom increase learners' autonomy in language education?
  - 1a. To what extent do learners increase their application of language learning strategies through CALL?
  - 1b. To what extent does learners' motivation increase through CALL?
  - 1c. To what extent do learners accept responsibility for learning when instructed in a CALL environment?
  - 1d. To what extent do learners perform extra-curricular activities in addition to class tasks when instructed in a CALL environment?
2. Is there a significant difference between the groups of learners who receive web-based instruction and those who do not receive web-based instruction with regard to their language learning strategy use?
3. How does the application of computer-mediated language learning affect learners' perceptions of English Language Learning by means of computers and the Internet?

## Method

### *Research Design*

We collected data with a combination of qualitative and quantitative instruments as a form of 'mixed' methodology to present reliable research information. While using the mixed methodology, the researcher amalgamates or combines quantitative and qualitative research techniques, methods, and approaches into a single study (Fraenkel & Wallen, 2005). Brown (1995) comments on the importance of combining qualitative and quantitative methods, stating that both types of data can yield valuable information in any given evaluation, so disregarding either type of information would be self-defeating (p. 232). Basing a study on more than one type of data collection instrument is also important for triangulation. Richards (2001) emphasizes that applying a triangular approach (i.e., collecting information from two or more sources) is advisable, because any one source of information is likely to be incomplete or partial (p. 59).

The mixed methodology approach helped us to illustrate learner autonomy development in language learning strategy use, motivation for learning, the willingness to take responsibility for one's own learning, and participation in extra-curricular study with the assistance of CALL. As part of the research design, one of the classes, the Strategy Training Group (STG), was given a five-week language learning strategy training course through CALL. The other class, the Non-Strategy Training Group (NSTG), did not receive any training. The differences between the STG and the NSTG regarding their learner autonomy development were explored.

### *Participants*

The study was conducted at a private university in Ankara, Turkey. This university grants a scholarship to some students, and loans a laptop to all enrolled students. Forty-eight students enrolled in the English Preparatory program participated in the study, and their ages varied from 17 to 20 years. All of the participants were at the intermediate level of English according to the university's placement test. There were 24 students in each class. One of the researchers was the instructor of the STG for the entire school semester, which lasted for 15 weeks. The NSTG had two instructors for the whole semester, and they were similar to the STG's teacher-researcher in terms of age, educational background, and teaching experience.

### *Data Collection Instruments*

Five types of data collection tools were used in this study: a questionnaire, a semi-structured face-to-face interview, an e-learning diary, classroom observations, and language learning strategy training via web-based instruction.

*Questionnaire.* The questionnaire was the SILL version 7.0 (Oxford, 1990), a 50-item self-report survey aimed at native speakers of English who are learning a foreign language. The SILL, a Likert-type measure, examines the frequency with which respondents use strategies for language learning. It consists of six subgroups of language learning strategies: memory, cognitive, compensation, metacognitive, affective, and social strategies. The students in both the STG and the NSTG were given the SILL inquiring about their learning strategies at the beginning and at the end of the web-based language learning strategy. The SILL was accompanied by a background questionnaire inquiring about the students' age, educational background, years of studying English, and whether they had completed an extended stay in an English-speaking country.

*Interview.* To receive feedback from the participants in the STG regarding their experiences during the training period of web-based instruction, the researchers conducted semi-structured face-to-face interviews. After the administration of the pre-questionnaire, the students in the STG were given a pre-interview to gain insights into their English language skills, learning strategies, habits, reasons for learning English, general attitudes towards learning English, and their use of computers and the Internet to improve their English. These students were again interviewed at the end of the five-week language learning strategy training period of web-based instruction to discuss the experiences that they had during the training period and their general attitudes towards learning English and the use of computers for educational purposes.

*E-learning Diary.* The class forum on the website that was set up for the STG provided the students with the opportunity to communicate with each other. Each week, the students in the STG were invited to write paragraphs discussing their experiences in learning English and in using the Internet and computers to study English. They were encouraged to discuss what they enjoyed during the week, what new things they learned, and what types of problems they encountered during their English learning. The students also wrote about what activities and homework they had done on the computers and the Internet as well as their weaknesses and strengths pertinent to the topics of the week.

*Classroom Observation.* The type of observation that the teacher-researcher used in this study was participant observation (Cohen, Manion, & Morrison, 2000). The instructor of the NSTG acted as the informant, and reported her observations at the end of each week to the teacher-researcher who was the instructor of the STG. Then, the teacher-researcher interviewed the instructor of the NSTG to compare the two groups in terms of their motivation levels, their willingness to take responsibility for their own learning, their out of class learning, and their language learning strategy use.

*Language Learning Strategy Training.* Throughout the language learning strategy training, both the STG and the NSTG followed the same syllabus prepared by the curriculum unit at the university. However, CALL activities were integrated into the syllabus of the STG, while the NSTG followed the common weekly schedule prepared by the administration. The students in the STG were involved in language learning strategy training through CALL both inside and outside the classroom. During the training, the students were informed of the types of strategies, how they could be used in learning, and why they were important to language development. All of the strategies were integrated into the weekly units of the course books and into all classroom activities that required computers and the Internet.

Two weeks before the study started, a class web page on *ifast.net* was set up for the STG. On this web page, a discussion forum was created, and its main purpose was to serve as a place where the students in the STG could participate in discussions outside the classroom. A blog page attached to this web page was used as an archive for the students' weekly writing assignments. Furthermore, an online speaking class was created on Yackpack ([www.yackpack.com](http://www.yackpack.com)), and its main purpose was to create an environment for the students to continue discussing a topic when classroom time did not suffice. Additionally, a Yahoo group account was created, and all the STG students were invited to join the group. The STG students sent their writing, grammar, and vocabulary assignments to the teacher-researcher via e-mail so that she could check these assignments. Besides these, PowerPoint presentations prepared by the teacher-researcher were used during the lessons for introducing new grammar points and vocabulary items.

## Results

### *The Role of CALL in Fostering Learner Autonomy*

#### *The Development of Language Learning Strategy Use through CALL*

To see the differences between the STG's pre-test and the post-test results on the learning strategy questionnaire, we performed a paired sample t-test. Since the same group was analyzed, the paired sample t-test was appropriate. The results of this test revealed that there was a significant difference between the STG's pre-test and the post-test scores.

The descriptive analysis of the paired sample t-test indicates that for the 24 subjects, the mean post-score for Memory (M=3.71), Cognitive (M=3.86), Compensation (M=3.97), Metacognitive, (M=3.78), Affective (3.77), and Social (3.81) are significantly greater than the mean pre-score for Memory (M=1.75), Cognitive (M=2.04), Compensation (M=2.31), Metacognitive, (M=2.27), Affective (2.30), and

Social (2.25). After evaluating the mean scores of the strategies, we concluded that the mean scores of the post-test results were higher than the mean scores of the pre-test results, indicating that the students in the STG improved in their use of language learning strategies at the end of the strategy training via computers and the Internet. Table 1 below presents the pre and post-test results of the STG.

**Table 1.**  
*Statistics Demonstrating Pre and Post-Test SILL Results of STG*

<i>Paired Samples Statistics</i>		<i>M</i>	<i>N</i>	<i>SD</i>	<i>Std. Error Mean</i>
Pair 1	Memory Strategies of Pre STG	1.7500	24	.33131	.06763
	Memory of Post STG	3.7176	24	.31594	.06449
Pair 2	Cognitive Strategies of Pre STG	2.0417	24	.40893	.08347
	Cognitive of Post STG	3.8690	24	.25596	.05225
Pair 3	Compensation Strategies of Pre STG	2.3194	24	.49859	.10177
	Compensation of Post STG	3.9722	24	.30561	.06238
Pair 4	Metacognitive Strategies of Pre STG	2.2778	24	.49798	.10165
	Metacognitive of Post STG	3.7824	24	.18383	.03752
Pair 5	Affective of Pre STG	2.3056	24	.50521	.10312
	Affective of Post STG	3.7778	24	.26314	.05371
Pair 6	Social of Pre STG	2.2569	24	.47645	.09725
	Social of Post STG	3.8125	24	.33446	.06827

A mean of all the participants in the range of 3.5-5.0 in a SILL item is thought to reflect a high use of that strategy, while 2.5-3.4 reflects a medium use, and 1.0-2.4 reflects a low use (Oxford & Burry-Stock, 1995). Further analysis of the results indicated that the answers the STG students gave to all strategy categories in the pre-test remained under 2.4, signifying the students' infrequent usage of language learning strategies before the strategy training. In contrast, the answers that the same group of students gave to all of the strategy categories in the post-test were above 3.71, indicating a high language learning strategy use. Thus, by looking at the mean score of the post-test results, it could be concluded that the five-week strategy training through CALL helped to improve the participants' language learning strategies. Language learning strategy use is usually associated with learner autonomy, so it can be inferred that, with regard to language learning strategy use, the learning autonomy of the students in the STG developed significantly.

*Students' Motivation Level and CALL*

Although the students in the STG were told that their participation in this strategy training would not be rewarded with a grade, they showed increasing motivation during and after the strategy training, which, in turn, contributed to their development of autonomy. However, the NSTG instructor noted that the students in the NSTG had low levels of motivation. To exemplify, the instructor of the NSTG complained about the learners' dependence on the teacher and a lack of incentive for discovering or utilizing available opportunities for learning English outside the classroom. Furthermore, the instructor of the NSTG observed that the students in the NSTG easily lost interest in the lessons, seemed sleepy during the lessons, and were reluctant to participate in activities both inside and outside the classroom. In contrast, the students in the STG stated during the interviews that the implementation of CALL helped them to recognize classroom attendance as an opportunity to be involved in a wide variety of collaborative activities that are relevant to their personal needs and interests rather than a duty assigned by the university administration.

*Students' Acceptance of Responsibility and CALL*

Before the implementation of the strategy training, the teacher-researcher noticed that the students in the STG were highly teacher-dependent with regard to language learning. Eighteen of the 24 STG students held the opinion that what they were doing in the classroom was enough for them to improve their English. Correspondingly, the instructor of the NSTG reported that the students in her classroom were unwilling to take personal responsibility for learning. The NSTG instructor also added that the students did their homework yet had a tendency to submit their homework or assignments just before the deadline. However, during and after the strategy training, the STG students demonstrated increasing responsibility for their own learning. For instance, as the STG participants reported in the interviews, students always regarded using computers and the Internet in the classroom as a kind of reward, because using computers and the Internet was already of personal interest to them. Therefore, whenever the students were instructed to turn on their computers in the classroom, they did so without complaint. In contrast to course book-based activities in the classroom, the students worked on the computers effectively and efficiently, producing high quality work.

The NSTG instructor added that the class in general was unwilling to take personal responsibility for learning. However, the instructor conceded that seven out of 24 students constantly talked to her about their weaknesses in the English language and the ways in which they could strengthen them. Nevertheless, the instructor had given these seven students concrete guidance and advice about how to improve their learning, and they did not apply the advice. Thus, the students' dissatisfaction persisted.

*Extra-Curricular Study and CALL*

Extra-curricular study is another component of learner autonomy. Gao (2009) asserted that teachers of English are often constrained by several factors, such as official curricula, course books, teaching objectives, and time constraints due to class scheduling. Gao (2009) added that teachers tend to focus solely on the results of the

learning stage, especially exam results. Thus, learners' capacity for autonomous learning is given neither enough recognition nor enough attention (p. 6).

As opposed to the typical scenario presented above, the students in the STG in this study were introduced to several opportunities for out-of-class study on the computer and the Internet. On the whole, the data collected through interviews and observation revealed that the students were fairly satisfied with the digital opportunities that enabled them to improve their skills at home without the presence of the teacher. Nineteen of the 24 STG students expressed that the idea of sitting in the Self Access Center at the university after their classes had not been beneficial to them due to their fatigue and mental exhaustion. However, the language learning materials available on the Internet exposed the students in the STG to the target language within their home environment where they were comfortable, relaxed, and rested.

*The Difference between the STG and the NSTG with Regard to Language Learning Strategy*

The researchers gave the SILL to both the STG and the NSTG to ascertain the quantity of strategies in the questionnaire that the students had been applying prior to the implementation of the language learning strategy training through CALL. As it can be seen in the independent t-test results presented in Table 2, no significant difference was noted between the strategy types of the two groups with the exception of memory and cognitive strategies. These results indicate that the two groups were similar in terms of their language learning strategy use prior to the administration of the language learning strategy training to the STG.

**Table 2.**

*Statistics Indicating Pre-Test (SILL) Results of the STG and the NSTG*

<i>Group Statistics</i>	<i>Groups</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Std. Error Mean</i>
Memory Strategies	Pre STG	24	1.7500	.33131	.06763
	Pre NSTG	24	2.2546	.33169	.06770
Cognitive Strategies	Pre STG	24	2.0417	.40893	.08347
	Pre NSTG	24	2.6935	.53472	.10915
Compensation Strategies	Pre STG	24	2.3194	.49859	.10177
	Pre NSTG	24	2.4583	.41775	.08527
Metacognitive Strategies	Pre STG	24	2.2778	.49798	.10165
	Pre NSTG	24	2.4722	.37394	.07633
Affective Strategies	Pre STG	24	2.3056	.50521	.10312
	Pre NSTG	24	2.4722	.37394	.07633
Social Strategies	Pre STG	24	2.2569	.47645	.09725
	Pre NSTG	24	2.5119	.43355	.08850

In contrast, as shown in Table 3, there were significant disparities between the mean post-scores of the STG and the NSTG. While the post-scores of the STG ranged from 3.71 to 3.86, the post-scores of the NSTG ranged from 2.11 to 2.65. The mean scores of the STG suggest that the participants in this group reported a high use of language learning strategies. Based on the analyses of the post scores of the STG and the NSTG, there were significant mean differences between each strategy within the groups. The levels of significance for each group (0.000) were less than the p value (0.05), so we concluded that there was a significant difference between the STG and the NSTG in terms of their language learning strategy use.

**Table 3.**  
*Statistics Indicating Post-Test (SILL) Results of the STG and the NSTG*

<i>Group Statistics</i>	<i>Groups</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Std. Error Mean</i>
Memory Strategies	Post STG	24	3.7176	.31594	.06449
	Post NSTG	24	2.1157	.28840	.05887
Cognitive Strategies	Post STG	24	3.8690	.25596	.05225
	Post NSTG	24	2.3899	.26474	.05404
Compensation Strategies	Post STG	24	3.9722	.30561	.06238
	Post NSTG	24	2.4722	.44141	.09010
Metacognitive Strategies	Post STG	24	3.7824	.18383	.03752
	Post NSTG	24	2.3708	.31551	.06440
Affective Strategies	Post STG	24	3.7778	.26314	.05371
	Post NSTG	24	2.6597	.31653	.06461
Social Strategies	Post STG	24	3.8125	.33446	.06827
	Post NSTG	24	2.6111	.26314	.05371

*Students' General Perceptions of English Language Learning through CALL*

The third research question was posed to reveal the feelings and ideas of the learners in the STG with regard to studying English with computers and the Internet. The analysis of the quantitative data indicated that students' feelings about web-based language learning were positive. Analysis of the interviews revealed that using computers and the Internet assisted the students with finding alternative ways to learn the English language. The principal problem for the students in the STG was their lack of knowledge of what to study and which ways to study. This lack was also supported by the results of the initial questionnaire, because the mean score of the answers given was below 2.5. Therefore, the students in the STG had been using language strategies infrequently prior to the strategy training. Moreover, the web-based instruction transformed the traditional classroom environment into an

environment that intensified the motivation of the learners. The students commented that before utilizing the digital technology for language learning, a lesson lasting 50 minutes seemed relatively long and that they struggled to stay motivated for the duration of the lesson. However, the students stated that using laptops and the Internet to perform some activities in the classroom helped them to maintain their concentration levels during the lesson.

### **Conclusions and Recommendations**

The analysis of data revealed that the use of computers and the Internet helped the STG students to improve their language learning strategies. Before the language learning strategy training through CALL, the students in the STG reported using very few learning strategies when learning English, mainly because they had not been taught or introduced to language learning strategies in previous English classes. This response parallels Grenfell and Harris' (1999) suggestions that learning strategy instruction be integrated into conventional lessons and that students be taught explicitly through collaborative learning. The results of this study indicate that explicit language learning strategy training paired with an interactive environment with computers and the Internet aided learners in developing their language learning strategies. Moreover, the learners in the STG improved in their use of language learning strategies, so we can also conclude that they increased their learning autonomy.

Motivation levels of students are an additional aspect associated with learner autonomy (Dickinson, 1987; Ushioda, 2000). This study demonstrated that, unlike the students in the NSTG, the students in the STG showed increasing motivation during and after strategy training, even though they knew that their participation in the strategy training would not be rewarded with a grade. Confirmed by the teacher-researcher's observations and the self-reports of the STG participants, the students had higher motivation during the training than they did prior to the training through CALL.

One of the most important issues that teachers can address while developing learners' autonomy is the learners' responsibility for their own learning (Wenden, 1991). As Po-Ying (2007) claims, learners do not readily accept personal responsibility for learning provided that they do not receive encouragement. The findings of this study corroborate these claims, because they revealed that the students in the STG were highly teacher-dependent before the strategy training; however, the STG students underwent a gradual change in their behaviour from teacher-dependent to teacher-independent during the language learning strategy training process.

One of the main goals of this study was to persuade the STG students to find their own learning methods. Thus, the researcher-instructor provided these students with various out-of-class activities that would encourage them to develop autonomy. Once they developed this autonomy, they were able to explore alternative methods of study and approaches for improving their English. The strategy training involved the use of computers and the Internet to provide the learners in the STG with activities and materials that they could employ outside the classroom. It was



observed that the assignments carried out on computers and the Internet were received with greater enthusiasm by the students than were the paper-based assignments. Using computers and the Internet had actively and personally involved the students in out-of-class studies, which led to autonomy development.

In conclusion, the results of this study indicate that the students in the STG improved in their language learning strategy use, had high motivation for learning, and were willing to take personal responsibility for their own learning outside the classroom with the help of CALL. All of these improvements assisted the learners with making progress towards becoming autonomous. Providing learners with the necessary strategies for language learning, teaching the strategies through CALL, helping learners to reach higher motivation levels, and encouraging students to take responsibility for their own learning by having them participate in out-of-class study contributed to the students' autonomy development in language learning.

As for this study's pedagogical implications, incorporating the teaching of learning strategies into the curriculum, implementing the instruction of these strategies through CALL, increasing student motivation levels, and encouraging students to take personal responsibility for learning and to participate in extra-curricular study with the aid of computers and the Internet will strengthen the English language teaching program. Additionally, organizing the frequency and the duration of the language learning strategy training in line with the workload of the students will encourage the students to commit to English language learning and to develop into autonomous learners.

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## Bilgisayar Destekli Dil Öğreniminin Öğrenci Özerkliğini Arttırmadaki Rolü

### Atıf:

Mutlu, A., & Eröz-Tuğa, B. (2013). The role of computer-assisted language learning (CALL) in promoting learner autonomy. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51,107-122.

### (Özet)

#### *Problem Durumu*

Son yıllarda bilgisayarların ve internetin dil öğretimine etkin biçimde katkıda bulunup bulunmadığını araştıran çalışma sayısının gözle görülür biçimde artmasına sebep olan bilgisayar ve internet desteği kullanılarak verilen dil öğretimi bu alanda çalışan pek çok araştırmacının dikkatini çekmiştir. Bu çalışmaların pek çoğu öğrencilerin ve öğretmenlerin bilgisayar ve internete karşı olan inanç ve tutumlarını, ya da bilgisayarların ve internetin verilen eğitimin bir parçası olarak kullanımının öğrenci başarı seviyesinin veya öğrencilerin farklı kültürlerle ilgili farkındalığının artmasında doğrudan etkili olup olmadığına odaklanılmışlardır. Özellikle son yıllarda bilgisayar ve internetin eğitim ortamlarında yoğun bir şekilde kullanılmaya başlamasına rağmen, bilgisayar destekli eğitimin öğrenen özerkliğini geliştirmedeki rolü üzerine yapılan araştırmalar nispeten kısıtlı sayıda kalmıştır. Yapılan bu çalışma, bilgisayar destekli eğitimin öğrenen özerkliğini arttırmadaki rolüne odaklanarak literatüre katkıda bulunacaktır.

#### *Araştırmanın Amacı*

Bu çalışmanın temel amacı teknoloji ile donatılmış dil eğitimi ortamlarının öğrenen özerkliğini geliştirmek için nasıl kullanılabileceğini göstermek ve öğrenen özerkliğinin gelişmesinde etkin olan bazı faktörleri deneysel bir yaklaşımla sunmaktır. Bu çalışmada dil öğreniminde özerklik gelişimi dört farklı alandaki değişimlere odaklanarak gözlemlenecektir. Bunlar, öğrencilerin dil öğrenimleri sırasında sıkça kullandıkları dil öğrenme stratejileri; öğrencilerin İngilizce dili eğitimindeki motivasyon seviyeleri; öğrencilerin kendi öğrenimleri için sorumluluk alma durumları; ve öğrencilerin sınıf dışında ve dersler haricinde İngilizce çalışmaya ve öğrenme seviyelerini geliştirmeye olan hevesleridir.

#### *Araştırmanın Yöntemi*

Bu çalışmaya Ankara'da özel bir üniversitenin Yabancı Diller Bölümü'nde örgün eğitim gören İngilizce seviyeleri orta düzey olarak belirlenmiş 48 Hazırlık Bölümü öğrencisi katılmıştır. Bu çalışmada görev alan öğrenciler Strateji Eğitimi Alan Grup (STG) ve Strateji Eğitimi Almayan Grup (NSTG) olarak iki gruba ayrılmışlardır. Strateji Eğitimi Alan Gruptaki öğrencilere beş hafta süreyle bilgisayar destekli dil öğrenme stratejileri eğitimi verilirken Strateji Eğitimi Almayan Gruptaki öğrenciler bu eğitimi almamış ve okulun normal dil eğitimi programını takip ederek derslerini yapmışlardır. Strateji Eğitimi Alan Grup'taki katılımcılar ile eğitim verilmeden hemen önce ve eğitim verildikten hemen sonra yüz yüze görüşmeler yapılmış ve bu gruptaki katılımcılardan kendi elektronik günlüklerini tutmaları istenmiştir. Her iki gruptaki öğrencilerin dil öğrenim strateji kullanımını incelemek için tüm katılımcılara bir ön-test ve bir son-test verilmiştir. Bunun yanı sıra, araştırma süresince her iki gruptaki katılımcıların motivasyon seviyeleri, kendi öğrenmelerinin

sorumluluğunu alma hevesleri ve sınıf dışı çalışmaya olan istekleri gözlemlenmiştir. Özetle, bu çalışmada beş haftalık bilgisayar destekli dil öğrenme stratejileri eğitimi, katılımcıların kendileri için hazırladıkları elektronik günlükler, sınıf içi gözlemler, yarı yapılandırılmış yüz yüze görüşmeler ve anket uygulaması yöntemleriyle hem nitel hem de nicel veri toplanmıştır.

Bu çalışma için toplanan veriyle aşağıda listelenen üç araştırma sorusuna cevap aranmıştır: (1) Bilgisayar destekli dil eğitimi, dil eğitiminde öğrenci özerkliğini arttırmada ne kadar etkilidir? (1a) Bilgisayar destekli dil eğitimi sayesinde öğrenciler ne kadar dil öğrenme strateji kullanımlarını geliştirebilirler? (1b) Bilgisayar destekli dil eğitimi öğrenci motivasyonunu arttırmada ne kadar etkilidir? (1c) Bilgisayar destekli dil eğitiminde öğrenciler ne kadar kendi öğrenmelerinin sorumluluğunu alabilirler? (1d) Bilgisayar destekli dil eğitimi ortamında öğrenim gören öğrenciler sınıf içi çalışmaların yanı sıra sınıf dışı çalışmalara ne kadar vakit ayırırlar? (2) Dil öğrenme stratejileri kullanımı açısından, bilgisayar destekli eğitim alan öğrenci grubu (STG) ve bilgisayar destekli eğitim almayan (NSTG) öğrenci grubu arasında önemli bir fark var mıdır? (3) Bilgisayar destekli eğitim öğrencilerin bilgisayar ve internet ile dil öğrenme anlayışlarını nasıl etkiledi?

#### *Araştırmanın Bulguları*

Yapılan Çalışmanın sonuçlarına göre Strateji Eğitimi Almayan Öğrenci Grubunun (NSTG) aksine, Strateji Eğitimi Alan Öğrenci Grubu (STG) dil öğrenimi kullanımlarında önemli gelişme gösterdikleri gözlemlenmiştir. Bunun yanı sıra bu adı geçen grubun dil öğrenme motivasyonunda belirgin bir artış görülmüş ve kendi öğrenmelerinin sorumluluğunu alma hevesi ve sınıf dışı ders çalışma isteklerinin arttığı gözlenmiştir. Aynı zamanda, bu durumun onların özerk öğrenme yolunda ileri adım atmalarına yardımcı olduğu önerilmiştir.

#### *Araştırmanın Sonuçları ve Önerileri*

Öğrenen özerkliği gelişimi ilk önce öğrencilerin bu duruma hazır olmalarını gerektirir. Bu yüzden, eğitimin uygulanacağı kurumlarındaki öğretmenlerin öğrencilerinin buna hazır olup olmadıklarını bilmeleri her şeyden önemlidir. Özerk öğrenmenin geleneksel dil öğreniminden bir farkı özerk öğrenmede öncelikli olarak öğrencilerin öğrenme süreciyle ilgili farkındalık geliştirmelerinin hedeflenmesidir. Bu yüzden, bu çalışmaya katılan okul gibi okulların program geliştirme birimlerinin eğitim hedeflerini ve amaçlarını yeniden gözden geçirmeleri ve sınıf aktivitelerini eğitim kurumu tarafından hedeflenen öğrenen özerkliğini arttırmaya yönelik olarak planlamaları gerekmektedir. Bilgisayar destekli dil eğitimi süreci boyunca teknolojik nedenlerle yaşanabilecek herhangi bir olumsuz tecrübenin önüne geçmek için hem bu eğitim kurumunda görev alan öğretmenlerin hem de bu eğitim sürecinden geçecek olan öğrencilerin bazı temel bilgisayar kullanma becerilerine sahip olmalarını gerekmektedir. Bu sebeple, öğrenen özerkliği hedefiyle bilgisayar destekli dil eğitimi verilmeden önce eğitim kurumundaki hem öğretmenlerin hem de öğrencilerin bilgisayar kullanım becerilerinin geliştirilmesi bu uygulamanın daha verimli olmasını sağlayacaktır ve aynı zamanda endişe daha yaşanmadan giderildiği için buna duyulan ilgiyi arttıracaktır.

*Anahtar Sözcükler:* Bilgisayar Destekli Dil Eğitimi, öğrenen özerkliği, öğrenme stratejileri, motivasyon, öğrenen sorumluluğu, sınıf dışı ders çalışma, dil öğrenimi.

## Freedom of Religion - Conscience, Religious Education and the Right of Education in The 1961 - 1982 Constitutions of The Republic of Turkey and Their Developmental Tendencies

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### Abstract

*Problem Statement:* The Constitutions are the main sources of legality for democratic societies. The 1961 and 1982 Constitutions have dominated the last fifty years of Turkey. In this regard, it is essential to examine and comment academically on the way these Constitutions and their amendments address the rights of education, freedom of thought and faith in light of the relationship between political and educational systems. It is also important in terms of academically contributing the current constitution polemics.

*Purpose of the Study:* The main purpose of this study is to comparatively examine the rights of education, freedom of religion and conscience and religious education in the 1961 and 1982 Constitutions of the Republic of Turkey.

*Methodology:* In this study, among possible analytic research patterns, document research is preferred. The articles on the rights of education, freedom of religion, conscience and religious education in the 1961 and 1982 Constitutions constitute the data source of this study. Descriptive and constant comparative analysis is used in analysis of the data. A related body of the literature is cited for the purpose of reflecting the social, cultural and political context.

*Findings and Interpretation:* It can be stated that there is no important difference in the 1961 and 1982 Constitutions in terms of considering the freedom of religion-conscience. In both constitutions, it is stated that the state cannot be organized on religious tenets, religion or religious feelings,

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and things considered sacred by religion can not be exploited and abused in any manner. It is the tendency that strict regulations are made in cases of abuses of religion, and functionalism has dominated by a monist "consensus" in case of conflicts. While religious education and teaching in the 1961 Constitution is subject to the individuals' own will or that of their legal representatives, the lesson "Religious Culture and Knowledge of Morals" becomes compulsory in the curriculum of primary and secondary schools. There is an obvious differentiation about religious education. In both constitutions, it is stated that primary education is compulsory and free at the state's schools; the state takes necessary measures to support students in financial need as well as those who need special training on account of their physical and mental incapacity. It is the tendency that functionalism is empowered with democratic values.

*Conclusion and Discussion:* The general tendency regarding language is that the debates continue although the education language is not specified directly. Freedom of religion-conscience has been one of the issues that is discussed frequently and seriously. Religion and state affairs have always been affected negatively by the fact that the Republic of Turkey was founded on a large multicultural empire. Thus capitalism did not develop over its own internal dynamics, and Turkey did not experience religious reformation. Compulsory religious education is problematic also in terms of making constitutions. The Constitution of the Republic of Turkey adopts a strict "casuistic" methodology instead of setting general principles, adopting a "framework constitution" and seeking to regulate possible situations. In general, it can be observed that the qualities of strictness and non-amenability strengthen from the 1961 Constitution to 1982 Constitution. We are in a period in which more flexible constitutions are preferred to more detailed and stricter ones. It is possible that more libertarian and egalitarian constitutional regulations could be made. Privatization efforts in education have been ruining the equality of opportunities and possibilities, which has been one of the most important arguments of the Republic since the early years. In this regard, constitutional arguments and regulations are under postmodern and neo-liberal effects.

*Key Words:* Constitution, freedom of religion-conscience, the right of education, postmodernism, functionalism, interactionism, social-conflict approach

It is a phenomenon that countries seek a source of legality for their education systems. This source has been based on religious or economic power in the past; today, in the contemporary world, it is generally based on a constitution to be decided in a referendum. As a component of a domestic public legal system, constitutions are the basic legal documents that address the foundation and operation of a state, the formation and reformation of power and the freedom of

individuals against power (Teziç, 2007). Therefore, constitutions are dominant and of vital importance regarding the administration of a country and an institution.

Constitutions are the main legal documents of government administration and one of the determinants of government policy. They are the most abstract and the broadest legal regulations, which regulate basic rights and liberties, the structure and government pattern of a state, the bodies of a state and the inter-relations among them (Aki, 2010). On the other hand, education has an important function in society due to its social, political, cultural and individual objectives. As a public duty, education is performed by the government under its supervision and control. The state is a form of sovereignty that activates public power and determines its own basic laws with free will (Teziç, 2007).

The legal system and the constitution of a state have an important role in determining the objectives and implementation phases of education. The definition of a constitution in a broader sense includes the relation between the state and its citizens and social organizations in a society. This basic relationship is formed according to political culture and the development of societies (Öztekin, 2001). In this regard, the content of the constitution regarding education is of crucial importance in terms of making education laws. The constitution is a law which is more permanent, broader and superior to the other laws, and it provides a basis for their existence. Furthermore, the legal and education systems are two effective entities in ensuring social order.

Turkey experienced some tempestuous political periods, particularly after moving into the multi-party political system; the first was the coup on May 27<sup>th</sup>, 1960, followed by the military intervention on March 12<sup>th</sup>, 1971; the final was the military government that came into power as of September 12<sup>th</sup>, 1980. Although some amendments were made to the 1961 and 1982 Constitutions within the parliamentary system, it is a historical fact that political processes have been conducted through the basic perspectives of these constitutions. In general, it is obvious that the political system between 1961 and 1980 and from 1980 to 2010 was formed by the perspectives adopted by the 1961 and 1982 Constitutions. Thus, it is essential to examine and discuss academically the way these Constitutions and their amendments address the rights of education, freedom of thought and faith in light of the relationship between political and educational systems, the constitution and education. The aim of this study is to examine and discuss the articles of the Constitutions of 1961 and 1982 in terms of the rights of education and freedom of thought and faith within the scope of sociological transformation and democratic approaches. Because of considerations of functionalism, interactionism and postmodern approaches to education and legal regulations must be addressed.

Functionalism focuses on the functioning and capacity of the institutions to satisfy needs. It attempts to depict social functioning by relating social systems to organic systems. Institutionalization, which seeks common solutions based on meeting the needs of functioning, was taken as a base in the fields of sociology and social culture. Functionalists expect society to operate as a systematic unity and each

part to meet functional needs as in an organism (Holmwood, 2005). According to this approach, law and education are institutions that have certain functions in a socio-economic and politic structure. Functionalist approaches depict law and education as a means of consensus and balance for a given system. From this point of view, constitutions are expected to have specific qualities and means to ensure the operation of a system.

The conflict approach, also known as mutualism or a Marxist approach, is an approach, that analyzes societies socio-economically. It suggests that societies consist of social classes determined according to possessing means of production, and societies are formed according to that classification; thus the distribution of opportunities is not equal. According to this approach, transformation depends on conflicts. Consequently, education and law are superstructure institutions. The conflict approach attributes the function of political socialization to education in favor of dominant social classes. According to the conflict approach, the legal and educational systems are superstructure institutions that operate to maintain and protect a given socio-economic political system; thus they are formed accordingly (Macionis & Plummer, 2008). According to the conflict theory, constitutions, by definition, are not independent of the socio-economic structure, or rather, relations of production. Consequently, constitutions are the common legal documents for maintaining the interests of the dominant class. Social classes, cliques and categories, i.e. social groups, continuously struggle to monopolize education (Doğan, 2011). Conflict approaches depict education as a means of the political socialization of the dominant classes. Therefore, discussions of politics, law, constitutions and education are the reflection of class conflict.

The interactionist approach examines the relationships among individuals, groups and immediate environment at a micro scale. According to this point of view, behaviors and social events are the results of the interaction between the individual and their environment. An institutional behavior does not result from its internal dynamics and needs but, by definition, is formed through experience, attitude, perception and interaction among the members (Appelrouth & Edles, 2008). Symbols and values attributed to them are important in social life; human behavior is formed according to these values and meaning. Social life depends on how the actors interpret their roles. Social structure is the result of social and individual interaction; it is impossible to consider the society, which consists of individuals, without human beings. Both social and individual lives are built with symbols; one cannot sustain his life without symbols. Symbols are the things to which we attribute meaning. Without symbols, our social relationship would not be any different from animal communication. In a sense, it can be suggested that the interactions between the constitution and education have an important influence on the formation of some behaviors in individuals through the symbols created as a result of such an interaction. Thus, what is symbolized in legal documents and what meanings do they convey that are important?

Interpretive paradigm is an approach opposing the point of view that considers societies as organisms and interprets them at macro scale. This paradigm, in contrast



with functionalist and positivist approaches, suggests that social analyses are individual-based interpretations. Studies focus on micro level mini groups and individuals rather than a macro level. Relationships or struggle among small groups and individuals are studied instead of the results, common premises and hypotheses related to groups or clusters (İnal, 1994). The interpretive paradigm advocates instability, interaction, hierarchical order, holographity of the universe, uncertainty of the future, linearity of relations and mutual causality; the overall belief is that transformation is morphogenetic (Yıldırım & Şimşek, 2011). Internal, simple, micro situations and events are of interest rather than the general formation and functioning of institutions. The functioning of institutions is formed, maintained and reformed by immediate actors.

Postmodernist analyses are defined as a state of chaotic perceptions and understandings, which usually refers to uncertainty and on which discussions have not yet come to an end. Politically, it is observed that third world countries are divided on the basis of ethnicity and religion, and the industrialized world moves towards unity. In a sense, postmodernism is a movement against developed modernity following the industrial world. It considers all ideologies and beliefs as total understanding, predicting the questions in advance and providing certain answers to them (Heartney, 2001). On the other hand, postmodernism defines itself against modernity. In a socio-political point of view, postmodernism tries to be both radical and conservative (Eagleton, 1996). In a sense, postmodernism opposes positivism, behaviorism, functionalism and the conflict approach. However, what is to be replaced remains in question. From this point of view, relations among education, law and constitutions could be considered eclectic.

The main purpose of this study is to comparatively examine the rights of education, freedom of religion and conscience and religious education in the 1961 and 1982 Constitutions of the Republic of Turkey.

1. Which articles exist in the 1961 and 1982 Constitutions on the rights of education, freedom of religion and conscience and religious education?
2. What is the content of the articles on the rights of education, freedom of religion and conscience, and religious education in the 1961 and 1982 Constitution?
3. Do the articles on the rights of education, freedom of religion and conscience and religious education in the 1961 and 1982 Constitutions differ from each other in any way?

## Method

### *Design*

This study has an analytic research method. Analytic research goes into the division of document research and mixed method research (McMillan, 2004). In this study, document research is adopted as an analytic research method. Document

research involves examining concepts, thoughts and events by analyzing documents and records. Contextual information is crucial in interpreting the information obtained through document research (Ersoy, 2010). This study conducted document research because the main data source for the study was texts. Another reason for adopting such a research method is that social, cultural and political contexts play a significant role in interpreting constitutional documents.

#### *Data Sources*

The constitutions of 1961 and 1982 of the Republic of Turkey comprise the main data sources of the study. The articles on the rights of education, freedom of religion and conscience, and religious education in these Constitutions constitute the data source of this study. Additionally, later amendments to the related articles are reflected on the data.

#### *Analyzing and Interpreting the Data*

The data is interpreted and analyzed qualitatively as it mainly involves written documents. Descriptive and continuous comparative analysis method is used for the analysis of the data (Marshall & Rossman, 1999). Within this framework, the first aim was to find the manner and extent to which the concepts in the research questions appeared in the articles. These articles were then analyzed comparatively in both the 1961 and 1962 Constitutions, identifying the differences and similarities. The articles in the Constitutions were tabulated comparatively within the context of the research questions. The review of literature was cited for the purpose of reflecting the social, cultural and political contexts in which these Constitutions were created. Additionally, the data was discussed, associating assumptions of functionalist, conflict and postmodernist paradigms. In order to maintain reliability, peer analysis was also called for, leading to two different approaches in the analysis. Different paradigms in interpreting the data were applied respectively.

## **Results**

#### *The way the Constitutions of 1961 and 1982 consider the issues related to education*

Examining distribution of the articles on the rights of education, freedom of religion and conscience and religious education in the constitutions, it was observed that three articles in the Constitution of 1961 and seven in the Constitution of 1982 were directly related to education. The three articles in the Constitution of 1961 include religion education (article 19), control of education (article 21) and the education duty of the state (article 50). On the other hand, there are seven articles that are directly related to education in the Constitution of 1982. These articles include freedom of religion and conscience (article 24), freedom of art and science (article 27), right and duty of education (article 42) and Turkish citizens working abroad (article 62). Articles on freedom of religion and conscience in the Constitutions of 1961 and 1982 are presented in Table 1.

**Table 1***Freedom of Religion and Conscience in the constitutions of 1961 and 1982*

<i>The 1961 Constitution</i>	<i>The 1982 Constitution</i>
<p><b>Article 19-</b> Every individual is entitled to freedom of conscience, freedom of religion and freedom of thought. Forms of worship, and religious ceremonies and rites are provided freely as long as they are not in opposition to public order, morals or to the relevant laws. No person shall be compelled to worship, or participate in religious ceremonies and rites, or to reveal his religious faith and belief. No person shall be reproached for his religious faith and belief.</p>	<p><b>Article 24 -</b> Everyone has the right to freedom of conscience, religious belief and conviction.</p> <p>Acts of worship, religious services, and ceremonies shall be conducted freely, provided that they do not violate the provisions of Article 14. No one shall be compelled to worship, or to participate in religious ceremonies and rites, to reveal religious beliefs and convictions, or be blamed or accused because of his religious beliefs and convictions.</p>

It could be suggested that Table 1 shows no significant difference in terms of the consideration of freedom of religion and conscience in the 1961 and 1982 Constitutions. Both Constitutions have the common point that every individual is entitled to freedom of conscience; one is free to choose his own religious faith, his/her forms of worship, religious ceremonies and rites; and to express his own opinions. No person shall be compelled to worship, participate in religious ceremonies and rites or to reveal his religious faith and belief; no person shall be reproached for his religious faith and belief. In addition to this, in Article 14 of the 1982 Constitution it is stated that none of the rights and freedoms embodied in the Constitution shall be exercised with the aim of

- violating the indivisible integrity of the State,
- endangering the existence of the Turkish State and Republic,
- destroying fundamental rights and freedoms,
- placing the government of the State under the control of an individual or a group of people,
- establishing the hegemony of one social class over others,
- making discrimination on the basis of language, race, religion or sect, or
- establishing by any other means a system of government based on these concepts and ideas.

On the other hand, the related article of the 1961 Constitution was regulated within the framework of penal law with the amendments made on September 20, 1971 in order to prevent exploitation and abuse of religion, religious feelings or sacred issues through religion in any manner for the purpose of gaining political, personal benefit, power or through basing the fundamental social, economic political and legal order of the State on religious dogmas even to a partial extent.

*Regulation on Freedom of Religion and Conscience*

The articles in the 1961 and 1982 Constitutions on the regulation of freedom of religion and conscience are presented in Table 2.

**Table 2**

*Constraint of Freedom of Religion and Conscience in The 1961 and 1982 Constitutions*

<i>The 1961 Constitution</i>	<i>The 1982 Constitution</i>
<p><b>Article 19-</b> ... No person shall be allowed to exploit and abuse religion or religious feelings or sacred issues through religion in any manner for the purpose of gaining political, personal benefit, power, or through basing the fundamental social, economic political and legal order of the State on religious dogmas even to a partial extent.</p>	<p><b>Article 24-</b> ... No one shall be allowed to exploit or abuse religion or religious feelings, sacred issues through religion in any manner for the purpose of gaining political, and personal influence, or through basing the fundamental social, economic political and legal order of the State on religious dogmas even to a partial extent.</p>

Those who violate this prohibition, or those who induce others to do so shall be punishable under the pertinent laws. In the case of associations and political parties the former shall be permanently closed down by the order of authorized courts and the latter by the order of the Constitutional Court.

**AMENDMENT:** (20. 9. 1971) The provision of pertinent laws shall be applicable to all real and corporate bodies who violate this prohibition, or those who induce others to do so, and the political parties guilty of such violation shall be permanently closed down by the Constitutional Court.

Table 2 presents some common points in the 1961 and 1982 Constitutions regarding regulation of freedom of religion and conscience. First, it is maintained that the State shall not be organized on the basis of religion; no person shall be allowed to exploit and abuse religion or religious feelings or things considered sacred by religion in any manner. Moreover, in both Constitutions, under the provisions of the Act, those who violate this prohibition shall be punished. The Constitutional amendment is written in terms of strict regulations pertaining to the abuse of religion.

#### *Religious Education*

The articles in the 1961 and 1982 Constitutions on the regulation of religious education are presented in Table 3.

**Table 3**

#### *Religious Education in the 1961 and 1982 Constitutions*

The 1961 Constitutions	The 1982 Constitutions
<p><b>Article 19:</b> Religious education and teaching shall be subject to the individual's own will and volition, and in the case of minors, to the request of their legally appointed guardians.</p>	<p><b>Article 24:</b> Education and instruction in religion and ethics shall be conducted under State supervision and control. Religious Culture and Knowledge of Moral shall be compulsory in the curricula of primary and secondary schools. Other religious education and instruction shall be subject to the individual's own will, and in the case of minors, to the request of their legal representatives.</p>

Table 3 shows that while religious education and teaching in the 1961 Constitution is subject to the individuals' own will or that of their legal representatives, the course "Religious Culture and Knowledge of Morals" becomes compulsory in the curriculum of primary and secondary schools. There is an obvious differentiation regarding religious education. This alteration is far from being egalitarian, and it transforms religious education into an anti-democratic form.

#### *The Right of Education and Its Control*

The articles in the 1961 and 1982 Constitutions on the regulation of the right of education and control are presented in Table 4.

**Table 4***The Right of Education and Its Control in the 1961 and 1982 Constitutions*

<b>The 1961 Constitution</b>	<b>The 1982 Constitution</b>
<p><b>Article 21-</b> Every individual is entitled to acquire and impart science and arts, to disseminate knowledge, and to carry out all kinds of research in these fields.</p> <ul style="list-style-type: none"> <li>• Education and teaching shall be free under the supervision and control of the state.</li> <li>• The provisions governing private schools shall be regulated by laws in conformity with the level desired to be attained in state schools.</li> <li>• No educational institutions shall be set up which are incompatible with the principles of contemporary learning and education.</li> </ul>	<p><b>Article 42 –</b> No one shall be deprived of the right of learning and education. The scope of the right to education shall be defined and regulated by law.</p> <p>Training and education shall be conducted along the lines of the principles and reforms of Atatürk, on the basis of contemporary science and educational methods, under the supervision and control of the State. Institutions of training and education contravening these provisions shall not be established.</p> <p>The freedom of training and education does not relieve the individual from loyalty to the Constitution.</p>

While in the 1961 Constitution the right of education and its control is introduced in articles 21 and 50, the same issue is gathered under only one article (article 42) in the 1982 Constitution. As can be seen in Table 4, in the 1961 Constitution education is free under the supervision and control of the state; however, it is also stated that no educational institutions shall be set up that are incompatible with the principles of learning and education. On the other hand, in the 1982 Constitution, it is specified that education must be conducted along the lines of the principles and reforms of Atatürk, on the basis of contemporary science and educational methods and under the supervision and control of the State. It also dictates that institutions of education contravening these provisions will not be established. The provision that primary education is compulsory and free at the state schools is also included in the 1982 Constitution. It is also included in the 1982 Constitution that the State must take the necessary measures for those in need of special education.

In the 1961 and 1982 Constitutions, the common points pertaining to the right of education and its provision emphasize that primary education is compulsory and free at state schools; the State takes necessary measures to support financially deprived students as well as those who are in need of special education.

However, while the educational philosophy statement is indicated as “principles of contemporary learning and education” in the 1961 Constitution, it is emphasized

as “the lines of the principles and reforms of Atatürk, on the basis of contemporary science and educational methods”. The change was made in terms of the context; education was placed in a context that the military government of September 12 modeled exclusively rather than the principles of contemporary learning and education.

*The Provision and Utilization of Education*

The articles in the 1961 and 1982 Constitutions on the regulation of the provision and utilization of education are presented in Table 5.

**Table 5**

*The Provision and Utilization of Education in the 1961 and 1982 Constitution*

The 1961 Constitution	The 1982 Constitution
<p><b>Article 50-</b></p> <ul style="list-style-type: none"> <li>• One of the foremost duties of the State is to cater for the educational needs of the people. Primary education is compulsory for all citizens, male and female, and shall be provided free of charge in State Schools.</li> <li>• To ensure that outstanding students in need of financial support attain the highest level of learning consistent with their skills, the State shall assist them through scholarships and other means..</li> <li>• The State shall take the necessary measures for those in need of special education.</li> <li>• The state shall ensure the preservation of works and monuments of historical and cultural value.</li> </ul>	<p><b>Article 42 -</b></p> <ul style="list-style-type: none"> <li>• Primary education is compulsory for all citizens of both sexes and is free of charge in State schools.</li> <li>• The principles governing the functioning of private primary and secondary schools shall be regulated by law keeping with the standards set for State schools.</li> <li>• The State shall provide scholarships and other means of assistance to enable students of merit lacking financial means to continue their education.</li> <li>• The State shall take necessary measures to rehabilitate those in need of special education so as to render such people useful to society.</li> </ul>

As can be seen in Table 5, education is regulated as a duty of the state in the 1961 Constitution. The common points in the two Constitutions appear as follows: primary education is compulsory for all citizens, male and female, and is provided free of charge in state schools; furthermore, the fact that the state takes the necessary measures to support students in financial need is concluded as a contract. Additionally, taking necessary measures for those who need special education is another common point.

Comparing the 1961 and 1982 Constitutions in the context of the provision and utilization of education, no significant difference is observed. However, the following was added to the 1982 Constitution: "The principles governing the functioning of private primary and secondary schools are regulated by law in keeping with the standards set for state schools". The difference lies in the fact that there is a hesitant attitude towards privatization. Prudence to the provision of private education is an overall tendency.

### Discussion and Conclusion

Constitutions are the common basic legal documents of each government in the contemporary world. They constitute the basic foundations of the contemporary administration of a society and country. They have a determinative and dominant role for the government of countries as a result of these particular characteristics. Education, as a social institution, interacts with the legal system and has exclusive functions.

Freedom of religion and conscience is one of the issues discussed extensively and vehemently in Turkey. Religion and state affairs have been negatively affected due to the fact that the Republic of Turkey was founded on a large multicultural empire where capitalism did not develop over its own internal dynamics, and Turkey did not experience religious reformation. It is observed that the 1961 Constitution, which is generally described as a libertarian constitution, attempted to regulate the religion and state affairs to "protect secularism" (article 19) so that destroying the social order would be impossible. The state's control over religious education and religious institutions can be viewed as constitutionally secured. In reality, the Republic treats religion as a matter of public service and tries to control it. This tendency can be observed in the 1961 Constitution. However, the application of elective religious courses can be interpreted as a "compromise which violates equality". The religious education of some sects of Islam such as Alawites is ignored with this decision, while elective religious courses can be interpreted as the existence of a "relatively democratic" attitude.

One of the most problematic periods regarding freedom of religion and conscience seems to be the period after the 1982 Constitution. The main problem in terms of democratization is that religious education became compulsory with the 1982 Constitution. This is criticized as contrasting with the democratic principle of equality and the secular principle of "freedom for all faiths". It is claimed that religion is imposed through this perception, gaining scientific understanding is prevented and thus compulsory religious education must be abolished.

Susceptibility regarding secularism, freedom of religion and conscience and the hesitation to fight with fundamentalism are some of the biggest problems faced by the Republic of Turkey. Therefore, secularism must be examined in detail and through various dimensions.



Within the scope of this study, the following section summarizes different ideas related to this issue. In a general sense, secularism is meant to separate earthly and state affairs from religious affairs and authorities. Characteristics of secularism in terms of government can be summarized as follows: there is no official religion, the state administration and social affairs are not subject to religious rules and the legal system does not have to obey religious rules. On the other hand, in practice, the state's regulation of religious services as a public service is adopted as a component of secularism in Turkey (Deliveli, 2001).

The following conclusions can be reached regarding freedom of religion and conscience. Freedom of religion and conscience is the soft under-belly of the Republic. Although there is the tendency to protect secularism in the Constitutions mentioned, the practice is criticized severely in two ways. Some of the critics address compulsory religious education, while others claim that the people are under the pressure of religious education. In this context, the course "Religious Culture and Knowledge of Morals" should not be compulsory any more, and the curriculum of the course should be revised to be an elective one according to contemporary and secular principles. Religious education other than a sociological religious culture and history instruction must be left to religious institutions. The fact that the state remains at an equal distance to all religions must be regarded as a universal principle of secularism and making related regulations in the Constitutions should be considered an obligation. The need for a structure regarding the regulation of freedom of religion and conscience is the result of modernization, which means making life earthly. From this point of view, it could be suggested that religion-state affairs, freedom of religion and conscience and religious education in the Constitutions are regulated according to this basic perspective. The main problem is creating a synthesis of secularism, which will ensure both citizens' religious freedom and an absence of religious perspective in governmental bodies.

In the Republic of Turkey, regarding the right of education and its provision, improving and spreading education has been a dominant political practice. The main educational purpose of the new Republic was to make all citizens literate, particularly girls. This became subject to the constitutional guaranty and was spread particularly by the 1961 Constitution. The basic themes of learning science and arts, and the following statement in the 1961 Constitution that "no person's right of education can be violated", are protected in the 1982 Constitution with different expressions. However, both Constitutions frame education and teaching as being carried out under the supervision and control of the state. On the other hand, it is frequently discussed that education and teaching were restricted mentally through the statement "the freedom of training and education does not relieve the individual from loyalty to the Constitution" in the 1982 Constitution. For example, some suggest that this is a sign of the suspicion of the constitution maker about this right (Algan, 2007). In a sense, this can be interpreted as the reflex of the constitution maker for protecting the Republic. Mass psychology and social atmosphere are of vital

importance in the governance of a society. It can be suggested that a protective perspective is an instinct regarding social and socio-economic and political chaos before 1980.

The justifications for the approval of Religious Culture and Moral Education as an obligatory course in the Constitution must be emphasized as well. First of all, the political process cannot be isolated from the socio-economic regulation. Some chaotic situations and social problems experienced before 1980 caused a separation of people on the basis of belief and ethnicity (Dursun, 2005). When the discussion of the 1982 Constitution is examined, the main purpose of the military government could be seen as to create common values by introducing an obligatory Religious Culture and Moral Education course.

It can be clearly seen that Kemalism is often emphasized in the 1982 Constitution. The reason behind such an emphasis is the fact that pre-1980 chaotic situations threatened the national unity of the country and caused diversion from Ataturk's political path. The economy lack of productivity and the chaotic situation jeopardizing the security of people and their property was related to this diversion from Ataturk's principles (Kongar, 1995). In a way, Kemalism has been perceived as a uniting power over all political views and parties. Such a situation was seen as a basis to reflect the constitutional view. This has been reflected on issues such as education and secularism within the framework of military approval.

The presentation of the right of education and its provision exhibits common characteristics in the two constitutions. The Republic has attached importance to education and built its existence on this feature since its beginning. This is manifested in both Constitutions. However, the realization of the Constitutions is made possible through taking a position in the socio-economic structure. From this point of view, Turkey has been under the influence of privatization in the service sectors as well as through neo-liberal socio-economic policies starting even before 1980s. While the privatization of education creates some positive changes such as the spreading of education and the enlightening the state, it also negatively affects the equality of opportunities and creates social class problems in terms of access to education. From this point of view, a regulatory perspective concerning the supply and privatization of education is needed.

In general, it is possible to indicate a holistic and functionalist perspective in the 1961 and 1982 Constitutions in terms of sociological approaches. However, while the 1961 Constitution regulates the concept taken over from 1950s according to neo-classical and democratic development, the 1982 Constitution has a conservative and status quo centered consideration. This, in a sense, shows traces of conversion into a neo-liberal and postmodernist eclectic concept.

In conclusion, these points can be emphasized in terms of regulations regarding constitutions. In Turkey, the Constitutions were generally made in extraordinary periods, and they bear the traces of those periods. The Constitutions show characteristics of reactionary responses to the former socio-economic and politic events. Turkey is the first national state that aimed to become a secular, democratic

and social legal state while founded within an Islamic territory and a multi-cultural empire. From this point of view, the tendency to conserve the principles of secularism, democracy and social legal state that is emphasized in the 1961 and 1982 Constitutions is dominant. However, secularism and democracy perspectives seem contradictory according to different points of view. Constitutions are considered differently by different political, sociological and philosophical approaches. The management of society at a macro level and education and school at a micro level are not based solely on legal documents. There are effective socio-economic and political variables in determining and implementing legal regulations. Multidirectional and dimensional democratic processes must be applied during the preparation of the Constitutions for a healthy socio-political advancement and administration.

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### **Türkiye Cumhuriyeti 1961 - 1982 Anayasalarında Din-Vicdan Özgürlüğü, Din Eğitimi, Eğitim Hakkı ve Gelişme Eğilimleri**

#### **Atıf:**

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#### **(Özet)**

*Problem Durumu:* Demokratik toplumlar için anayasalar meşruiyetin temel dayanaklarıdır. Türkiye'nin son elli yılına 1961 ve 1982 anayasaları yön vermiştir. Bu bakımdan 1961 ve 1982 anayasalarında din-vicdan özgürlüğü, din eğitimi ve eğitim hakkı konularına yer verilmiş biçimleri, süreçte yapılan değişikliklerin incelenmesi ve akademik bir bakış açısıyla yorumlanması bir gereksinimdir. Bu, güncel anayasa tartışmalarına akademik bir katkı verilmesi gereksinimi açısından da önemlidir.

*Çalışmanın Amacı:* Bu araştırmanın temel amacı, Türkiye Cumhuriyeti'nin 1961 ve 1982 anayasalarındaki eğitim hakkı, din-vicdan özgürlüğü ve din eğitimi ile ilgili maddeleri karşılaştırmalı olarak incelemektir.

*Araştırmanın Yöntemi:* Araştırmada analitik araştırma desenlerinden doküman araştırması kullanılmıştır. Araştırmanın verileri Türkiye Cumhuriyeti 1961 ve 1982

Anayasa'larındaki eğitim hakkı, din-vicdan özgürlüğü ve din eğitime ilişkin maddeler oluşmaktadır. Veriler betimsel ve sürekli karşılaştırmalı olarak analiz edilmiştir. Verilerin yorumlanmasında ilgili anayasaların hazırlandığı ve uygulandığı sosyal, kültürel ve siyasal bağlamı yansıtmak için alanyazından alıntılar yapılmıştır.

*Araştırmanın Bulguları ve Yorum:* Her iki anayasada devletin din esasına göre düzenlenemeyeceği; din ve din duygularının veya dince kutsal sayılan şeylerin istismar edilemeyeceği ve kötüye kullanılmayacağı belirtilmiştir. Eğilim, dinin istismar edilmesine karşı katı düzenlemelerin yapıldığı ve çatışmalara karşı tekçi bir "uzlaşma" egemenliğinde işlevselcilik işleyişi biçimindedir. Din eğitim ve öğretimi 1961 Anayasası'nda kişilerin kendi isteğine ve küçüklerin kanuni temsilcilerinin isteğine bırakılırken, 1982 Anayasasında Din Kültürü ve Ahlak Bilgisi dersi ilk ve ortaöğretim kurumlarında zorunlu dersler arasına alınmıştır. Din eğitiminde kesin bir farklılaşma söz konusudur. İki anayasada ilköğretim kız ve erkek bütün yurttaşlar için zorunlu ve devlet okullarında parasız olması, yoksun başarılı öğrencilere öğretimin her kademesinde destek verileceği ve özel eğitime gereksinim duyanlar için gerekli önlemlerin alınacağı belirtilmiştir. Eğilim işlevselci yaklaşımın demokratik değerlerle güçlendirilmesi biçimindedir.

*Sonuç ve Tartışma:* Din ve vicdan özgürlüğü Türkiye'de sıkça ve sert tartışılan konularından biridir. Din derslerinin zorunlu okutulması anayasa yapımı açısından da tartışmalıdır. Türkiye Cumhuriyeti Anayasası genel ilkeleri ortaya koyup "çerçeve anayasa" anlayışı benimseyip olası durumları düzenlemek isteyen anayasa yerine sıkı, sert yani "kazuistik" yöneme yer verilmiştir. Genel olarak 1961 Anayasası'ndan 1982 Anayasası'na geçişte sertlik, katılık ve zor değiştirilebilirlik niteliklerinin güç kazandığı görülmektedir. Din ve vicdan özgürlüğü konusunda daha özgürlükçü ve eşitlikçi anayasal düzenlemelerin yapılması önerilebilir. Eğitimde özelleştirme çabaları erken Cumhuriyet'ten beri eğitimin önemli argümanı olan fırsat ve olanak eşitliği ilkesini zedelemektedir. Bu açıdan anayasal tartışma ve olası düzenlemeler postmodern ve neo-liberal etkilerin altındadır.

*Anahtar Sözcükler:* Anayasa, din-vicdan özgürlüğü, eğitim hakkı, postmodernizm, işlevselcilik, etkileşimselcilik, çatışmacı yaklaşım



## Irrational Beliefs and Abuse in University Students' Romantic Relations

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### Abstract

*Problem Statement:* The complex nature of romantic relationships, in general, makes the continuation of these relationships a challenge. This situation is even more problematic in traditional societies, as social norms for these relations are more strict and more disciplinarian. University students want to be in romantic relationships due to their current state of development. However, when they decide to be in a relationship, they meet a variety of social pressures; some even feel guilt as a result of the negative connotations attached to relationships. This situation affects satisfaction in romantic relationships, causes irrational beliefs and may lead to abuse in relationships. The purpose of this study is to determine whether university students' irrational beliefs are related to and a predictor of problem-solving behavior in their romantic relationships.

*Methods:* This study was conducted among 320 students from the Ondokuz Mayıs University, Faculty of Education. The Relationship Belief Inventory (RBI) and Problem Solving Scale in Romantic Relationships for Adolescents (PSSRR-A) were employed during data collection. Data was analyzed using the SPSS 15 statistical package.

*Findings and Results:* Pearson correlation analysis results showed a positive correlation between beliefs of helplessness and physical ( $r = .148, p < .01$ ) and emotional abuse ( $r = .250, p < .05$ ), but showed a significant negative correlation between beliefs of helplessness and problem solving. Also, beliefs of being unlovable and physical ( $r = .198, p < .01$ ) and emotional abuse ( $r = .123, p < .05$ ) correlated positively, while there was a significant negative correlation between beliefs of being unlovable and problem solving ( $r = -.165, p < .01$ ). In addition, the results of the stepwise multiple regression analysis indicated that beliefs of helplessness are a positively correlated predictor of emotional abuse ( $R^2 = 0.062, t = 4.603, p < 0.001$ ) and a

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negatively correlated predictor of problem solving ( $R^2= 0.057$ ,  $t= -4.384$ ,  $p<0.001$ ). Likewise, beliefs of being unlovable are a positively correlated predictor ( $R^2= 0.39$ ,  $t=3.611$   $p< 0.01$ ) of physical abuse.

*Conclusions and Recommendations:* Irrational beliefs of university students in romantic relationship are associated with physical and emotional abuse and problem-solving behaviors in their relationships and can also be a predictor of abusive behavior. Because abuse in young people's romantic relationships has become more widespread, sometimes threatening the physical and mental health of partners, these findings may help provide more effective psychological help for those suffering such abuses. The findings show that professionals (psychiatrists, psychologists, counselors, etc.), especially those dealing with university students' psychological health, need to focus on students' irrational beliefs when dealing with abuse.

*Keywords:* Irrational beliefs about romantic relationships, students, helplessness, unlovability, problem solving, abuse.

Romantic relationships during university years, which correspond to the late adolescent period, play an important role in individuals' development. The late adolescent period involves a transition to early adulthood, during which individuals experience cognitive, social and emotional changes that play an important role in developing fundamental behaviors to better adjust to adulthood (Sarı, 2008). Individuals learn how to improve relationships and how to interact with others through romantic relationships (Skipper & Nass, 1966; Feldman, Rosenthal, Brown & Canning, 1995). They also meet socio-psychological needs, like belonging, intimacy, sharing and social support, within these relationships, and they experience the positive effects of romantic relationships on their self-esteem and personal development (Pistole, 1989; Connolly & Konarsky, 1994; Feiring, 1996; Furman & Schaffer, 2003; La Greca & Harrison, 2005).

Important aspects of effective social relationships are shaped within each new relationship, including relations with the opposite sex. As adolescents move into adult, they need to redefine their relationship systems (Kirchler, Palmonari & Pombeni, 1993). Achieving this is a very difficult task for adolescents, so conflict and confusion can become the sources of important problems in their development. Some researchers (Elliott, Sheridan & Gresham, 1989; Silverman & DiGiuseppe, 2001; Altıntaş, 2006) suggest that social skills are very important in reinforcing and damaging adolescent relations with the opposite sex. They also claim that having good social skills makes social acknowledgement easier; therefore, those who have stronger social skills can be more successful in solving relationship problems.

Although romantic relationships usually start with liking, love, and attachment, it is not easy to maintain satisfaction and compatibility over time. The distinctive developmental nature of every romantic relationship affects relationship satisfaction. Dissatisfactory relationships can cause adolescents who struggle to cope with the



difficult nature of their own personal development to have even more profound conflicts, which they might not have enough knowledge and skills to solve, which thereby leads them to have more difficulty in their relationships. This vicious circle can lead to developing negative perceptions of relationships.

Because the perceptions and expectations that are produced by first romantic relationships provide perspectives for future relationships, these relations determine both the quality of intimate relationships that will be established during adulthood and an individual's partner choice throughout the marriage process (Furman, 2002). Adolescents' beliefs about romantic relationships are one of the most important elements that affect their relationship expectations. Beliefs about dysfunctional romantic relationship significantly affect relationship satisfaction, commitment, attachment and trust (Eidelson & Epstein, 1982), and play an important role in shaping a more successful relationship. Some researchers (Markman, Floyd, Stanley & Storaasli, 1988; Baucom, Sayers & Sher, 1990; Sharp & Ganong, 2000) suggest that adolescents' irrational thoughts and beliefs about themselves, their partners and their relationships promote problems and disharmonies in their relationships. Irrational beliefs are related to cognitive distortions. These beliefs are thoughts that are fixed, hard to change and incompatible with reality. Due to irrational beliefs, people may show unhealthy emotions, dysfunctional behaviors and psychological disorders (Ellis & Dryden, 1997). It has claimed that the first childhood relationships are important in the development of these beliefs, that the children from families that base their problem-solving on abuse and violence have stronger tendencies toward violence when solving problems (Foshe, 1996; Malik, Sorenson & Aneshensel, 1997), and that these beliefs are transmitted through culture and the family (Can, 2009).

As previously stated, irrational thought can cause destructive behavior and disharmony in the relationship (Sari, 2008; Metts & Cupach, 1990), whereas rational and functional thought increases the harmony and satisfaction in the relationship (Sullivan & Schwebel, 1995). When individuals' beliefs about relationships are unrealistic and dysfunctional, the possibility of having problems in their relationships increases (Friedman & Whisman, 1998; Moller, Rabe & Nortse, 2001), due to their less constructive conflict-resolution behavior (Metts & Cupach, 1990). According to Bradbury and Fincham (1993) and Christian, O'Leary and Vivian (1994), individuals who have irrational beliefs often include negative problem-solving methods in their relationships. Therefore, determining individuals' romantic relationship beliefs will make it easier to understand the social behaviors and expectations they explicitly and consciously express about their romantic relationships (Miga, Hare, Allen & Manning, 2010).

This research aims to understand the modes of conflict resolution styles adolescents use in their romantic relationships and the relationship between these styles and irrational beliefs. Understanding of the unhealthy problem-solving modes, along with determining the predictive power of the variables that affect these problem-solving styles, could contribute to additional research on adolescent romantic relationships. In addition, the findings of this study could also increase

psychologists' and counselors' awareness when counseling adolescents, especially in regard to changing unhealthy problem-solving styles in romantic relationships.

The existence of conflicts and problems in romantic relationships affects the relationship's development. However, the strategies and behaviors that are used to resolve conflicts determines the course of the relationship (Christensen & Shenk, 1991; Kurdek, 2002). The marriages of individuals who show destructive behaviors when they have negative emotions in their relationships tend to result in divorce more often (Gottman, 1993). Research has discovered that the methods used to solve problems predict relationship satisfaction better than the importance of the problem (Troy, 2000; Cramer, 2000; Metz & Epstein, 2002). It has been shown that abusive behaviors, such as psychological and heavy physical violence, weaken self-esteem by making the development of love difficult in the romantic relationships (Jezl, D.R., Molidor,, C.E., & Wright, L.T. 1996). Also, individuals who were rejected during childhood or exposed to or witnessed physical violence are more often involved in dating violence during adolescence (Hickman, Jaycox, & Aronoff, 2004). Other previously determined relationships include the link between irrational beliefs and anxiety (Çivitçi, 2006), hopelessness (Göller, 2010), communication skills (Altıntaş, 2006) and interpersonal problem-solving skills (Ağır, 2007; Yıkılmaz, 2009).

The good news is that training programs on prevention of cognitive distortions have been found to improve problem-solving skills. The findings of this research indicate that irrational beliefs deepen the problems of relationship and impede understanding the problem itself. This study focused on the problem as a form of problem solving in romantic relationships, and also the relationship between irrational beliefs and emotional and physical. Ultimately, it is hoped that educational programs on irrational beliefs will contribute to the problem-solving approaches individuals use in their relationships. It is assumed that problem-solving behaviors in marriage are a continuation of pre-marriage behaviors; therefore, when it is considered that the behaviors displayed in romantic relationships can be maintained in marriage, it is understood that teenagers and adolescents must be educated about acceptable and proper behavior. Some parts of this training must aim to change the perspective that causes conflicts and problems. Quite a number of studies have been done concerning the connection between irrational beliefs and conflicts in relationships. However, research that can determine how and which irrational beliefs and thoughts highlight problem-solving behaviors in romantic relationships has not been seen much in the literature. Therefore, this study tested the following hypotheses:

1. There is a significant correlation between irrational beliefs about relationships and problem solving and abuse in romantic relationships.
2. Irrational beliefs about relationships are significant predictors of problem-solving difficulties and abuse in romantic relationships.

## Method

### *Participants*

The study sample consisted of 320 students who have been studying in various faculties at 19 Mayıs University: 210 of the students were female and 110 were male. The mean age was 18.53 ( $S= 1.12$ ). Participants were randomly chosen amongst the volunteers who either had a relationship for a period of at least six months or who have been in their current relationship for at least six months.

### *Research Instruments*

*Relationship Belief Inventory (RBI).* The Relationship Belief Inventory (RBI), which was developed by Kalkan (2006) to measure individuals' irrational beliefs about romantic relationships, consists of 20 items. In the validity study of RBI, construct validity and similar validity scales were used. The results of the factor analysis that were used to determine the construct validity of the scale indicated the two factors "helplessness" and "unlovability", explaining 35.84 % of total variance. The Irrational Belief Scale (IBS) and Dysfunctional Attitude Scale (DAS) were used to calculate the similar validity scale of the inventory. The data showed that the correlation between the scores from RBI and IBS was .24 ( $p<.05$ ), and .32 ( $p<.01$ ) from RBI and DAS. While the internal consistency reliability of the whole scale was found to be .87, the test re-test reliability coefficient was calculated as .74. For the "Helplessness" subscale, the internal consistency coefficient was .78 and the test re-test reliability coefficient was .69; for the "Unlovability" subscale, the internal consistency coefficient was .80 and the test re-test reliability coefficient was calculated as .71. These values were at acceptable levels for the reliability of RBI.

*Problem Solving on Romantic Relationships Scale for Adolescents (PSRRS-A).* The scale, which was developed by Kalkan (2008) to determine adolescents' problem-solving behaviors in romantic relationships, consists of 38 items and is a 5-item Likert type instrument. Construct validity was used to test the validity of PSRRS-A. The Kaiser-Meyer Olkin value and Barlett test were done during the first stage of the factor analysis. Accordingly, the Kaiser-Meyer Olkin value was 0.84 and the result of the Barlett test was found significant as (4846.898,  $p<.000$ ).

Afterward, the varimax rotation technique was applied to determine the sub-scales and to examine the factor structure of the scale. According to the results of the principal component analysis, three factors accounted for 37.93 % of the total variance and their eigen value was over 26.19 %. This variance was derived from the first factor "Emotional Abuse", which contained 15 items. "Physical Abuse", the second factor, consisted of 13 items and accounted for 6.87 % of the total variance. "Problem Solving", the third factor, contained 10 items and accounted for 4.86 % of the total variance. The Cronbach Alpha reliability coefficient calculated for the whole scale was found as .91. The Cronbach Alpha reliability coefficient for the sub-scales of the inventory was calculated as follows: the "Emotional Abuse" sub-scale was  $\alpha=.86$ , the "Physical Abuse" sub-scale was  $\alpha=.80$ , and the "Problem Solving" sub-scale was  $\alpha=.76$  (Kalkan, 2008).

*Data Collection and Analysis*

Measurement instruments were applied to the volunteer student participants in around 20 minutes, and analysis of the obtained data was done using SPSS 15.0. Pearson's Product Moment correlation and multiple linear regression analysis were used as the statistical analysis technique.

**Results**

Results and analysis regarding the correlation between university students' irrational belief about relationships and problem-solving and abuse are provided below.

*Correlation between irrational beliefs about relationships and problem-solving and abuse in romantic relationships.* The correlation between irrational beliefs about relationships and problem solving and abuse in romantic relationships among university students was tested using Pearson's correlation analysis, and the results are shown in Table 1.

**Table1**

*The Correlation Between Irrational Beliefs about Romantic Relationships and Problem-Solving Behaviors*

	<i>Physical Abuse</i>	<i>Emotional Abuse</i>	<i>Problem Solving</i>
Helplessness	.148*	.250**	-.239*
Unlovability	.198*	.123**	-.165*

When the findings in Table 1 were analyzed, it was seen that there is a positive significant correlation between helplessness and physical abuse ( $r = .148, p < .01$ ) and emotional abuse ( $r = .250, p < .05$ ); also, there is a negative significant correlation between helplessness and problem solving ( $r = -.239, p < .01$ ). It was also found that there is a positive significant correlation between beliefs of unlovability and physical- ( $r = .198, p < .01$ ) and emotional abuse ( $r = .123, p < .05$ ), and a negative significant correlation between unlovability and problem solving ( $r = -.165, p < .01$ ).

*Regression analysis of irrational beliefs about relationships and problem-solving and abuse in romantic relationships.* Multiple linear regression analysis was used to test the second hypothesis of the study. Before the multiple linear regression analysis was done, inter-correlations for predictor variables were examined to determine whether there was a multicollinearity problem among predictor variables. The results of the Pearson's Product-Moment Correlation analysis showed that there was not a multicollinearity problem and that the sub-scales were independent of each other. After it was determined that the Linear Multiple Regression analysis assumptions were met, the analysis was carried out. The result of this regression analysis -- in which helplessness and beliefs of unlovability predict physical abuse, emotional abuse and problem-solving -- are presented in Table 2.

**Table 2**

*Linear Regression Analysis of How Irrational Beliefs Predict Problem-Solving Behaviors in Romantic Relationships*

<i>Variable</i>		$\beta$	<i>t</i>	<i>P</i>	$R^2$
Physical Abuse	Unlovability	.198	3.611	.000	.039
Emotional Abuse	Helplessness	.250	4.603	.000	.062
Problem Solving	Helplessness	-.239	-4.384	.000	.057

As seen in Table 2, irrational beliefs about relationships are significant predictors of problem-solving difficulties and abuse in romantic relationships. Beliefs of “unlovability” significantly predicted physical abuse ( $R^2=0.39$ ,  $t=3.611$   $p < 0.01$ ). In addition, beliefs of “Helplessness” in relationships significantly predicted emotional abuse ( $R^2= 0.062$ ,  $t=4.603$ ,  $p < 0.001$ ) and negatively predicted ( $R^2= 0.057$ ,  $t= -4.384$ ,  $p < 0.001$ ) problem solving. In one stage, regression analysis of problem solving and abuse that was predicted by irrational beliefs was completed for each dependent variable. For physical abuse, the “unlovability” score that accounted for 3.9 % of variance was included in the equation. For emotional abuse, the “helplessness” score that accounted for 6.2 % of the variance of the dependent variable, was included in the equation. As for the problem-solving, “helplessness” was included in the regression equation, and it was seen that it accounted for 5.7 % of the dependent variable. When the regression coefficient signs were examined, a positive correlation was seen between beliefs of “helplessness” and “unlovability” in relationships and physical- and emotional abuse was positive; however, the correlation with problem solving was negative.

### Conclusions and Recommendations

This study examined the relationship between university students’ irrational beliefs about relationships and problem-solving and abuse in their romantic relationships. The study also investigated whether these beliefs predict problem-solving and abuse in romantic relationships. In this study, irrational beliefs relationships were examined in the dimensions of “helplessness” and “unlovability”. Both showed a positive correlation with physical and emotional abuse, and a negative correlation with problem solving. Moreover, it was seen that beliefs of “unlovability” and “helplessness” positively predicted physical abuse, but negatively predicted problem solving. This finding has revealed that believing helplessness and having the idea of being unloved in relationships block a positive approach to resolving conflicts. Furthermore, having these thoughts reinforces physical and emotional abuse.

When related field literature was examined, studies showed that cognitive biases and irrational beliefs about relationships cause problems in relationships and affect

relationship satisfaction. Irrational beliefs have also been found to have an adverse effect on some psychological characteristics (Çivitçi, 2006; Göller, 2010), on interpersonal problem-solving skills (Yıkılmaz, 2009) and on communication skills. The study of Metts & Cupach (1990) determined that there is a relationship between irrational relationship beliefs and abandonment and neglect. Bradbury and Fincham (1993) found a positive relationship between the incidence of problem-solving behaviors of couples and irrational beliefs. Christian, O'Leary and Vivian (1994) determined that there is a negative significant relationship between positive problem-solving behaviors and irrational beliefs.

This study has revealed that physical abuse is predominantly predicted by the belief of unlovability, and emotional abuse by helplessness. Once more, it was determined that the belief of helplessness predicted problem solving in a negative way. These findings draw attention to beliefs regarding romantic relationships as a source for abuse. The existence of these kinds of behaviors prevents people from seeing the world in a realistic way and being open to new input (Beştav, 2007). Therefore, in situations where individuals have problems with their partners, the existence of irrational relationship beliefs makes it difficult to practice positive problem-solving behaviors, such as trying to find the reason behind the problem, understanding partner's feelings, sharing one's own feelings, and giving opportunities for mutual expression of expectations. Some studies (Carich, Kassel & Stone, 2001) have shown that individuals who display abusive behaviors have difficulty in understanding feelings and lack empathy. While rational thoughts include ideas that make it easier to reach selected targets for happiness and survival, irrational thoughts consist of ideas that hinder, ruin and obstruct individual's ability to reach these targets, as irrational beliefs consist of consistent and generalized cognitive structures that carry problematic conditions into relationships.

Consequently, irrational beliefs about relationships are related to physical and emotional abuse, and have the predictive power for these abuses. These findings show that psychological counselors, especially those working with adolescents, have to focus their attention on irrational beliefs while examining abuse in relationships. Moreover, mental health practitioners who examine adolescents' relationship problems must develop appropriate treatments programs to reveal patients' irrational beliefs, as doing so may prevent abuse in adolescent romantic relationships. However, guided counseling programs should also facilitate adolescents' understanding of and ability to convey their love. In addition, organizing training programs and providing resources that deal with hopelessness may lead adolescents to try out more rational ways of solving both personal and relationship problems.

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#### **Examples of Problem Solving on Romantic Relationships Scale for Adolescents.**

- I say things that enrage him/her.
- I would not devote him/her time.
- I do not allow him/her to meet with others.
- I become obstinate with him/her and wait for him/her to feel sorry.
- I would show with my behaviour that I do not care about him/her.
- I would threaten to harm him/her or things that him/her cared about.
- I behave to make him/her jealous.
- I say humiliating things to him/her.
- I say that I do not love him/her.

### Examples of Items of Romantic Relationships Belief Inventory

I think that our relationship is unsuccessful when my partner and I do not agree.

When things go wrong in my relationship, I blame myself.

Even though I have difficulties in my relationship, I should look strong

I need my partner; I cannot live without him/her.

As long as my partner does not love me, I am nothing

## Üniversite Öğrencilerinin Romantik İlişkilerinde İrrasyonel İnançlar ve İstismar.

### Atıf:

Kaygusuz, C. (2013). Irrational beliefs and abuse in university students' romantic relations. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 141-156.

### (Özet)

*Problem Durumu:* İnsan ilişkileri her geçen gün daha fazla zorlanmayla yüz yüze kalmakta, bu zorlanmalar birçok ilişkide saldırgan davranışların ortaya çıkmasına yol açmaktadır. Ergenlik ve genç yetişkinlik döneminde ilişkilerin sürdürülmesi bu dönemlerin kendine özgü, kimlik arayışı, geleceğe yönelme, yetişkinlik toplumsal rollerine uyum için ön hazırlık yapabilme gibi güçlükleri nedeniyle daha da zorlanmaktadır. Ergenlik dönemi romantik ilişkilerinin kendine özgü doğası bu zorlanmaları derinleştirmekte; ilişkiler tahrip edici bir hal almakta, romantik ilişki sürdüren ergenler zaman zaman partnerinin yaşamını tehdit edecek düzeyde ilişki sorunları yaşayabilmektedirler. Bir çok geleneksel ya da yarı geleneksel toplumda olduğu gibi Türkiye'de romantik ilişki alanı oldukça sorunludur, çünkü, romantik ilişkileri düzenleyen toplumsal normlar daha katı ve daha baskılayıcıdır. Üniversite yıllarının başlangıcını da içine alan ergenlik dönemi içinde olan gençlerin romantik ilişkileri sürdürürken çoğu kez arzularıyla toplumsal normlar arasında kaldıkları; bu çatışmalı hal nedeniyle zaten zorlanarak sürdürdükleri ilişkilerde çoğu kez başarısız oldukları ve yıkıcı davranışlara yöneldikleri gözlemlenmektedir. Üniversite öğrencileri yaşları gereği romantik ilişki içinde olmak istemekte; bu ilişkiler aracılığı ile kendilerini gelecek ebeveyn rollerine hazırlamaktadır. Ancak, geleneksel değerler nedeniyle toplumsal olarak henüz onaylanmamış (sözlülük-nişanlılık-evlilik gibi) romantik ilişkiler sürdüren gençler, bu ilişkilerinde yeteri kadar rahat olamadıklarından romantik ilişkilerinde yeterli doyum sağlayamamakta, ilişkilerde akılcı olmayan inançlar geliştirebilmekte ve bu durum ilişkilerde oldukça yaygın istismara yol açabilmektedir.

*Araştırmanın Amacı:* Bu çalışmanın amacı, romantik ilişkilerde ortaya çıkan sorunların çözülmesindeki stratejilerle akılcı olmayan inançların ilişkili olup olmadığı irdelemek ve bu inançların romantik ilişkilerde fiziksel ve duygusal istismarı ve problem çözmeyi anlamlı biçimde yordayıp yordamadığı araştırmaktır. Bu amaç doğrultusunda, iki soruya yanıt aranmıştır:

1. Romantik ilişkilerde istismar ve problem çözme ile akılcı olmayan inançlar arasında bir ilişki var mıdır?
2. Akılcı olmayan inançlar romantik ilişkilerde istismar ve problem çözmenin anlamlı yordayıcıları mıdır?

*Araştırmanın Yöntemi:* Araştırmaya Ondokuz Mayıs Üniversitesi'nin çeşitli fakültelerinde öğrenim gören, 210 kız, 110 erkek, toplam 320 öğrenci katılmıştır. Katılımcılar geçmişte en az altı ay ilişki sürdüren ya da halen en az altı aydır romantik ilişkisi olan kişilerden seçilmiştir. Araştırmada, Kalkan tarafından geliştirilen ve romantik ilişkilerde akılcı olmayan inançları ölçen 20 maddelik *İlişkilerde İnanç Envanteri (İİE)* ile yine Kalkan tarafından geliştirilen ve ilişkilerde sorun çözme davranışlarını ölçen *Ergenler İçin Romantik İlişkilerde Sorun Çözme Ölçeği (ERİŞÇÖ)* kullanılmıştır. Her iki ölçeğinde geçerlik ve güvenilirlik çalışmaları ilgili araştırmacı tarafından yapılmış ve ölçeklerin geçerli ve güvenilir olduğu saptanmıştır. *İlişkilerde İnanç Envanteri* "çaresizlik" ve "sevilmezlik" olmak üzere iki boyutludur. *Ergenler İçin Romantik İlişkilerde Sorun Çözme Ölçeği* ise, fiziksel istismar, duygusal istismar ve soruna yönelme olmak üzere üç boyutlu olup toplam 38 maddeden oluşmaktadır. Gönüllü öğrencilerden toplanan verilerin analizi SPSS 15.0 paket programı kullanılarak yapılmıştır. İstatistiksel analiz tekniği olarak Pearson momentler çarpımı korelasyonu ve bağımsız değişken üzerinde birden fazla bağımlı değişkenin etkisini ve değişkenler arası ilişkinin gücünü saptamak için kullanılan aşamalı çoklu regresyon analizi kullanılmıştır

*Araştırmanın Bulguları:* Araştırmada yanıtlanması hedeflenen sorulardan biri olan, ilişkilerde akılcı olmayan inançlar ile romantik ilişkilerde fiziksel ve duygusal istismar ve problem çözme/soruna yönelme arasında ilişki olup olmadığını, test etmek amacıyla veriler Pearson korelasyon analizine tabi tutulmuş; sonuçlar, çaresizlik inancıyla fiziksel istismar ( $r = .148, p < .01$ ) ve duygusal istismar ( $r = .250, p < .05$ ) arasında olumlu anlamlı; çaresizlik inancının problem çözmeyle olumsuz anlamlı ( $r = -.239, p < .01$ ). korelasyonu olduğunu göstermiştir. Sevilmezlik inancı ile fiziksel istismar ( $r = .198, p < .01$ ) ve duygusal istismar ( $r = .123, p < .05$ ) arasında anlamlı olumlu korelasyon olduğu; yine, sevilmezlik inancı ile problem çözme davranışı arasında anlamlı ( $r = -.165, p < .01$ ) olumsuz korelasyon olduğu bulunmuştur.

Araştırmanın ikinci problemine, yani, ilişkilerde akılcı olmayan inançların ergen romantik ilişkilerinde fiziksel ve duygusal istismar ve problem çözme/soruna yönelmeyi anlamlı biçimde yordayıp yordamadığına ilişkin soruya yanıt bulmak için yapılan aşamalı çoklu regresyon analizi, ilişkilerde akılcı olmayan inançlardan çaresizlik inancının duygusal istismarın olumlu anlamlı ( $R^2 = 0.062, t = 4.603, p < 0.001$ ), problem çözme/soruna yönelmenin olumsuz anlamlı ( $R^2 = 0.057, t = -4.384, p < 0.001$ )

yordayıcısı olduğunu göstermiştir. Sevilmezlik inancı ise fiziksel istismarın olumlu anlamlı ( $R^2= 0.39$ ,  $t=3.611$   $p< 0.01$ ) yordayıcısıdır.

*Tartışma ve Yorum:* Üniversite öğrencilerinin romantik ilişkilerinde akılcı olmayan inançları, onların ilişkilerinde fiziksel istismar, duygusal istismar ve problem çözme/soruna yönelme davranışlarıyla ilişkilidir. Ayrıca ilişkilerde akılcı olmayan inançlardan çaresizlik inancı duygusal istismarın olumlu anlamlı, problem çözme/soruna yönelmenin olumsuz anlamlı yordayıcısıdır. Akılcı olmayan inançlar alt boyutlarından sevilmezlik inancı ise fiziksel istismarın olumlu anlamlı biçimde yordamıştır.

Son zamanlarda gençlerin romantik ilişkilerdeki istismarlarının bazen partnerlerinin fiziksel ve ruhsal sağlığını tehdit eden biçimlere ulaştığı göz önüne alındığında, bu bulgular öğrencilere götürülecek etkili psikolojik yardımda işlevsel olabilir. Örneğin, çaresizlik inancı duygusal istismara yol açmakta ve problem çözme/soruna yönelme davranışını engellemektedir. İlişkilerinde sorun yaşayan ve çaresiz hisseden kişilerin çaresizlik duygularına yapılacak psikolojik müdahaleler o kişilerin ilişkide istismarcı davranmalarını engelleyebilecektir. Yine, sevilmezlik inancının fiziksel istismarın tetikleyicisi olduğu anlaşıldığından sevilmezlik inancını pekiştiren olumsuz algılarla mücadele etmek, fiziksel istismarın azalmasına katkı sağlayabilecektir. Bulgular, özellikle üniversite öğrencilerinin psikolojik sağlığıyla ilgilenen profesyonellerin (psikiyatr, psikolog, sosyal hizmet uzmanı ve psikolojik danışman gibi) istismarla çalışırken onların akılcı olmayan inançlarına odaklanması gerektiğini göstermektedir.

*Anahtar Sözcükler:* Romantik ilişkilerde irrasyonel inançlar, öğrenci, çaresizlik, sevilmezlik, problem çözme, istismar.



## The Predictive Value of Teachers' Perception of Organizational Justice on Job Satisfaction

Cevat ELMA\*

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### Abstract

*Problem Statement:* For individuals and organizations alike there has been a recent upsurge in significance of employees' perceptions toward their work and their job satisfaction. The concept of organizational justice has evolved to include almost all aspects of organizational life, particularly employees' attitudes toward work. While a significant amount of research has been performed on the relationship between organizational justice and job satisfaction, few studies have been conducted in the field of education. In this regard, this study may provide support to close this gap in the education area.

*Purpose of the Study:* This study aims to determine the organizational justice perceptions of primary school teachers and the predictive value of those perceptions on the teachers' job satisfaction.

*Method:* This study uses correlational survey to investigate the predictive value of organizational justice on teachers' job satisfaction. The predictive value of primary school teachers' perceptions of organizational justice on their job satisfaction is evaluated by means of two scales designed by the researcher. The population of this study consists of teachers working in public primary schools in the city of Samsun. The number of public primary schools and teachers was taken into account, and the technique of stratified sampling was used in the selection of the sample. "Organizational Justice" and "Job Satisfaction" scales were designed for teachers by the researcher. Bivariate correlation and multiple regression analyses were used in the data analysis.

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*Findings:* The correlation analyses suggest a positive and significant relationship between the organizational justice types and job satisfaction dimensions. In overall job satisfaction, the relative order of significance for the organizational justice types was interactional, procedural, and distributive. Interactional justice and procedural justice have significant predictive values on overall job satisfaction whereas distributive justice does not have a significant predictive value.

*Discussion and Results:* In organizations such as schools, where interaction plays an important role, the principals should be even more sensitive to problems that may have a negative predictive value on the perceptions of justice and, for this reason they should take necessary steps to prevent any such perceptions. As this study concludes, procedural and interactional justice types have a significant predictive value on teachers' job satisfaction. In this context, it is up to the managers to be more careful in the work relations. Forming relations and promoting cooperation and collaboration depend to a large extent on a positive and open school climate. In this sense, the establishment of such climate by the principals will have a positive predictive value on both the teachers' perception of justice and their job satisfaction.

**Keywords:** Organizational Justice, Distributive Justice, Interactional Justice, Procedural Justice, Job Satisfaction

Job satisfaction is one of the most widely studied issues in organizational behavior and management (Lee, 2000) and can be defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p.1300). Job satisfaction is also defined as a function of work-related rewards and values. Similarly, Mottaz (1988) regards job satisfaction as an effective response resulting from an evaluation of a work situation. Job satisfaction can be described as a general feeling about the job or as a related constellation of attitudes about various facets of the job (Lee, 2000). A job satisfaction facet can be related to pay, benefits, promotion, work conditions, supervision, organizational practices, and relationships with co-workers (Misener, Haddock, Gleaton, & Ajamieh, 1996). Recently, employees' attitudes toward their work and their job satisfaction have gained significance for individuals and organizations. Research findings suggest that insufficient consideration of human needs in the workplace leads to the intent to leave, absenteeism, slowing down of work, and similar defensive behaviors, which increase economic losses (Balci, 1985). Therefore, a balance needs to be struck between ensuring job satisfaction for hardworking employees and attaining organizational targets. Striking this balance is viewed as a factor that strengthens the employee's perception of organizational justice; a high perception of justice leads to more job satisfaction (Martin & Bennett, 1996; Tang, & Sarsfield-Baldwin, 1996; McFarlin & Sweeney, 1992; Osborn, 1991).



### *Organizational Justice*

In recent years, the concept of organizational justice has evolved to include almost all aspects of organizational life, particularly employees' attitudes toward work. Organizational justice is a key issue for understanding organizational behavior (Cropanzano & Folger, 1991; Greenberg, 1987). A survey of studies on organizational justice shows that most studies are based on Adams' (1965, 1963) theory of equality. Additionally, organizational justice reveals individual perceptions on whether organizations behave fairly toward all of their members (Umphress, Labianca, Brass, Kass, & Scholten, 2003; Folger & Cropanzano, 1998; Moorman, 1991). According to this theory, individuals expect that the amount they invest in and gain from a relationship should be proportional to what another person invests and gains.

Organizational justice refers to employee perceptions of fairness in organizations (Greenberg, 1987). Organizational justice means fairness in sharing economic values as well as in the strategies and policies adopted by the management. It means developing relationships without discrimination among individuals and includes respect for the employee's identity, honor, and cultural values (Cremer, 2005). The studies on organizational justice fall under three main headings: procedural, distributive, and interactional (McCollough, Berry, & Yadav, 2000; Smith, Bolton, & Wagner, 1999; Skarlicki, & Folger, 1997).

Lind and Tyler (1988) define procedural justice as the fairness of procedures underlying the distribution of outcomes whereas Moon and Kamdar (2008) and Folger and Konovsky (1989) define it as an individual's ability to participate in the decision-making process and their perceptions of impartiality and objectivity in that process. In other words, procedural justice is the extent to which the methods, procedures, and policies in payment, promotion, financial benefits, work conditions, and performance assessment are fair (Beugre, 2002; Cropanzano & Folger, 1991; Greenberg, 1990). Procedural justice entails consistency, freedom from bias, accuracy, representativeness, correctability, and consistency with ethical standards (Leventhal, Karuza, & Fry, 1980). According to Thibaut and Walker (1975), procedural justice has two subdimensions. The first is whether employees are invited to voice their opinions, ideas, and views before decisions are made. The second is the way the policies and practices used in the decision-making process are applied by the decision makers. Kim (2005) also examines procedural justice in two subdimensions and stresses that the first relates to the fairness of managers' individual attitudes and behaviors whereas the second focuses on the extent to which the principles and policies adopted by the organization are perceived to be fair by the employees. Research shows that procedural justice is a significant and positive predictor of performance (Konovsky & Cropanzano, 1991; Taylor, Moghaddam, Gamble, & Zellerer, 1987). Procedural justice is also found to have an impact on employees' job satisfaction, extra-role behaviors, organizational loyalty, and turnover (McFarlin & Sweeney, 1992; Konovsky & Cropanzano, 1991; Moorman, 1999; Folger & Konovsky, 1989).

Interactional justice focuses on individuals' interactions with their superiors and especially the way their superiors treat them in the application of organizational procedures (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Bies & Moag, 1986). Interactional justice refers to "aspects of interactions between outcome receivers and outcome givers" and "the procedures that do not involve formally imposed

constraints on roles and behavior" (Folger & Cropanzano, 1998, p.27). It is also viewed as the 'social aspect of justice' and focuses on the nature of work relations between employees and their superiors (Ambrose, 2002). Interactional justice can be assessed by obtaining information related to respect, propriety, truthfulness, and justification (Kwak, 2006; Tyler & Bies, 1990; Bies & Moag, 1986). When supervisors enact organizational procedures offering adequate justification, with truthfulness, respect, and propriety, and when the information is timely, reasonable, and specific, interactional justice is said to be present (Shapiro, Buttner, & Barry, 1994; Bies & Moag, 1986). Interactional justice also addresses how openly the decision-making processes are shared with employees. Consequently, management attitude is the determining factor in interactional justice.

Adams (1965, 1963) holds that distributive justice involves the perception of justice when an employee compares the amount of work they put in and the pay, benefits, and rewards they receive in return compared with other employees in the same capacity (Beugre, 2002; Jawahar, 2002; Mueller & Tor, 2000; Greenberg, 1990; Leventhal, 1980). Distributive justice can also be defined as fairness perceived by employees in the distribution of organizational resources including pay, promotion, and related benefits (Cohen & Spector, 2001; Dailey & Kirk, 1992; Folger & Konovsky, 1989). Distributive justice directly affects employees' attitudes toward job satisfaction, organizational commitment, and trust (Colquitt et al., 2001). The study of distributive justice in organizations focuses primarily on employees' perceptions of the fairness of the outcomes (benefits or punishments) they receive, that is, their evaluations of the end state of the allocation process (Lee, 2000).

#### *Relationship between Organizational Justice and Job Satisfaction*

Job satisfaction as part of life satisfaction is based on the evaluation of working conditions as a whole and their partial components. If employees are happy with their jobs, their colleagues, and their superiors, and if they also view the current policies on payment and promotion as fair, then they dedicate themselves to their organization and do not think about quitting (Nayir, 2012; Reed, Stanley, & Robert, 1994). Employees' perception of justice in the workplace is important for job satisfaction and the efficient functioning of the organization. Research shows that organizational justice perceptions strongly affect workers' attitudes and feelings of job satisfaction (Colquitt et al., 2001). Osborn (1991) notes that job satisfaction will be higher for employees who perceive a balance between their contributions and rewards at work.

Researchers underlining the link between organizational justice and job satisfaction (Tansky, 1993; Folger & Konovsky, 1989; Alexander & Ruderman, 1987) have recently focused on which type of justice has a greater effect on job satisfaction (Lambert, Hogan, & Griffin, 2007; Rifai, 2005; Masterson, Levis, Goldman, & Taylor, 2000). For instance, Dailey and Kirk (1992), Cropanzano and Ambrose (2001), and Rifai (2005) state that both distributive and procedural justices have a significant effect on workers' job satisfaction. Studies to determine which organizational justice type increases job satisfaction have yielded inconsistent conclusions. For example, Sweeney and McFarlin (1993) and Hartman, Yrle and Galle (1999) conclude that distributive justice has a greater effect on workers' job satisfaction than procedural justice, while Lambert et al. (2007) reach just the opposite conclusion. In another study, Masterson, Levis, Goldman and Taylor (2000) conclude that both types of

justice are relevant to job satisfaction but procedural justice is more influential than interactional justice.

While a significant amount of research has been performed on the relationship between organizational justice and job satisfaction, Hoy and Tarter (2004) noted few studies have been conducted in the field of education. Organizational justice is one of the key factors with a positive or negative impact on attitudes toward work in individuals employed in educational organizations, just as it is in other organizations. In this context, this study aims to determine the organizational justice perceptions of primary school teachers and the predictive value of those perceptions on teachers' job satisfaction.

### Method

This study uses correlational research to investigate the predictive value of organizational justice on teachers' job satisfaction. Correlational studies are useful for initial exploration of relationships, particularly when there are a large number of variables. Like other types of quantitative research, the goal of correlational studies is to generalize their results to a larger population. There are two types of correlational studies: relationship and predictive studies. Relationship studies seek to determine if a relationship exists between two or more variables, whereas the purpose of predictive studies is to identify one or more variables that predict the results of participants on another variable (Lodico, Spaulding & Voegtle, 2006; Anderson, 1998). The predictive value of primary school teachers' perceptions of organizational justice on their job satisfaction was evaluated by means of two scales designed by the researcher.

#### *Research Population and Sample*

The research population of this study consists of teachers working in public primary schools in the city of Samsun, Turkey. The number of public primary schools and teachers was taken into account, and the technique of stratified sampling was used in the selection of the sample. The research population was divided into four sublayers district-wide, and the teachers were divided into two sublayers as subject and classroom teachers. Primary schools were selected from each of the four districts. Approximately 20% of the 3,427 teachers were targeted and the scales were sent out to 686 classroom teachers; 514 of these 686 scales were returned, for a return rate of 75%. Of the participants, 62% were female (319), 38% were male (195), 86% were married (442), 14% were single (72), 48% were classroom teachers (249), and 52% were subject teachers (265).

#### *Development of the Data Collection Instruments*

The research data were collected using organizational justice and job satisfaction scales. The scales used as the data collection instruments are described below.

#### *Organizational justice scale*

Following an extensive literature review regarding an organizational justice scale (Hoy and Tarter, 2004; Colquitt et al., 2001; McFarlin and Sweeney, 1992; Moorman, 1991), the researcher designed a scale for teachers. Following an analysis of a pilot study, an 'Organizational Justice Scale' of 19 items was developed. In the factor analysis for structural validity, the scale was put together under three factors by using principal components analysis with varimax rotation and the load of

factors varied between .41 and .77. The three-factor scale explained almost 76% of total variance. A five-step Likert scale was used to evaluate teachers' perceptions of organizational justice. On the scale, the lowest value corresponds to 'never' and the highest value corresponds to 'always'.

The interactional justice scale consists of seven items: The Cronbach  $\alpha$  internal consistency factor was found to be .94 and the factor analysis revealed that the load of factors of the statements varied between .41 and .76. The procedural justice scale consists of six items. The Cronbach  $\alpha$  internal consistency factor was found to be .92 and the factor analysis revealed that the load of factors of the statements varied between .48 and .75. The distributive justice scale consists of six items. The Cronbach  $\alpha$  internal consistency factor was found to be .91 and the factor analysis revealed that the load of factors of the statements varied between .67 and .77. The organizational justice subscales' factor loadings and item-total correlations are given in Table 1.

**Table 1.**  
*Organizational Justice Subscales' Factor Loadings and Item-Total Correlations*

<i>Sub-scale</i>	<i>Items</i>	<i>Factor Loadings</i>	<i>Corrected Item-Total Correlation</i>
Interactional Justice	The principal takes my views into account when making a decision.	.72	.72
	The principal hears me out when making a decision.	.41	.75
	The principal respects my rights as a teacher.	.67	.82
	I believe the principal would do his/her best for me.	.70	.77
	The principal clearly states the reasons for his/her decisions.	.78	.87
	The principal is polite to me.	.75	.85
	The principal trusts me.	.74	.80
Procedural Justice	The principal keeps his/her prejudices out of his/her judgments.	.60	.76
	The principal briefs us on the processing of the school.	.62	.81
	The principal is fair when assessing my performance.	.48	.81
	The principal treats all of us the same way.	.75	.77
	I can easily announce my views to the principal on decisions affecting the processing of the school.	.63	.72
	The principal enforces the regulations equally to all of us.	.70	.74
Distributive Justice	The principal designs class schedules fairly.	.67	.73
	The principal is fair in sharing out extracurricular activities.	.67	.79
	The principal grants leaves fairly.	.72	.78
	The principal provides equal opportunities for all for professional development.	.77	.70
	The principal distributes course sections fairly.	.76	.71
	The principal designs our weekly schedules fairly.	.65	.78

*Job satisfaction scale*

Following a comprehensive literature review, a job satisfaction scale was designed for teachers. Although the literature covers sub-dimensions such as job satisfaction, remuneration, opportunities for promotion, working conditions, and organizational practices, this study focuses instead on the job itself and relations with management and colleagues, as school principals have no say in their teachers' salaries or promotion in the Turkish educational system. In this context, the factors affecting job and relations have been focused on, ignoring those falling outside the realm of school principals, in the establishment of organizational justice in the school. Following an analysis of the pilot study, a 'Job Satisfaction Scale' of 17 items was designed. The Cronbach  $\alpha$  internal consistency factor was found to be .94. In the factor analysis for structural validity, the scale was put together under three factors and the load of factors varied between .41 and .89. The three-factor scale (job itself, relations with principal, relations with colleagues) explained almost 73% of total variance. A five-step Likert scale was used to evaluate teachers' job satisfaction. On the scale, the lowest value corresponds to 'I strongly disagree' and the highest value corresponds to 'I strongly agree'. The job satisfaction subscales' factor loadings and item-total correlations are given in Table 2.

**Table 2.***Job Satisfaction Subscales' Factor Loadings and Item-Total Correlations*

<i>Sub-scale</i>	<i>Items</i>	<i>Factor Loadings</i>	<i>Corrected Item-Total Correlation</i>
Job itself	I find my job suitable to my knowledge and skills.	.85	.53
	If I found a new job, I would get the same job that I do now.	.89	.52
	I find my job meaningful.	.70	.64
	Teaching is the best job for me.	.66	.63
Relations with principal	My principal acts sensitively to my problems.	.64	.72
	I can pass over all my opinions and recommendations to my principal very easily.	.75	.71
	I think my principal is successful regarding management skills.	.84	.64
	I can easily communicate with the principal.	.64	.73
	The principal always supports me in my endeavors.	.86	.63
	Teachers are valued in my school.	.72	.74
	My principal evaluates teachers fairly and objectively.	.68	.81
	Communication between teachers in this school is friendly and openly.	.86	.67
Relations with colleagues	My colleagues consider my opinions.	.77	.76
	We are like a team with my colleagues.	.87	.74
	My colleagues have a big influence on why I am staying in this school	.82	.60
	I feel myself as an indispensable member of my school.	.67	.63
	Our relationship with my colleagues is based on trust.	.81	.73

*Data Analysis*

The SPSS 16.0 statistical package program was used in the analysis of the research data. Bivariate correlation and multiple regression analyses were used in the data analysis.

**Results**

The research model examines the predictive value of perceived organizational justice on teachers' job satisfaction. The Pearson correlation and multiple regression analyses were used to study the relationships between the variables in the model. In the analyses, the job satisfaction dimensions were taken as the dependent variable and perceived organizational justice types as the independent variable.

The relationship between the organizational justice types and teachers' job satisfaction dimensions was studied through the Pearson correlation analysis.

**Table 3.***Means, Standard Deviations, and Correlations*

Variables	Mean	SD	1	2	3	4	5	6	7
1. Procedural Justice	24.7393	4.92459							
2. Interactional Justice	28.2646	5.77013	.710**						
3. Distributive Justice	24.9163	4.45847	.772**	.744**					
4. Relations with Colleagues	22.4650	5.20194	.364**	.390**	.341**				
5. Relations with Principal	26.6459	6.01615	.749**	.765**	.702**	.506**			
6. Job Itself	16.5117	3.33930	.374**	.332**	.328**	.387**	.483**		
7. Overall Job Satisfaction	73.2004	12.50453	.635**	.642**	.588**	.789**	.845**	.691**	-

Note:  $p < 0.01$

As observed in Table 1, a positive and statistically significant relationship exists between the organizational justice types and teachers' job satisfaction dimensions. Positive and significant relationships are observed between procedural justice and relations with colleagues ( $r = .364$ ), relations with principals ( $r = .749$ ), the job itself ( $r = .374$ ), and overall job satisfaction ( $r = .635$ ). Relations with principals and overall job satisfaction have a particularly strong relationship with procedural justice compared to other job satisfaction dimensions. Positive and significant relationships are observed between interactional justice and relations with colleagues ( $r = .390$ ), relations with principals ( $r = .765$ ), the job itself ( $r = .332$ ), and overall job satisfaction

( $r=.642$ ). Relations with principals and overall job satisfaction have a particularly strong relationship with interactional justice compared to other job satisfaction dimensions. Positive and significant relationships are observed between distributive justice and relations with colleagues ( $r=.341$ ), relations with principals ( $r=.702$ ), the job itself ( $r=.328$ ), and overall job satisfaction ( $r=.588$ ). Relations with principals have a particularly strong relationship with procedural justice compared to other job satisfaction dimensions.

In order to detect any problems in terms of collinearity and multicollinearity in the study, the values for simple correlation, variance inflation factor (VIF), and tolerance value (TV) were looked at, and no such problems were found as the existing data had simple correlation values lower than .90, VIFs lower than .10, and TVs higher than .10. In order to test the multi-variable normality and linearity, the scatter plot matrix of each group was examined and the diagrams formed by variable couples were found to be almost elliptical in shape. This suggests that no problems exist in terms of normality or linearity in the study (Çokluk, Şekercioğlu & Büyüköztürk, 2010; Field, 2005).

The results of the multiple regression analyses for the predictive values of the organizational justice types on teachers' job satisfaction dimensions are shown in Table 4.

**Tablo 4.** Results of Multiple Regression Analysis

Variable	Relations with Colleagues			Relations with Principal			Job Itself			Overall Job Satisfaction		
	B	SE(B)	$\beta$	B	SE(B)	$\beta$	B	SE(B)	$\beta$	B	SE(B)	$\beta$
Interactional Justice	.28	.09	.31*	.48	.07	.48**	-.07	.06	-.13	.69	.17	.34*
Procedural justice	.03	.12	.02	.34	.09	.28*	.34	.08	.49**	.72	.22	.29*
Distributive justice	.08	.10	.07	.08	.07	.06	.02	.06	.03	.20	.18	.07
R			.40			.80			.40			.69
R <sup>2</sup>			.16*			.64**			.17*			.48**
Adjusted R <sup>2</sup>			.15*			.63**			.16*			.47**

Note: B represents the unstandardized regression coefficient. SE (B) represents the estimated standard error, and  $\beta$  represents the standardized regression coefficient.

\* $p < 0.05$ ; \*\* $p < 0.01$ .

Interactional, procedural, and distributive justice types were found to have a low-level relationship with teachers' relations with their colleagues ( $R^2=.16$ , Adjusted  $R^2=.15$ ,  $p<0.05$ ), a mid-level relationship with relations with principals ( $R^2=.64$ , Adjusted  $R^2=.63$ ,  $p<0.01$ ), a low-level relationship with the job itself ( $R^2=.17$ , Adjusted  $R^2=.16$ ,  $p<0.05$ ), and finally a mid-level relationship with overall job satisfaction ( $R^2=.48$ , Adjusted  $R^2=.47$ ,  $p<0.01$ ). Organizational justice types account for

approximately 15% of the total variance in relations with colleagues, 63% in relations with principals, 14% in the job itself, and 47% in overall job satisfaction.

In relations with colleagues, the relative order of significance for the organizational justice types was interactional, procedural, and distributive. The significance of regression factors shows that only interactional justice has a significant predictive value on relations with colleagues ( $\beta=.31$ ,  $p<0.05$ ) whereas procedural and distributive justice types do not have a significant predictive value.

In relations with principals, the relative order of significance for the organizational justice types was interactional, procedural, and distributive. The significance of regression factors shows that both interactional justice ( $\beta=.48$ ,  $p<0.01$ ) and procedural justice ( $\beta=.28$ ,  $p<0.05$ ) have significant predictive values on relations with principals whereas distributive justice does not have a significant predictive value.

In the job itself, the relative order of significance for the organizational justice types was procedural, interactional, and distributive. The significance of regression factors shows that only procedural justice has a significant predictive value on the job itself ( $\beta=.49$ ,  $p<0.01$ ) whereas interactional and distributive justice types do not have a significant predictive value.

In overall job satisfaction, the relative order of significance for the organizational justice types was interactional, procedural, and distributive. The significance of regression factors shows that both interactional justice ( $\beta=.34$ ,  $p<0.05$ ) and procedural justice ( $\beta=.29$ ,  $p<0.05$ ) have significant predictive values on overall job satisfaction whereas distributive justice does not have a significant predictive value.

## Discussion and Conclusion

The objective of this study was to determine the predictive value of teachers' perceptions of organizational justice (distributive, procedural, and interactional) on their job satisfaction. The correlation analyses suggest a positive and significant link between the organizational justice types and job satisfaction dimensions. This finding is also corroborated by many other studies in the literature (Altinkurt & Yılmaz, 2012; Yelboğa, 2012; Al-Zubi, 2010; İçsan & Sayın, 2010; Yıldırım, 2007; Rifai, 2005; Konovsky & Cropanzano, 1991). Yelboğa (2012) concludes that the perception of organizational justice is one of the factors affecting job satisfaction. The present study has found that, while distributive justice and interactional justice have an impact on job satisfaction, procedural and informational justice perceptions have no such impact. Altinkurt & Yılmaz (2012) and Al-Zubi (2010), for instance, stress that organizational justice is one of the key predictors of job satisfaction. In studies on the link between organizational justice and job satisfaction, Yıldırım (2007) concludes that job satisfaction rises in line with distributive justice. Likewise, Rifai (2005) underlines the strong, positive relationship between procedural and distributive justice and employees' job satisfaction. Konovsky and Cropanzano (1991) conclude that when employees perceive a work environment to be unfair, they adopt a



negative attitude toward their jobs and obtain little satisfaction from them. The findings of the present study reveal that relations with principals and overall job satisfaction have a stronger relationship with all three organizational justice types than relations with colleagues or the job itself. The lowest link is between the satisfaction one gets from the job itself and the organizational justice types.

To determine which justice type has a greater predictive value on specific dimensions of job satisfaction, multiple regression analyses were conducted. According to the results, interactional justice has predictive values on relations with colleagues, procedural justice on the job itself, and interactional and procedural justice on relations with principals and overall job satisfaction. Teachers' perceptions of their principals' or colleagues' attitudes as fair or unfair do have a predictive value on their job satisfaction. Another study on teachers concludes that interactional justice, or interactional relations, has the greatest predictive value on job satisfaction (Karademir, 2010). Similarly, Schappe (1998) and Yıldırım (2007) also conclude that interactional justice affects job satisfaction more than the other types of justice. This is also supported by the findings of the present study. This study further reveals that procedural justice has predictive values on the job itself, relations with principals, and overall job satisfaction. This, too, is corroborated by other studies in the literature. Masterson et al. (2000), for instance, conclude that while both procedural and interactional justice affect job satisfaction, the former has a greater predictive value than the latter. Tyler (1989) and Lambert et al. (2007), on the other hand, reveal that procedural justice has a stronger predictive value on job satisfaction than distributive justice. Lee (2000), however, holds that both procedural and distributive justices have direct, positive effects on job satisfaction. As for the present study, the findings point toward distributive justice having an insignificant predictive value on job satisfaction dimensions. However, the literature also contains studies that conclude otherwise (Yelboğa, 2012; Tsai & Bellino, 2010; Clay-Warner, Reynolds, & Roman, 2005; McFarlin & Sweeney, 1992; McCain, Konovsky & Cropanzano, 1991; Lind & Tyler, 1988). Where such studies are carried out, and on whom, undoubtedly affects the findings they yield.

Organizational justice is a significant factor in employee job satisfaction and organizational effectiveness in schools (Aydın & Kepenekçi, 2008). The perception of justice by schoolteachers is important from both the organizational and individual points of view. Low organizational justice perceptions might cause problems in adding value for teachers who are supposed to imbue future generations with values such as justice, honesty, sincerity, and equality (Yılmaz, 2010). Unfair practices have been found to have negative effects on teachers also when reaching organizational targets is concerned (Özgan and Bozbayındır, 2011). This perception is influenced by many factors including the sharing of the resources, the distribution of rewards and sanctions, interaction among people, enforcement of the regulations, and remuneration corresponding to the work done. If individuals perceive injustice in their organizations, this will affect their behaviors and attitudes to work, of which, in this context, job satisfaction is one. Undoubtedly, the perception of justice is not the sole factor affecting job satisfaction but it is a significant one, as has been revealed by

this study. In organizations like schools, where interaction plays an important role, the principals should be even more sensitive to problems that may have a negative effect on the perceptions of justice and, for this reason; they should take steps necessary to prevent any such perceptions. As pointed out by Polat and Celep (2008), principals must behave ethically and observe the regulations of the educational system and the school. Promoting justice in all school-related matters will lead to a better functioning of the educational processes. Principals should treat the teachers equally and fairly in the distribution of extra teaching hours, classroom sizes, duties, rewards, and sanctions. Teachers also need to feel respect, love, trust, self-esteem, and appreciation. The principals should also be fair in their interaction with all of their subordinates and avoid favoring any particular individuals. Management should be sensitive to the teachers' problems, listen to them, and allow them to express their views freely. Participation should be promoted, the teachers should be informed of the functioning of the school, and their taking part in the decision-making processes should be encouraged. An unprejudiced, all-inclusive, and ethical management method should be adopted. As this study concludes, procedural and interactional justice types have a significant predictive value on teachers' job satisfaction. In this context, it is up to the managers to be more careful in the work relations. Forming relations based on mutual trust and promoting cooperation and collaboration depends to a large extent on a positive and open school climate. In this sense, the creation of such a climate by the principals has a positive effect on both the teachers' perception of justice and their job satisfaction. Teachers obtaining satisfaction from their jobs will have a positive attitude toward their colleagues, principals, and others, and will surely be more dedicated to their work.

Studies on the link between organizational justice in education and job satisfaction are in general, quantitative in nature and based on the theoretical framework set by the researchers. Besides these approaches, the demonstration is expected to make a significant contribution to the field through qualitative methods of how these facts are defined in the work environment and precisely on what it is that teachers base their own perspectives.

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## Öğretmenlerin İş Doyumlarının Yordayıcısı Olarak Örgütsel Adalet Algısı

### Atf:

- Elma, C. (2013). The predictive value of teachers' perception of organizational justice on job satisfaction. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 157-176.

### (Özet)

#### *Problem Durumu*

Günümüzde çalışanın işine karşı tutumu ve işinden doyum sağlaması hem bireysel açıdan hem de örgütsel açıdan önem verilen konular arasında yer almaktadır. Örgütsel adalet kavramı ise son yıllarda başta çalışanların işe yönelik tutumları olmak üzere örgütsel yaşamın neredeyse tüm boyutlarıyla ilişkili bir kavram haline gelmiştir. Örgütsel adalet ve iş doyumunu arasındaki ilişkiye yönelik pek çok çalışma yapılmış olmasına rağmen uzun yıllardır bu çalışmaların eğitim alanında göz ardı edildiği görülmektedir. Bu çalışmanın eğitim alanındaki bu eksikliği gidermesine katkı sağlayacağı düşünülmektedir.

#### *Araştırmanın Amacı*

Bu çalışmanın amacı ilköğretim okullarında görev yapan öğretmenlerin örgütsel adalet algılarının iş doyumlarına etkisini belirlemektir.

### *Yöntem*

Örgütsel adaletin öğretmenlerin iş doyumlarına etkisinin belirlenmesi amacıyla yapılan bu araştırma, tarama modeli niteliğindedir. Bu çalışmada ilköğretim okullarında görev yapan öğretmenlerin örgütsel adalet algılarının iş doyumlarına etkisi araştırmacının geliştirdiği iki ölçek aracılığıyla belirlenmeye çalışılmıştır. Bu araştırmanın evreni Türkiye'nin Samsun ilinin resmi ilköğretim okullarında görev yapan öğretmenlerden oluşmaktadır. Örneklem seçiminde resmi ilköğretim okul sayıları ile öğretmen sayıları göz önünde bulundurulmuştur. Örneklem seçiminde "tabakalı örnekleme" tekniği kullanılmıştır. Buna göre araştırma evreni ilk olarak ilçe düzeyinde 4 alt tabakaya ve öğretmenler branş ve sınıf öğretmeni olmak üzere iki alt tabakaya ayrılmıştır. Örneklem belirlenme sürecinde sözü edilen 4 ilçenin tamamından ilköğretim okullarının seçilmesine dikkat edilmiştir. 3427 olan öğretmen sayısının yaklaşık %20'sine ulaşılması hedeflenmiş ve toplam 686 sınıf ve branş öğretmenine ölçekler ulaştırılmıştır. Araştırmacı tarafından öğretmenlere ulaştırılan 686 ölçekten 514'ü geri dönmüş ve dönüş oranı yaklaşık % 75 olmuştur. Örgütsel adalet ve iş doyumunu ile ilgili yapılan kapsamlı bir yazın taramasından sonra öğretmenlere yönelik "Örgütsel Adalet" ve "İş Doyum" ölçekleri geliştirilmiştir. Verilerin analizinde bivariate korelasyon katsayısı ve çoklu regresyon analizi kullanılmıştır.

### *Bulgular*

Yapılan korelasyon analizi sonucunda örgütsel adalet türleriyle iş doyum boyutları arasında anlamlı ve pozitif yönde bir ilişki olduğu belirlenmiştir. Örgütsel adalet türlerinin toplam iş doyum boyutu üzerindeki görece önem sırasının; etkileşim, prosedür ve dağıtım adaleti olduğu görülmektedir. Regresyon katsayılarının anlamlılığına ilişkin t-testi sonuçları incelendiğinde ise hem etkileşim adaletinin hem de prosedür adaletinin toplam iş doyum boyutu üzerinde önemli yordayıcıları olduğu görülmektedir. Dağıtım adaletinin ise bu anlamda önemli bir etkiye sahip olmadığı belirlenmiştir. Bu çalışma sonuçları, yöneticiyle ilişkiler ve toplam iş doyumunun diğer boyutlara (meslektaşlarla ilişkiler ve işin kendisi) göre her üç örgütsel adalet türüyle daha yüksek bir ilişki içinde olduğunu ortaya koymuştur. En düşük ilişkinin ise işin kendisinden elde edilen doyum ile örgütsel adalet türleri arasında olduğu saptanmıştır.

### *Tartışma ve Sonuç*

Bir örgütte çalışanların adalet algısı hem örgütsel hem de bireysel açıdan oldukça önemlidir. Çalışanların örgütteki adalet algılamasını, kaynakların paylaşımı, ödül ve cezanın dağıtımını, kişiler arası etkileşim, kuralların uygulanması, yapılan iş karşılığı alınan ücret gibi pek çok faktör etkilemektedir. Bireyler, eğer örgütlerinde adaletsizlikler yapıldığını algıarlarsa, bu onların işe yönelik tutumlarını ve davranışlarını da etkileyecektir. Bu bağlamda etkilenen tutumlardan biri de iş doyumudur. Şüphesiz iş doyumunu etkileyen tek neden çalışanların algıladıkları adalet değildir, ancak önemli bir faktör olduğu bu araştırma ile ortaya konulmuştur. Okul gibi etkileşimin önemli olduğu örgütlerde yöneticiler adalet algısını olumsuz etkileyebilecek sorunlara daha duyarlı olmalıdırlar. Bu nedenle yöneticiler okuldaki



her türlü adaletsizlik algılarının önüne geçmelidir. Öğretmenlerin örgütsel adalet algılarını artırmak için yöneticilerin etik davranması, eğitim sistemi ve okulla ilgili kurallara sadık kalarak keyfi uygulamalardan kaçınmaları gerekir. Okuldaki tüm işlerde adaletin gözetilmesi, okuldaki süreçlerin daha sağlıklı işlemesine yol açacaktır. Okul yöneticileri ek ders, şube, nöbet, ödül ve ceza gibi işlerin dağıtılmasında öğretmenler arasında ayırım yapmadan eşit ve adil davranmalıdırlar. Ayrıca öğretmenlerin okulda saygı görme, sevilme, güvenilme, kendini değerli hissetme ve takdir edilme ihtiyaçları vardır. Okul yöneticileri çalışanlarıyla etkileşimlerinde de adil olmalı; birileri kendisine yakın olduğu için özel imkânlarla kavuşmamalıdır. Okul yöneticisi, öğretmenlerin sorunlarına duyarlı olmalı, onları dinlemeli ve görüşlerini rahatça ifade etmelerine olanak sağlamalıdır. Katılımcı bir yönetim anlayışını uygulamak suretiyle öğretmenleri okulun işleyişi ile ilgili konularda bilgilendirmeli ve özellikle öğretmenleri doğrudan ilgilendiren kararlara onların katılımlarını sağlamalıdır. Okul yöneticisi kararlarında ön yargıdan uzak, okuldaki herkesi dikkate alan ve etik kurallara uygun bir yöntem benimsemelidir. Bu çalışmada da ortaya konulduğu gibi özellikle prosedür ve etkileşim adaletinin öğretmenlerin iş doyumunu üzerinde önemli bir etkisi olduğu belirlenmiştir. Bu bağlamda yöneticiye düşen görev, okuldaki işlemler ve öğretmenlerle kurulan ilişkiler açısından daha özenli davranmaktır. Öğretmenler arasında güvene dayalı ilişkilerin kurulması, dayanışma ve işbirliğinin arzu edilen düzeye ulaştırılması büyük ölçüde olumlu ve açık bir okul ikliminin oluşturulmasına bağlıdır. Bu anlamda okul yöneticisi olumlu bir okul iklimi yaratabilirse öğretmenlerin hem adalet algısını hem de iş doyumunu pozitif yönde etkileyecektir.

*Anahtar Sözcükler:* Örgütsel Adalet, Dağıtımsal Adalet, Etkileşimsel Adalet, Prosedür Adaleti, İş Doyumu



## The Prediction Level of Teachers' Organizational Citizenship Behaviors on the Successful Practice of Shared Leadership

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### Abstract

*Problem Statement:* Defined as the actions that personnel voluntarily take beyond their formal job description, organizational citizenship behavior is regarded as a premise for shared leadership, a management style that is frequently used in organizations today. The relevant literature suggests that organizational citizenship behavior can provide the team effectiveness required for the successful practice of shared leadership. The procedure of this leadership style involves sharing tasks and responsibilities, and thus requires cooperation. Considering the personnel's expectations for this type of leadership, it is not possible for members who exhibit poor organizational citizenship behaviors to meet these expectations. A school under shared leadership functions as a team, and all members of this team must share leadership in every field and devote themselves to performing their responsibilities if they wish to achieve the school's mission satisfactorily. This study tried to discover the extent to which teachers' levels of commitment to organizational citizenship in primary schools predict the successful practice of shared leadership.

*Purpose of Study:* The author wished to determine the extent to which teachers' organizational citizenship behaviors in primary schools predict the successful practice of shared leadership.

*Methods:* This research is a correlational study. The sample comprised 364 primary school teachers working in Zonguldak. The data were collected

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using a group-level organizational citizenship behaviors scale and a shared leadership perception scale.

*Findings and Results:* The findings of the study revealed that there is a high level of positive correlation between primary school teachers' levels of organizational citizenship behaviors and the successful practice of shared leadership. For example, the sub-dimension of organizational citizenship behaviors towards individuals of the organization predicts significantly in a positive way and at a high level the joint completion of tasks, mutual skill development, decentralized interaction among personnel, and emotional support dimensions of shared leadership. In addition, the sub-dimension of organizational citizenship behaviors towards the organization predicts significantly at a low level the successful practice of joint completion of tasks and emotional support dimensions of shared leadership, but this sub-dimension offered no significant prediction of the successful practice of mutual skill development and decentralized interaction among personnel. According to the findings, it can be stated that organizational citizenship behaviors are significant predictors of the successful practice of shared leadership.

*Conclusions and Recommendations:* According to the findings of the study, when the correlations between group-level organizational citizenship behaviors and both total shared leadership and its factors are examined, it can be seen that the correlation between the level of individual organizational citizenship behaviors and shared leadership is higher than other correlations. It is also understood that the level of organizational citizenship behaviors predicts positively and highly the successful practice of shared leadership and that the prediction of the sub-dimension of organizational citizenship behaviors towards individuals is more significant and at higher level than that of the organizational citizenship behaviors towards the organization. There is also research in the literature supporting the finding that organizational citizenship behaviors, particularly the individual-oriented ones, predict significantly the successful practice of shared leadership. Therefore, it was confirmed that the level of organizational citizenship behaviors predicts shared leadership significantly to a considerable extent. This situation is also understood from the goodness of fit indices. As a result, it can be suggested that the organizations planning to employ shared leadership in their executive structures should take actions to empower organizational citizenship behaviors as a premise of shared leadership.

*Keywords:* Organizational citizenship behavior, group-level organizational citizenship, leadership, shared leadership.

The effectiveness and improvement of organizations relies on their indispensable element: the personnel. The organizational citizenship behavior (OCB) that personnel voluntarily undertake beyond their formal task definitions make them even more important to the organization in terms of organizational effectiveness (Buluç, 2008;

Sezgin, 2005). Organ (1988) defines OCB as “extra role” behaviors performed by personnel for the good of the organization, specifically for improving its productivity and effectiveness; moreover, such behaviors are not rewarded or punished by the organization (Schnake & Dumler, 2003). According to another definition, OCB is the voluntary performance of some tasks and the exceptionally careful conduct that personnel perform to contribute to the effective operation of the organization. This definition also acknowledges that they know they will not be rewarded directly for the acts (Vigoda-Gadot, Beerli, Birman-Shemesh & Somech, 2007; Shragay & Tziner, 2011). This is well-documented in the literature on OCB. The early research studies on OCB were about OCB’s promises and dimensions. In contrast, recent research is about the organizational outcomes of OCB (Köse, Kartal & Kayalı, 2003; Gürbüz, 2006). Perry, Pearce and Sims (1999) and Pearce (2004) included OCB education into the requirements for the successful practice of shared leadership. Empowering OCB is believed to lead to team behavior, which is the key for successful shared leadership, because shared leadership is impossible without teamwork (Shuffler, Wiese, Salas & Burke, 2010). In this sense, it would not be wrong to suggest that OCB is considered to be a precondition for the success of shared leadership. In fact, Pearce and Conger (2003) define shared leadership, which is a promising development in the field of team leadership, as the process in which group members interactively affect each other in order to achieve the goals of the group or organization (Bligh, Pearce & Kohles, 2006).

The complexity of duties in present organizations makes it almost impossible for a single person to manage an organization (Buckmaster, 2004). Recently, “single person” types of leadership models have been replaced by shared leadership models with an associative, cooperative leadership procedure that involves groups that share tasks and responsibilities (Hulpia, Devos & Rosseel, 2009; Kocolowski, 2010). The importance of shared leadership was also noted in the summary report of the Improving School Leadership Conference held in Turkey on the 9th and 10th of April 2009. This report stressed the changes in school leadership and the impact of those changes (<http://abdigm.meb.gov.tr>, 2011). In brief, the conference established that school management needs to employ shared leadership in today’s conditions. Therefore, sharing school’s administration must share the leadership with personnel in every department. In modern organizations, success-oriented managers are obliged to recognize this requirement. The rate and scope of current and future changes in the global economy requires leaders to share the burden of leadership in order to survive, putting aside the necessity to update and adapt themselves (Erçetin, 2000; Karabey & İşcan, 2007). In shared leadership, all members must share tasks and responsibilities, such as taking part in decision-making and goal-setting procedures, acknowledging the responsibility of these decisions, performing their responsibilities to achieve the goals, and using autonomy and accountability (Wood, 2005). Shared leadership is a kind of leadership conducted by more than one person or even by all members of the team. It is also a process of cooperation among the team members. Since shared leadership is not limited to one person, all members have equal status and responsibilities. The success is not individual, but belongs to the team. In shared leadership, everybody is responsible for leadership. In fact, leadership emerges as a

result of regular interaction between team members (Bligh, et al., 2006; Ensley, Hmieleski & Pearce, 2006; Lindsay, Day & Halpin, 2011; Ryan & Coglisier, 2011). In this sense, personnel are expected to have high levels of OCB in order to achieve a sustainable shared leadership in an organization.

OCB consists of five dimensions: altruism (help behaviors aimed at specific individuals in the organization for the good of the organization), conscientiousness (helpful behaviors aimed at the organization itself, not a certain individual or group), civic virtue (behaving responsively toward the operation of the organization), sportsmanship (showing tolerance for difficulties in organizational life), and courtesy (informing others about organizational decisions; Schnake & Dumler, 2003). According to Khasawneh (2011), the well represented components of OCB include personnel helping each other with job-related tasks and problems (focusing on team work), tolerating the effects of job decisions, tolerating problematic aspects to help the organization to survive, achieving organizational goals, and always complying with the rules and regulations of the organization.

In exchange for this loyalty, all members of a shared leadership have a say in any of the duties that they perform. Such personnel care about each other, feel attached to each other and to the organization, and try to improve and encourage each other (Wood, 2005). Personnel exhibiting poor organizational citizenship behaviors cannot meet these expectations. Due to the team structure of shared leadership, the attitudes of team members about shared leadership and how much they volunteer to share the leadership responsibility is critical (Small, 2007). According to Sullivan and Harper (1996), leadership is to manage rational and well planned actions such as goals, culture, strategies, basic identities, and critical procedures that bring the organization to life, secure its future, and set up its team (cited in: Eraslan, 2004). In general, when OCBs are exhibited in an organization, the operation of social mechanisms is facilitated, and organizational efficacy is improved (Gürbüz, 2006). Therefore, for the sake of this incremented mentality and collective functionality and organizational efficacy, the organizations should encourage OCBs (Jiao, Richards & Zhang, 2011). Shared leadership depends on team citizenship behaviors, so organizations can improve with team citizenship behaviors (Pearce & Herbig, 2004). Cohen and Vigoda (2000) argued that OCB encourages coordination among group or team members as well as between personnel. Personnel can have a great impact on the effectiveness of the organization when they are motivated to go above and beyond their formal roles (Köse et al., 2003; Gürbüz, 2006; Arslan, 2008). When levels of OCB are high among group members, the individuals are more likely to exhibit acceptable and expected behaviors (Vigoda-Gadot et al, 2007).

There are two types of OCBs in an organization: organizational citizenship behaviors aimed at other individuals (other personnel and customers) in the organization (OCB-I) and organizational citizenship behaviors (OCB-O) aimed at the greater organizational good, generally represented as compliance with organizational policies and over-exertion to perform duties (Ilies, Nahrgang & Morgeson, 2007 cited in: Wilson, Sin & Conlon, 2010). Schnake and Dumler (2003) note the dearth of research investigating the coexistence of the individual and group

levels of OCBs. Therefore, the present study tried to put forth the prediction level of both OCB-I and OCB-O on shared leadership. In terms of shared leadership, school is defined as a team composed of members with formal leadership roles as a whole (Hulpia, Devos & Van Keer, 2010). In this sense, shared leadership at school is expected to exist under four dimensions. It should be a joint completion of tasks, mutual skill development, decentralized interaction among personnel, and emotional support. In terms of the common description of the tasks, it is a matter of fact that each employee at school is responsible for himself/herself and other employees in order to make the aims of the school come true. Yet if this responsibility is to be feasible, then each employee must have at least some control over all decisions, ranging from resource distribution at school to problem solving. The dimension of mutual skills development also expects that every employee to improve one another's skills for success, because this dimension sees the school as a leadership team. Non-central interaction means that everyone sees one another as equal members of the team; emotional support, on the other hand, means that a professional and relational connection exists among school employees and that all employees encourage one another in hard times (Wood, 2005). Randel (2003), OCBs in the team encourage members to perform the pre-defined roles and responsibilities, and provide supportive efforts towards group success (cited in: Omar, Zainal, Omar & Khairudin, 2009). When the shared leadership practices are looked through, it is obvious that the employees whose OCB levels are not high cannot execute these practices.

A school's OCB level affects its leadership's state of actualization and success, as the literature on OCB has revealed ever since the beginning of the introduction of the survey. Effective leadership occurs when personnel contribute to production and/or services voluntarily above and beyond their formal job definitions, not because they are obliged but they are willing (Arslan, 2009). The level of organizational citizenship is important for the effectiveness of shared leadership. For this reason, activities that provide organizational integration should be organized, and teachers' citizenship behaviours should be developed through motivating teachers to success (Ereş, 2010). Moreover, some researchers claim that shared leadership and organizational citizenship behaviors are vital to the success of an organization (Ehrhart & Naumann, 2004 cited in: Khasawneh, 2011). This research proposes that every staff member at school must have a high level of OCB before a shared leadership school can accomplish its entire mission. The prediction level of OCB level towards individuals and the organization in schools on the shared leadership is studied in this research, as well.

The purpose of this study is to determine the prediction level of organizational citizenship behaviors in primary schools as to the extent to which shared leadership is practiced successfully. In line with this basic purpose, answers have been researched for the following questions:

1. What is the level of correlation between the extent to which shared leadership is practiced and group-level OCB towards individuals (GOCB-I) as well as group-level OCB towards the organization (GOCB-O) in primary schools?

2. Does the level of GOCB-I in primary schools predict significantly the successful practice of joint completion of tasks, mutual skill development, decentralized interaction among personnel, and emotional support dimensions of shared leadership?
3. Does the level of GOCB-O in primary schools predict significantly the successful practice of joint completion of tasks, mutual skill development, decentralized interaction among personnel, and emotional support dimensions of shared leadership?

## Method

### *Research Model*

This is a correlational survey. Correlational research is carried out with the aim of determining the relationships between two or more variables to gather evidence regarding the cause and effect. Predictive correlational research is a type of correlational research that is for explaining the changes in the dependent variable based on one independent variable or more (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demiral, 2012).

### *Sample*

The population of the survey comprises 4044 teachers working in primary schools in the city of Zonguldak (National Education Statistics, 2012). A chart of theoretical sample sizes for differently-sized samples has been used in order to determine the sample size in the survey (Balci, 2007). According to the chart, the necessary sample size has been determined as 356 teachers from a population of 5000 teachers for the research to be 95 % reliable, to have  $\alpha = .05$  significance level, and to exhibit 5 % tolerance. However, it has been taken into account that the number of the scales returning can lessen, so 450 scales were distributed to the teachers. Three hundred and sixty-four of these scales were returned. Thus, 364 primary school teachers composed the sample. Convenience sampling has been preferred in this study. Among the participating teachers, 194 (53.3%) were female and 170 (46.7%) were male; 146 (40.1%) had 1-10 years of experience, 139 (38.2%) had 11-20 years of experience, and 79 (21.7%) had 21 years or more of experience; 29 (8.0%) had undergraduate degrees, 321 (88.2%) had graduate degrees, and 14 (3.8%) had master's degrees; finally, 203 (55.8%) were classroom teachers and 161 (44.2%) were subject field teachers.

### *Instruments*

The data were collected with the GOCB Scale and Shared Leadership Perception Scale.

**GOCB Scale.** Originally developed by Vigoda-Gadot et al. (2007), the GOCB scale consists of two dimensions - GOCB-I and GOCB-O - which include a total of 18 items. The Cronbach's Alpha values were reported as  $\alpha = .86$  for the GOCB scale,  $\alpha = .88$  for the GOCB-I dimension (10 items), and  $\alpha = .66$  for the GOCB-O dimension (8 items). The factor loadings were between .54-.84 for the GOCB-I factor and .45-.82 for



the GOCB-O factor. Before using the GOCB scale, permission was granted by Vigoda-Gadot. Next, the items were subjected to a translation-back translation study by a panel of 5 language experts. After the translation of the form was finalized, the scale was submitted to field experts for content validity. Then, the scale was finalized. The finalized scales were applied to 232 high school teachers in the province of Sakarya as a pre-application to test their construct validity and reliability. As a result of this pre-application, validity and reliability results of the adaptation of the scale to Turkish are as follows. According to the Confirmatory Factor Analysis (CFA) of the scale's pre-application, the Turkish adaptation's adaptive values are found as Goodness of Fit Index (GFI) = 0.87, Adjusted Goodness of Fit Index (AGFI) = 0.83, Comparative Fit Index (CFI) = 0.88, Normed Fit Index (NFI) = 0.81, Root Mean Square Residual (RMR) = 0.067, and Root Mean Square Error of Approximation (RMSEA) = 0.078. Chi-square = 315.98,  $df = 132$ , and  $\chi^2 / df = 2.39$ . The correlation between the dimensions is, on the other hand, 0.78. These goodness of coherence values prove that the scale is valid. Moreover, Cronbach's Alpha values have been calculated as  $\alpha = .87$  for GOCB,  $\alpha = .88$  for dimension GOCB-I, and  $\alpha = .63$  for GOCB-O for the pre-application. It is seen that the reliability coefficients of the Turkish GOCB are parallel to those of English form. In addition, the high level of points from the GOCB-I dimension of the GOCB scale shows the high level of organizational citizenship behaviors for these dimensions at the pre-tested schools.

**Shared Leadership Perception Scale:** The research data regarding Shared Leadership were, on the other hand, gathered with the Shared Leadership Perception Scale that was developed by Wood (2005) and adapted to Turkish by Bostancı (2012). It has been found that Cronbach's Alpha values are  $\alpha = .91$  in total and that the joint completion of tasks dimension is  $\alpha = .88$ , mutual skill development dimension is  $\alpha = .78$ , decentralized interaction among personnel dimension is  $\alpha = .74$ , and emotional support dimension is  $\alpha = .83$ . The goodness of fit indices estimated through CFA were found to be adequate (GFI = 0.90, AGFI = 0.87, CFI = 0.95, NFI = 0.94, RMR = 0.025, and RMSEA = 0.055). Other parameters were Chi-square = 220.30,  $df = 129$ ,  $\chi^2 / df = 1.53$ ,  $p = 0.00$ . The interfactor correlations ranged between 0.44 and 0.84. Again, the level of the points observed from each dimension of the Shared Leadership Perception Scale shows the extent to which shared leadership is practiced.

#### **Data Analysis**

The obtained data were analyzed using SPSS and LISREL software. First of all, a confirmatory factor analysis was performed on the GOCB scale to test its validity, and its reliability co-efficient was calculated with pre-application data. Then, Pearson's correlation coefficients were used to analyze the correlation between levels of GOCB, GOCB-I, and GOCB-O in primary schools and shared leadership. Finally, a path analysis was completed to determine the extent to which GOCB-I and GOCB-O in schools predict the joint completion of tasks (JCT), mutual skill development (MSD), decentralized interaction among personnel (DIAP), and emotional support (ES) dimensions of shared leadership.

## Results

The correlations between GOCB and shared leadership and its dimensions are provided below in Table 1.

**Table 1**

*The results of correlation analysis between GOCB and Shared leadership*

<i>Variable</i>	<i>JCT</i>	<i>MSD</i>	<i>DIAP</i>	<i>ES</i>	<i>Shared Leadership</i>
GOCB-I	.60	.64	.34	.68	.70
GOCB-O	.50	.44	.16	.56	.53
GOCB	-	-	-	-	.72

$p < .05$ , JCT:Joint Completion of Tasks, MSD: Mutual Skill Development,DIAP: Decentralized Interaction Among Personnel, ES: Emotional Support

According to Table 1, there is a significant, high-level positive correlation ( $r = .72$ ) between GOCB and shared leadership. Significant, medium-level positive correlations were found between GOCB-I and the dimensions of shared leadership, including joint completion of tasks ( $r = .60$ ), mutual skill development ( $r = .64$ ), decentralized interaction among personnel ( $r = .34$ ), and emotional support ( $r = .68$ ). Similarly, medium levels of significant, positive correlations were found between GOCB-O and dimensions of shared leadership, including joint completion of tasks ( $r = .50$ ), mutual skill development ( $r = .44$ ), and emotional support ( $r = .56$ ). However, a low level of significant and positive correlation was found between GOCB-O and the decentralized interaction among personnel ( $r = .16$ ) dimension of shared leadership. Compared to GOCB-O, GOCB-I was found to have higher correlations with both shared leadership and its dimensions.

Figure 1 shows the results of the analysis of whether levels of GOCB-I and GOCB-O can predict the joint completion of tasks, mutual skill development, decentralized interaction among personnel, and emotional support dimensions.

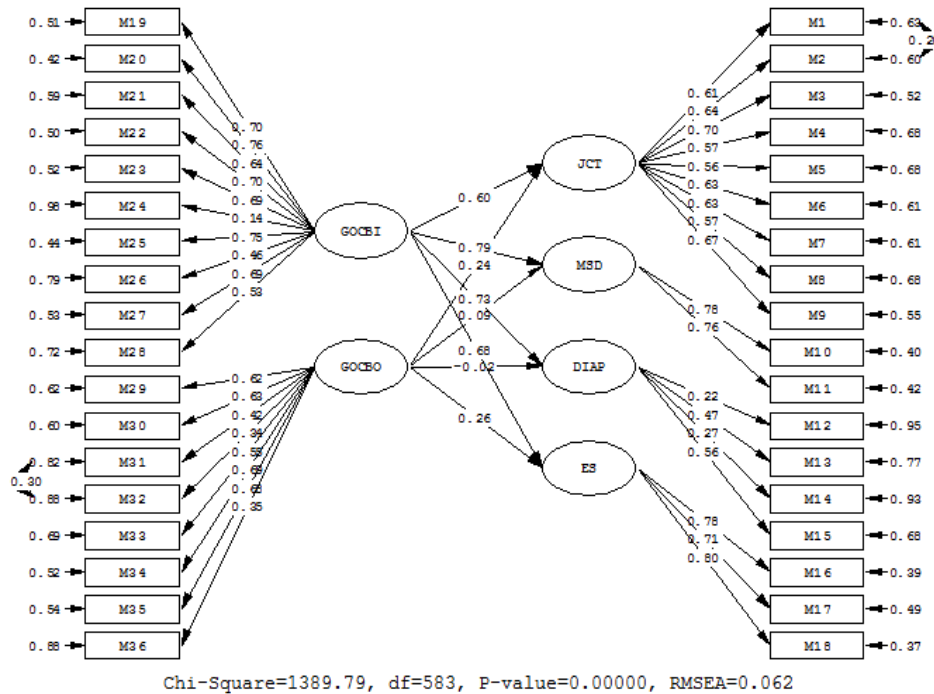


Figure 1. Path analysis results for the prediction of GOCB on Shared leadership

The goodness of fit indices yielded in the path analysis shown in Figure 1 for the prediction of GOCB on the practice of shared leadership are GFI = 0.82, AGFI = 0.80, CFI = 0.85, NFI = 0.76, RMR = 0.037, RMSEA = 0.062, and Chi-square = 1389.79, df = 583,  $\chi^2 / df = 2.38$ . The observed goodness values seem to be rather good considering the sample size. It is also understood from these values that organizational citizenship behaviors are significant predictors of shared leadership. When Figure 1 is examined, the sub-dimension of the GOCB is that GOCEI predicts the successful practice of shared leadership significantly in a positive way and at a high level in terms of joint completion of tasks (.60), mutual skill development (.79), decentralized interaction among personnel (.73), and emotional support (.68) dimensions. On the other hand, GOCEO predicts the successful practice of shared leadership significantly in a positive way and at a low level in terms of the joint completion of tasks (.24) and emotional support (.26) dimensions. The "t" values in Figure 2 show the results.

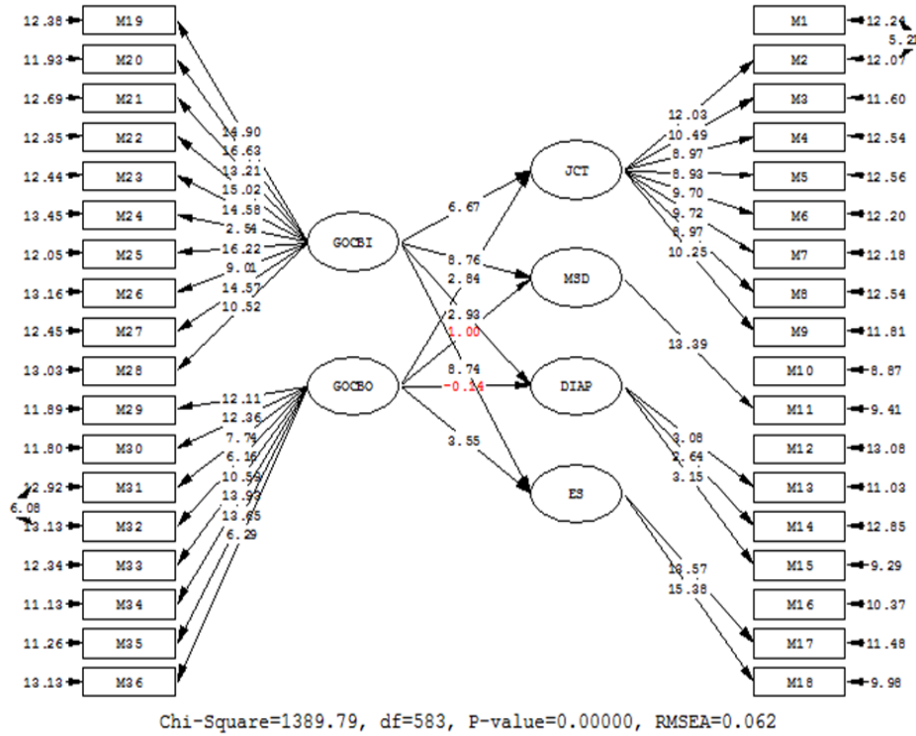


Figure 2. Path analysis for the prediction of GOCB on Shared leadership: "t" values

In contrast, as it is understood from the "t values" chart in Figure 2, GOCB-O had no significant prediction on the practice of mutual skill development and decentralized interaction among the personnel dimensions of shared leadership. According to the findings in Figures 1 and 2, it can be stated that the level of organizational citizenship behavior is a significant predictor of shared leadership and that the level was considerably high for the teachers surveyed. This situation is also understood by the goodness of fit indices.

### Discussion and Conclusion

According to the results of the study, there is a significant high level of positive correlation between GOCB and shared leadership. Although there are no studies about the direct relationship between OCB and shared leadership at schools in Turkey, some have studied the relationship between OCB and other leadership types. For example, Can and Sözer (2011) found that there is a significant, positive relationship between transformational and subscriber leader behavior types and organizational citizenship behaviors in their studies, and Oğuz (2008) revealed in his study that there is a significant, positive relationship between transformational leadership and organizational citizenship behavior. Çetin, Korkmaz and Çakmakçı

(2012) have also concluded in their research that transformational leadership affects organizational leadership, whereas transactional leadership does not. Therefore, it is understood that the results of the studies on the relationship between the other types of leadership and organizational citizenship in schools parallel with those of this study.

In addition, GOCB-I was found to have higher correlations with both shared leadership and its dimensions compared to GOCB-O. This finding was confirmed by the results of the path analysis. The GOCB-I dimension of GOCB was found to have a positive and high level of prediction the successful practice of shared leadership in terms of joint completion of tasks, mutual skill development, decentralized interaction among personnel, and emotional support dimensions. This finding is consistent with the findings of Jiao et al. (2011). They likewise concluded that OCB-I, rather than OCB-O, was predictive, especially for constructive and active leadership. Furthermore, Jiao et al. (2011) found OCB-O to be a partially mediating variable for constructive and active leadership. According to Ilies et al. (2007), OCB-I focuses on other personnel in the organization and the customers, i.e., the individuals, whereas OCB-O generally focuses on the greater good of the organization in the form of compliance to organizational policies and exceptional effort (as cited by Wilson et al., 2010).

The results of the research suggest that, in general, there are high levels of positive correlations between GOCB-I and shared leadership's dimensions of joint completion of tasks, mutual skill development, decentralized interaction among personnel, and emotional support. As a matter of fact, OCB is reported to first emerge at an individual level and gradually affect the organizational effectiveness at the group level (Schnake & Dumler, 2003). Thus, OCB appears to contribute to the leadership process in every aspect (Jiao et al., 2011). Another study concluded that shared leadership made a significant contribution to team effectiveness through OCB (Ryan & Cogliser, 2011), which indicates that organization managers can make use of organizational and individual OCB while improving the organization and restructuring its leadership (Jiao et al., 2011). Similarly, it is understood in the present research that GOCB-I predicts significantly at a high level the practice of the joint completion of tasks dimension of shared leadership. This dimension of the scale that was originally developed by Wood (2005) and was used in this study involved statements about deciding the organizational goals together, solving the organizational problems together, making decisions together, and feeling responsible to each other on the part of every person. OCB can be regarded as a premise of these statements. As a matter of fact, according to Omer et al. (2007), the altruism dimension of OCB includes behaviors of helping other people, and civic virtue refers to participation in organizational practices (Chang, Tsai & Tsai, 2011). Again, OCB promotes organizational effectiveness and enhances performance by ensuring that personnel help each other in solving the organizational problems (Podsakoff, Mackenzie, Paine & Bacharach, 2000; Turnipseed & Rassuli, 2005). The existence of a shared vision in the organization depends on OCB (Wong, Tjosvold & Liu, 2009). Moreover, other research has reported that OCB provides opportunities for teachers to stress the merits of cooperation and social responsibility (Somech & Bogler, 2002,

as cited in Vigoda-Gadot et al., 2007). Furthermore, OCBs produces positive consequences for both personnel and managers by facilitating the management methodologies of the organization (Buentello, Jung & Sun, 2008). OCB encourages the team members to perform the predefined roles and responsibilities in the group (Omar et al., 2009), and it ensures active coordination between people and units in the organization while enhancing organizational effectiveness (Keleş & Pelit, 2009). Overall, the explanations in the literature suggest that GOCB-I predicts the practice of joint completion of tasks dimension of shared leadership significantly at a high level, which can be regarded as a natural result.

According to another finding of the research, GOCB-I predicts the practice of the mutual skill development dimension of shared leadership significantly to a considerable extent. This dimension of shared leadership occurs when all personnel exchange knowledge and support each other in acquiring knowledge and competences. Chang et al. (2011) found that if personnel in an organization exhibit OCBs, then the organization will offer a better organizational learning process to its personnel. Therefore, this finding seems to be consistent with the present finding that the level of OCB predicts at a high level the practice of mutual skill development dimension of shared leadership. In the same vein, it is understood from the present findings that GOCB-I predicts the decentralized interaction among personnel dimension of shared leadership significantly in a positive way and at a high level with the coefficient. This dimension of shared leadership stresses that everybody in the organization is equal, regardless of any hierarchical positions. In fact, one of the theories on which organizational citizenship behavior is grounded is the equality theory (Keleş & Pelit, 2009). Thus, the present authors expected that GOCB-I would affect this dimension of the shared leadership to a high level, which stresses the equality of all organization members. According to the present findings, GOCB-I again predicts the practice of emotional support dimension of shared leadership significantly in a positive way and at a high level. This last dimension of the shared leadership construct is characterized by personnel encouraging and caring about each other, an interpersonal and professional attachment among personnel, and the emotional support of one another. Turnipseed and Rassuli (2005) also suggested that OCB promotes socio-cultural support by enhancing motivation in the organization or by increasing a nourishing culture.

Though the analysis revealed that GOCB-O made no significant contribution to the practice of mutual skill development and decentralized interaction among personnel dimensions of shared leadership according, it did reveal that GOCB-O predicts the joint completion of tasks and emotional support dimensions of shared leadership significantly in a positive way. The willingness of team members is critical to successful shared leadership (Wood, 2005), and the present findings confirm that the level of organizational citizenship behaviors significantly predicts the successful practice of the shared leadership to a considerable extent. This situation is also understood by the goodness of fit indices. Therefore, it can be suggested that any organizations that are planning to employ shared leadership in their executive structures should take actions to empower organizational citizenship behaviors as a premise of shared leadership.

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### Öğretmenlerin Örgütsel Vatandaşlık Davranışlarının Paylaşılan Liderliğin Gerçekleşmesini Yordama Düzeyi

#### Atıf:

- Bostancı, A. B. (2013). The prediction level of teachers' organizational citizenship behaviors on the successful practice of shared leadership. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 177-194.

#### (Özet)

*Problem Durumu:* Çalışanların örgütlerinde görev tanımlarının dışında gönüllüğe dayalı olarak gösterdikleri davranış olarak adlandırılan örgütsel vatandaşlık

davranışı, son yıllarda örgütlerde başvurulan bir liderlik türü olan paylaşılan liderlik için bir öncül olarak görülmektedir. Alan yazına göre örgütsel vatandaşlık davranışlarının paylaşılan liderliğin başarısı için gerekli olan takım etkililiğini sağlayacağı belirtilmektedir. Paylaşılan liderlik görev ve sorumlulukların paylaşıldığı işbirliğine dayalı bir liderlik sürecidir. Bu liderlik sürecinde çalışanlardan beklenenlere bakıldığında, örgütsel vatandaşlık davranışı düzeyi yüksek olmayan çalışanların bu beklentileri gerçekleştirmesi mümkün görülmemektedir. Paylaşılan liderlikte takım olarak görülen okulun, etkili bir şekilde misyonunu yerine getirebilmesi için okul çalışanları ile her alanda liderliğin paylaşılması ve her okul çalışanının bu paylaşımda üzerine düşeni fazlasıyla yapması, bunun için de örgütsel vatandaşlık düzeyinin yüksek olması gerekmektedir. Bu çalışmada da ilköğretim okullarındaki öğretmenlerin örgütsel vatandaşlık davranışlarının paylaşılan liderliğin gerçekleşmesini yordama düzeyi ortaya konulmaya çalışılmıştır.

*Araştırmanın Amacı:* Araştırmanın amacı, ilköğretim okullarındaki öğretmenlerin örgütsel vatandaşlık davranışlarının paylaşılan liderliğin gerçekleşmesini yordama düzeyini belirlemektir. Bu temel amaç doğrultusunda araştırmada şu sorulara cevap aranmıştır. İlköğretim okullarındaki örgütsel vatandaşlık davranışları ile paylaşılan liderliğin gerçekleşme durumu arasındaki ilişki düzeyi nedir? İlköğretim okullarındaki bireylere yönelik ve örgüte yönelik örgütsel vatandaşlık davranışları düzeyleri, paylaşılan liderliğin görevlerin ortak tamamlanması, karşılıklı beceri geliştirme, çalışanlar arasında merkezi olmayan etkileşim ve duygusal destek boyutlarının gerçekleşmesini anlamlı olarak yordamakta mıdır?

*Yöntem:* Araştırma, korelasyonel bir çalışmadır. Araştırmanın örneklemini Zonguldak ili'nde görev yapan 364 ilköğretim okulu öğretmeni oluşturmaktadır. Araştırmada veriler, Vigoda-Gadot ve diğerleri (2007) tarafından geliştirilen "Grup Düzeyinde Örgütsel Vatandaşlık Davranışları Ölçeği" ve Wood (2005) tarafından geliştirilen ve Bostancı (2012) tarafından Türkçe'ye uyarlanan, "Paylaşılan Liderlik Algısı Ölçeği" ile toplanmıştır. Elde edilen veriler, SPSS ve LISREL programlarında analiz edilmiştir. Öncelikle kullanılan GOCB ölçeğinin ön uygulama verilerine doğrulayıcı faktör analizi ve güvenilirlik analizi yapılmıştır. Daha sonra GOCB, GOCB-İ ve GOCB-O ile paylaşılan liderliğin ilişkisine yönelik olarak verilerin analizinde Pearson Momentler Çarpımı Korelasyonu kullanılmıştır. Son olarak da okullarda bireye ve örgüte yönelik örgütsel vatandaşlık davranışlarının paylaşılan liderliğin gerçekleşmesini yordayıcılığına yönelik olarak verilere path analizi uygulanmıştır.

*Araştırmanın Bulguları:* Araştırma bulgularına göre, ilköğretim okullarında öğretmenlerin örgütsel vatandaşlık davranışları düzeyleri ile paylaşılan liderliğin gerçekleşme durumu arasında genel toplamda olumlu yönde yüksek düzeyde anlamlı bir ilişki olduğu görülmektedir. Yine okullarda örgütsel vatandaşlık davranışlarının bireylere yönelik örgütsel vatandaşlık davranışları boyutu ile paylaşılan liderliğin görevlerin ortak tamamlanması, karşılıklı beceri geliştirme, çalışanlar arasında merkezi olmayan etkileşim ve duygusal destek boyutları arasında olumlu yönde orta düzeyde anlamlı bir ilişki olduğu anlaşılmaktadır. Bununla birlikte okullarda örgüte yönelik örgütsel vatandaşlık davranışları boyutu ile paylaşılan liderliğin görevlerin ortak tamamlanması, duygusal destek ve karşılıklı

beceri geliştirme boyutları arasında olumlu yönde orta düzeyde anlamlı bir ilişki bulunur iken, çalışanlar arasında merkezi olmayan etkileşim boyutu arasında olumlu yönde düşük düzeyde anlamlı bir ilişki bulunmaktadır. Bulgulara göre, okullarda bireylere yönelik örgütsel vatandaşlık davranışları boyutunun paylaşılan liderliğin gerçekleşme durumu ile ilişki değerlerinin daha yüksek olduğu söylenebilmektedir. Örgütsel vatandaşlık davranışları düzeyinin, paylaşılan liderliğin gerçekleşmesini yordamasına yönelik bulgulara bakıldığında ise; örgütsel vatandaşlığın paylaşılan liderliği yordamasına yönelik path analizi uyum değerlerinin oldukça iyi olduğu görülmektedir. Yine okullarda bireylere yönelik örgütsel vatandaşlık davranışları, paylaşılan liderliğin görevlerin ortak tamamlanması, karşılıklı beceri geliştirme, çalışanlar arasında merkezi olmayan etkileşim ve duygusal destek boyutlarının gerçekleşmesini olumlu yönde yüksek düzeyde anlamlı olarak yordamaktadır. Diğer yandan örgüte yönelik örgütsel vatandaşlık davranışları ise, paylaşılan liderliğin görevlerin ortak tamamlanması ve duygusal destek boyutlarının gerçekleşmesini düşük düzeyde anlamlı olarak yordarken, karşılıklı beceri geliştirme ve çalışanlar arasında merkezi olmayan etkileşim boyutlarının gerçekleşmesini anlamlı olarak yordamamaktadır. Dolayısı ile bu bulgulara göre, okullarda örgütsel vatandaşlık davranışları düzeyinin paylaşılan liderliğin gerçekleşme durumunun anlamlı yordayıcısı olduğu belirtilebilir.

*Sonuçlar ve Öneriler:* Araştırma sonuçlarına göre, örgütsel vatandaşlık davranışları düzeyi ile paylaşılan liderliğin gerçekleşme durumu arasında olumlu yönde anlamlı bir ilişki bulunmaktadır. Okullarda bireylere yönelik örgütsel vatandaşlık davranışları ile paylaşılan liderliğin gerçekleşme durumu arasındaki ilişki düzeyi, örgüte yönelik örgütsel vatandaşlık davranışları ile paylaşılan liderliğin gerçekleşme durumu arasındaki ilişki düzeyine göre daha yüksektir. Bunun yanında örgütsel vatandaşlık davranışları düzeyinin paylaşılan liderliğin gerçekleşmesi durumunu olumlu yönde anlamlı olarak yordadığı; bireylere yönelik örgütsel vatandaşlık davranışları alt boyutunun yordamasının örgüte yönelik örgütsel vatandaşlık davranışlarına göre daha yüksek ve anlamlı olduğu görülmektedir. Bu durum yordamaya yönelik uyum değerlerin de anlaşılmaktadır. Dolayısı araştırma sonuçlarından anlaşılacağı üzere, örgütsel vatandaşlık davranışları düzeyinin paylaşılan liderliğin gerçekleşmesinin önemli ölçüde anlamlı bir yordayıcısıdır. Alan yazında da paylaşılan liderliğin gerçekleşmesini örgütsel vatandaşlık davranışlarının ve özellikle de bireylere yönelik örgütsel vatandaşlık davranışları düzeyinin anlamlı olarak yordadığına yönelik destekleyici çalışmalar bulunmaktadır. Bu nedenle paylaşılan liderliği yönetsel yapılarına yerleştirecek olan örgütler için paylaşılan liderliğin öncüsü olarak örgütsel vatandaşlık davranışlarını güçlendirme çalışmalarını sürdürmeleri önerilebilir.

*Anahtar kelimeler:* Örgütsel vatandaşlık davranışı, grup düzeyinde örgütsel vatandaşlık, liderlik, paylaşılan liderlik.

## The Effect of Role Ambiguity and Role Conflict on Performance of Vice Principals: The Mediating Role of Burnout

Kazım ÇELİK\*

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### Abstract

*Problem Statement:* Role ambiguity and role conflict are considered issues that affect performance and lead to burnout. While numerous studies have analyzed role ambiguity or role conflict in relation to burnout or performance, few studies have studied all of these issues together. Since vice principals are expected to carry out a variety of responsibilities as principals and educators, it is predicted that they frequently experience role ambiguity, role conflict, and burnout. However, there is a dearth of studies researching how vice principals in schools are affected by this situation.

*Purpose of the Study:* The study aims to investigate the effects of role ambiguity and role conflict on the burnout of head vice principals and vice principals and on job performance indirectly and directly.

*Methods:* Two hundred vice principals working at elementary and high schools in the city centers of Denizli and Manisa were contacted. The Maslach Burnout Inventory, Role Conflict and Role Ambiguity Questionnaire, and Job Performance Scale were used. In line with the purpose of the study, the model was tested to analyze the cause and effect relationship between variables. SPSS 17 and AMOS 7.0 were used to analyze the data.

*Findings and Results:* The indirect and direct effects of role ambiguity on job performance were significant. In terms of the effect of role ambiguity on job performance, full mediation of emotional exhaustion and partial mediation of personal accomplishment were found. The direct and indirect effects of role conflict on job performance were also significant.

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The full mediation of emotional exhaustion and the partial mediation of depersonalization resulted from the effect of Role Conflict on job performance.

*Conclusions and Recommendations:* According to the results of the study, the direct effect of role ambiguity and role conflict on job performance is higher than the indirect effect. It was found that role ambiguity decreases job performance indirectly and directly. While the direct effect of role conflict increases job performance, the indirect effect of role conflict decreases job performance. *Emotional exhaustion* fully mediates both role ambiguity/job performance and role conflict/job performance relationships. While *personal accomplishment* plays a partially mediating role in the relationship between role ambiguity and job performance, depersonalization partially mediates the relationship of role conflict and job performance. Based on the results of the study, it can be said that determining the mission, authority, and responsibilities of vice principals might increase their performance.

**Keywords:** Role Ambiguity, role conflict, burnout, job performance, path analysis

## Introduction

Organizations are social systems that aim to provide for the needs of individuals and societies. Effective and efficient members are required and maintain their existence (Suliman, 2001). Harmony between organizational aims and employee qualifications affects performance. Today, organizations need highly qualified employees to serve in specialized fields and gain an edge on their rivals (Sonnentag & Frese, 2002). Whatever the type, field, and size of the organization, one of the most important responsibilities of leaders is to increase the job performance (JP) of human resources.

Performance has been defined differently in different contexts. Job performance is behavioral, incidental, measurable, and multifaceted, and it can be evaluated across the sum of actions that employees have taken during a given time period (Motowidlo, Borman & Schmit, 1997). Job performance also refers to the behaviors of employees involved in certain jobs, including their effectiveness and the outcomes of these behaviors (Babin & Boles, 1998).

Organizational, individual, and environmental factors affect performance in organizations (Dicle, 1982; Erdogan, 1991). These factors influence performance levels in either positive or negative ways. Job stress is considered one of these factors that impacts individuals directly. Individuals display low performance under high stress or high performance under sufficient stress. Role conflict (RC) and role ambiguity (RA) are considered the two main components of role stress (Jackson & Schuler, 1985).

Role conflict occurs when employees are required to meet incompatible demands and expectations. Employees have RA when organizations do not define their job functions and responsibilities (Jaramillo, Mulki, & Boles 2011). In the literature, the findings about the relationship between RC-RA and JP are inconsistent. Some researchers have found no relationship between stress and JP, though two stress studies have found support for the inverted-U theory, and another study found partial support (Muse, Harris & Feild, 2003; Wu 2011).

In some studies, burnout is emphasized as another factor influencing performance. When people deal with RA and RC, they encounter emotional exhaustion (EE), depersonalization (DP), and a decrease in success (Karatepe & Uludag, 2008). It is difficult to distinguish between burnout and stress since burnout is a multifaceted notion. Dagli (2006) carried out a study with school directors and vice principals and determined that one third of principals suffer from burnout.

Maslach and Jackson (1981) argue that burnout consists of three separate, albeit related, dimensions. The dimensions of this multidimensional construct are emotional exhaustion, depersonalization, and personal accomplishment. Emotional exhaustion occurs when individuals feel tense and frustrated due to their fears about meeting previous levels of work performance (Cordes & Dougherty, 1993). Depersonalization, the second dimension of burnout, arises when individuals do not want to work because they perceive interactions with tasks, clients, or co-workers as dehumanizing. To seek relief, individuals create buffers by ignoring the quality of their work (Maslach, Schaufelli & Leiter, 2001). Incompetence and lack of achievement at work is the third and final dimension of job burnout (Maslach & Leiter, 2008).

There have been many studies investigating RA and RC's relationship with performance. RA and RC had a positive relationship with emotional exhaustion and depersonalization, which were sub-dimensions of burnout in some studies (Lee & Ashforth, 1996; Jackson, Turner & Brief, 1987; Gil-monte, Valcaárcel & Zornoza, 1993; Capel, Sisley & Desertrain, 1987). Hsieh and Hsieh (2003) and Piko's (2006) studies were consistent with these studies.

As a common negative consequence of burnout, a reduction can be seen in JP (Maslach, 1982). However, there is a dearth of empirical work addressing the relationship between burnout and JP (Wright & Bonett, 1997). A longitudinal study found a negative relationship between only the emotional exhaustion component of burnout and JP. In pursuit of this study, Wright & Cropanzano (1998) conducted a one-year longitudinal study investigating the relationship between emotional exhaustion and supervisory ratings of JP. After explaining the potential influence of negative and positive affectivity, they found a statistically significant inverse relationship between emotional exhaustion and JP (Halbesleben & Buckley, 2004, 866). Due to the dearth of empirical work concerned with the aforementioned relationships, the findings of individual studies have been considerably mixed. In Advani, Jagdale, Garg, and Kumar's study (2005), it was found that emotional exhaustion increased the JP of Indian software professionals. However,

depersonalization and diminished personal accomplishment did not have a significant relationship with JP. In short, the finding above indicates the need for further research into the relationships between components of burnout and JP (Karatepe & Uludag 2008, 114).

In the many studies about the relationship of RC and RA with JP for healthcare staff, social service workers, academics, bank and hotel staff, teachers, etc., the effects of RA, RC, and burnout on performance were analyzed separately. However, the burnout variable was considered as a mediating variable between reasons and outcomes in the studies by Halbesleben and Buckley (2004), Leiter and Maslach (2005), Laschinger and Leiter (2006), and Leiter and Maslach (2009). These studies showed that burnout plays a mediating role in the relationship between behavioral and psychological outcomes such as role stressors, job satisfaction, and performance (Yurur and Keser, 2010). There have been a limited number of studies analyzing the effect of RA, RC, and burnout on performance. Karatepe & Uludag (2008) conducted a study with hotel staff. However, there have been no studies investigating the agent role of burnout in the effect of RA and RC on performance. In schools, vice principals are expected to fulfill multifaceted role responsibilities, so they are expected to experience RA, RC, and burnout. No previous studies have examined how this situation affects the performance of vice principals. Therefore, this study aims to investigate the direct or indirect effects of RA, RC (independent variables), and burnout (agent variable) on the performance (dependent variable) of vice principals working in Denizli and Manisa.

The responsibilities of the group sampled in the study, vice principals working at elementary schools, are legally defined as follows (MEB, 2003): "vice principals carry out the tasks given by the school director about educational instruction, administration, students, personnel, accrual, mobile equipment, legal correspondence, social activities, boarding, scholarships, security, nutrition, service, watch, protection, cleaning services, order, and public relations, in addition to giving lectures." Furthermore, the responsibilities of vice principals are extended to a large framework: "vice principals carry out the duties determined within the context of their responsibilities." Similar expressions can be found in the regulations of other institutions. Both the co-existence of many responsibilities and the definition of a large but uncertain framework for their action might expose vice principals to RA and RC.

This study aims to investigate the direct and indirect effects of role ambiguity and role conflict with burnout on the job performance of head vice principals and vice principals.

## Method

### *Population and Sample*

The study group was comprised of head vice principals and vice principals working at elementary and high schools in the city center of Denizli and Manisa. The main reason for choosing Denizli and Manisa was accessibility. Denizli and Manisa also share common characteristics such as being large-scale and well-developed. In



the 2010-2011 academic year, 202 vice principals were working in the city center of Denizli and 166 vice principals were working in the city center of Manisa. For this study, data was collected from 135 (67%) vice principals in the city center of Denizli and 65 (39%) vice principals in the city center of Manisa. 126 (63%) of the participants worked at elementary schools and 74 at high schools. In terms of their length of service, 69 of them (34.5%) had worked in this for role between 1 and 5 years, 47 (23.5%) for between 6 and 10 years, 30 (15%) for between 11 and 15 years, and 27 (13.5%) for between 16 and 20 years. The number of vice principals with 21 years of experience or more is 27 (13.5%).

### *Instruments*

The data were gathered using the Maslach Burnout Inventory (1981), Role Conflict and Role Ambiguity Questionnaire (1970), and Job Performance Scale (2000).

The Maslach Burnout Inventory, developed by Maslach and Jackson to measure burnout level, was adapted into Turkish, with validity and reliability analyses, by Ergin (1992). The Maslach Burnout Inventory (MBI) consisted of 22 items evaluating three dimensions of burnout. Of these sub-dimensions, emotional exhaustion (EE) and depersonalization (DP) consist of 9 and 5 negative items, respectively, while the personal accomplishment (PA) dimension consists of 8 positive items. In the Turkish adaptation, Ergin (1992) turned the 7-point Likert scale (1-never and 7-always in the original inventory) into a 5-point Likert scale (1-never and 5-always in the adapted inventory). As burnout is a process with different dimensions, a sum could not be obtained from the measure, and each dimension was scored separately. The reliability of the coefficients of the emotional exhaustion, depersonalization, and personal accomplishment dimensions on the MBI were .83, .65, and .72 for a group of doctors and nurses (Ergin, 1992). In this study, the reliability coefficients of emotional exhaustion, depersonalization, and personal accomplishment were .85, .69, and .78, respectively.

The Role Conflict and Role Ambiguity Questionnaire, developed by Rizzo, House, and Lirtzman (1970), was used to measure the RC and RA of employees in their organizations. The scale was originally a seven-point Likert type scale. However, in this study, the questionnaire as adapted into Turkish employs a 5-point Likert type scale, in order to match other scales and increase clarity. The role conflict scale consisted of eight items, each having a 5-point scale ranging from "very false" to "very true." The role ambiguity scale contained six items ranging from "very false" to "very true." In the original questionnaire, low scores of RA indicated high RA. However, the scores for the RA items were reversed in order to be able to evaluate the results easily. In this sense, high scores of RA indicated high RA in this study. In Eriguc's study (1994), the Cronbach's alpha coefficients for RC and RA were .81 and .72 respectively. The alpha coefficients were calculated as .67 and .73 for RC and RA respectively.

The Job Performance Scale, developed by Wong and Law (2000) to measure JP, was adapted into Turkish by Gurbuz and Yuksel (2008). The 13-item JP sub-measure of the Job Performance, Job Satisfaction, and Organizational Citizenship Behavior

Scale was used in this study. All the items were positive. The scale was a 5-point Likert type ranging from “strongly disagree” (1) to “strongly agree” (5). Performance was self-reported, and the items in the scale were organized accordingly. While the Cronbach’s alpha coefficient was .93 in Gurbuz and Yuksel’s study (2008), it was .82 for this study.

#### *Procedure*

The necessary permissions were acquired from the Provincial Directorates for National Education in Denizli and Manisa, and the data were gathered from vice principals on a voluntary basis during the 2010-2011 spring term. The data were collected from each participant personally in Denizli and by mail from those in Manisa.

#### *Data Analysis*

In this study, path analysis through structural equation modeling (SEM) was performed to examine the direct or indirect relationships and interactions among RC, RA, and sub-dimension variables with performance. The data were analyzed using the Maximum Likelihood technique. Path analysis was employed to determine the level of corroboration the model provided with the research hypotheses of the study (Bedia & Armenakis, 1981; 417). Path analysis was initiated by forming path diagrams to show the relationship between variables that were thought to display cause and effect relationships. Next, correlation coefficients, showing the extent of linear relationships among variables, were classified as displaying a direct effect, indirect effect, or total effect. The analysis was completed by interpreting these results (Kaygisiz, Saracli, & Dokuzlar, 2005). The relationships among variables were determined using Pearson’s product-moment correlation coefficient. The statistical analysis of the study was carried out using the SPSS 17.00 and AMOS 7.0 programs. A significance level of 0.05 was accepted in this study, and other significance levels (0.01 and 0.001) have also been indicated.

In measuring model fit, the chi-square test ( $\chi^2$ ),  $\{\chi^2 / s.d.\}$ , RMSEA (Root Mean Square Error of Approximation), and SMR (Standardized Root Mean Square Residual) indexes are used most frequently. Other model fit indexes are the GFI (Goodness Fit Index), CFI (Comparative Fit Index), TLI (Tucker Lewis Index), NFI (Normed Fit Index), and RFI (Relative Fit Index). If the ratio of  $\{\chi^2 / s.d.\}$  is lower than 3, the model fit is acceptable. The model fit is perfect if RMSEA and SRMR are equal, with a difference of 0.05 or lower. It is acceptable if the difference is 0.08 or lower. GFI, CFI, TLI, NFI and RFI have magnitudes between 0 and 1. A value of 0.95 or above is considered to indicate perfect fit, and coefficients between 0.90 and 0.94 can be taken as confirmations of good fit (Kline, 2011). In this study, model fit was analyzed according to the fit indexes given above.

## **Results**

Means and standard deviations, Cronbach’s alpha coefficients, and correlation coefficients are presented for the variables of role ambiguity (RA), role conflict (RC), sub-dimensions of burnout (Emotional exhaustion, EE; depersonalization, DP; personal accomplishment, PA), and job performance (JP) in Table 1.

**Table 1.***Descriptive Statistics and Correlations (N=200)*

	<i>M</i>	<i>SD</i>	<i>Cronbach's alpha</i>	<i>RA</i>	<i>RC</i>	<i>EE</i>	<i>DP</i>	<i>PA</i>	<i>JP</i>
RA	2.03/5	2.68	.73	1	.084	.299**	.253**	.312**	-.353**
RC	3.30/5	4.12	.67		1	.147*	.243**	-.068	.093
EE	1.29/4	5.68	.85			1	.383**	.322**	-.162*
DP	1.28/4	2.61	.69				1	.213**	-.177*
PA	1.12/4	3.10	.78					1	-.547**
JP	4.26/5	5.42	.82						1

\*\*  $p = .01$  \*  $p = .05$ 

As indicated in Table 1, Cronbach's alpha internal validities are at medium levels and highly reliable, as they are between .67 and .85. RA and RC can be considered to be at middle and medium levels ( $M=2.03/5$  and  $M=3.30/5$  respectively). In addition, the self-reported JP levels of participants were higher ( $M=4.26/5$ ) than average. Swider and Zimmerman (2010) found self-reported performance to be about .80 in the 115 empirical studies they analyzed. The emotional exhaustion and depersonalization levels of participants were  $M=1.29/4$  and  $M=1.28/4$  respectively. These results indicate that the burnout levels of the participants are low in terms of the emotional exhaustion and depersonalization dimensions. Personal accomplishment is lower than average, with a level of  $M=1.12/4$ . This value shows that participants report low lack of personal accomplishment, so burnout is low for this dimension as well. While EE and DP display a significant but negative correlation with JP at a level of  $p=.05$ , a negative correlation is determined between PA and JP at the level of  $p=.01$ , according to the results of the correlation analysis. In the case of the significant negative relationship between RA and JP at the level of  $p=.01$ , it is not possible to show a significant relationship for RC. Furthermore, there is no significant relationship between RC and RA, or RC and personal accomplishment.

#### *The Effect of Role Ambiguity on Performance*

First, goodness of fit is tested to analyze the effect of RC on performance and the mediating role of dimensions of burnout; then, standardized coefficients are examined, accounting for the relationships among variables. Finally, an evaluation of the model is presented.

As observed in Figure 1, the mediating role of burnout for the effect of RA on performance was analyzed with the help of constructed model. However, the fit indexes of the model did not show support, with values of  $\chi^2 / s.d = 12.441 > 3$ ,  $RMSEA = .24 > .05$ ,  $GFI = .93$ ,  $AGFI = .64$ ,  $NFI = .78$ ,  $RFI = .28$ ,  $IFI = .80$ ,  $TLI = .30$ , and  $CFI = .79$ .

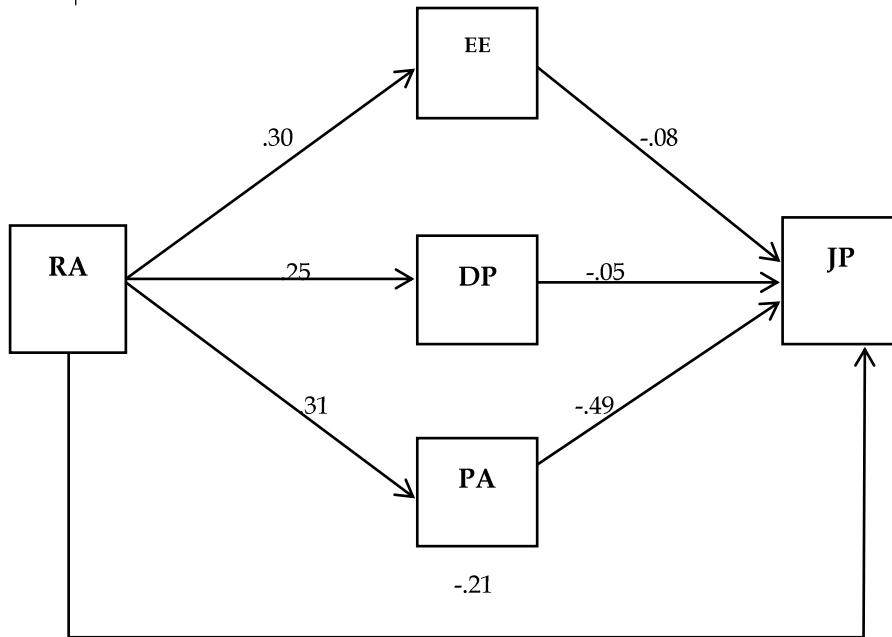


Figure 1. Lack of good fit for paths in the model and standardized path coefficients

Several models were used to find a structural equation model (SEM) with variables in this dimension, starting with the model considered to show the relationship among all variables (Figure 1). In this process, DP was excluded, as it did not have a significant relationship with the overall model, and the study was carried out with significant paths. The paths in the model and path coefficients gained from the study are presented in Figure 2.

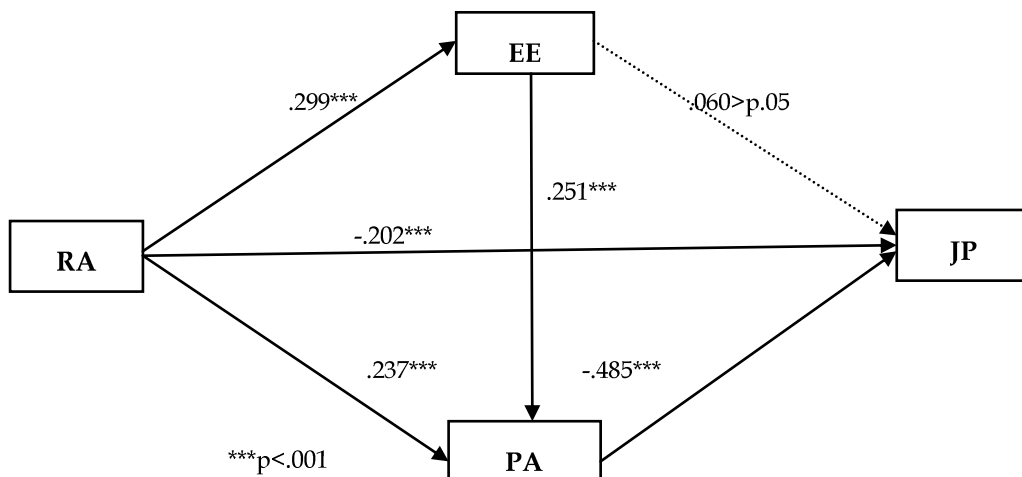


Figure 2. The paths in the best fitting model and standardized path coefficients

The goodness of fit values of the developed model were higher than the acceptable values. The fit indexes of the developed model support were supported with  $\chi^2 / s.d = 1.047 > 3$ ,  $RMSEA = .015 < .05$ ,  $GFI = .99$ ,  $AGFI = .97$ ,  $NFI = .99$ ,  $RFI = .95$ ,  $IFI = 1.00$ ,  $TLI = .99$ ,  $CFI = 1.00$ ,  $SRMR = .0172$  values.

In accounting for the direct effects of independent variables on performance, path coefficients were used. The total effect of each independent variable on the dependent variables is formed from the sum of the path coefficient (direct effect) and indirect effects. The evaluation of the model is presented in Table 2. Kline (2011, 185) indicated that path coefficients  $< .10$  might be estimated as a "smaller" effects, values around  $.30$  as "typical" or "medium" effects, and values  $> .50$  as "larger" effects.

**Table 2.**

*Standardized Coefficients and Effect Size about the Model*

Variables	Standardized Regression Weights	p	Standardized Direct Effects	Effect Size	Standardized Indirect Effects	Standardized Total Effects
EE <--- RA	.299	***	.299	Moderate	.000	.299
PA <--- RA	.237	***	.237	Moderate	.075	.312
PA <--- EE	.251	***	.251	Moderate	.000	.251
JP <--- RA	-.202	***	-.202	Moderate	-.151	-.353
JP <--- PA	-.485	***	-.485	Moderate	.000	-.485
JP <--- EE	.060	>p.05	.000	No effect	-.122	-.122

\*\*\*p<.001

As indicated in Figure 2, standardized coefficients range between  $-.202$  and  $-.485$  in the path model explaining the relationship between independent and dependent variables ( $p < .001$ ). According to this model, the variable most predictive of performance is PA (coefficient =  $.485$ ). This can be interpreted to mean "a unit-increase in the standard deviation of PA lowers the standard deviation of performance by a net total of  $.48$  points." The next most predictive variable in terms of performance is RA (coefficient =  $.20$ ). This can be understood to mean that "a unit-increase in the standard deviation of PA lowers the standard deviation of performance by a net total of  $.20$  points".

When path coefficients are analyzed to determine the effects of mediation and independent variables on dependent variables, they need to be estimated as fully mediating if there is an insignificant relationship between the dependent and independent variables. Otherwise, if the relationship is a slightly less certain, it is estimated as partial mediation. As seen in the model, EE does not have a direct effect on JP (coefficient =  $.06$ ,  $p > 0.5$ ). However, EE can be included in the model as it affects JP owing to PA. EE has an indirect effect (coefficient =  $-.12$ ) on JP in the mediation of EE. This situation indicates that EE has a fully mediating effect on JP. In Figure 2, RA affects performance not only directly but also indirectly with PA. Therefore, PA has a partially mediating role in the relationship between JP and RA. Furthermore, it can

be estimated that RA increases EE (coefficient=.30) and EE affects JP in the mediation of PA. The other variable in the model, DP, was excluded, as it was not significantly related to JP.

The total effect of one variable on another is defined as the sum of the direct and indirect effects between variables (Kline, 2011). Therefore, the total effect size of RA on JP is -0.35. This can be interpreted to mean that "a unit-increase in the standard deviation of RA lowers the standard deviation of JP by a net total of .353 points." The total effect size of RA on JP (-.353) can be divided into direct (-.202) and indirect (-.151) effects. The direct effect size of RA on performance is higher than its indirect effect.

#### *The Effect of Role Conflict on Performance*

The mediating role of the burnout sub-dimensions was analyzed to determine the relationship between RC and performance using the model in Figure 1b. However, indexes of good fit ( $\chi^2 / s.d = 18.40 > 3$ ,  $RMSEA = .30 > .05$ ) and fitting indexes ( $GFI = .89$ ,  $AGFI = .46$ ,  $NFI = .62$ ,  $RFI = -.26$ ,  $IFI = .64$ ,  $TLI = -.28$ ,  $CFI = .62$ ) did not support the model.

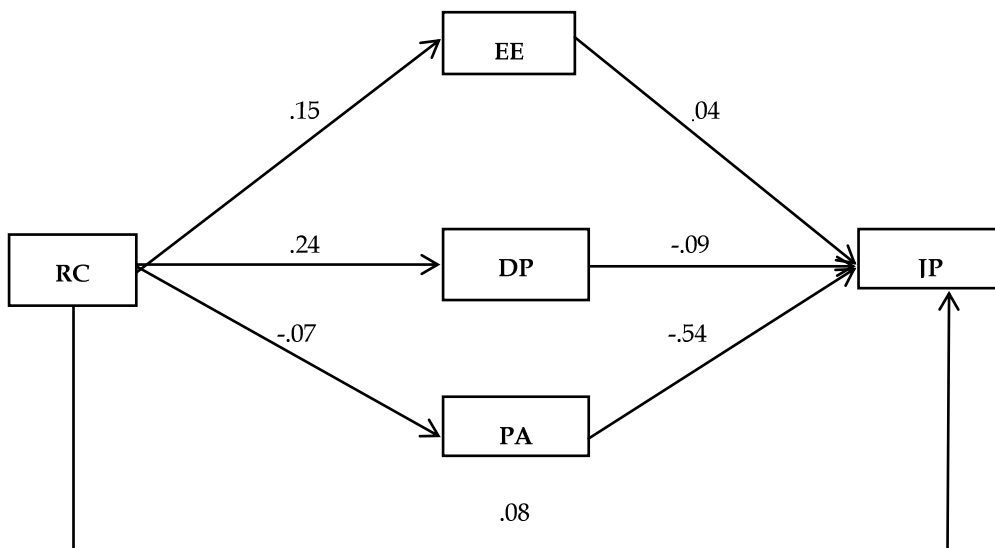


Figure 3. Lack of good fit for paths in the model and standardized path coefficients

In order to determine the best structural equation model, several models were tried with the variables in this part of the study, beginning with the model that was considered to display the relationships among all variables (Figure 3). In this process, PA was excluded, as it did not have a significant relationship with the overall model, and the study was carried out using significant paths. The paths in the model and path coefficients gained from the study are presented in Figure 4.

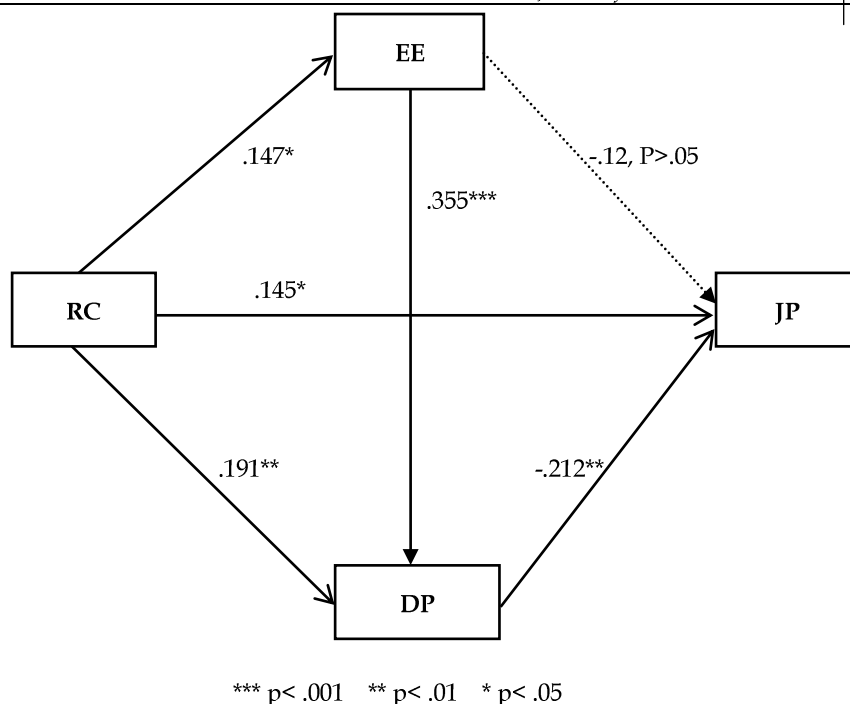


Figure 4. The paths in the best fitting model and standardized path coefficients

Table 3.

Standardized Coefficients and Effect Sizes for the Model

Variables	Standardized Regression Weights	p	Standardized Direct Effects	Effect Size	Standardized Indirect Effects	Standardized Total Effects
EE <--- RC	.147	.036*	.147	Moderate	.000	.147
DP <--- RC	.191	.003**	.191	Moderate	.052	.243
DP <--- EE	.355	***	.355	Moderate	.000	.355
JP <--- RC	.145	.042*	.145	Moderate	-.051	.093
JP <--- DP	-.212	.003**	-.212	Moderate	.000	-.212
JP <--- EE	-.12	P>.05	.000	No effect	-.075	-.075

\*\*\* p<.001 \*\* p<.01 \* p<.05

As observed in Figure 4, the standardized coefficients vary between .355 and -.212 in the path model explaining the relationship between independent and dependent variables (p<.05). According to the model, the variable most predictive of performance is DP (coefficient= -.212). This situation can be interpreted to mean that

“a unit-increase in the standard deviation of DP lowers the standard deviation of performance by a net total of .212 points.” The variable next most predictive of performance is RC (coefficient = .145). This can be interpreted to mean that “a unit-increase in the standard deviation of RC lowers the standard deviation of performance by a net total of .145 points.”

EE does not have a direct effect on PRF (coefficient=-.12,  $p > .05$ ). However, it can be included in the model, as it affects the model owing to DP. EE has an indirect effect (coefficient = -.075) on PRF through the mediating role of DP. This situation indicates that EE has a fully mediating effect on PRF. In Figure 4, EE does not have a direct effect on PRF. RC affects performance not only directly but also indirectly through DP (coefficient=-.051). Therefore, DP has a partially mediating role in the relationship between PRF and RC. Furthermore, it can be estimated that RC increases EE (coefficient=.147) and EE decreases PRF through the mediation of DP. The other variable, PA, was excluded from the model as it was not significantly related to job performance.

When the sum of direct, indirect, and total effects is analyzed among these relationships, the size of the effect of RC on performance is .0935. This can be interpreted to mean that “a unit-increase in the standard deviation of RC lowers the standard deviation of JP by a net total of .0935 points.” The total effect size of RC on JP (.0935) can be divided into direct (.145) and indirect (-.051) effects. The direct effect size of RC on performance is higher than its indirect effect.

## Discussion and Conclusions

The mediating role of burnout in the effect of RA on JP was analyzed in the first model of this study, which showed good fit. When three sub-dimensions of burnout (EE, DP and PA) were analyzed together, they were insufficiently influential (Figure 1). In the first model, good fit was found when the DP sub-dimension was excluded from the analysis. According to this model, RA has direct and indirect effects on JP, decreasing performance. This result corroborates the findings of Ross and Boles (1994), Babin and Boles (1996), and Karatepe and Uludag (2008). Environments in which individuals experience RA create uncertainty in decision-making, and individuals spend more effort and time gaining approval from others. This might decrease performance. Studies in this field also show that RA decreases performance.

When the mediating role of burnout is considered in the relationship between RA and performance, EE is fully mediating and PA is partially mediating. The variable of burnout was considered to be a mediating variable between reasons and outcomes in the studies of Halbesleben and Buckley (2004), Leiter and Maslach (2005), Laschinger and Leiter (2006), and Leiter and Maslach (2009). These studies also show that burnout has a mediating role (Yurur & Keser 2010) in the relationship between behavioral and psychological results such as role stressors, job satisfaction, and performance (Singh, Goolsby, & Rhoads, 1994). DP was excluded as a mediating variable in the model, as it was not correlated. Wright and Hobfoll (2004), Wright and Bonett (1997), and Karatepe and Uludag (2008) found similar results in their



studies. While EE does not have a direct effect on JP, PA has a direct effect on JP. However, Advani et al. found that emotional exhaustion increases performance.

In this study, EE and PA have a significant but negative effect on JP when the effect of RA on the dimensions of burnout was analyzed. According to most of the findings in the field, RA and RC affect the sub-dimensions of burnout negatively. RC and RA increase EE and DP in the studies carried out by Babakus, Cravens, Johnston, and Moncrief (1999), Hsieh and Hsieh (2003), Lee and Ashforth (1996), and Karatepe and Uludag (2008). However, Sabuncuoglu (2008) found that RA affects three dimensions of burnout.

The mediating role of burnout in the effect of RC on JP was analyzed in the second model in this study that demonstrated good fit. When the three sub-dimensions of burnout (EE, DP and PA) were analyzed together, they did not offer sufficient support (Figure 3). In the first model, good fit occurred when the PA sub-dimension was excluded from the analysis (Figure 4). According to this model, RC has significant, positive, direct and indirect effects on JP. This finding is interesting, as it is expected that RC would decrease performance. Although a number of empirical studies have investigated the effect of RC on JP, the individual studies have reported mixed results regarding this relationship. For instance, Brown and Peterson (1993) could not find a significant relationship between RC and salespersons' performance in their meta-analytic study. In the study by MacKenzie, Podsakoff, and Ahearne (1998), salespersons reported lower (in-role) job performance when they were confronted with RC. On the other hand, various empirical studies have demonstrated a positive relationship between RC and JP (Behrman & Perreault, 1984; Ross & Boles, 1994; Babin & Boles, 1996; Babakus et al., 1999; Karatepe & Uludag 2008). This study also indicates that RC increases the JP of vice principals. This may be because they might be able to cope with difficulties in their position, as unpredictable problems occur in schools. These difficulties are predicted to be RCs between the administration and everyone in the school environment, or rivalry with school administrators. Another reason for RC might be vice principals' expectations of promotion.

When the mediating role of the sub-dimensions of burnout are analyzed, it is understood that EE is fully mediating and DP is partially mediating. DP has a partially mediating effect in decreasing JP. PA was excluded, as it did not have a significant relationship with the overall model. Hsieh and Hsieh (2003) and Karatepe and Uludag (2008) did not find a significant relationship between RC and PA.

RC affects the EE and DP sub-dimensions of burnout significantly but negatively. Similar findings can be seen in Sabuncuoglu's study (2008). Swider and Zimmerman (2010) reported that emotional exhaustion, depersonalization, and personal accomplishment correlated with performance with measures of -.20, -.20 and .35 respectively in the 115 empirical studies they analyzed. When studies were carried out on the basis of self-ratings of performance, emotional exhaustion, depersonalization, and personal accomplishments have true score correlations of -.33, -.38, and .42. DP has a significant effect on JP.

According to these results, it is necessary to determine the roles, mission, authority, and responsibilities of vice principals more exactly, as this might prevent them from experiencing RC, increasing performance. Furthermore, while RC increases performance directly, it decreases performance indirectly. Since RC also affects burnout negatively, it can be concluded that RC should be minimized.

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### Okul Müdür Yardımcılarında Rol Belirsizlięi ve Rol Çatışmasının Performans Üzerindeki Etkisinde Tükenmişlięin Aracı Rolü

#### Atf:

- Celik, K. (2013). The effect of role ambiguity and role conflict on performance of vice principals: the mediating role of burnout. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 195-214.

#### (Özet)

**Problem Durumu:** Örgütlerin etkin ve verimli bir şekilde çalışıp varlıklarını sürdürebilmeleri büyük ölçüde sahip oldukları insan kaynağının performansına baęlıdır. Örgütlerin türü, çalışma alanı ve büyüklükleri ne olursa olsun yöneticilerin önemli sorumluluk alanlarından birisi çalışanların iş performansının artırılmasıdır.

Rol belirsizliği ve rol çatışması ile tükenmişlik performansı etkilediği düşünülen kavramlardır. Rol çatışması ve rol belirsizliği ile tükenmişlik, rol çatışması ve rol belirsizliği ile performans arasındaki ilişkileri tek tek inceleyen çalışma çok, birlikte inceleyen çalışma sayısı sınırlıdır. Bu çalışmanın örneklemini oluşturan, ilköğretim kurumlarında görev yapan müdür yardımcılarının görevleri, İlköğretim Kurumları Yönetmeliğinde “ders okutmanın yanında okulun her türlü eğitim-öğretim, yönetim, öğrenci, personel, tahakkuk, taşınır mal, yazışma, sosyal etkinlikler, yatılılık, bursluluk, güvenlik, beslenme, bakım, nöbet, koruma, temizlik, düzen, halkla ilişkiler gibi işleriyle ilgili olarak okul müdürü tarafından verilen görevleri yapar” şeklinde tanımlanmıştır. Ayrıca, “müdür yardımcılarının, görev tanımında belirtilen diğer görevleri de yapar.” denilerek görevleri ile ilgili geniş bir çerçeveye çizilmiştir. Benzer ifadelerle diğer kurumların yönetmeliklerinde de rastlanabilir. Hem birden çok görevlerinin olması hem de görevlerine ilişkin geniş ve belirsiz bir sınır çizilmesi bu yöneticileri rol belirsizliği ve rol çatışması ile karşı karşıya bırakabilir. Okullarda yönetici ve eğitimci olarak çok yönlü rol yükümlülüklerini yerine getirmeleri beklenen ve bu nedenle işlerini yaparken sık sık rol belirsizliği, rol çatışması ve tükenmişlik yaşadıkları tahmin edilen okul müdür yardımcılarının performanslarının bu durumdan nasıl etkilendiğini araştıran çalışmalara rastlanamamıştır. Literatürdeki bu eksiklikten hareketle, bu çalışmada Manisa ve Denizli il merkezinde görev yapan ilköğretim okulu ve ortaöğretim kurumlarında görev yapan müdür yardımcılarının yaşadıkları rol belirsizliği ve rol çatışması ile tükenmişliğin performans üzerindeki ayrı ayrı ve birlikte (doğrudan ve dolaylı) etkilerinin durumu incelenecektir.

**Araştırmanın Amacı:** Çalışmada ilk ve ortaöğretim okullarında görev yapan müdür başyardımcıları ve müdür yardımcılarının algıladıkları rol belirsizliği ve rol çatışması ile tükenmişliğin algılanan iş performans üzerindeki ayrı ayrı ve birlikte (doğrudan ve dolaylı) etkilerinin araştırılması amaçlanmıştır.

**Yöntem:** Araştırma kapsamında Denizli ve Manisa il merkezlerindeki ilköğretim ve ortaöğretim kurumlarında görev yapan ve araştırmaya katılmaya gönüllü olan 200 okul müdür yardımcısına ulaşılmıştır. Araştırmada, Maslach Tükenmişlik Ölçeği, Rol Çatışması ve Rol Belirsizliği Ölçeği, İş Performansı Ölçeği kullanılmıştır. Çalışmanın amacı doğrultusunda, değişkenler arasındaki neden-sonuç ilişkilerini incelemek üzere kurulan model path (yol) analiziyle test edilmiştir. Path analizi, birbirleriyle sebep-sonuç ilişkisi içinde olduğu düşünülen değişkenler arasındaki ilişkileri gösteren path diyagramlarının oluşturulması, değişkenler arasındaki doğrusal ilişkilerin derecesini gösteren korelasyon katsayılarının direkt etkiler, dolaylı etkiler ve bileşik path katsayılarına ayrılarak analiz edilmesi ve analiz sonuçlarının doğru bir şekilde yorumlanması işlemlerini kapsar. Verilerin analizi Maximum Likelihood yöntemi kullanılarak gerçekleştirilmiştir Verilerin analizinde SPSS 17 ve AMOS 7.0 programı kullanılmıştır.

**Araştırmanın Bulguları:** Rol belirsizliğinin iş performansı üzerinde doğrudan ve dolaylı etkileri anlamlı bulunmuştur. Rol belirsizliğinin iş performansı üzerindeki etkisinde duygusal tükenmenin tam aracılığı (full mediation) ile kişisel başarı eksikliğin kısmi aracılığı (partial mediation) söz konusudur. Duyarsızlaşma,

performans ile ilişkili bulunmamıştır. Rol belirsizliğinin performans, kişisel başarı eksikliğini performans üzerindeki doğrudan etkisi orta düzeydedir.

Araştırmanın diğer bir sonucu olarak; rol çatışmasının performans üzerinde doğrudan ve dolaylı etkileri anlamlı bulunmuştur. Rol çatışmasının iş performansı üzerindeki etkisinde duygusal tükenmenin tam aracılığı ile duyarsızlaşmanın kısmi aracılığı söz konusudur. Tükenmişliğin bir boyutu olan kişisel başarı eksikliği performans ile ilişkili bulunmamıştır. Rol çatışmasının performans, duyarsızlaşmanın performans üzerindeki doğrudan etkisi orta düzeydedir.

**Araştırmanın Sonuçları ve Önerileri:** Araştırma sonuçlarına göre, rol belirsizliğinin ve rol çatışmasının iş performansı üzerindeki doğrudan etkisi dolaylı etkisinden daha fazladır. Rol belirsizliği direkt etkisiyle performansı düşürürken rol çatışması performansı artırmaktadır. Rol belirsizliği dolaylı etkisiyle iş performansını düşürürken rol çatışmasının da dolaylı etkisiyle performansı düşürmektedir. Duygusal tükenme, hem rol belirsizliği- performans ilişkisinde hem de rol çatışması- performans ilişkisinde tam aracılık rolü üstlenmektedir. Kişisel başarı, rol belirsizliği- performans ilişkisinde, duyarsızlaşma ise rol çatışması- performans ilişkisinde kısmi aracılık görevi yapmaktadır. Bu sonuçlara dayanarak, müdür yardımcılarının görev, yetki ve sorumlulukları ile rollerinin açık bir biçimde tanımlanmasının performanslarını daha da artırabileceği söylenebilir.

**Anahtar Sözcükler:** Rol belirsizliği, rol çatışması, tükenmişlik, performans, path analizi





## Sample Size for Estimation of G and Phi Coefficients in Generalizability Theory

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### Abstract

*Problem Statement:* Reliability, which refers to the degree to which measurement results are free from measurement errors, as well as its estimation, is an important issue in psychometrics. Several methods for estimating reliability have been suggested by various theories in the field of psychometrics. One of these theories is the generalizability theory. In generalizability theory, two distinct reliability coefficients are estimated: the generalizability coefficient (G coefficient) for relative evaluation, and the index of dependability (Phi coefficient) for absolute decisions. Like in all methods of reliability estimation, G and Phi coefficients are estimated based on a data set obtained from a sample as a result of administering the instrument. Therefore, it has been a critical issue to determine what sample size is necessary in order to reliably estimate the population's characteristics.

*Purpose of Study:* The purpose of this study is to determine the adequate sample size required to ensure that the G and Phi coefficients obtained from a sample can estimate the G and Phi coefficients for the population in an unbiased way.

*Methods:* A total of 480691 students who took Form A of the SBS test for the 6<sup>th</sup> grade in 2008 were considered as the population of the study. Using a bootstrap method, a total of 1200 students were selected from this population, randomly falling into 12 subgroups consisting of different sample sizes (n=30, 50, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000), with each sample size having 100 replications. Since the test battery contained five subtests with distinct contents and numbers of items, and

all items were replied to by all participants, a  $p \times i^c$  multivariate G

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theory design was used. G and Phi reliability coefficients were estimated both for the population and each of the 12 distinct samples of different sizes. The relative root mean square error (R-RMSE) index was used as the error index to analyze the consistency of the G and Phi coefficients with the G and Phi parameters estimated for the population.

*Findings and Results:* It was found that the G and Phi coefficients estimated for a sample size of 30 tended to be less than the G and Phi parameters, and the R-RMSE value was greater than .01. When the sample size was 50 or more, R-RMSE values were less than .01. Thus it can be said that G and Phi coefficients are robust estimators of G and Phi parameters. Moreover, it was concluded that where the sample size is 400 or greater, R-RMSE values become stable. It was seen that a sample size of 400 is a more exact and robust estimator of G and Phi parameters, and increasing the sample size over 400 does not make a significant contribution to the unbiased estimation of G and Phi parameters.

*Conclusions and Recommendations:* A sample size of 30 does not provide an adequately unbiased estimation of G and Phi coefficients. It can be recommended that sample sizes of 50 to 300 are adequate for a robust estimation of G and Phi coefficients; however, a more exact and robust estimation requires a sample size of 400. In future research, the sample size for facets using different designs of G theory can be studied.

*Keywords:* Generalizability theory, sample size, generalizability coefficient, Phi coefficient

Due to the measurement errors present in educational and psychological measurements, accurate scores cannot be obtained. When measuring a variable it is desirable to obtain measurement scores as close to the real measure as possible. Therefore, reliability, which refers to the degree to which measurement results are free from measurement errors, as well as its estimation, play central roles in psychometrics. Several methods for estimating reliability have been suggested by various theories in the field of psychometrics. These methods of estimating reliability are statistics estimated based on a data set obtained from a sample as a result of administering an instrument. Therefore, it is critical to determine the sample size in order to estimate the reliability of the population. An adequate sample size must be used in order to accurately estimate reliability while ensuring economy in administering the instrument.

There are many suggestions in the psychometric literature about adequate sample sizes required to estimate reliability. Kline (1986), for example, reports that samples in reliability analysis must contain 200 or more data points. On the other hand, Nunnally and Bernstein (1994) stress that a large sample size should be used to minimize sample errors, thus estimating reliability confidently accurately, and suggest that sample sizes should be 300 or more. However, Segall (1994) states that a sample size of 300 is small for reliability estimation. Charter (1999, 2003)

recommends a sample size of 400 to estimate the population reliability precisely. On the other hand, Yurdugül (2008) reported that if the first eigenvalue of a measurement cluster is greater than six, a sample size of 30 is adequate; if the eigenvalue is between 3 and 6, a sample size of 100 is adequate; and if the eigenvalue is less than 3, a sample size of 300 or more is adequate. No upper limit is recommended for the sample size in reliability literature, but the ideal sample size has been discussed. In addition, Felt and Ankenmann (1998, 1999) stated that it is ill-advised to employ a sample size of less than 30, and Charter (2008) also suggested that levels below this threshold are unwise. One reliability estimation theory is Generalizability Theory, which was developed by Lee J. Cronbach et al. in 1972 based on the shortcomings of classical test theories (Crocker & Algina, 1986; Shavelson & Webb, 1991; Nunnally & Bernstein, 1994; Brennan, 2001a).

Generalizability Theory (G Theory) enables the assessment of reliability in behavioural measurements, and the design, research, and conceptualization of reliable observations (Shavelson & Webb, 1991; Brennan, 2001a). G Theory was first put forward by Cronbach et al. as a reaction to the shortcomings of the still popular real score model of classical reliability theory. Classical reliability theory considers the errors inherent in the measurement results to be errors coming from a single source. On the contrary, G theory considers the errors coming from all potential error sources together, as well as their interaction effects (Breannan, 2011). The purpose of G theory is to generalize the observed scores of measured subjects to the population scores accurately by defining and interpreting the measurement results and distinguishing different sources of variance. G theory assumes that the reliability of an observation depends on the studied population (Crocker & Algina, 1986; Shavelson & Webb 1991; Brennan, 2001a)

G theory takes into consideration two means of estimating reliability in education and psychology: relative and absolute evaluation. Therefore, in G theory two distinct reliability coefficients are estimated: a generalizability coefficient (G coefficient) for relative evaluations, and an index of dependability (Phi coefficient) for absolute decisions (Crocker & Algina, 1986; Shavelson & Webb, 1991; Brennan, 2001a).

Used for relative evaluations and symbolized by  $E\rho^2$ , the G coefficient is defined as equal to the proportion of universe score variance [ $\sigma^2(p)$ ] to the sum of the same variance and relative error variance [ $\sigma^2(\delta)$ ]:

$$E\rho^2 = \frac{\sigma^2(\tau)}{\sigma^2(\tau) + \sigma^2(\delta)} \quad (1)$$

Used for absolute evaluations and symbolized by  $\Phi$ , the Phi coefficient is defined as equal to the proportion of universe score variance [ $\sigma^2(p)$ ] to the sum of the same variance and absolute error variance [ $\sigma^2(\Delta)$ ]:

$$\Phi = \frac{\sigma^2(\tau)}{\sigma^2(\tau) + \sigma^2(\Delta)} \quad (2)$$

(Shavelson & Webb 1991; Brennan, 2001a)

Cronbach et al. (1972) warn that variance components used in estimating the G and Phi coefficients can be unstable, depending on the sample size. Smith (1978) stresses that using a small sample size does not provide a sound ground in estimating the G and Phi coefficients, and if a sample size is small the G and Phi coefficients will not be stable. The issue of adequate sample size in estimating the G and Phi coefficients needs to be studied within generalizability theory (Shumate, Surles, Johnson & Penny, 2007). This study investigated the adequate sample size that will ensure that the G and Phi coefficients obtained from the sample can estimate the G and Phi coefficients for the population in an unbiased way.

## Method

### *The Instrument and Data Collection*

The results of the SBS test for the 6<sup>th</sup> grade held by the Ministry of National Education (MoNE) in 2008 were used in the study. This test consisted of five subtests with 80 multiple-choice items (4 choices per item). The Turkish subtest consisted of 19 items, and the Math, Science, and Social Studies subtests comprised 16 items each. The foreign language subtest contained 13 items. The answers (A, B, C, and D) given by 480691 students on "Form A" of the test were converted into a 1-0 matrix according to the answer keys of the relevant subtests, and this matrix was used in the study.

### *Population and samples*

The study population consisted of a total of 480691 students who took Form A of the SBS test for the 6<sup>th</sup> grade in 2008. Using a bootstrap method, a total of 1200 students were selected from this population, randomly falling into 12 subgroups consisting of different sample sizes (n=30, 50, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000), with each sample size having 100 replications. Analyses were carried out on 1200 samples selected in this manner.

### *Data Analysis*

The test battery used in the study consists of five subtests: In this test, there is a different set of items nested within each of the levels of the fixed facets, such as the Turkish, Math, Science, Social Studies, and Foreign Language. Brennan (2001) states

that a model consisting of such subtests and items is called a “table of specifications.” In this case, if all students taking the test ( $p$ ) answer all of the items ( $i$ ) in each of the subtests ( $s$ ) (“ $x$ ” is crossed with and “:” nested within), the model is defined as  $p \times (i:s)$ . If, in this case, the number of items in each subtest is equal, the test follows a balanced design. However, when the number of items in each subtest is unequal it becomes an unbalanced design as a mixed model. Brennan (2001, p. 86) suggests that “unbalanced designs with mixed models are best treated using multivariate generalizability theory.” Since the test used in this study consisted of five subtests with different numbers of items and all items are replied by all students,  $p \times i^c$  multivariate G theory design was used (Brennan, 2001a; 2001b). In the design, a superscript filled circle  $\bullet$  shows that the facet is crossed with the fixed multivariate variables and a superscript empty circle  $\circ$  shows that the facet is nested within fixed multivariate variables. In this design, the analyses were done using the PC version of mGENOVA 2.1. G and Phi coefficients were first calculated for the population. Next, G and phi coefficients were estimated for 1200 students in 12 subgroups consisting of different sample sizes ( $n=30, 50, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000$ ), with each having 100 replications. Then, consistency between the G and Phi coefficients estimated from each of the sample sizes consisting of 100 samples ( $n=30, 50, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000$ ) and the G and Phi parameters calculated for the population were analyzed. The relative root mean square error (R-RMSE) index was used as the error index for G and Phi coefficients.

$$R - RMSE(E\rho_i^2) = \sqrt{\frac{1}{M} \sum_{j=1}^M \frac{(E\rho_{ij}^2 - E\rho^2)^2}{E\rho^2}} \quad (3)$$

$$R - RMSE(\Phi_i) = \sqrt{\frac{1}{M} \sum_{j=1}^M \frac{(\Phi_{ij} - \Phi)^2}{\Phi}} \quad (4)$$

In this equation  $E\rho^2$  represents the G coefficient of a population, and  $\Phi$  represents the Phi coefficient of the population.  $E\rho_{ij}^2$  and  $\Phi_{ij}$  respectively represent the G and Phi coefficients estimated from the  $j^{\text{th}}$  sample for  $i$  sample size. The  $M$  in the equation represents the number of replications selected for each of the sample sizes using the simple random sampling method. In this study, 100 samples of  $M=100$  were selected for each of the sample sizes ( $i=30, 50, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000$ ) using the simple random sampling method.

For sample size studies based on simulation, R-RMSE is taken into consideration (Yurdugül, 2008), and an R-RMSE value closer to zero indicates robust estimation of

a parameter (Yurdugül, 2009). If the estimated G and Phi values are equal to the G and Phi parameters, this indicates excellent consistency and the R-RMSE value is zero. As the R-RMSE values calculated as an error index get closer to zero, the G and Phi coefficients estimated from the samples can be said to be more robust estimators of the population G and Phi parameters. In this study it was assumed that when R-RMSE values are less than .01, the estimated G and Phi coefficients are robust estimators of the real G and Phi parameters.

### Findings and Results

G and Phi parameters were calculated for the data set obtained from the population of 480691 using  $p \times i^c$  multivariate G theory design. The G parameter value was calculated as .95774 and the Phi parameter value was .95397. Next, a total of 1200 students were selected from this population using a random sampling method creating 12 subgroups consisting of different sample sizes ( $n=30, 50, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000$ ), each consisting of 100 samples. G and Phi coefficients were estimated for each of the samples selected. Graphics (see Figure 1) were produced in order to show how the G and Phi coefficients estimated from the samples changed according to sample sizes.

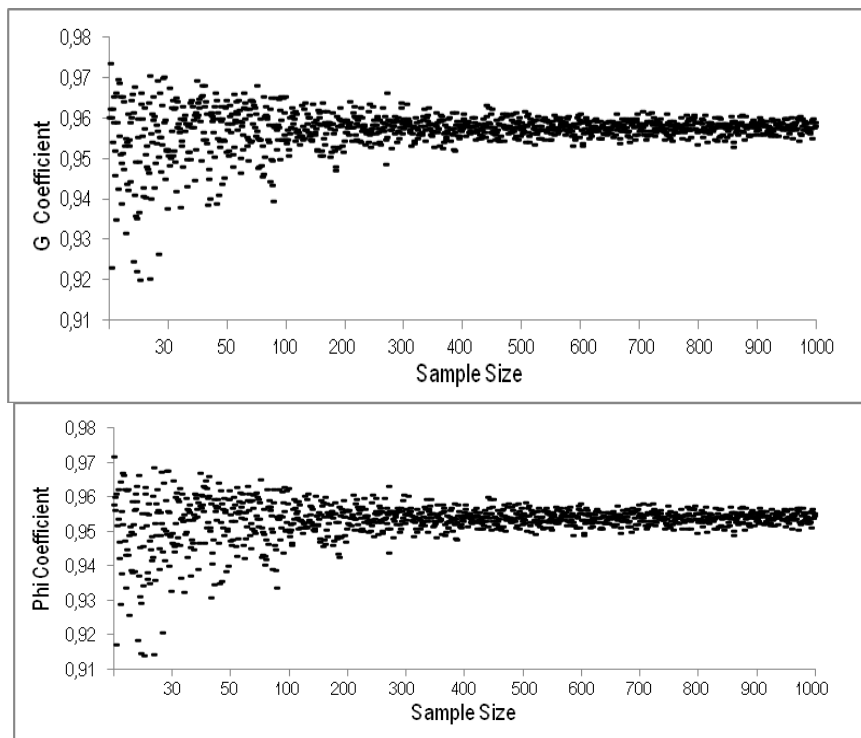


Figure 1. G and Phi coefficients estimated from different sample sizes

Figure 1 shows that G and Phi coefficients estimated from different sample sizes get closer to each other and form a narrowing cone as sample size increases. It was found that the G and Phi coefficients estimated for sample sizes of 30 tended to be lower than the G and Phi parameters ( $E\rho^2=.95774$  and  $\Phi=.95397$ ). However, it can be said that when sample size was increased to 50, 100, 200, or 300, the consistency of both estimated G and Phi coefficients increases relatively and gets closer to the parameter values. It is seen in Figure 1 that when the sample size is 400, 500, 600, 700, 800, 900, or 1000, the estimated G and Phi coefficients are more stable, and when sample size is increased over 400 the consistency of the estimated G and Phi coefficients does not increase significantly.

The relative root mean square error (R-RMSE) index was used as the error index to analyze the consistency of the G and Phi coefficients estimated for 12 different sample sizes (100 samples per size) selected from the population with the G and Phi parameters estimated for the population. The R-RMSE values of the G and Phi coefficients estimated for each sample size (n=30, 50, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000) are shown in Table 1.

**Table 1**

*R-RMSE Values of G and Phi Coefficients Estimated According to Each Sample Size*

Sample Size (n)	R-RMSE		Sample Size (n)	R-RMSE	
	G coefficient ( $E\hat{\rho}^2$ )	Phi coefficient ( $\Phi$ )		G coefficient ( $E\hat{\rho}^2$ )	Phi coefficient ( $\Phi$ )
30	.01334	.01437	500	.00201	.00219
50	.00758	.00842	600	.00188	.00206
100	.00606	.00673	700	.00171	.00189
200	.00376	.00422	800	.00170	.00186
300	.00286	.00316	900	.00166	.00180
400	.00234	.00259	1000	.00140	.00152

The minimum and maximum R-RMSE values of the G coefficients estimated for each of the sample sizes ranged between .00140 and .01334. The minimum and maximum R-RMSE values of the Phi coefficients estimated for each of the sample sizes ranged between .00152 and .01437. The R-RMSE values given in Table 1 were found to be greater than .01 for both G and Phi coefficients when the sample size is 30. Thus it can be said that a sample size of 30 is too small to estimate the G and Phi coefficients; an adequately unbiased estimation is not possible when the sample size is 30. When the sample size is 50 or greater (n=50, 100, 200, 300, 400, 500, 600, 700,

800, 900, 1000), the R-RMSE values were found to be less than .01, which suggests that G and Phi coefficients estimated from these sample sizes are robust estimators of G and Phi parameters.

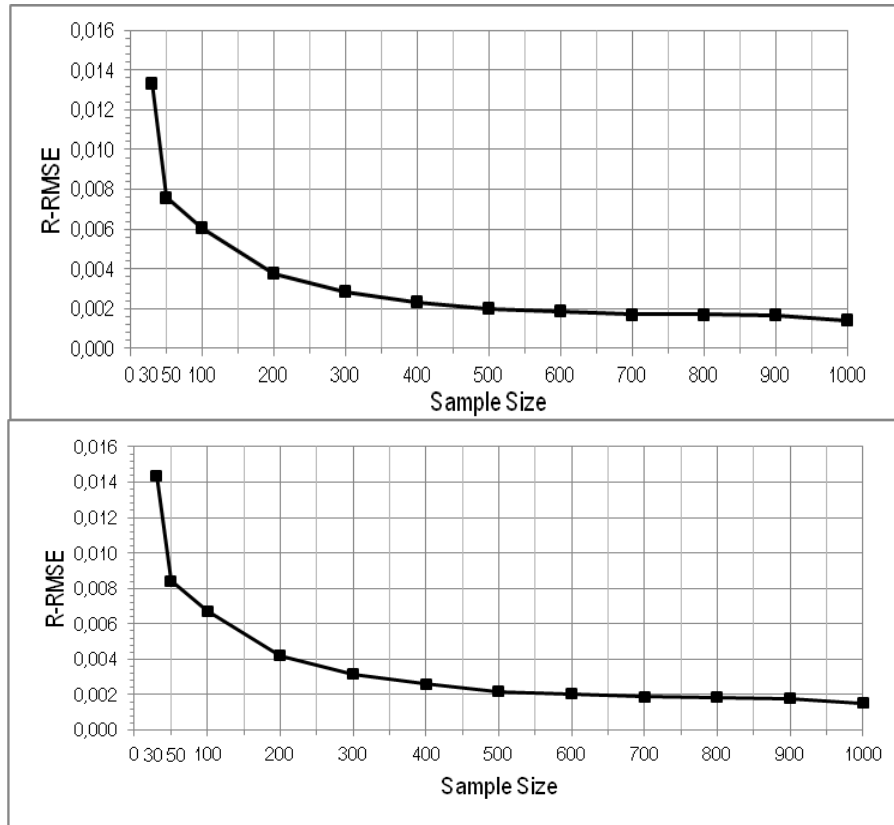


Figure 2. Change in R-RMSE values for G and Phi coefficients estimated, by sample size

Figure 2 shows how R-RMSE values of estimated G and Phi coefficients change according to sample size. As mentioned earlier, when the sample size is 50 or more, R-RMSE values drop below .01. It can be said that when the sample size is 50 or more, G and Phi coefficients can be estimated in an unbiased way, and these sample sizes are robust estimators of G and Phi parameters. On the other hand, as shown in Figure 2, when the sample size is 400 or more ( $n=400, 500, 600, 700, 800, 900, 1000$ ), R-RMSE values become stable and do not change significantly. This suggests that increasing the sample size over 400 does not significantly improve the unbiased estimation of G and Phi parameters.



### Conclusions and Recommendations

In this study the data set contains 480691 students, who took a test containing subtests with dichotomous (1-0) scaling, was taken as the population of the study.. Using a bootstrap method, a total of 1200 students were selected from this population, randomly falling into 12 subgroups consisting of different sample sizes (n=30, 50, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000), with each sample size being replicated 100 times. Since the test battery contained five subtests with distinct contents and numbers of items, and all items were replied to by all participants,

$p \times i^c$  multivariate G theory design was used. Based on this design, the G and Phi coefficients estimated from different sample sizes were compared to the G and Phi parameters estimated for the population. As a result, it was concluded that when the sample size is 30, estimated G and Phi coefficients are not robust estimators of G and Phi parameters, and the R-RMSE value is greater than .01. This result supports that of Felt and Ankenmann (1998, 1999), who suggested that it is ill-advised to estimate reliability if the sample size is less than 30, as well as the conclusion reached by Charter (2008), who suggested that it is not wise to allow sample sizes below 30. It also verifies the warning by Cronbach et al. (1972) that variance components used in estimating the G and Phi coefficients can be unstable depending on the sample size, as well as the suggestion by Smith (1978) that when a small sample size is used G and Phi coefficients will not be stable. It is seen in this study that the R-RMSE values calculated for the G and Phi coefficients estimated for sample sizes of 50, 100, 200, and 300 are less than .01; i.e., they are robust estimators of G and Phi parameters. This finding is consistent with the findings of previous research, including that of Kline (1986), who recommended a sample size of 200 for reliability studies; Yurdugül (2008), who recommended sample size of 300 or more when the first eigenvalue is less than 3; and Nunnally and Bernstein (1994), who recommended a sample size of 300 or more. However, the findings of this study do not support Segall's (1994) suggestion that a sample size of 300 is small for reliability estimation. As a matter of fact, this study found that a sample size of 300 is enough to make an adequately unbiased reliability estimation (G and Phi). On the other hand, it was observed that when the sample size is 400 or more (n=400, 500, 600, 700, 800, 900, 1000), the estimated G and Phi coefficients move considerably closer to the G and Phi parameters, and become stable in sample sizes over 400. It was also found that R-RMSE values calculated for sample sizes of 400 and over (n=400, 500, 600, 700, 800, 900, 1000) were quite small, around .002, which suggests that these sample sizes offer more exact and robust estimation of G and Phi coefficients. At the same time, when the sample size is 400 or more (n=400, 500, 600, 700, 800, 900, 1000), estimated G and Phi coefficients become more stable. This shows that a sample size of 400 is a more exact and robust estimator of G and Phi parameters, supporting Charter (1999), who recommends a sample size of 400 to estimate the population reliability precisely. Moreover, it was seen that increasing the sample size over 400 does not make a significant contribution to the unbiased estimation of G and Phi parameters.

As a result, it was found that when the sample size is as small as 30, the G and Phi coefficients cannot be estimated in a stable way. On the other hand, it was

concluded that when the sample size is 50, 100, 200, or 300, G and Phi coefficients can be estimated in an adequately unbiased way. Given a sample size of 400, the estimations given by the G and Phi coefficients are more exact and robust. Nevertheless, it can be said that increasing the sample size over 400 does not make a significant contribution to the unbiased estimation of G and Phi coefficients. A sample size of 50 to 300 can be thought adequate for the robust estimation of G and Phi coefficients; however, a more exact and robust estimation requires a sample size of 400.

In this study,  $p^* x i^c$  multivariate G theory design was used to estimate the G and Phi coefficients for a sample of people. By its nature, G theory estimates single G and Phi coefficients by evaluating different error sources together. Therefore, the sample size for different facets, including different items, time, scorers, etc., can be studied for different designs of G theory in future researches.

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### Genellenebilirlik Kuramında G ve Phi Katsayılarının Kestirilmesi için Örneklem Büyüklüğü

#### Atıf:

- Atılğan, H. (2013). Sample size for estimation of g and phi coefficients in generalizability theory. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 215-228.

#### (Özet)

##### Problem Durumu

Eğitimde ve psikolojide ölçme sonuçlarına karışan ölçme hataları nedeniyle yapılan ölçme ile gerçek puana ulaşamaz. Yapılan ölçmeler ile ölçülen özelliğin gerçek puanına olabildiğince yakın ölçme sonuçları elde edilmek istenir. Bu nedenle; ölçme sonuçlarının ölçme hatalarından ne derece arınık olduğu anlamına gelen güvenilirlik kavramı ve güvenilirliğin tahmin edilmesi psikometri alanında önemli bir yer tutmaktadır. Öyle ki psikometri alanında geliştirilen kuramlar ile pek çok güvenilirlik tahmin metodu önerilmiştir. Güvenirlik tahmin metodu öneren kuramlardan biri de Genellenebilirlik Kuramıdır. Genellenebilirlik kuramıyla bağlı değerlendirmeler için Genellenebilirlik (G) katsayısı ve mutlak değerlendirmeler için güvenilirlik (Phi) katsayısı olmak üzere iki farklı güvenilirlik katsayısı hesaplanır. Tüm güvenilirlik kestirme metotlarında olduğu gibi Genellenebilirlik kuramında da G ve Phi katsayıları ölçme aracının bir birey örnekleme uygulanması ile elde edilecek örneklem puan dağılımından hesaplanan bir istatistiktir. Bu nedenle popülasyon güvenilirliğinin tahmin edilmesi için örneklem büyüklüğünün ne olması gerektiği önemli bir soru olagelmiştir. Genel olarak güvenilirlik kestirme çalışmalarında örneklem büyüklüğünün ne olması gerektiği konusunda psikometri literatürde farklı öneriler bulunmaktadır.

### *Araştırmanın Amacı*

Genellenebilirlik kuramında G ve Phi katsayılarının hesaplanmasında kullanılan varyans bileşenlerinin örneklem büyüklüğüne bağlı olarak değişiklik gösterebilir. G ve Phi katsayılarının kestirilmesi için örneklem büyüklüğünün yeterli olması durumunda G ve Phi katsayıları doğru olarak kestirilemez. Bu nedenle G ve Phi katsayılarının kestirilmesi için uygun örneklem büyüklüğünün ne olması gerektiği genellenebilirlik kuramında çalışılması gereken bir alandır. Bu çalışmada, örneklemden elde edilen G ve Phi katsayılarının evren G ve Phi katsayılarını yansız olarak kestirebilmesi için örneklem büyüklüğünün ne olması gerektiği araştırılmıştır.

### *Araştırmanın Yöntemi*

2008 yılında yapılan 6. Sınıf Seviye Belirleme Sınavı (SBS) testi "A" formunu alan 480691 kişi evren olarak kabul edilmiştir. Evren olarak kabul edilen bu veri setinden bootstrap metoduyla 12 farklı örneklem büyüklüğünde (n=30, 50, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000) ve her bir örneklem büyüklüğü için 100 tane olmak üzere toplam 1200 örneklem basit seçkisiz olarak çekilmiştir. Verilerin elde edildiği testte, madde sayıları eşit olmayan farklı kapsamda beş alt test bulunduğu ve

tüm maddeleri tüm bireyler yanıtladığından  $p \cdot x \cdot i^c$  çok değişkenli G kuramı deseni kullanılmıştır. Evren için ve bu evrenden 12 farklı örneklem büyüklüğünde çekilen örneklem için G ve Phi katsayıları hesaplanmıştır. G ve Phi katsayılarının evren için hesaplanan G ve Phi parametreleri ile tutarlılıkları incelemek için hata indeksi olarak görel hata kareler ortalaması karekökü (R-RMSE) kullanılmıştır. Hata indeksi olarak elde edilen R-RMSE değerleri sıfıra yaklaştıkça örneklemden kestirilen G ve Phi katsayılarının G ve Phi parametrelerinin sağlam kestiricisi olduğu söylenebilir. Bu çalışmada R-RMSE değerlerinin 0,01'den küçük olması durumunda kestirilen G ve Phi katsayılarının G ve Phi parametrelerinin sağlam kestiricisi olduğu kabul edilmiştir.

### *Araştırmanın Bulguları*

Örneklem büyüklüğü 30 için kestirilen G ve Phi katsayılarının G ve Phi parametrelerinden küçük çıkma eğiliminde olduğu ve R-RMSE değerinin 0,01'den büyük çıktığı görülmüştür. Bununla birlikte örneklem büyüklükleri 50, 100, 200 ve 300 olarak arttığında, hem kestirilen G hem de kestirilen Phi katsayılarının görel olarak tutarlılıklarının arttığı ve parametre değerlerine giderek yaklaştığı söylenebilir. Örneklem büyüklüğü 50 ve üstünde olduğunda R-RMSE değerleri 0,01'den küçük bulunduğu ve G ve Phi katsayılarının G ve Phi parametrelerinin sağlam kestiricisi olduğu söylenebilir. Bununla birlikte, örneklem büyüklüğü 400, 500, 600, 700, 800, 900 ve 1000 olduğunda kestirilen G ve Phi katsayılarının daha kararlı davrandıkları, fakat örneklem büyüklüğünün 400'den sonra artırılması durumunda kestirilen G ve Phi katsayılarının tutarlılığının görel olarak fazlaca değiştirmediği sonucuna ulaşılmıştır. Örneklem büyüklüğü 400 olduğunda G ve Phi parametrelerinin daha kesin ve daha sağlam kestirildiği, örneklem büyüklüğünün 400'den sonra artırılmasının G ve Phi parametrelerinin yansız kestirilmesinde önemli bir katkı sağlamadığını görülmüştür.

*Araştırmanın Sonuçları ve Öneriler*

G ve Phi katsayılarının kestirilmesi için örneklem büyüklüğünün 30 gibi küçük bir örneklem olması durumunda G ve Phi katsayılarının istikrarlı olarak kestirilemediği görülmüştür. Diğer yandan örneklem büyüklüğünün 50, 100, 200 ve 300 olması durumunda G ve Phi katsayılarının yeterince yansız olarak kestirilebileceği, ancak 400 örneklem büyüklüğünde ise G ve Phi katsayılarının daha kesin ve daha sağlam olduğu sonucuna varılmıştır. Diğer yandan örneklem büyüklüğünün 400'den sonra artırılmasının G ve Phi katsayılarının yansız olarak kestirilmesine katkı sağlamadığı söylenebilir. G ve Phi katsayılarının sağlam kestirilmesi için örneklem büyüklüğünün 50 ile 300 arasında olması, ancak daha kesin ve daha sağlam kestirme için örneklem büyüklüğünün 400 olması önerilebilir.

Bu çalışmada G ve Phi katsayılarının kestirilmesinde kişi örnekleme üzerinde,

$p \times i^c$  multivariate G kuramı deseni ile çalışılmıştır. G kuramı özelliği gereği farklı hata kaynaklarını birlikte değerlendirerek tek bir G ve Phi katsayılarını kestiren bir kuramdır. Bu nedenle; madde, zaman, puanlayıcı vb. farklı hata kaynaklarının yer aldığı G kuramının farklı desenlerinde bu hata kaynakları için örneklem büyüklükleri çalışılabilir.

*Anahtar Sözcükler:* Genellenebilirlik Kuramı, Örneklem Büyüklüğü, Genellenebilirlik Katsayısı, Phi Katsayısı



## Elaboration and Organization Strategies Used by Prospective Class Teachers While Studying Social Studies Education Textbooks

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### Abstract

*Problem Statement:* Students spend a considerable amount of their time studying from textbooks, which play an important role in their learning activities. The strategies students use to learn work as guides, requiring them to mentally process, make sense of and internalize information offered to them during the instructional process. Of these, elaboration and organization strategies enable students to establish internal and external links among different pieces of information. Knowing the elaboration and organization strategies used by prospective class teachers when teaching from social studies education textbooks would benefit curriculum designers as well as all education stakeholders.

*Purpose of the Study:* The purpose of this study is to describe how prospective class teachers use elaboration and organization strategies as they study their social studies education textbook.

*Methods:* Data was collected through analysing 235 social studies education textbooks used by prospective class teachers. As the data source was a textbook, document and content analysis techniques were employed.

*Findings and Results:* The prospective class teachers in this study used the following elaboration strategies while studying the social studies education textbook: 90.3% took notes, 81.7% summarized information in their own words, 45.5% used grouping, and 3% formed questions. A moderate relationship existed between the categories of note-taking and summarizing. As for organization strategies, 43.8% created outlines, 33.2% made matrices, charts and tables, 21.2% used concept maps, and 9.8%

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used information mapping. No prospective class teacher seemed to be using hierarchical structures. Outlining and concept-mapping were found to be moderately related to making matrices, charts and tables.

*Conclusions and Recommendations:* Prospective class teachers in this study most commonly used the elaboration strategy of note-taking and least commonly used question forming. As for organization strategies, outlining was the most common and information mapping, the least. No prospective class teacher used hierarchical structures. These results suggest that prospective class teachers make little use of elaboration and organization strategies when studying from their social studies education textbooks, and may need learning strategy training. The results also suggest that the elaboration and organization strategies that prospective class teachers rarely or never use should be modeled in social studies education textbooks.

*Keywords:* Learning strategies, textbook, social studies education, prospective class teacher

One pedagogical field competence needed by prospective class teachers is social studies training, which is provided through the Social Studies Education course. As textbooks help prospective class teachers gain the pedagogical competences needed for social studies education, they comprise a valuable dimension in teacher training. In addition to textbooks, learning strategies also guide the learning activities of prospective class teachers. These can be defined as a set of one or more operations that facilitate the performance of an individual during a learning task (Riding & Rayner, 1998 cited in Hewitt, 2008). The aim of any given strategy is to influence the affective state of learners or their ways of acquiring, selecting, organizing and integrating new information (Weinstein & Mayer, 1986). Learning strategies have been classified in different ways by experts in the field (Weinstein & Mayer, 1986; Mayer, 1988; Hartley, 1998; Gagne & Driscoll, 1988; O'Malley & Chamot, 1990; Warr & Downing, 2000; Senemoğlu, 2010). For instance, Weinstein and Mayer (1986) divide them into five groups: revision, elaboration, organization, monitoring and affective strategies. The present study uses Weinstein and Mayer's (1986) taxonomy, focusing on elaboration and organization strategies as the main theme.

Elaboration strategies, such as interpreting, summarizing, making analogies and effective note-taking, help students store new knowledge in their long-term memory by making internal links between things to be learned. At the same time, these strategies help students integrate new learning with existing knowledge (Pintrich, Smith, Garcia & McKeachie 1991). In general, elaboration strategies serve to make connections between the existing knowledge in our long-term memory and the new information that is considered worth remembering (Cornford, 2002). In doing so, learners form a symbolic structure that adds meaning to the new information they are learning (Rohwer, 1970 cited in Weinstein, 1977). Because each action taken within elaboration strategies aims to link new and unfamiliar material with students'



existing knowledge and experience (Weinstein & Underwood, 1985), these strategies are critical to deep learning (Lewalter, 2003).

Another valuable learning strategy is organization. Organization strategies, such as outlining and concept mapping, are high level strategies and help build connections between opinions (Stefanou & Salisbury-Glennon, 2002). This involves a process whereby students make connections between new and old knowledge and organize them (Olgren, 1998 cited in Filcher & Miller, 2000). Therefore, organization strategies require the transformation of knowledge into a different form, as well as the development of certain schematic systems that make connections between fragments or elements of knowledge. The links formed when analyzing similarities and differences may not only be important to the formation of opinions, but also to how we retain knowledge in our long-term memory (Cornford, 2002). This may show whether understanding has reached a deeper level.

Both elaboration and organization strategies are used to construct and reconstruct knowledge. Therefore, knowledge is organized within meaningful internal or external images (Schlag, Florax & Ploetzner, 2007). Both elaboration and organization strategies enable users to make internal and external links between different pieces of information (Weinstein & Mayer, 1986).

The literature mentions the following as elaboration strategies: paraphrasing, summarizing, note-taking, making analogies, asking and answering questions about the materials, forming logical relationships within a text, inferencing, creating mental images or statements, supporting memory, using new information in a sentence, interpreting, matching, finding similarities, making comparisons, writing questions, determining how new information will be used, transferring and analyzing, brainstorming and finding a daily example of a rule or principle (Weinstein, 1977; Weinstein & Mayer, 1983; Weinstein & Mayer, 1986; Pintrich, Smith, Garcia & McKeachie, 1991; Styles, Beltman & Radloff, 2001; Dembo, 2001; Stefanou & Salisbury-Glennon, 2002; Cornford, 2002; Güven, 2008; Şimşek & Balaban, 2010).

Organization strategies, on the other hand, involve note-taking, summarizing, making spatial representations, ordering words within context, reordering complex informations, making charts, drafting, finding main ideas, grouping similar examples, collating, making flowcharts, creating tables, classifying information, regrouping, combining pieces, mapping concepts, listing, distinguishing stages, making hierarchies and mental maps, finding similarities, representing information in new ways (through graphics, tables and diagrams), practicing new knowledge, linking new and old knowledge, using comparison methods, teaching new information to others and inferencing (Weinstein & Mayer, 1983; Weinstein & Mayer, 1986; Weinstein, Ridley, Dahl & Weber, 1988-1989; Pintrich, Smith, Garcia & McKeachie, 1991; Styles, Beltman & Radloff, 2001; Cornford, 2002; Güven, 2008; Şimşek & Balaban, 2010). Considering these long lists of options, the most effective elaboration strategies that students can use while studying their textbooks may be summarizing, note-taking, asking questions and grouping. As for organization

strategies, students may be able to use outlining, creating matrices and tables, concept mapping, and making information maps and hierarchical structures.

University, high school and secondary school students spend a major part of their time studying from their textbooks. The task of reading includes distinguishing main ideas and supporting details and linking these to other knowledge in order to facilitate remembering and coding (Weinstein & Mayer, 1983). Textbooks, which have been assessed against certain criteria and are recommended as the main resource for teachers and learners in a certain school and course, are important educational materials with which students can practice elaboration and organization strategies (Oğuzkan, 1993).

Comparing the textbooks used in Turkish schools with their counterparts in other countries, it would be safe to claim that they are lagging behind in many respects. This may be attributed to the lack of adequate scientific knowledge and technical experience in writing textbooks; censorship of books owing to political reasons; the income-based approach of publishers, authors and teachers; and the failure of textbooks' contents and design to help students grasp the subjects (Aslan, 2010). Indeed, the study by Güven (2010) revealed in some aspects shortcomings of textbooks.

The failure of textbooks may also be related to unsatisfied student expectations. Students expect textbooks to include elements, such as learning strategies, that will help them learn. Studies on the relationship between learning strategies and success have shown that the use of these strategies increases and predicts success (Mayer, 1980; Ames & Archer, 1988; Somuncuoğlu & Yıldırım, 1999; Filcher & Miller, 2000; Lewalter, 2003; Yıldız-Duban, 2006; Bidjerano & Dai, 2007; Çakıcı, Arıca & Ilgaz, 2011). Moreover, achieving efficiency and success in education also requires individuals to choose, sustain, change and renew their own learning strategies (Saracaloğlu & Karasakaloğlu, 2011). This suggests that the inclusion of a set of prespecified learning strategies in textbooks may be important. There are very few studies on the relationship between learning strategies and textbooks, including social studies textbooks (Tay, 2005). Considering the role of textbooks in helping students learn, it may be argued that social studies textbooks should also be written with reference to specific learning strategies.

It is believed that understanding the elaboration and organization strategies used by students in the Social Studies Education course offered at the department of classroom teaching will benefit social studies training. The first benefit would be redesigning social studies education textbooks by including the strategies that students readily use, and the second might be to dedicate sections of the book to directly teach the study strategies that students are unfamiliar with or rarely use. This study is expected to fill the research gap regarding the relationship between learning strategies and social studies textbooks and may guide future studies.

This study attempted to describe how prospective class teachers use elaboration and organization strategies in their social studies education course books. In line with this general purpose, the following research questions were studied:

1. Do prospective class teachers use the elaboration strategies of summarizing, note-taking, forming questions and grouping when studying their social studies education textbooks?
2. Is there a meaningful relationship between the elaboration strategies used by prospective class teachers when studying their social studies education textbooks?
3. Do prospective class teachers use the organization strategies of outlining, making matrices charts and tables, concept-mapping, information-mapping and making hierarchical structures when studying their social studies education textbooks?
4. Is there a meaningful relationship between the organization strategies used by prospective class teachers when studying their social studies education textbooks?

## Method

### *Research Design*

In line with its purpose, the study used the qualitative research method of a case study in order to describe the elaboration and organization strategies used by prospective class teachers when studying their social studies education textbooks. Qualitative studies depict a detailed picture of a certain individual, group, state or problem (Fraenkel & Wallen, 1996). They are conducted in order to identify the natural state of the topic, event, phenomena or perceptions and generally use the techniques of interview, observation and document analysis (Ekiz, 2003; Kuş, 2003; Yıldırım & Şimşek, 2011). Case studies aim to understand the social phenomenon of a single or small group in their natural environment and to yield a detailed description (Bloor & Wood, 2006). Document analysis was used to collect data from the participants' social studies education textbooks. Thus, this study is a descriptive case study. This study intends to offer a detailed description of the elaboration and organization strategies used by prospective class teachers while studying their social studies education textbooks.

### *Sample*

In the present study, data was collected from the 235 textbooks used by third-year students who attended the Social Studies Education course at Ahi Evran University, Department of Classroom Teaching, during the 2010-2011 and 2011-2012 academic years. The study employed convenience sampling, which aims to include appropriate and willing participants in the study (Creswell, 2005). Thus, the study was conducted at the researcher's university with volunteering prospective class teachers. Of the participants, 70 (29.8%) were male and 165 (70.2%) were female. Of these, 116 (49.4%) were third-year students during the 2010-2011 academic year, and 119 (50.6%) were third-year students during the 2011-2012 academic year.

*Datagathering Procedure*

The research examined the elaboration and organization strategies stated in the learning strategies classification of Weinstein and Mayer (1986). For this purpose, document analysis was used to identify the elaboration and organization strategies used by prospective class teachers when studying their social studies education textbooks. According to Forster (1995), document analysis consists of five stages: accessing the documents, checking their originality, understanding them, analyzing the data and using the data (cited in Yıldırım & Şimşek, 2011). The present study employed all of these stages during content analysis. In order to increase the transferability of results, the study also included detailed descriptions of the data collection process, characteristics of the data source, how they were chosen, the data analysis process and the constraints of the study (Cresswell and Miller, 2000). The various stages of the study are explained below.

In the first stage, the purpose of the study was established, as mentioned above. The second stage involved the selection of the study sample. According to Bogdan and Biklen (1992) and Goetz and LeCompte (1984), textbooks, curriculum guidelines, internal or external correspondences, student records, minutes of meetings, student counseling records and files, student and teacher handbooks, student assignments and exams, lesson and unit plans, teacher files and other official documents may all be used as data sources in studies of education (Cited in Yıldırım & Şimşek, 2011). The sample of the present research consisted of 235 social studies education textbooks. In order to preserve the originality of the documents, the students were not informed of the study at the beginning of the term, thus enabling them to naturally use elaboration and organization strategies. At the end of the term, the students were asked to bring their textbooks to use for a section of the final exam. At the end of the exam, the students were informed about the study and the textbooks of voluntary participants were collected. In the end, textbooks were collected from 116 out of 133 students who were taking the social studies education course in the 2010-2011 academic year, and 119 out of 125 students in 2011-2012.

In the third stage, categories were defined using the closed approach, which means grouping record units based on an existing category system in a certain field (Bilgin, 2006). Hence, the behaviors included in elaboration and organization strategies were determined by surveying the literature. As a result, the elaboration (4) and organization (5) strategies that students may use in their textbooks were grouped under nine headings. The categories defined were submitted for review to four academics from Ahi Evran (2), Atatürk and Muğla Sıtkı Koçman Universities and were evaluated as "appropriate", "appropriate subject to revision" and "not appropriate". Expert views were then compared to the defined categories, the level of consensus and dissensus was determined, and the reliability of categories was calculated via the Miles and Huberman formula (1994) (Reliability = consensus/consensus+dissensus). The resulting coefficient of concordance was 0.83, which indicates a high reliability for the categories. After these stages, the categories were established as summarizing; note-taking; forming questions; grouping;

outlining; making matrices, charts and tables; concept-mapping; information-mapping and hierarchical structures.

These categories were used in order to understand the documents and analyze the data. This stage thus involved a quantitative analysis of the frequency of categories and an analysis of the relationships between these categories. First, each document was examined thoroughly in terms of the nine categories of elaboration and organization strategies, in order to determine their frequencies. The data were tabulated and sample quotations were chosen in order to support the interpretations of the researcher and reveal how students used elaboration and organization strategies. These quotations were coded as follows: 104-F-4 for the student documents from 2010-2011 and 162-M-3 for those of 2011-2012. The coding represents the order in which the document was analyzed, the gender of the student and the academic year to which the student belonged, respectively. The expression "4" represents 2010-2011 and "3" represents 2011-2012.

In addition to frequency analysis, the content analysis technique for contingency was also used in analyzing the data. Contingency analysis is considered to be a more meaningful form of analysis by researchers who do not wish to be limited to basic frequency analysis. It aims to determine the associations between items, rather than their frequencies, and the relationships between various message units (Bilgin, 2006). Data obtained through frequency analysis was represented via Kendall's tau-b correlation coefficient, a non-parametric analysis technique, as the data was discontinuous and classified. The results are presented in tables.

The final stage of content analysis consisted of evaluation, inferencing and interpretation (Bilgin, 2006), which involved using the data in document analysis. These are explained in the discussion, conclusion and recommendations sections of the study.

## Results

In line with the purpose of the study, prospective class teachers' use of elaboration strategies was determined and represented in Table 1.

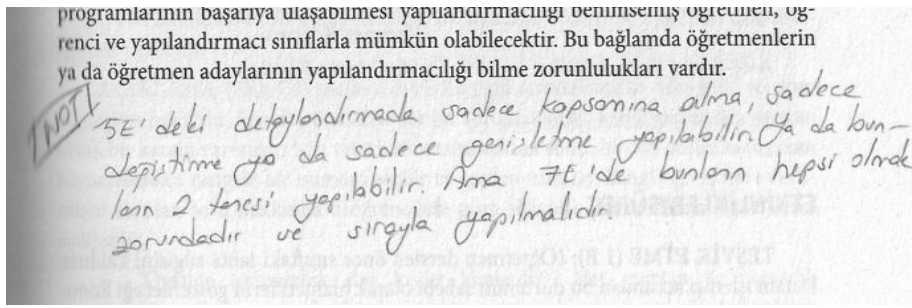
**Table 1**

*Prospective Class Teachers' Use Of Elaboration Strategies While Studying Their Social Studies Education Textbook*

<i>Learning Strategy Used</i>	<i>Yes</i>		<i>No</i>	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
Note-Taking	212	90.3	23	9.8
Summarizing	192	81.7	43	18.3
Grouping	107	45.5	128	54.5
Forming Questions	7	3	228	97.0

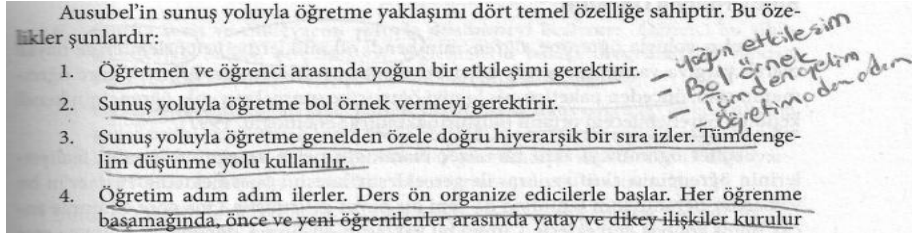
Table 1 shows that 90.3% of the students used the elaboration strategy of note-taking in their social studies education textbooks and 9.8% did not. Also, 81.7% of the students used the elaboration strategy of summarizing in their social studies education textbooks and 18.3% did not. Grouping, on the other hand, was not used by 54.5% of the prospective class teachers and used by 45.5%. While 97% of the prospective class teachers did not use the strategy of forming questions, only 3% did. Below are the examples of using elaboration strategies:

## 212-M-3



In the first example, student 212-M-3 wrote the following note about 5E in a blank space in the textbook: 'Only inclusion, only change or only expansion can be done in elaboration in 5E. Or two of them can be done. But in 7E there must be all of them and they are done respectively'.

## 119-F-3



In the second example, student 119-F-3 took some notes related to the four basic features of expository teaching approach and wrote them next to the text, which reads --

Ausubel's expository teaching approach has four basic features. Below are these features:

1. It requires an intensive interaction between the teacher and the student.
2. Expository teaching approach requires giving a lot of examples.
3. Expository teaching approach follows a hierarchical order from the general to the specific. Deductive reasoning is used.
4. Teaching proceeds step by step. The lesson begins with advance organizers. In each stage of learning, vertical and horizontal links are created between previously and newly learned things.

Below are the things that the student noted next to the text:

- intensive interaction
- a lot of examples
- deduction
- teaching step by step

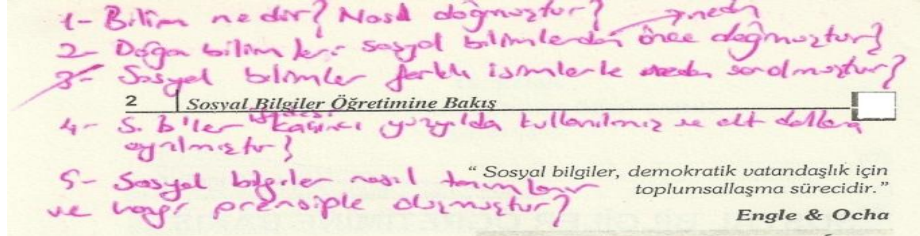
27-F-4

Sosyal bilgiler dersini ABD'nin dışında Türkiye, Japonya, Güney Kore, Kanada ve Avustralya'da görmek mümkündür. Bazı ülkelerde ise sosyal bilgiler dersi yerine, tek disiplinli anlayış benimsenerek tarih, coğrafya ve vatandaşlık dersleri ayrı ayrı okutulmaktadır. Bu ülkelerin başında İngiltere gelmektedir. İngiltere'de sosyal bilgiler kapsamındaki tarih ve coğrafya dersleri ilköğretim ilk yıllarından itibaren ayrı ayrı okutulmaktadır. İngiltere'deki bu anlayış Lüksemburg ve Danimarka'da da görülebilir (Sözer, 1997; Öztürk ve Dilek, 2005; Öztürk ve Otluoğlu, 2005; Sağlam, 1999).

In the third example, student 27-F-4 created the new word "DİL", which means "tongue, language" in Turkish, using the Turkish corresponding country names for England, Luxemburg and Denmark. Here, "D" stands for "Danimarka (Denmark)", "İ" stands for "İngiltere (England)" and finally "L" stands for "Lüksemburg(Luxemburg)". When she put the initials of the given Turkish country names together she produced "DİL", which is extremely easy to remember as "DİL" also means language. The text reads as follows:

Other than America, it is also possible to see Social Studies course in Turkey, Japan, South Korea, Canada and Australia. Some countries adopted a single discipline perspective and teach history, geography and civics courses separately instead of Social Studies course. England is the leading country among these countries. In England, history and geography, which are normally under Social Studies course, are taught separately starting from the early years of primary school. This perspective of England can also be seen in Luxemburg and Denmark (Sözer, 1997; Öztürk and Dilek, 2005; Öztürk and Otluoğlu, 2005; Sağlam, 1999).

97-F-4



In the fourth example, student 97-F-4 wrote the following questions related to the chapter "An Overview on Teaching Social Studies" in a blank space on the page:

1. What is Science? How did it begin?
2. Why did the nature sciences begin before social sciences?
3. Why did Social sciences exist under different names?
4. In which century was the "Social Sciences" phrase first used and why was it subbranched?
5. How is Social studies defined and out of which principles did it develop?

**Table 2**

*Relationships Between the Elaboration Strategies Used by Prospective Class Teachers in Their Social Studies Education Textbooks*

	<i>Summarizing</i>	<i>Grouping</i>	<i>Forming questions</i>
Note-taking	.622	.157	-.027
Summarizing	-	.035	-.111
Grouping		-	-.009
Forming questions			-

According to Table 2, there was a moderate relationship between the categories of note-taking and summarizing ( $r=.622$ ). No meaningful relationship existed between other categories. This suggests that the prospective class teachers who used the strategy of note-taking also used the strategy of summarizing.



**Table 3**

*Prospective Class Teachers' Use of Organization Strategies in Their Social Studies Education Textbook*

<i>Learning Strategy Used</i>	<i>Yes</i>		<i>No</i>	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
Outlining	103	43.8	132	56.2
Making matrices, charts and tables	78	33.2	157	66.8
Concept-mapping	50	21.2	185	78.7
Information-mapping	23	9.8	212	90.2
Forming hierarchical structures	-	-	235	100

Table 3 shows that 56.2% of the students did not use the strategy of outlining in their social studies education textbooks, and 43.8% did. While 66.8% of the prospective class teachers did not make matrices, charts or tables, 33.2% did. Also, 78.7% of the prospective class teachers did not use concept-mapping in their social studies education books, while 21.2% did. Information-mapping was not used by 90.2% of the prospective class teachers, and only 9.8% used it as a strategy. Forming hierarchical structures was not used by any participants. Below are the examples of using organization strategies:

134-F-3

① **Etkili Vatandaşlık**  
 Ülkelerin eğitim sistemlerinden beklentileri, kendi yönetim rejimlerinin devamını sağlayacak bireyler yetiştirmektir. Bu nedenle vatandaş yetiştirmek ülkeler için

② **Kültürleme**  
 Eğitim, kasıtlı kültür aktarımı süreci olarak ifade edilebilir (Eidan, 1996). Her toplum, genç üyesine kendi kültürünü tanıtır ve varolan kültürü geliştirmeye çalışır.

③ **Yöntem**  
 Sosyal bilgiler derslerinde, etkili vatandaş yetiştirmek için gerekli bilgilerin kanıtlanmış, bilimsel yöntemle elde edilmiş ve geçerliliği olan bilgiler olması gerekmektedir. Bu bilgilerin elde edilmesinde ve öğrencilere verilmesinde bilimsel yöntemlerin

④ **Zaman (geçmiş-bugün-gelecek)**  
 Sosyal bilgiler dersinin en genel amacı etkili vatandaş yetiştirmektir. Etkili vatandaş, içinde yaşadığı toplumun kültürüne ve onu yaşatma arzusuna sahip olmalıdır.

In the first example, "Efficient Citizenship, Domestication, Method and Time (past, present, future)" subtitles on different pages, but under the "Basic Principles in Teaching Social Studies" main title, the student 134-F-3 created an outline by numbering the subtitles 1, 2, 3, 4, respectively.

44-K-4

## 2. Yerleşim Elemanlarının Kullanım İlkeleri

**Oran-Ölçek:** Objelerin büyüklüğü ile bağlantılıdır. Bir objenin diğer objeler ve bütün ile arasındaki ilişkiye göre objenin büyük, orta, küçük, ağır, hafif olması gibi duygular yaratabilir. Objelerin büyüklüğünün doğru olarak algılanabilmesi için tanıdık başka bir obje ile ölçeklendirilmesi gerekir.

**Denge:** Denge, objenin göz tarafından algılanan ağırlığı ile ilgilidir. Öğretim materyalleri üzerinde denge, yatay ve dikey eksenin her iki tarafına objelerin eşit olarak dağıtılması ile oluşturulur. İstenilen amaca yönelik olarak objelerin bütününe yerleşimi ile denge veya dengesizlik etkisi yaratılabilir.

**Bütünlük:** Görsel elemanlar ve bunların fonksiyonları arasındaki ilişki bütünlüğü oluşturur. Her bir görsel unsur, bir mesaj iletmekteki fonksiyonu göz önüne alınarak yerleştirilmelidir.

**Ritim:** Kompozisyonda gözün bir objeden diğerine rahatça kayabilmesidir. Soyut bir kavram olmasına rağmen çizgi, şekil, form, yapı ve renk kullanımı ile sağlanabilir.

**Vurgu:** Vurgunun bütüne baskın olması gereklidir. Öğretim materyalinin can alıcı noktasıdır. Dikkat çekmek istediğiniz nokta olarak tasarlanmalıdır. En ilgi çekici nokta olarak tasarlanıp en önemli unsurlar yerleştirilebilir.

**Ahenk:** Kompozisyonun bütünü ile bağlantılıdır. Parçalar bir araya geldiğinde ortaya çıkacak bütünlük duygusudur. Ahenk, bir bakıma bütünü oluşturan parçaların birbiri ile olan ilişkisine bağlı olarak ortaya çıkan uyumdur.

In contrast, student 44-F-4 made an outline by highlighting the "Settlement Components Policy" main title in pink and "Ratio-Scale, Balance, Integrity, Rhythm, Emphasis and Harmony" subtitles in green.

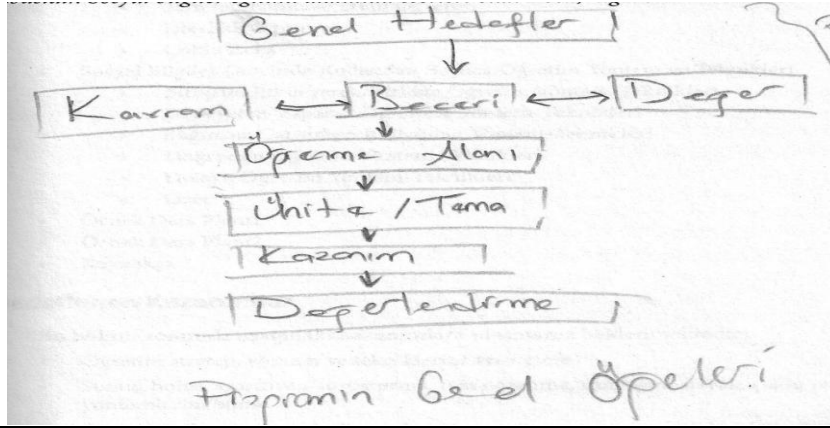
162-M-3

Sunus	Buluş	Araştırma inceleme
Ausubel	Bruner	Dewey
Bilgi	Kavram(+)	Uygulama(+)
Tümevarım	Tümevarım	her ikisi
öğretmen merkezde	retiler	ortak
öğrenci pasif (edilgen)	aktif	aktif
	eleştirel/yaratıcı	eleştirel /yaratıcı /yansıtıcı

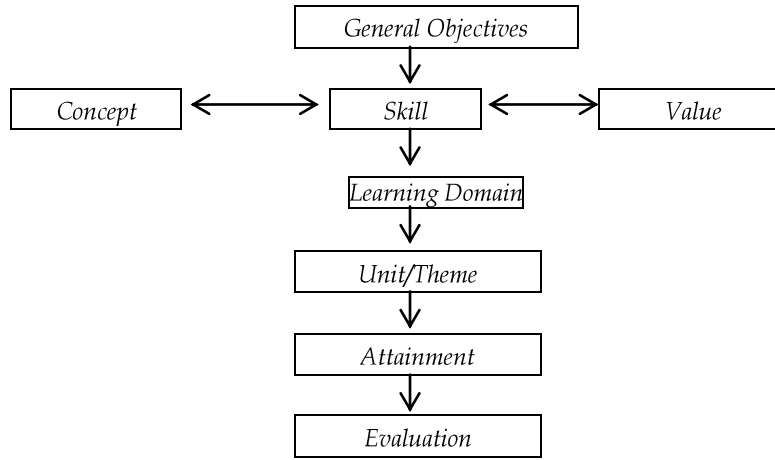
Student 162-M-3, as seen in the example above, created a chart for the information related to the three teaching strategies. Her notes are translated below:

Expository teaching	Discovery teaching	Research-Investigation
Ausubel	Bruner	Dewey
information	Comprehension (+)	Application (+)
deduction	Induction	both
Teacher	guide	common
in the center	active	active
Student	passive	critical/creative/reflective
	critical/creative	

156-M-3

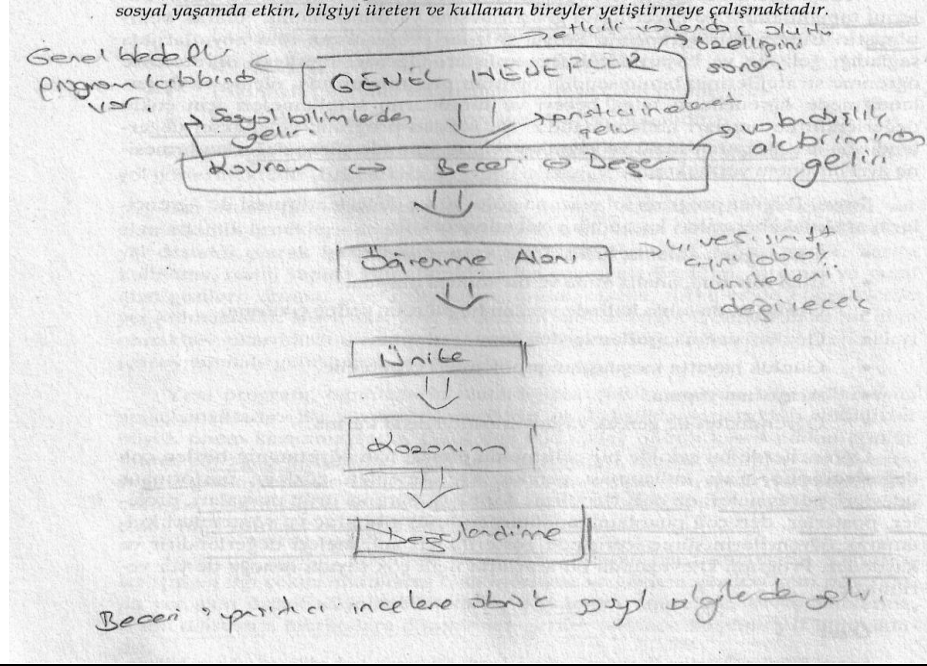


Student 156-M-3 made the above concept map of the general elements of social studies curriculum. His concept map is translated below:



General Elements of the Curriculum

8-F-4



Student 8-F-4 first made the previous concept map of the general elements of social studies curriculum and then changed it into an information map by adding some explanations. For example, she added "presents the feature of making efficient citizens" to "general objectives", "comes from social sciences" to the "statement of concept", "comes from reflective review" to "skill", "comes from citizenship transferring" and "it will be the same in 4th and 5th grade, the units will be changed" to \_\_\_\_? .

**Table 4.**

*Relationships Between the Organization Strategies Used by Prospective Class Teachers in Their Social Studies Education Textbooks*

	<i>Making matrices, charts and tables</i>	<i>Concept-mapping</i>	<i>Information-mapping</i>
Outlining	.543	.211	-.031
Making matrices, charts and tables	-	.649	-.171
Concept-mapping		-	-.101
Information-mapping			

Table 4 reveals a moderate relationship between outlining and making matrices, charts and tables ( $r = .543$ ), and concept-mapping and making matrices, charts and tables ( $r = .649$ ). Significant relationships were not found between other categories. Thus, it seems that the prospective class teachers who use the strategy of making matrices, charts and tables also use the strategies of outlining and concept-mapping.

### Discussion and Conclusion

Approximately 90% of the prospective class teachers use note-taking when they study their social studies education course books. Miller (1997) also concluded that 87% of open university students took notes from video cassettes. Styles, Beltman and Radloff (2001) state that, from a task strategies perspective, the most common strategy is using complementary activities such as participating in classes or doing assignments, followed by the complex elaboration strategy of note-taking. These findings corroborate the present study's finding that note-taking is the most common strategy used by prospective class teachers. Similarly, Kobayashi (2005) found in his meta-analysis that when note-takers' performance was compared to non-note-takers, in relation to certain variables, note-taking led to positive outcomes. Peper and Mayer (1978) also stated note-taking has a positive impact on learning outcomes. Further, Shrager and Mayer (1989) found that university students who take notes as they watch course videos are better at retaining and transferring information, in comparison to those who do not take notes. The literature therefore seems to corroborate the finding that note-taking is the most common strategy used by prospective class teachers.

Mayer (1980) states that the two most common elaboration strategies are comparative and integrative elaboration. When the sample notes taken by prospective class teachers were examined, the researcher found that 212-M-3 wrote the heading "NOTE" in the margin followed by important information from relevant pages. The one hundred nineteenth page of the textbook explains the details in 5E and the coming pages explain the expansion, inclusion and change in 7E. Comparing and integrating this information, the prospective class teacher made his own notes.

The second most common strategy that the prospective class teachers used in this study was summarizing, which was used by 81.7% of the participants. This finding is also in agreement with previous studies. For example, Taşçı (2011) found that university biology students most commonly use summarizing and note-taking strategies. Tüfekçioğlu (2010) examined writing skills and concluded that 85.7% of the 6th graders he studied made summaries, and that those who used this strategy had higher essay writing achievement than those who did not. Weinstein, Ridley, Dahl and Weber (1988-1989) argued that high school and university students are able to retain content area knowledge for an adequate amount of time to achieve on exams, but are rather poor at transferring it into their long-term memory. In order to do so, students should make meaningful links between their old and new knowledge. In other words, new information needs to take on a personal aspect.

Learning with such connections requires students to use certain kinds of elaboration strategies, one of which is summarizing.

Wittrock (2010) also believed that summarizing positively affects learning outcomes. Hooper, Sales and Rysavy (1994) found that university students are better at writing summaries than making analogies. An additional finding is that a moderate relationship exists between note-taking and summarizing, while no significant relation can be found between other elaboration strategies.

Mayer (1980) stated that comparative elaboration results when a student effectively grasps the relationship between two concepts. Integrative elaboration, on the other hand, occurs when a student grasps the relationship between previously learned concepts and a new one. These techniques are very different from associative elaboration and require more than a mere reminiscent statement or image. Grouping and questioning strategies are examples of integrative elaboration. While 45.5% of the prospective class teachers in the present study used grouping strategies, forming questions was only used by 3%. The relatively more complicated nature of these two strategies might be the reason almost half of the participants did not use grouping and almost none used forming questions. Nordell (2009) studied learning strategy training and concluded that only 11.2% of their university students made concept maps and prepared their own quizzes. He too attributed the rarity of these activities to their time-consuming and skill-requiring nature .

An examination of prospective class teachers' grouping samples shows that 154-F-3 grouped the concepts of social studies definitions by using their initial letters and making her own additions, while 27-F-4 grouped the states that teach social studies as a single discipline by using their initial letters. Samples of question forming showed that 97-F-4 formed five questions from a given page.

The most common organization strategy used by prospective class teachers was outlining, but this strategy was used by less than half. The samples reveal that when outlining 44-F-4 made use of color coding instead of numbers, representing the headings in the book with colors of her own choice. As seen in the Findings section, student 44-F-4 highlighted the heading "principles of use for placement elements" in pink, and the subheadings beneath in green. She also highlighted the heading "2D Materials" on page 157 in pink, the subheadings beneath (pp. 157-164) in green, and the secondary subheadings under "Diagrams" (pp. 160-161) in orange. On the other hand, 8-K-4 numbered the 14 tools of alternative assessment between pages 236-276 from 1 to 14, thus making an numerical outline of the chapter. In addition to numbering, she also underlined each heading with a red pen.

The second most common organization strategy, making matrices, charts and tables, was only used by 1/3 of the participants. This was followed by concept- and information-mapping, with an approximate use rate of 20% and 10%, respectively. No participants used hierarchical structures. Overall, the use of organization strategies was rather low, as reflected in several previous studies.

Senemoğlu (2010) writes that the use of organization strategies is determined by age, talent levels and the socio-cultural environment. Şimşek and Balaban (2010)

found that organization was the least preferred strategy by university students. Hooper, Sales and Rysavy (1994) also stated that university students are often not good at certain strategies, such as making analogies and mental images and changing the structure of the text. Talu (1997) and Özdemir (2004) concluded that organization strategies were high school students' least preferred study methods.

As previously stated, organization strategies involve transforming information into a different form and developing schematic systems that connect parts or elements (Cornford, 2002). The two cognitive aims of organization strategies are to select the information to be sent to the working memory to then integrate with known information (Weinstein & Mayer, 1983). Thus, organization strategies are higher order strategies (Stefanou & Salisbury-Glennon, 2002) and require active effort (Pintrich, Smith, Garcia & McKeachie, 1991). As stated by Nordell (2009), prospective class teachers may make little use of organization strategies in their social studies education books, as these activities are time-consuming and require skills. Senemoğlu (2010) writes that the use of organization strategies is determined by age, talent levels and the socio-cultural environment.

### **Recommendations**

The majority of prospective class teachers do not use certain elaboration and organization strategies. This may be because they do not know about these learning strategies or they do not know how to use them. For these reasons, prospective class teachers should be given learning strategy training and shown how to use these strategies in their textbooks as they read.

This study aimed to discover the elaboration and organization strategies already used by prospective class teachers while studying their social studies education textbooks without offering them any training on these strategies. This study found that these prospective class teachers would benefit from being taught the elaboration and organization strategies to use as they study their social studies education textbooks.

Similar studies may be conducted with other education textbooks and other groups of prospective class teachers in order to examine other possible commonalities.

This study revealed the elaboration and organization strategies used by prospective class teachers as well as the extent to which they used them. The findings may be beneficial for curriculum designers. New textbook designs may be possible for social studies education and other fields, which incorporate the elaboration and organization strategies that were used little, if at all, by prospective class teachers.

The elaboration and organization strategies used by the prospective class teachers in this study were determined by analysing their social studies education textbooks. The reasons why certain strategies were or were not used were not studied. Focus group interviews may be held with a similar group to examine their reasoning.

### Conclusions

The study revealed that prospective class teachers most commonly use the elaboration strategy of note-taking as they study their textbooks. A moderate relationship existed between the categories of note-taking and summarizing. As for organization strategies, the most common strategy was outlining and the least common was information-mapping. Hierarchical structures were not used by any students. Further, a moderate relationship existed between the categories of making matrices, charts and tables and outlining, and making matrices, charts and tables and concept-mapping.

The findings have shown that prospective class teachers make little use of elaboration and organization strategies in their social studies education textbooks, and thereby need learning strategy training.

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## Sınıf Öğretmeni Adaylarının Sosyal Bilgiler Öğretimi Ders Kitaplarında Kullandıkları Anlamlandırma ve Örgütlenme Stratejileri

### Atıf:

Tay, B. (2013). Elaboration and organization strategies used by prospective class teachers while studying social studies education textbooks. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 229-252.

### (Özet)

#### *Problem Durumu*

Sınıf öğretmeni adaylarının sahip olması gereken pedagojik alan bilgisi yeterliliklerinden birini oluşturan sosyal bilgiler eğitimi ile ilgili yeterlilikler adaylara sosyal bilgiler öğretimi dersi ile kazandırılmaktadır. Bu ders için kullanılan kitaplar, sosyal bilgiler eğitimi için gerekli olan pedagojik alan bilgisi yeterliliklerini kazanmada yardımcı olmaktadır. Üniversite öğrencileri, zamanlarının önemli bir bölümünü ders kitaplarından çalışarak geçirmektedir ve ders kitapları öğrenme etkinliklerinde önemli bir yere sahiptir. Öğrenme etkinliklerini yönlendiren unsurlardan biri de öğrenme stratejileridir ve öğrenme stratejileri, öğrencilerin öğrenme-öğretme süreci içinde ya da bireysel hazırlıklarında kendisine sunulan bilgileri zihinsel süreçlerinden geçirerek, ona anlam vermesi ve kendine mal etmesi için gerekli olan çabaları ortaya koymasındadır. Bu çabalardan anlamlandırma ve örgütlenme stratejileri öğrencilerin bilgiler arasında içsel ve dışsal bağlar kurmasını sağlamaktadır. Bu yolla öğrenmelerin kalıcılığı artmaktadır. Sosyal bilgiler eğitimi ile ilgili alan yazın tarandığında anlamlandırma ve örgütlenme stratejileri ile ders kitapları arasında ilişkiyi konu edinen çalışmaların çok az olduğu görülmektedir. Bu bağlamda sınıf öğretmeni adaylarının sosyal bilgiler öğretimi dersini dinlerken ya da çalışırken ders kitaplarında kullandıkları anlamlandırma ve örgütlenme stratejilerinin bilinmesinin alana, öğretim tasarımcılarına ve diğer eğitim paydaşlarına katkı sağlayacağı düşünülmektedir.

#### *Araştırmanın Amacı*

Bu araştırmanın ana amacı sınıf öğretmeni adaylarının sosyal bilgiler öğretimi ders kitaplarında anlamlandırma ve örgütlenme stratejilerini kullanma durumlarını betimlemektir. Bu temel amaç doğrultusunda aşağıdaki sorulara cevap aranmıştır:

1. Sınıf öğretmeni adayları sosyal bilgiler öğretimi ders kitaplarında anlamlandırma stratejilerinden kendi cümleleriyle özet çıkarma, not alma, soru oluşturma ve gruplama stratejilerini kullanmakta mıdır?
2. Sınıf öğretmeni adaylarının sosyal bilgiler öğretimi ders kitaplarında kullandıkları anlamlandırma stratejileri arasında anlamlı bir ilişki var mıdır?
3. Sınıf öğretmeni adayları sosyal bilgiler öğretimi ders kitaplarında örgütlenme stratejilerinden anahat oluşturma, matris, çizelge ve tablo oluşturma, kavram haritası

oluşturma, bilgi haritası oluşturma ve hiyerarşik yapı oluşturma stratejilerini kullanmakta mıdır?

4. Sınıf öğretmeni adaylarının sosyal bilgiler öğretimi ders kitaplarında kullandıkları örgütlenme stratejileri arasında anlamlı bir ilişki var mıdır?

#### *Araştırmanın Yöntemi*

Araştırmada, Ahi Evran Üniversitesi Sınıf Öğretmenliği Anabilim Dalı'ndan 2010-2011 ve 2011-2012 öğretim yıllarında üçüncü sınıfa devam eden ve "Sosyal Bilgiler öğretimi" dersini alan öğretmen adaylarının bu derste kullandıkları ders kitaplarından veriler toplanmıştır. Araştırma sürecine toplam 235 öğretmen adayının kullandığı sosyal bilgiler öğretimi ders kitabı dâhil edilmiştir. Araştırma verilerinin kaynağı sosyal bilgiler öğretimi kitabı olduğundan doküman çözümlemesi tekniği işe koşulmuş ve dokümanlar içerik analizine tabi tutulmuştur.

#### *Araştırmanın Bulguları*

Sınıf öğretmeni adaylarından sosyal bilgiler öğretimi kitaplarında anlamlandırma stratejilerinden not almayı % 90,3'ü, kendi cümleleriyle özet çıkarmayı % 81,7'si, gruplamayı % 45,5'i ve soru oluşturmayı % 3'ü kullanmaktadır. Not alma ile kendi cümleleriyle özet çıkarma kategorileri arasında orta düzeyde bir ilişki vardır. Örgütlenme stratejilerinde ise anahat oluşturmayı % 43,8'i, matris, çizelge ve tablo oluşturmayı % 33,2'si, kavram haritası oluşturmayı % 21,2'si ve bilgi haritası oluşturmayı % 9,8'i kullanmakta, hiyerarşik yapı oluşturmayı hiçbir öğretmen adayı kullanmamaktadır. Matris, çizelge ve tablo oluşturma ile anahat oluşturma ve matris, çizelge ve tablo oluşturma ile kavram haritası oluşturma kategorileri arasında orta düzeyde bir ilişki vardır.

#### *Araştırmanın Sonuçları ve Önerileri*

Yapılan bu çalışmada sınıf öğretmeni adayların sosyal bilgiler öğretimi ders kitabında kullandıkları anlamlandırma ve örgütlenme stratejileri belirlenmiştir. Belirlenen amaç doğrultusunda yapılan içerik analizi sonuçlarına göre sınıf öğretmeni adayları sosyal bilgiler öğretimi ders kitaplarında anlamlandırma stratejilerinden en çok not almayı kullanırken, en az da soru oluşturmayı tercih etmişlerdir. Bununla birlikte not alma ile kendi cümleleriyle özet çıkarma kategorileri arasında orta düzeyde bir ilişki vardır. Örgütlenme stratejileri boyutunda ise en çok anahat oluşturma, en az da bilgi haritası oluşturma kullanılmıştır. Hiyerarşik yapı oluşturmayı hiçbir öğrenci kullanmamıştır. Buna ek olarak matris, çizelge ve tablo oluşturma ile anahat oluşturma ve matris, çizelge ve tablo oluşturma ile kavram haritası oluşturma kategorileri arasında orta düzeyde bir ilişki vardır.

Bu sonuçlar, sınıf öğretmeni adaylarının sosyal bilgiler öğretimi kitaplarında anlamlandırma ve örgütlenme stratejilerini kullanma durumlarının düşük seviyede olduğunu ve buna yönelik olarak öğretmen adaylarının öğrenme stratejileri ile ilgili bir eğitime ihtiyaç duyduğunu göstermiştir.

Sınıf öğretmeni adaylarının büyük bir kısmı anlamlandırma ve örgütlenme stratejilerinin bazılarını kullanmamaktadırlar. Bu durumun nedenlerinden biri

öğretmen adaylarının söz konusu öğrenme stratejilerini ya bilmiyor ya da nasıl kullanılacağını bilmiyor olmaları şeklinde düşünülebilir. Bu bağlamda öğretmen adaylarına öğrenme stratejilerinin öğretimi gerçekleştirilip bu stratejileri ders kitaplarında nasıl kullanacakları öğretilir.

Bu çalışmada öğretmen adaylarına anlamlandırma ve örgütleme stratejileri ile ilgili herhangi bir eğitim verilmeden sosyal bilgiler öğretimi ders kitaplarında kullandıkları anlamlandırma ve örgütleme stratejileri tespit edildi. Bu bağlamda öğretmen adaylarına sosyal bilgiler öğretimi ders kitaplarında kullanabilecekleri anlamlandırma ve örgütleme stratejileri öğretilerek sonuçlar betimlenebilir.

Sınıf öğretmeni adaylarının sosyal bilgiler öğretimi ders kitaplarında kullandıkları anlamlandırma ve örgütleme stratejilerinin betimlendiği bu araştırmaya benzer çalışmalar diğer öğretim derslerinin kitapları üzerinde ve diğer öğretmen adaylarıyla da gerçekleştirilip birbirleri arasındaki ilişkiler araştırılabilir.

Çalışmada öğretmen adaylarının anlamlandırma ve örgütleme stratejilerinden hangilerini ne derecede kullandıkları tespit edildi. Bu tespitler öğretim tasarımcıları için faydalı olabilecektir. Bu bağlamda öğretim tasarımcıları, bu çalışmadan elde edilen sonuçları dikkate alarak başta sosyal bilgiler öğretimi kitapları olmak üzere diğer ders kitaplarında yeni tasarımlar geliştirebilirler. Bununla birlikte sosyal bilgiler öğretimi kitaplarında öğretmen adaylarının az kullandıkları ve ya kullanmadıkları anlamlandırma ve örgütleme stratejileri onlara hazır olarak verilebilir.

Çalışmada öğretmen adaylarının anlamlandırma ve örgütleme stratejileri sosyal bilgiler öğretimi kitapları incelenerek tespit edildi. Tespit edilen bu stratejilerin kullanılma ve kullanılmama nedenleri araştırılmadı. Benzer bir çalışma grubu ile odak grup görüşmeleri yapılarak bu durum ayrıntılı olarak belirlenebilir.

*Anahtar Sözcükler:* Öğrenme stratejileri, ders kitabı, sosyal bilgiler eğitimi, sınıf öğretmeni adayları

## Elaboration and Organization Strategies Used by Prospective Class Teachers While Studying Social Studies Education Textbooks

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### Abstract

*Problem Statement:* Students spend a considerable amount of their time studying from textbooks, which play an important role in their learning activities. The strategies students use to learn work as guides, requiring them to mentally process, make sense of and internalize information offered to them during the instructional process. Of these, elaboration and organization strategies enable students to establish internal and external links among different pieces of information. Knowing the elaboration and organization strategies used by prospective class teachers when teaching from social studies education textbooks would benefit curriculum designers as well as all education stakeholders.

*Purpose of the Study:* The purpose of this study is to describe how prospective class teachers use elaboration and organization strategies as they study their social studies education textbook.

*Methods:* Data was collected through analysing 235 social studies education textbooks used by prospective class teachers. As the data source was a textbook, document and content analysis techniques were employed.

*Findings and Results:* The prospective class teachers in this study used the following elaboration strategies while studying the social studies education textbook: 90.3% took notes, 81.7% summarized information in their own words, 45.5% used grouping, and 3% formed questions. A moderate relationship existed between the categories of note-taking and summarizing. As for organization strategies, 43.8% created outlines, 33.2% made matrices, charts and tables, 21.2% used concept maps, and 9.8%

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used information mapping. No prospective class teacher seemed to be using hierarchical structures. Outlining and concept-mapping were found to be moderately related to making matrices, charts and tables.

*Conclusions and Recommendations:* Prospective class teachers in this study most commonly used the elaboration strategy of note-taking and least commonly used question forming. As for organization strategies, outlining was the most common and information mapping, the least. No prospective class teacher used hierarchical structures. These results suggest that prospective class teachers make little use of elaboration and organization strategies when studying from their social studies education textbooks, and may need learning strategy training. The results also suggest that the elaboration and organization strategies that prospective class teachers rarely or never use should be modeled in social studies education textbooks.

*Keywords:* Learning strategies, textbook, social studies education, prospective class teacher

One pedagogical field competence needed by prospective class teachers is social studies training, which is provided through the Social Studies Education course. As textbooks help prospective class teachers gain the pedagogical competences needed for social studies education, they comprise a valuable dimension in teacher training. In addition to textbooks, learning strategies also guide the learning activities of prospective class teachers. These can be defined as a set of one or more operations that facilitate the performance of an individual during a learning task (Riding & Rayner, 1998 cited in Hewitt, 2008). The aim of any given strategy is to influence the affective state of learners or their ways of acquiring, selecting, organizing and integrating new information (Weinstein & Mayer, 1986). Learning strategies have been classified in different ways by experts in the field (Weinstein & Mayer, 1986; Mayer, 1988; Hartley, 1998; Gagne & Driscoll, 1988; O'Malley & Chamot, 1990; Warr & Downing, 2000; Senemoğlu, 2010). For instance, Weinstein and Mayer (1986) divide them into five groups: revision, elaboration, organization, monitoring and affective strategies. The present study uses Weinstein and Mayer's (1986) taxonomy, focusing on elaboration and organization strategies as the main theme.

Elaboration strategies, such as interpreting, summarizing, making analogies and effective note-taking, help students store new knowledge in their long-term memory by making internal links between things to be learned. At the same time, these strategies help students integrate new learning with existing knowledge (Pintrich, Smith, Garcia & McKeachie 1991). In general, elaboration strategies serve to make connections between the existing knowledge in our long-term memory and the new information that is considered worth remembering (Cornford, 2002). In doing so, learners form a symbolic structure that adds meaning to the new information they are learning (Rohwer, 1970 cited in Weinstein, 1977). Because each action taken within elaboration strategies aims to link new and unfamiliar material with students'



existing knowledge and experience (Weinstein & Underwood, 1985), these strategies are critical to deep learning (Lewalter, 2003).

Another valuable learning strategy is organization. Organization strategies, such as outlining and concept mapping, are high level strategies and help build connections between opinions (Stefanou & Salisbury-Glennon, 2002). This involves a process whereby students make connections between new and old knowledge and organize them (Olgren, 1998 cited in Filcher & Miller, 2000). Therefore, organization strategies require the transformation of knowledge into a different form, as well as the development of certain schematic systems that make connections between fragments or elements of knowledge. The links formed when analyzing similarities and differences may not only be important to the formation of opinions, but also to how we retain knowledge in our long-term memory (Cornford, 2002). This may show whether understanding has reached a deeper level.

Both elaboration and organization strategies are used to construct and reconstruct knowledge. Therefore, knowledge is organized within meaningful internal or external images (Schlag, Florax & Ploetzner, 2007). Both elaboration and organization strategies enable users to make internal and external links between different pieces of information (Weinstein & Mayer, 1986).

The literature mentions the following as elaboration strategies: paraphrasing, summarizing, note-taking, making analogies, asking and answering questions about the materials, forming logical relationships within a text, inferencing, creating mental images or statements, supporting memory, using new information in a sentence, interpreting, matching, finding similarities, making comparisons, writing questions, determining how new information will be used, transferring and analyzing, brainstorming and finding a daily example of a rule or principle (Weinstein, 1977; Weinstein & Mayer, 1983; Weinstein & Mayer, 1986; Pintrich, Smith, Garcia & McKeachie, 1991; Styles, Beltman & Radloff, 2001; Dembo, 2001; Stefanou & Salisbury-Glennon, 2002; Cornford, 2002; Güven, 2008; Şimşek & Balaban, 2010).

Organization strategies, on the other hand, involve note-taking, summarizing, making spatial representations, ordering words within context, reordering complex informations, making charts, drafting, finding main ideas, grouping similar examples, collating, making flowcharts, creating tables, classifying information, regrouping, combining pieces, mapping concepts, listing, distinguishing stages, making hierarchies and mental maps, finding similarities, representing information in new ways (through graphics, tables and diagrams), practicing new knowledge, linking new and old knowledge, using comparison methods, teaching new information to others and inferencing (Weinstein & Mayer, 1983; Weinstein & Mayer, 1986; Weinstein, Ridley, Dahl & Weber, 1988-1989; Pintrich, Smith, Garcia & McKeachie, 1991; Styles, Beltman & Radloff, 2001; Cornford, 2002; Güven, 2008; Şimşek & Balaban, 2010). Considering these long lists of options, the most effective elaboration strategies that students can use while studying their textbooks may be summarizing, note-taking, asking questions and grouping. As for organization

strategies, students may be able to use outlining, creating matrices and tables, concept mapping, and making information maps and hierarchical structures.

University, high school and secondary school students spend a major part of their time studying from their textbooks. The task of reading includes distinguishing main ideas and supporting details and linking these to other knowledge in order to facilitate remembering and coding (Weinstein & Mayer, 1983). Textbooks, which have been assessed against certain criteria and are recommended as the main resource for teachers and learners in a certain school and course, are important educational materials with which students can practice elaboration and organization strategies (Oğuzkan, 1993).

Comparing the textbooks used in Turkish schools with their counterparts in other countries, it would be safe to claim that they are lagging behind in many respects. This may be attributed to the lack of adequate scientific knowledge and technical experience in writing textbooks; censorship of books owing to political reasons; the income-based approach of publishers, authors and teachers; and the failure of textbooks' contents and design to help students grasp the subjects (Aslan, 2010). Indeed, the study by Güven (2010) revealed in some aspects shortcomings of textbooks.

The failure of textbooks may also be related to unsatisfied student expectations. Students expect textbooks to include elements, such as learning strategies, that will help them learn. Studies on the relationship between learning strategies and success have shown that the use of these strategies increases and predicts success (Mayer, 1980; Ames & Archer, 1988; Somuncuoğlu & Yıldırım, 1999; Filcher & Miller, 2000; Lewalter, 2003; Yıldız-Duban, 2006; Bidjerano & Dai, 2007; Çakıcı, Arıca & Ilgaz, 2011). Moreover, achieving efficiency and success in education also requires individuals to choose, sustain, change and renew their own learning strategies (Saracaloğlu & Karasakaloğlu, 2011). This suggests that the inclusion of a set of prespecified learning strategies in textbooks may be important. There are very few studies on the relationship between learning strategies and textbooks, including social studies textbooks (Tay, 2005). Considering the role of textbooks in helping students learn, it may be argued that social studies textbooks should also be written with reference to specific learning strategies.

It is believed that understanding the elaboration and organization strategies used by students in the Social Studies Education course offered at the department of classroom teaching will benefit social studies training. The first benefit would be redesigning social studies education textbooks by including the strategies that students readily use, and the second might be to dedicate sections of the book to directly teach the study strategies that students are unfamiliar with or rarely use. This study is expected to fill the research gap regarding the relationship between learning strategies and social studies textbooks and may guide future studies.

This study attempted to describe how prospective class teachers use elaboration and organization strategies in their social studies education course books. In line with this general purpose, the following research questions were studied:

1. Do prospective class teachers use the elaboration strategies of summarizing, note-taking, forming questions and grouping when studying their social studies education textbooks?
2. Is there a meaningful relationship between the elaboration strategies used by prospective class teachers when studying their social studies education textbooks?
3. Do prospective class teachers use the organization strategies of outlining, making matrices charts and tables, concept-mapping, information-mapping and making hierarchical structures when studying their social studies education textbooks?
4. Is there a meaningful relationship between the organization strategies used by prospective class teachers when studying their social studies education textbooks?

## Method

### *Research Design*

In line with its purpose, the study used the qualitative research method of a case study in order to describe the elaboration and organization strategies used by prospective class teachers when studying their social studies education textbooks. Qualitative studies depict a detailed picture of a certain individual, group, state or problem (Fraenkel & Wallen, 1996). They are conducted in order to identify the natural state of the topic, event, phenomena or perceptions and generally use the techniques of interview, observation and document analysis (Ekiz, 2003; Kuş, 2003; Yıldırım & Şimşek, 2011). Case studies aim to understand the social phenomenon of a single or small group in their natural environment and to yield a detailed description (Bloor & Wood, 2006). Document analysis was used to collect data from the participants' social studies education textbooks. Thus, this study is a descriptive case study. This study intends to offer a detailed description of the elaboration and organization strategies used by prospective class teachers while studying their social studies education textbooks.

### *Sample*

In the present study, data was collected from the 235 textbooks used by third-year students who attended the Social Studies Education course at Ahi Evran University, Department of Classroom Teaching, during the 2010-2011 and 2011-2012 academic years. The study employed convenience sampling, which aims to include appropriate and willing participants in the study (Creswell, 2005). Thus, the study was conducted at the researcher's university with volunteering prospective class teachers. Of the participants, 70 (29.8%) were male and 165 (70.2%) were female. Of these, 116 (49.4%) were third-year students during the 2010-2011 academic year, and 119 (50.6%) were third-year students during the 2011-2012 academic year.

*Datagathering Procedure*

The research examined the elaboration and organization strategies stated in the learning strategies classification of Weinstein and Mayer (1986). For this purpose, document analysis was used to identify the elaboration and organization strategies used by prospective class teachers when studying their social studies education textbooks. According to Forster (1995), document analysis consists of five stages: accessing the documents, checking their originality, understanding them, analyzing the data and using the data (cited in Yıldırım & Şimşek, 2011). The present study employed all of these stages during content analysis. In order to increase the transferability of results, the study also included detailed descriptions of the data collection process, characteristics of the data source, how they were chosen, the data analysis process and the constraints of the study (Cresswell and Miller, 2000). The various stages of the study are explained below.

In the first stage, the purpose of the study was established, as mentioned above. The second stage involved the selection of the study sample. According to Bogdan and Biklen (1992) and Goetz and LeCompte (1984), textbooks, curriculum guidelines, internal or external correspondences, student records, minutes of meetings, student counseling records and files, student and teacher handbooks, student assignments and exams, lesson and unit plans, teacher files and other official documents may all be used as data sources in studies of education (Cited in Yıldırım & Şimşek, 2011). The sample of the present research consisted of 235 social studies education textbooks. In order to preserve the originality of the documents, the students were not informed of the study at the beginning of the term, thus enabling them to naturally use elaboration and organization strategies. At the end of the term, the students were asked to bring their textbooks to use for a section of the final exam. At the end of the exam, the students were informed about the study and the textbooks of voluntary participants were collected. In the end, textbooks were collected from 116 out of 133 students who were taking the social studies education course in the 2010-2011 academic year, and 119 out of 125 students in 2011-2012.

In the third stage, categories were defined using the closed approach, which means grouping record units based on an existing category system in a certain field (Bilgin, 2006). Hence, the behaviors included in elaboration and organization strategies were determined by surveying the literature. As a result, the elaboration (4) and organization (5) strategies that students may use in their textbooks were grouped under nine headings. The categories defined were submitted for review to four academics from Ahi Evran (2), Atatürk and Muğla Sıtkı Koçman Universities and were evaluated as "appropriate", "appropriate subject to revision" and "not appropriate". Expert views were then compared to the defined categories, the level of consensus and dissensus was determined, and the reliability of categories was calculated via the Miles and Huberman formula (1994) ( $\text{Reliability} = \frac{\text{consensus}}{\text{consensus} + \text{dissensus}}$ ). The resulting coefficient of concordance was 0.83, which indicates a high reliability for the categories. After these stages, the categories were established as summarizing; note-taking; forming questions; grouping;

outlining; making matrices, charts and tables; concept-mapping; information-mapping and hierarchical structures.

These categories were used in order to understand the documents and analyze the data. This stage thus involved a quantitative analysis of the frequency of categories and an analysis of the relationships between these categories. First, each document was examined thoroughly in terms of the nine categories of elaboration and organization strategies, in order to determine their frequencies. The data were tabulated and sample quotations were chosen in order to support the interpretations of the researcher and reveal how students used elaboration and organization strategies. These quotations were coded as follows: 104-F-4 for the student documents from 2010-2011 and 162-M-3 for those of 2011-2012. The coding represents the order in which the document was analyzed, the gender of the student and the academic year to which the student belonged, respectively. The expression "4" represents 2010-2011 and "3" represents 2011-2012.

In addition to frequency analysis, the content analysis technique for contingency was also used in analyzing the data. Contingency analysis is considered to be a more meaningful form of analysis by researchers who do not wish to be limited to basic frequency analysis. It aims to determine the associations between items, rather than their frequencies, and the relationships between various message units (Bilgin, 2006). Data obtained through frequency analysis was represented via Kendall's tau-b correlation coefficient, a non-parametric analysis technique, as the data was discontinuous and classified. The results are presented in tables.

The final stage of content analysis consisted of evaluation, inferencing and interpretation (Bilgin, 2006), which involved using the data in document analysis. These are explained in the discussion, conclusion and recommendations sections of the study.

## Results

In line with the purpose of the study, prospective class teachers' use of elaboration strategies was determined and represented in Table 1.

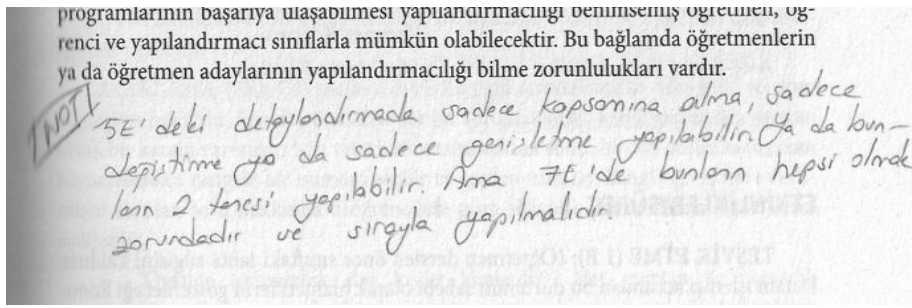
**Table 1**

*Prospective Class Teachers' Use Of Elaboration Strategies While Studying Their Social Studies Education Textbook*

<i>Learning Strategy Used</i>	<i>Yes</i>		<i>No</i>	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
Note-Taking	212	90.3	23	9.8
Summarizing	192	81.7	43	18.3
Grouping	107	45.5	128	54.5
Forming Questions	7	3	228	97.0

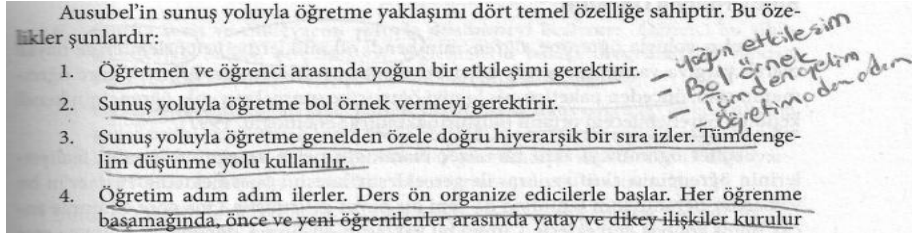
Table 1 shows that 90.3% of the students used the elaboration strategy of note-taking in their social studies education textbooks and 9.8% did not. Also, 81.7% of the students used the elaboration strategy of summarizing in their social studies education textbooks and 18.3% did not. Grouping, on the other hand, was not used by 54.5% of the prospective class teachers and used by 45.5%. While 97% of the prospective class teachers did not use the strategy of forming questions, only 3% did. Below are the examples of using elaboration strategies:

## 212-M-3



In the first example, student 212-M-3 wrote the following note about 5E in a blank space in the textbook: 'Only inclusion, only change or only expansion can be done in elaboration in 5E. Or two of them can be done. But in 7E there must be all of them and they are done respectively'.

## 119-F-3



In the second example, student 119-F-3 took some notes related to the four basic features of expository teaching approach and wrote them next to the text, which reads --

Ausubel's expository teaching approach has four basic features. Below are these features:

1. It requires an intensive interaction between the teacher and the student.
2. Expository teaching approach requires giving a lot of examples.
3. Expository teaching approach follows a hierarchical order from the general to the specific. Deductive reasoning is used.
4. Teaching proceeds step by step. The lesson begins with advance organizers. In each stage of learning, vertical and horizontal links are created between previously and newly learned things.

Below are the things that the student noted next to the text:

- intensive interaction
- a lot of examples
- deduction
- teaching step by step

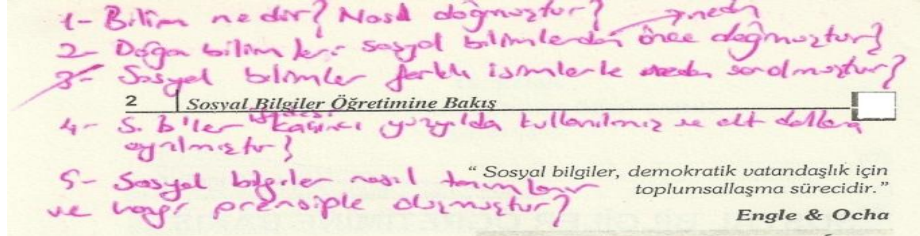
27-F-4

Sosyal bilgiler dersini ABD'nin dışında Türkiye, Japonya, Güney Kore, Kanada ve Avustralya'da görmek mümkündür. Bazı ülkelerde ise sosyal bilgiler dersi yerine, tek disiplinli anlayış benimsenerek tarih, coğrafya ve vatandaşlık dersleri ayrı ayrı okutulmaktadır. Bu ülkelerin başında İngiltere gelmektedir. İngiltere'de sosyal bilgiler kapsamındaki tarih ve coğrafya dersleri ilköğretimin ilk yıllarından itibaren ayrı ayrı okutulmaktadır. İngiltere'deki bu anlayış Lüksemburg ve Danimarka'da da görülebilir (Sözer, 1997; Öztürk ve Dilek, 2005; Öztürk ve Otluoğlu, 2005; Sağlam, 1999).

In the third example, student 27-F-4 created the new word "DİL", which means "tongue, language" in Turkish, using the Turkish corresponding country names for England, Luxemburg and Denmark. Here, "D" stands for "Danimarka (Denmark)", "İ" stands for "İngiltere (England)" and finally "L" stands for "Lüksemburg(Luxemburg)". When she put the initials of the given Turkish country names together she produced "DİL", which is extremely easy to remember as "DİL" also means language. The text reads as follows:

Other than America, it is also possible to see Social Studies course in Turkey, Japan, South Korea, Canada and Australia. Some countries adopted a single discipline perspective and teach history, geography and civics courses separately instead of Social Studies course. England is the leading country among these countries. In England, history and geography, which are normally under Social Studies course, are taught separately starting from the early years of primary school. This perspective of England can also be seen in Luxemburg and Denmark (Sözer, 1997; Öztürk and Dilek, 2005; Öztürk and Otluoğlu, 2005; Sağlam, 1999).

97-F-4



In the fourth example, student 97-F-4 wrote the following questions related to the chapter "An Overview on Teaching Social Studies" in a blank space on the page:

1. What is Science? How did it begin?
2. Why did the nature sciences begin before social sciences?
3. Why did Social sciences exist under different names?
4. In which century was the "Social Sciences" phrase first used and why was it subbranched?
5. How is Social studies defined and out of which principles did it develop?

**Table 2**

*Relationships Between the Elaboration Strategies Used by Prospective Class Teachers in Their Social Studies Education Textbooks*

	<i>Summarizing</i>	<i>Grouping</i>	<i>Forming questions</i>
Note-taking	.622	.157	-.027
Summarizing	-	.035	-.111
Grouping		-	-.009
Forming questions			-

According to Table 2, there was a moderate relationship between the categories of note-taking and summarizing ( $r=.622$ ). No meaningful relationship existed between other categories. This suggests that the prospective class teachers who used the strategy of note-taking also used the strategy of summarizing.



**Table 3**

*Prospective Class Teachers' Use of Organization Strategies in Their Social Studies Education Textbook*

<i>Learning Strategy Used</i>	<i>Yes</i>		<i>No</i>	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
Outlining	103	43.8	132	56.2
Making matrices, charts and tables	78	33.2	157	66.8
Concept-mapping	50	21.2	185	78.7
Information-mapping	23	9.8	212	90.2
Forming hierarchical structures	-	-	235	100

Table 3 shows that 56.2% of the students did not use the strategy of outlining in their social studies education textbooks, and 43.8% did. While 66.8% of the prospective class teachers did not make matrices, charts or tables, 33.2% did. Also, 78.7% of the prospective class teachers did not use concept-mapping in their social studies education books, while 21.2% did. Information-mapping was not used by 90.2% of the prospective class teachers, and only 9.8% used it as a strategy. Forming hierarchical structures was not used by any participants. Below are the examples of using organization strategies:

134-F-3

① **Etkili Vatandaşlık**  
 Ülkelerin eğitim sistemlerinden beklentileri, kendi yönetim rejimlerinin devamını sağlayacak bireyler yetiştirmektir. Bu nedenle vatandaş yetiştirmek ülkeler için

② **Kültürleme**  
 Eğitim, kasıtlı kültür aktarımı süreci olarak ifade edilebilir (Eidan, 1996). Her toplum, genç üyesine kendi kültürünü tanıtır ve varolan kültürü geliştirmeye çalışır.

③ **Yöntem**  
 Sosyal bilgiler derslerinde, etkili vatandaş yetiştirmek için gerekli bilgilerin kanıtlanmış, bilimsel yöntemle elde edilmiş ve geçerliliği olan bilgiler olması gerekmektedir. Bu bilgilerin elde edilmesinde ve öğrencilere verilmesinde bilimsel yöntemlerin

④ **Zaman (geçmiş-bugün-gelecek)**  
 Sosyal bilgiler dersinin en genel amacı etkili vatandaş yetiştirmektir. Etkili vatandaş, içinde yaşadığı toplumun kültürüne ve onu yaşatma arzusuna sahip olmalıdır.

In the first example, "Efficient Citizenship, Domestication, Method and Time (past, present, future)" subtitles on different pages, but under the "Basic Principles in Teaching Social Studies" main title, the student 134-F-3 created an outline by numbering the subtitles 1, 2, 3, 4, respectively.

44-K-4

## 2. Yerleşim Elemanlarının Kullanım İlkeleri

**Oran-Ölçek:** Objelerin büyüklüğü ile bağlantılıdır. Bir objenin diğer objeler ve bütün ile arasındaki ilişkiye göre objenin büyük, orta, küçük, ağır, hafif olması gibi duygular yaratabilir. Objelerin büyüklüğünün doğru olarak algılanabilmesi için tanıdık başka bir obje ile ölçeklendirilmesi gerekir.

**Denge:** Denge, objenin göz tarafından algılanan ağırlığı ile ilgilidir. Öğretim materyalleri üzerinde denge, yatay ve dikey eksenin her iki tarafına objelerin eşit olarak dağıtılması ile oluşturulur. İstenilen amaca yönelik olarak objelerin bütününe yerleşimi ile denge veya dengesizlik etkisi yaratılabilir.

**Bütünlük:** Görsel elemanlar ve bunların fonksiyonları arasındaki ilişki bütünlüğü oluşturur. Her bir görsel unsur, bir mesaj iletmedeki fonksiyonu göz önüne alınarak yerleştirilmelidir.

**Ritim:** Kompozisyonda gözün bir objeden diğerine rahatça kayabilmesidir. Soyut bir kavram olmasına rağmen çizgi, şekil, form, yapı ve renk kullanımı ile sağlanabilir.

**Vurgu:** Vurgunun bütüne baskın olması gereklidir. Öğretim materyalinin can alıcı noktasıdır. Dikkat çekmek istediğiniz nokta olarak tasarlanmalıdır. En ilgi çekici nokta olarak tasarlanıp en önemli unsurlar yerleştirilebilir.

**Ahenk:** Kompozisyonun bütünü ile bağlantılıdır. Parçalar bir araya geldiğinde ortaya çıkacak bütünlük duygusudur. Ahenk, bir bakıma bütünü oluşturan parçaların birbiri ile olan ilişkisine bağlı olarak ortaya çıkan uyumdur.

In contrast, student 44-F-4 made an outline by highlighting the "Settlement Components Policy" main title in pink and "Ratio-Scale, Balance, Integrity, Rhythm, Emphasis and Harmony" subtitles in green.

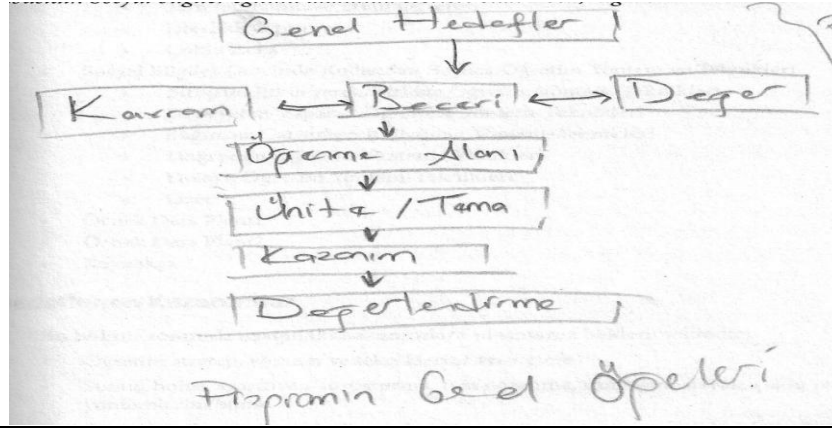
162-M-3

Sunus	Buluş	Araştırma inceleme
Ausubel	Bruner	Dewey
Bilgi	Kavram(+)	Uygulama(+)
Tümevarım	Tümevarım	her ikisi
öğretmen merkezde	rehter	ortak
öğrenci pasif (edilgen)	aktif	aktif
	eleştirel/yaratıcı	eleştirel /yaratıcı /yansıtıcı

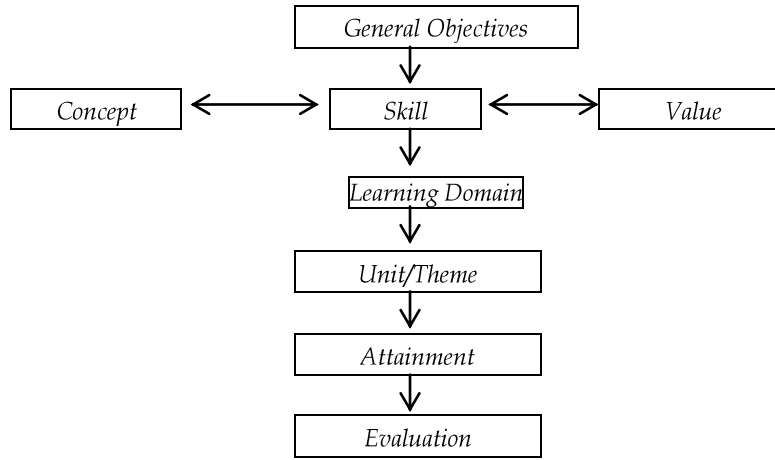
Student 162-M-3, as seen in the example above, created a chart for the information related to the three teaching strategies. Her notes are translated below:

Expository teaching	Discovery teaching	Research-Investigation
Ausubel	Bruner	Dewey
information	Comprehension (+)	Application (+)
deduction	Induction	both
Teacher	guide	common
in the center	active	active
Student	passive	critical/creative/reflective
	critical/creative	

156-M-3

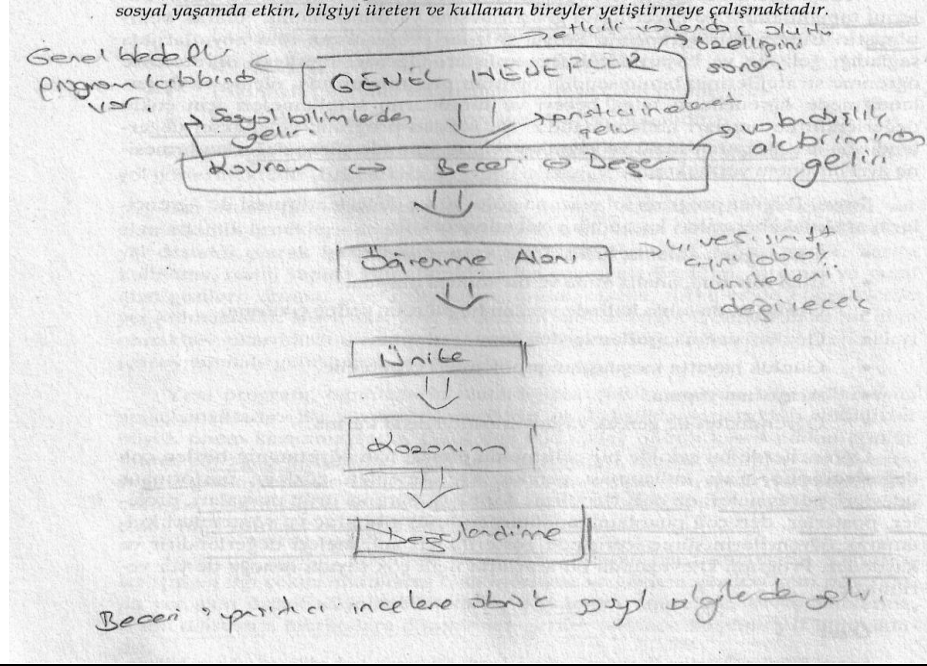


Student 156-M-3 made the above concept map of the general elements of social studies curriculum. His concept map is translated below:



General Elements of the Curriculum

8-F-4



Student 8-F-4 first made the previous concept map of the general elements of social studies curriculum and then changed it into an information map by adding some explanations. For example, she added "presents the feature of making efficient citizens" to "general objectives", "comes from social sciences" to the "statement of concept", "comes from reflective review" to "skill", "comes from citizenship transferring" and "it will be the same in 4th and 5th grade, the units will be changed" to \_\_\_\_? .

**Table 4.**

*Relationships Between the Organization Strategies Used by Prospective Class Teachers in Their Social Studies Education Textbooks*

	<i>Making matrices, charts and tables</i>	<i>Concept-mapping</i>	<i>Information-mapping</i>
Outlining	.543	.211	-.031
Making matrices, charts and tables	-	.649	-.171
Concept-mapping		-	-.101
Information-mapping			

Table 4 reveals a moderate relationship between outlining and making matrices, charts and tables ( $r = .543$ ), and concept-mapping and making matrices, charts and tables ( $r = .649$ ). Significant relationships were not found between other categories. Thus, it seems that the prospective class teachers who use the strategy of making matrices, charts and tables also use the strategies of outlining and concept-mapping.

### Discussion and Conclusion

Approximately 90% of the prospective class teachers use note-taking when they study their social studies education course books. Miller (1997) also concluded that 87% of open university students took notes from video cassettes. Styles, Beltman and Radloff (2001) state that, from a task strategies perspective, the most common strategy is using complementary activities such as participating in classes or doing assignments, followed by the complex elaboration strategy of note-taking. These findings corroborate the present study's finding that note-taking is the most common strategy used by prospective class teachers. Similarly, Kobayashi (2005) found in his meta-analysis that when note-takers' performance was compared to non-note-takers, in relation to certain variables, note-taking led to positive outcomes. Peper and Mayer (1978) also stated note-taking has a positive impact on learning outcomes. Further, Shrager and Mayer (1989) found that university students who take notes as they watch course videos are better at retaining and transferring information, in comparison to those who do not take notes. The literature therefore seems to corroborate the finding that note-taking is the most common strategy used by prospective class teachers.

Mayer (1980) states that the two most common elaboration strategies are comparative and integrative elaboration. When the sample notes taken by prospective class teachers were examined, the researcher found that 212-M-3 wrote the heading "NOTE" in the margin followed by important information from relevant pages. The one hundred nineteenth page of the textbook explains the details in 5E and the coming pages explain the expansion, inclusion and change in 7E. Comparing and integrating this information, the prospective class teacher made his own notes.

The second most common strategy that the prospective class teachers used in this study was summarizing, which was used by 81.7% of the participants. This finding is also in agreement with previous studies. For example, Taşçı (2011) found that university biology students most commonly use summarizing and note-taking strategies. Tüfekçioğlu (2010) examined writing skills and concluded that 85.7% of the 6th graders he studied made summaries, and that those who used this strategy had higher essay writing achievement than those who did not. Weinstein, Ridley, Dahl and Weber (1988-1989) argued that high school and university students are able to retain content area knowledge for an adequate amount of time to achieve on exams, but are rather poor at transferring it into their long-term memory. In order to do so, students should make meaningful links between their old and new knowledge. In other words, new information needs to take on a personal aspect.

Learning with such connections requires students to use certain kinds of elaboration strategies, one of which is summarizing.

Wittrock (2010) also believed that summarizing positively affects learning outcomes. Hooper, Sales and Rysavy (1994) found that university students are better at writing summaries than making analogies. An additional finding is that a moderate relationship exists between note-taking and summarizing, while no significant relation can be found between other elaboration strategies.

Mayer (1980) stated that comparative elaboration results when a student effectively grasps the relationship between two concepts. Integrative elaboration, on the other hand, occurs when a student grasps the relationship between previously learned concepts and a new one. These techniques are very different from associative elaboration and require more than a mere reminiscent statement or image. Grouping and questioning strategies are examples of integrative elaboration. While 45.5% of the prospective class teachers in the present study used grouping strategies, forming questions was only used by 3%. The relatively more complicated nature of these two strategies might be the reason almost half of the participants did not use grouping and almost none used forming questions. Nordell (2009) studied learning strategy training and concluded that only 11.2% of their university students made concept maps and prepared their own quizzes. He too attributed the rarity of these activities to their time-consuming and skill-requiring nature .

An examination of prospective class teachers' grouping samples shows that 154-F-3 grouped the concepts of social studies definitions by using their initial letters and making her own additions, while 27-F-4 grouped the states that teach social studies as a single discipline by using their initial letters. Samples of question forming showed that 97-F-4 formed five questions from a given page.

The most common organization strategy used by prospective class teachers was outlining, but this strategy was used by less than half. The samples reveal that when outlining 44-F-4 made use of color coding instead of numbers, representing the headings in the book with colors of her own choice. As seen in the Findings section, student 44-F-4 highlighted the heading "principles of use for placement elements" in pink, and the subheadings beneath in green. She also highlighted the heading "2D Materials" on page 157 in pink, the subheadings beneath (pp. 157-164) in green, and the secondary subheadings under "Diagrams" (pp. 160-161) in orange. On the other hand, 8-K-4 numbered the 14 tools of alternative assessment between pages 236-276 from 1 to 14, thus making an numerical outline of the chapter. In addition to numbering, she also underlined each heading with a red pen.

The second most common organization strategy, making matrices, charts and tables, was only used by 1/3 of the participants. This was followed by concept- and information-mapping, with an approximate use rate of 20% and 10%, respectively. No participants used hierarchical structures. Overall, the use of organization strategies was rather low, as reflected in several previous studies.

Senemoğlu (2010) writes that the use of organization strategies is determined by age, talent levels and the socio-cultural environment. Şimşek and Balaban (2010)

found that organization was the least preferred strategy by university students. Hooper, Sales and Rysavy (1994) also stated that university students are often not good at certain strategies, such as making analogies and mental images and changing the structure of the text. Talu (1997) and Özdemir (2004) concluded that organization strategies were high school students' least preferred study methods.

As previously stated, organization strategies involve transforming information into a different form and developing schematic systems that connect parts or elements (Cornford, 2002). The two cognitive aims of organization strategies are to select the information to be sent to the working memory to then integrate with known information (Weinstein & Mayer, 1983). Thus, organization strategies are higher order strategies (Stefanou & Salisbury-Glennon, 2002) and require active effort (Pintrich, Smith, Garcia & McKeachie, 1991). As stated by Nordell (2009), prospective class teachers may make little use of organization strategies in their social studies education books, as these activities are time-consuming and require skills. Senemoğlu (2010) writes that the use of organization strategies is determined by age, talent levels and the socio-cultural environment.

### **Recommendations**

The majority of prospective class teachers do not use certain elaboration and organization strategies. This may be because they do not know about these learning strategies or they do not know how to use them. For these reasons, prospective class teachers should be given learning strategy training and shown how to use these strategies in their textbooks as they read.

This study aimed to discover the elaboration and organization strategies already used by prospective class teachers while studying their social studies education textbooks without offering them any training on these strategies. This study found that these prospective class teachers would benefit from being taught the elaboration and organization strategies to use as they study their social studies education textbooks.

Similar studies may be conducted with other education textbooks and other groups of prospective class teachers in order to examine other possible commonalities.

This study revealed the elaboration and organization strategies used by prospective class teachers as well as the extent to which they used them. The findings may be beneficial for curriculum designers. New textbook designs may be possible for social studies education and other fields, which incorporate the elaboration and organization strategies that were used little, if at all, by prospective class teachers.

The elaboration and organization strategies used by the prospective class teachers in this study were determined by analysing their social studies education textbooks. The reasons why certain strategies were or were not used were not studied. Focus group interviews may be held with a similar group to examine their reasoning.

### Conclusions

The study revealed that prospective class teachers most commonly use the elaboration strategy of note-taking as they study their textbooks. A moderate relationship existed between the categories of note-taking and summarizing. As for organization strategies, the most common strategy was outlining and the least common was information-mapping. Hierarchical structures were not used by any students. Further, a moderate relationship existed between the categories of making matrices, charts and tables and outlining, and making matrices, charts and tables and concept-mapping.

The findings have shown that prospective class teachers make little use of elaboration and organization strategies in their social studies education textbooks, and thereby need learning strategy training.

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## Sınıf Öğretmeni Adaylarının Sosyal Bilgiler Öğretimi Ders Kitaplarında Kullandıkları Anlamlandırma ve Örgütlenme Stratejileri

### Atıf:

Tay, B. (2013). Elaboration and organization strategies used by prospective class teachers while studying social studies education textbooks. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 229-252.

### (Özet)

#### *Problem Durumu*

Sınıf öğretmeni adaylarının sahip olması gereken pedagojik alan bilgisi yeterliliklerinden birini oluşturan sosyal bilgiler eğitimi ile ilgili yeterlilikler adaylara sosyal bilgiler öğretimi dersi ile kazandırılmaktadır. Bu ders için kullanılan kitaplar, sosyal bilgiler eğitimi için gerekli olan pedagojik alan bilgisi yeterliliklerini kazanmada yardımcı olmaktadır. Üniversite öğrencileri, zamanlarının önemli bir bölümünü ders kitaplarından çalışarak geçirmektedir ve ders kitapları öğrenme etkinliklerinde önemli bir yere sahiptir. Öğrenme etkinliklerini yönlendiren unsurlardan biri de öğrenme stratejileridir ve öğrenme stratejileri, öğrencilerin öğrenme-öğretme süreci içinde ya da bireysel hazırlıklarında kendisine sunulan bilgileri zihinsel süreçlerinden geçirerek, ona anlam vermesi ve kendine mal etmesi için gerekli olan çabaları ortaya koymasıdır. Bu çabalardan anlamlandırma ve örgütlenme stratejileri öğrencilerin bilgiler arasında içsel ve dışsal bağlar kurmasını sağlamaktadır. Bu yolla öğrenmelerin kalıcılığı artmaktadır. Sosyal bilgiler eğitimi ile ilgili alan yazın tarandığında anlamlandırma ve örgütlenme stratejileri ile ders kitapları arasında ilişkiyi konu edinen çalışmaların çok az olduğu görülmektedir. Bu bağlamda sınıf öğretmeni adaylarının sosyal bilgiler öğretimi dersini dinlerken ya da çalışırken ders kitaplarında kullandıkları anlamlandırma ve örgütlenme stratejilerinin bilinmesinin alana, öğretim tasarımcılarına ve diğer eğitim paydaşlarına katkı sağlayacağı düşünülmektedir.

#### *Araştırmanın Amacı*

Bu araştırmanın ana amacı sınıf öğretmeni adaylarının sosyal bilgiler öğretimi ders kitaplarında anlamlandırma ve örgütlenme stratejilerini kullanma durumlarını betimlemektir. Bu temel amaç doğrultusunda aşağıdaki sorulara cevap aranmıştır:

1. Sınıf öğretmeni adayları sosyal bilgiler öğretimi ders kitaplarında anlamlandırma stratejilerinden kendi cümleleriyle özet çıkarma, not alma, soru oluşturma ve gruplama stratejilerini kullanmakta mıdır?
2. Sınıf öğretmeni adaylarının sosyal bilgiler öğretimi ders kitaplarında kullandıkları anlamlandırma stratejileri arasında anlamlı bir ilişki var mıdır?
3. Sınıf öğretmeni adayları sosyal bilgiler öğretimi ders kitaplarında örgütlenme stratejilerinden anahat oluşturma, matris, çizelge ve tablo oluşturma, kavram haritası

oluşturma, bilgi haritası oluşturma ve hiyerarşik yapı oluşturma stratejilerini kullanmakta mıdır?

4. Sınıf öğretmeni adaylarının sosyal bilgiler öğretimi ders kitaplarında kullandıkları örgütlenme stratejileri arasında anlamlı bir ilişki var mıdır?

#### *Araştırmanın Yöntemi*

Araştırmada, Ahi Evran Üniversitesi Sınıf Öğretmenliği Anabilim Dalı'ndan 2010-2011 ve 2011-2012 öğretim yıllarında üçüncü sınıfa devam eden ve "Sosyal Bilgiler öğretimi" dersini alan öğretmen adaylarının bu derste kullandıkları ders kitaplarından veriler toplanmıştır. Araştırma sürecine toplam 235 öğretmen adayının kullandığı sosyal bilgiler öğretimi ders kitabı dâhil edilmiştir. Araştırma verilerinin kaynağı sosyal bilgiler öğretimi kitabı olduğundan doküman çözümlemesi tekniği işe koşulmuş ve dokümanlar içerik analizine tabi tutulmuştur.

#### *Araştırmanın Bulguları*

Sınıf öğretmeni adaylarından sosyal bilgiler öğretimi kitaplarında anlamlandırma stratejilerinden not almayı % 90,3'ü, kendi cümleleriyle özet çıkarmayı % 81,7'si, gruplamayı % 45,5'i ve soru oluşturmaya % 3'ü kullanmaktadır. Not alma ile kendi cümleleriyle özet çıkarma kategorileri arasında orta düzeyde bir ilişki vardır. Örgütlenme stratejilerinde ise anahat oluşturmaya % 43,8'i, matris, çizelge ve tablo oluşturmaya % 33,2'si, kavram haritası oluşturmaya % 21,2'si ve bilgi haritası oluşturmaya % 9,8'i kullanmakta, hiyerarşik yapı oluşturmaya hiçbir öğretmen adayı kullanmamaktadır. Matris, çizelge ve tablo oluşturma ile anahat oluşturma ve matris, çizelge ve tablo oluşturma ile kavram haritası oluşturma kategorileri arasında orta düzeyde bir ilişki vardır.

#### *Araştırmanın Sonuçları ve Önerileri*

Yapılan bu çalışmada sınıf öğretmeni adayların sosyal bilgiler öğretimi ders kitabında kullandıkları anlamlandırma ve örgütlenme stratejileri belirlenmiştir. Belirlenen amaç doğrultusunda yapılan içerik analizi sonuçlarına göre sınıf öğretmeni adayları sosyal bilgiler öğretimi ders kitaplarında anlamlandırma stratejilerinden en çok not almayı kullanırken, en az da soru oluşturmaya tercih etmişlerdir. Bununla birlikte not alma ile kendi cümleleriyle özet çıkarma kategorileri arasında orta düzeyde bir ilişki vardır. Örgütlenme stratejileri boyutunda ise en çok anahat oluşturma, en az da bilgi haritası oluşturma kullanılmıştır. Hiyerarşik yapı oluşturmaya hiçbir öğrenci kullanmamıştır. Buna ek olarak matris, çizelge ve tablo oluşturma ile anahat oluşturma ve matris, çizelge ve tablo oluşturma ile kavram haritası oluşturma kategorileri arasında orta düzeyde bir ilişki vardır.

Bu sonuçlar, sınıf öğretmeni adaylarının sosyal bilgiler öğretimi kitaplarında anlamlandırma ve örgütlenme stratejilerini kullanma durumlarının düşük seviyede olduğunu ve buna yönelik olarak öğretmen adaylarının öğrenme stratejileri ile ilgili bir eğitime ihtiyaç duyduğunu göstermiştir.

Sınıf öğretmeni adaylarının büyük bir kısmı anlamlandırma ve örgütlenme stratejilerinin bazılarını kullanmamaktadırlar. Bu durumun nedenlerinden biri

öğretmen adaylarının söz konusu öğrenme stratejilerini ya bilmiyor ya da nasıl kullanılacağını bilmiyor olmaları şeklinde düşünülebilir. Bu bağlamda öğretmen adaylarına öğrenme stratejilerinin öğretimi gerçekleştirilip bu stratejileri ders kitaplarında nasıl kullanacakları öğretilir.

Bu çalışmada öğretmen adaylarına anlamlandırma ve örgütleme stratejileri ile ilgili herhangi bir eğitim verilmeden sosyal bilgiler öğretimi ders kitaplarında kullandıkları anlamlandırma ve örgütleme stratejileri tespit edildi. Bu bağlamda öğretmen adaylarına sosyal bilgiler öğretimi ders kitaplarında kullanabilecekleri anlamlandırma ve örgütleme stratejileri öğretilerek sonuçlar betimlenebilir.

Sınıf öğretmeni adaylarının sosyal bilgiler öğretimi ders kitaplarında kullandıkları anlamlandırma ve örgütleme stratejilerinin betimlendiği bu araştırmaya benzer çalışmalar diğer öğretim derslerinin kitapları üzerinde ve diğer öğretmen adaylarıyla da gerçekleştirilip birbirleri arasındaki ilişkiler araştırılabilir.

Çalışmada öğretmen adaylarının anlamlandırma ve örgütleme stratejilerinden hangilerini ne derecede kullandıkları tespit edildi. Bu tespitler öğretim tasarımcıları için faydalı olabilecektir. Bu bağlamda öğretim tasarımcıları, bu çalışmadan elde edilen sonuçları dikkate alarak başta sosyal bilgiler öğretimi kitapları olmak üzere diğer ders kitaplarında yeni tasarımlar geliştirebilirler. Bununla birlikte sosyal bilgiler öğretimi kitaplarında öğretmen adaylarının az kullandıkları ve ya kullanmadıkları anlamlandırma ve örgütleme stratejileri onlara hazır olarak verilebilir.

Çalışmada öğretmen adaylarının anlamlandırma ve örgütleme stratejileri sosyal bilgiler öğretimi kitapları incelenerek tespit edildi. Tespit edilen bu stratejilerin kullanılma ve kullanılmama nedenleri araştırılmadı. Benzer bir çalışma grubu ile odak grup görüşmeleri yapılarak bu durum ayrıntılı olarak belirlenebilir.

*Anahtar Sözcükler:* Öğrenme stratejileri, ders kitabı, sosyal bilgiler eğitimi, sınıf öğretmeni adayları

## Effects of Decision-Making Styles of School Administrators on General Procrastination Behaviors

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### Abstract

*Problem Statement:* Lack of habits such as effective time management, determination of priorities, and effective and productive use of time is one of several reasons for procrastination behaviors. Personality traits along with incorrect cognitive loads about the self and the environment are other reasons for procrastination behaviors. At this point, reasons behind procrastination behaviors are mainly explained with self-managing skills, personality traits, and cognitive processes. This situation creates a result that reflects decision-making styles of an individual which set the relation between decision-making styles and procrastination behavior.

*Purpose of Study:* This study aims to identify the correlation between decision-making styles of principals (administrators) and their procrastination tendencies and the relationship of decision-making styles with age. Relational survey model is utilized to examine decision styles and procrastination behaviors of school administrators.

#### *Methods:*

Sample of the study comprises principals and vice-principals serving in elementary and high schools of the central Sivas province and its counties. A total of 397 principals and vice-principals were serving in schools of the region in 2011-2012 academic year and questionnaires were sent to all of them. A total of 285 (71.79 %) questionnaires were returned to the researcher and further analyses were performed with this data.

#### *Findings:*

Findings show that means for rational decision-making are  $M=3.24$ , intuitive decision-making  $M=3.24$ , and dependent decision-making subdimensions of the decision-making styles are high; and avoidant

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decision-making  $M=1.84$ , and spontaneous decision-making  $M=2.17$  are low. According to the results, rational decision making, which is one of the decision-making styles and procrastination tendencies do not significantly differ with respect to the age variable. Correlation between rational, intuitive, dependent, avoidant and spontaneous decision-making styles jointly results in a minor but significant correlation with procrastination behaviors of school administrators ( $R=0.536$ ,  $R^2= 0.287$ ,  $p< .01$ ). Five mentioned variables jointly account for 29% of the variance in the procrastination.

*Conclusion and Recommendations:*

The results favored more experienced school administrators in terms of decision-making styles and this enabled us to conclude that choosing school principals from experienced ones could result in better performance against procrastination. Positive school climate and a healthy surrounding, along with rational decisions are necessary for an effective management process in schools.

Keywords: Decision making, decisionmaking styles, procrastination, general procrastination

### Introduction

The decision-making process is the basis of management systems. As a source of managing human behaviors in an orderly manner, the *decision-making process* should always be referenced. Permanence of organizations is related with successful management of organizational variables like mission, association, and coordination.

Just as in medical science, which is built on the biological structure of living organisms, ailments of organizations can also be treated only by an in-depth understanding of the anatomy and physiology of the organization. While the anatomy of an organization makes up the distributions of the decisions, powers and duties, the organization procreates its own decision-making conditions and consequently, affects the decisions of its members. The decision-making process in an organization is functioning as an innovative and problem-solving procedure and is applied in the assignment of duties to the staff. The life span of an organization is related to the quality of the decisions being made (Bursalıoğlu, 1998). Effective decision making is a major concern for the administrators and makes up a significant proportion of their professional life. Technological developments, globalization, requirements brought about by the need for localization, and social concerns can all affect decisions of an administrator. Attitudes and behaviors towards decision making can play a vital role in determining the characteristics of the tasks to be completed such as when, where and with whom the tasks will be completed. While administrators' approaches towards the decision-making process and different decision-making styles can produce different administrative conditions, their own



decision-making styles in turn create their own behavioral patterns. One such pattern is procrastination behavior.

Lack of habits like effective time management, determination of priorities, and effective and productive use of time is one of the reasons for procrastination behaviors. Personality traits along with incorrect cognitive loads about the self and the environment are other reasons. At this point, reasons behind procrastination behaviors are mainly explained with self-managing skills, personality traits, and cognitive processes (Balkis, 2007). This situation creates a result that reflects decision-making styles of an individual, which set the relation between decision-making styles and procrastination behavior.

### Decision Making and Decision-Making Styles

Decisionmaking is a matter of making a selection from different options (Erdoğan, 1996; Akdağ, 2002; Uğurlu, 2007; Oğuz, 2009; Altunok, Özpeynirci, Kazançoğlu & Yılmaz, 2010; Dönmez, Uğurlu & Cömert, 2011). An administrator is expected to choose the most appropriate solution when a problem is encountered. According to Oğuz (2009), the decision process in school administration is based on problem solving. School administrators are in charge of making the right choice to solve a problem that concerns the teachers in the school as well as any other school-related issue. A healthy organization is dependent on the true operation of the decision-making process. This decision-making process involves perceiving, defining, and gathering information on the problem, identifying possible solutions, selecting the best solution, implementing and then evaluating. Management of the decision-making process is influenced by the proficiencies of the administrators who are expected to be well-trained as sources of true-selections.

The interrogative approach reveals the significance of decision-making approaches by asking can the importance of decisionmaking and how alternatives are chosen be influenced by the decision-making styles of the administrators (Bursalıoğlu, 1998). Qualifications of the members of the organization influence the attitudes of administrators on the decision-making process and thus shape the way they make selections. For example, an administrator's influence on staff will differentiate when he/she ensures participation of the personnel, consults them, hesitates to make decisions or makes immediate decisions without a brief consideration.

When discussing decision-making styles, it is unlikely that there is only one single decision-making style, with the complexity of the situation itself making some decisions more difficult than others. Indeed, the administrator, who is the head of the decision-making process can possess different decision-making styles. Possession of different decision-making styles determines the qualification of the decision-making behaviors. According to Oğuz (2009), decisionmaking is one of the substantial processes that an administration has to perform. In the completion of the organizational tasks, the way the decision-making process is pursued plays a

prominent role. Decision-making is influenced by the personal traits of the administrator and the staff.

Different personality traits possessed by individuals may generate different decision-making styles with diverse social and psychological constructs. Distinct classifications are observed on decision-making styles and according to Scott and Bruce (1995), there are; rational, intuitive, dependent, spontaneous, and avoidant decision-making styles. Responses of those individuals in the position of decisionmaking determine their decision-making style.

Decision genres according to decision-making styles indicated by Deniz (2004) are as follows: Individuals implementing cautious decision-making style make their decisions carefully. Avoidant decision-makers tend to relinquish decision-making to others. Individuals with procrastinating decision-making style are likely to postpone the decision. Without an acceptable reason, they continuously try to postpone the decision. While individuals with spontaneous decision-making style are quick decisionmakers under the stress of time limitation.

There are various studies examining relations between decision-making styles and some other variables; Dilmaç and Bozgeyikli (2009) examined the relation between subjective well-being and decision making of prospective teachers, Bacanlı and Sürücü (2006) examined the relation between decision-making styles and test anxiety, and Pennino (2002) examined the relation between decision styles and ethical conditions. A brief research of the literature on decision styles and decision making (Podrug, 2011; Henderson and Nutt, 1980; Haniffa and Ahmed, 2008;) reveals that decision style of an individual is determinative in making alternative selections. Decision styles of people in a position to make decisions impact the quality of the decision, what the decision will be and how it will be carried out.

In terms of school administration, decision manners of school administrators are a means for effective administration of the school. Schools can become more effective institutions when the staff is well-coordinated and effective ways of communication are utilized. School administrators are continuously in charge of making effective decisions about teachers in their school. According to Podrug (2011), diverse cultural formations require distinct administrative manners. In order to be successful in their objectives, organizations must upgrade their ability of coherence to different customs. Schools as organizations of a combination of pupils from diverse cultural backgrounds are well-affected by decisions of administrators. The origin of different decision styles of both teachers and administrators at school is distinct personal attributions of their lives. These attributions may vary from administrator to administrator. And consequently, everyone working in the school is somehow affected by the decision styles of the administrator. Just as decision style of administrators affects the staff, so do their administrative manners. Procrastination is one such administrative manner.

### ***Procrastination***

Many people immediately categorize everything as black or white, good or bad, true or false. A truly effective leader needs to be able to see the shades of gray in

situations in order to make wise decisions (Murtagh, 2003). However, when the situation becomes leaving today's work for tomorrow the decision process can become impaired. And in organizations, some decisions have to be prompt.

Although viewed as a common phenomenon and an unfavorable feature, there is no consensus on the exact definition of the concept procrastination. Commonly, it is defined as including attitudes and behaviors which affect productivity of an individual in a negative way (Balkis, 2007). Beyond a characteristic of inefficient management of time, procrastination is defined as a personality trait. Procrastination as a personality trait includes cognitive and affective elements and results from various reasons. Risk-taking, fear of failure and laziness may be counted as a few such reasons (Uzun Özer and Ferrari, 2011; Uzun and Saçkes, 2010; Fee and Tangney, 2000; Lay, 1986). According to another definition, procrastination is avoiding self-regulatory behaviors. It is defined as a motivational problem beyond laziness or lack of time-management (Lee, 2005). Or can be defined as despite being aware of consequences, delaying work that has to be finished (Klassen, Krawchuk and Rajani, 2008; Chu & Choi, 2005; Eerde, 2003). Various studies related procrastination with different personal traits. Defined as a hazardous and weighty event, procrastination is affected by individual performances. And at the same time, can be defined to be a motivational condition. Such a negative correlation was found between intrinsic motivation and procrastination (Fatimah, et al., 2011). McCrown and Johnson (1991) stated that procrastination is being oblivious to and negligent while performing a task. Thence procrastination is recognized as an illness (Fatimah, 2011). Examining procrastination according to different variables, Uzun Özer, Demir and Ferrari (2009) found that female university students exhibited procrastination behaviors because of the fear of failure. Whereas another research finding performed by Ferrari, Uzun Özer and Demir (2009) revealed that procrastination behavior does not differentiate with the gender variable.

#### ***Relation of Decision Styles and Procrastination***

Decision styles and procrastination have been investigated in relation with various organizational variables. In his research performed to put forth the relation between decision styles of prospective teachers and procrastination behaviors, Balkis (2006) found that prospective teachers' procrastination tendencies are related with their thinking and decision styles. Decision styles are determinative in procrastination and an underlying reason of it. Competence in time management, working in an orderly and regular manner will reduce procrastination and enhance the quality of the organizational functioning which is correlated with decision styles.

It is seen in the literature that the relation between decision styles and procrastination concepts has been studied according to many different concepts within many different organizations. Some such studies are as follows: Relation between procrastination tendencies of teachers and their levels of apprehension (Güner, 2008), comparing the procrastination tendencies of teachers in terms of their professional efficacy perceptions (Gülebağlan, 2003), relationships between the levels of self-actualization, general procrastination, and hopelessness among university

students (Dünyaogulları, 2011), self-esteem of university students on decisionmaking (Avşaroğlu, 2007), adolescent self-esteem and decision-making style of the decision with the perceived level of social support, social competence and level of expectation in terms of some variables (Kaşık, 2009), irrational beliefs and decision-making styles (Can, 2009), relationship between leadership styles and making a decision styles (İlmez, 2010), relationships between career development and decisionmaking styles (Yayla and Bacanlı, 2011), procrastination and motivation (Lee, 2005), and academic procrastination and perfectionism (Seo, 2008). Examination of the literature reveals that studies investigating the relation between procrastination and decision styles are performed on students, teachers, and adults. However, there is no study encountered in the literature examining decision styles of school administrators and their procrastination behaviors. Thence, investigation of the relation between decision styles of school administrators and their procrastination behaviors is considered necessary.

Overlooking these studies as a whole, it can be seen that decision styles influence human behaviors in many ways. Describing the effects of school administrators' decision styles on procrastination behaviors and examining that relation is the aim of this study. By performing this study, we seek answers to the following questions:

1. What are the views of school administrators on decision styles and procrastination?
2. Is there any significant relation between decision styles and procrastination behaviors of school administrators in terms of age variable?
3. Is there a predictive relationship between decision styles and its subdimensions of school administrators and procrastination?

## Method

This study was designed as a descriptive and associative survey model. Survey models aim to represent a current or past situation as it is. The incident, person or object subject to the research is described within its own circumstances without any effort to modify (Karasar, 1999).

### *Population and Sample*

The population of the study is comprised of 397 principals and vice-principals working in primary and secondary schools in the academic year 2011-2012 within the boundaries of the central district of Sivas. The study tried to reach the entire population and for this reason, the selection of the sample wasn't done.

It is aimed to collect data from every principal and vice-principal in the region and questionnaires were sent to all of these 397 school administrators. A total of 285 (71.79 %) questionnaires were returned to the researcher and further analyses performed with this data.

### **Data collection tools**

*Procrastination Scale* (PS) was developed by Lay (1986) and adopted into Turkish by Balkis (2006), reliability of the scale is established by internal consistency calculations. As a result of analyses performed, internal consistency coefficient of the scale is found to be  $\alpha = .82$ . Test-re-test reliability is found to be  $r = .80$  by application of the scale after a month. In order to establish the construct validity of the scale, researchers performed factor analyses and found that findings account for the 32.09% of the total variance. According to the results, eigenvalue is 4.80 with single factor (Balkis, 2006).

*Decision-Making Styles Inventory*, (DMSI), was developed by Scott and Bruce (1995) to measure individual differences in decision-making styles. A 24-item original form of the decision making styles inventory is utilized with five subdimensions: rational, intuitive, dependent, spontaneous, and avoidant decision-making styles. Internal consistency coefficients were found to be between  $\alpha = .79$  and  $.94$  for subdimensions of the inventory. The inventory was adopted into Turkish by Taşdelen (2002). Data received from applications were analyzed for the correlation between English and Turkish forms of the inventory, Pearson's correlation coefficient for items ( $n=38$ ) calculated to be  $r = .727$  where  $p < .001$ .

Internal consistency analyses (Cronbach's alpha) for each of the five subdimensions of the scale are performed. Results are: Internal consistency of Rational Decision-Making sub-scale is alpha:  $.76$ . Internal consistency of Intuitive DecisionMaking sub-scale is alpha:  $.78$ . Internal consistency of Dependent DecisionMaking sub-scale is alpha:  $.76$ . Internal consistency of Avoidant DecisionMaking sub-scale is alpha:  $.79$ . Internal consistency of Spontaneous DecisionMaking sub-scale is alpha:  $.76$ . And for the whole inventory, internal consistency is found to be alpha:  $.74$ . Examining test-re-test reliabilities, Pearson's Correlation coefficient between the two applications was found to be  $r = .257$  with  $p < .05$  for rational decision-making sub-scale;  $r = .293$  with  $p < .01$  for intuitive decision-making sub-scale;  $r = .524$  with  $p < .01$  for dependent decision-making sub-scale;  $r = .347$  with  $p < .01$  for avoidant decision-making sub-scale;  $r = .257$  with  $p < .05$  for spontaneous decision-making sub-scale; and  $r = .439$  with  $p < .01$  for the whole scale (Taşdelen, 2002).

### **Data Analyses**

Means of the scores received from the inventory were calculated to establish the views of the school administrators on decision-making styles and procrastination and subscales of procrastination. Possible attainable scores from the decision-making styles inventory are between 25 and 100. Possible attainable scores from the procrastination scales are between 15 and 75.

In order to identify the variation of views of administrators according to personal traits, provision of normality assumption is checked. To do this, skewness and kurtosis coefficients are examined and the distribution is found to be normal. Also, since the sample consisted of over 50 participants ( $N=190$ ), Kolmogorov Smirnov test is performed (decision- making styles Skewness value  $-.350$  and Kurtosis value  $.560$ ;

procrastination Skewness value -.040 and Kurtosis value .091) and since the normality assumption is verified, parametric tests t-test and ANOVA (Analysis of Variance) were performed. Since the analysis of variance (ANOVA) resulted with a significant p value, in order to find the source of variances between groups, equality of variances is examined. As a result of Levene's test for equality of variances, the Benferroni test, which is one of the post hoc tests, is applied for the dimensions with equal variances. The value of significance is adopted as .05.

In the study, correlation analyses are performed for variables of each of the inventories and the correlations set forth between the variables. The + or - signs of the correlation coefficients are used to set the direction of the correlation. In order to test to what extent the variables in the research model are predictive of each other, multiple regression analysis is performed (Büyüköztürk, 2007).

### Results

The aim of performing this survey was to identify the correlation between decision-making styles of principals and their procrastination tendencies. Findings of this research will provide a source for international literature. Means and correlations between decision styles and procrastination, relations between decision styles with their subdimensions and procrastination, differences in opinions of principals according to the age variable and prediction levels of decision styles on procrastination were investigated under this heading.

*Decision-making styles and procrastination, means, standard deviations and correlations.*

Correlation values, means and standard deviations are displayed in Table 1 to present the correlation between inventories and their sub-dimensions utilized in this study.

**Table 1.**

*Findings for correlation values, means, and standard deviations of decisionmaking styles and procrastination.*

	M	SD	1	2	3	4	5	6
Decision Making	3.24	.51						
Rational	4.48	.62	.633**					
Intuitive	3.38	.81	.621**	.522**				
Dependent	4.04	.74	.598**	.387**	.228**			
Avoidant	1.84	.84	.682**	.097	.058	.321**		
Spontaneous	2.17	.85	.762**	.247**	.252**	.227**	.645**	
Procrastination	1.62	.43	-.020	-.175**	.189**	.255**	.128*	-.061

\*\* P< .01 \* P< .05

Examination of Table 1 reveals that mean of the decisionmaking styles is M=3.24 and mean of the procrastination is M=1.62. Findings show that means for rational decisionmaking are M=3.24; intuitive decision-making M=3.24; and dependent decisionmaking subdimensions of the decision-making styles are high and avoidant decisionmaking M=1.84 and spontaneous decision-making M=2.17 are low. Administrators expressed that they are more cautious when making their decisions rationally, intuitively or dependently. It can be concluded that they avoid spontaneous and avoidant decision styles. In general, administrators are attentive to make more qualified decisions. Low mean value of procrastination scores (M=1.64) indicates that they exhibit less procrastination behavior.

Correlations found to be low or negative between inventories utilized in this study are decision-making styles and procrastination  $r = -0.20$ ; rational decisionmaking and avoidant decisionmaking  $r = 0.97$ ; avoidant decisionmaking and intuitive decisionmaking  $r = 0.58$  and spontaneous decisionmaking  $r = -0.61$ .

***Findings related with age about decision styles and procrastination behaviors of school administrators.***

Opinions of administrators on general decision styles and rational, intuitive, dependent, avoidant and spontaneous decision styles subdimensions along with procrastination are given under this heading.

**Table 2.**

*Results on decision styles of principals and their procrastination tendencies with respect to the age variable.*

Sub-scale	Age	n	M	SD	F	p	Post hoc (Benforonni)	
Decision making	Below years	35	105	2.92	.93	41.904	0.00	1 < 2 1 < 3
	36-50 years	89	3.41	.56				
	50 years +	91	3.45	.56				
	Total	285	3.24	.58				
Rational	Below years	35	105	4.46	.36	2.541	0.08	
	36-50 years	89	4.39	.38				
	50 years +	91	4.59	.42				
	Total	285	4.48	.48				
Intuitive	Below years	35	105	3.36	.66	4.783	0.00	1 < 2
	36-50 years	89	4.02	.70				
	50 years +	91	3.85	.74				
	Total	285	3.83	.74				
Dependent	Below years	35	105	3.98	.98	7.61	0.00	1 < 2 3 < 2
	36-50 years	89	4.28	.70				
	50 years +	91	3.87	.87				
	Total	285	4.04	.72				
Avoidant	Below years	35	105	1.25	.85	63.290	0.00	1 < 2 2 < 3 1 < 3
	36-50 years	89	2.04	.84				
	50 years +	91	2.34	.74				
	Total	285	1.84	.84				
Spontaneous	Below years	35	105	1.45	.95	101.093	0.00	1 < 2 1 < 3
	36-50 years	89	2.50	.70				
	50 years +	91	2.67	.67				
	Total	285	2.17	.77				
Procrastination	Below years	35	105	1.55	.55	2.302	0.10	
	36-50 years	89	1.68	.78				
	50 years +	91	1.65	.65				
	Total	285	1.62	.72				



In order to test whether or not decision styles and procrastination behaviors of administrators differ with respect to the age variable, one-way ANOVA (Analysis of Variance) along with post hoc tests are performed. According to the results, rational decision making, which is one of the decision-making styles and procrastination tendencies do not significantly differ with respect to the age variable. According to the total scores of decisionmaking on the other hand, administrators younger than 35 years of age received lower scores on decisionmaking and their scores are significantly lower than those over 35 years of age. For intuitive decisionmaking, results significantly favored principals younger than 35 years of age compared with the administrators between 36 and 50, for dependent decisionmaking, results significantly favored administrators younger than 35 years of age and older than 50 years of age compared with the administrators aged between 36 and 50. Avoidant decisionmaking results favored younger age groups significantly and for the spontaneous decisionmaking, results favored administrators that were 35 years of age and younger compared with those between 36 and 50 and those over 50 (Table 2).

#### *Predictive relationships between decision-making styles and procrastination*

Multiple regression analysis performed to obtain predictive relationship between decisionmaking styles and procrastination behaviors of administrators.

**Table 3.**

*Results of multiple regression analysis on decision-making styles and procrastination*

Model	Predicted variable: Procrastination							
	Predictive variable	B	ShB	$\beta$	t	p	Binary r	Partial r
Constant		2.203	0.175		12.583	.000		
Rational		-.172	0.044	-0.244	-3.394	.000	-.175	-.195
Intuitive		.240	0.032	0.447	7.408	.000	.189	.374
Dependent		-.195	0.034	-0.330	-5.709	.000	-.225	-.289
Avoidant		.228	0.036	0.439	6.286	.000	.128	.318
Spontaneous		-.165	0.036	-0.321	-4.614	.000	-.061	-.233
R= 0.536		R <sup>2</sup> =0.287						
F(5. 279)=22.476		p=.000						

Results of the analyses on predictive relations of rational, dependent, intuitive, avoidant, and spontaneous decision-making styles and procrastination behavior are given in Table 3. Examination of partial correlations between predictive variables and dependent (predicted) variables revealed that there is a minor negative relation

between rational decisionmaking and procrastination ( $r = -.17$ ), however the correlation is calculated to be  $r = -.19$  when other variables are taken into consideration. There is a minor positive correlation between intuitive decisionmaking and procrastination ( $r = .189$ ). Yet the correlation is calculated to be moderately positive ( $r = .37$ ) when the other two variables are taken into account. The minor negative correlation ( $r = -.225$ ) between dependent decision-making style and procrastination is yet a minor negative correlation ( $r = -.289$ ) including the other four variables in the calculation. The minor positive correlation ( $r = .128$ ) between avoidant decision-making style and procrastination is calculated to be  $r = .318$  when other variables are included in the calculation. The minor negative correlation ( $r = -.061$ ) between spontaneous decision-making style and procrastination is calculated to be minor negative with  $r = -.233$  when other variables are included in the calculation.

Correlation between rational, intuitive, dependent, avoidant, and spontaneous decision-making styles jointly results in a minor but significant correlation with procrastination behaviors of school administrators ( $R = 0.536$ ,  $R^2 = 0.287$ ,  $p < .01$ ). Five mentioned variables jointly account for 29% of the variance in procrastination.

According to the standardized regression coefficient ( $\beta$ ), significance of predictive variables on procrastination behavior is intuitive ( $\beta = 0.447$ ), avoidant ( $\beta = 0.439$ ), dependent ( $\beta = -0.330$ ), spontaneous ( $\beta = -0.321$ ) and rational ( $\beta = -0.244$ ), decisionmaking respectively. Investigation of the significance of regression coefficients with t-test reveals that each variable is a significant predictor of procrastination.

## Discussion

The purpose of this study is to identify the correlation between decision-making styles of administrators and their procrastination tendencies and the relation of decision-making styles with age. According to Steel (2007), procrastination is conceptually linked to the conscientiousness trait, reflecting responsibility (i.e., the diligent fulfillment of objectives). This makes procrastination especially important, because it can provide insight into the relationship of traits to performance and motivation (p. 81). The relationship between decision-making styles of school administrators and procrastination will likewise explain the fact that the characteristics of decision-making will predict the procrastination.

Findings of this study reveal that decision-making styles and its subdimensions are related to procrastination. Decision-making styles are in minor and negative correlation with procrastination. As expected, school administrators who are assiduous in decisionmaking are less likely to procrastinate. Likewise the results of the study performed by Balkis (2007) revealed that there is a negative relation between rational decision-making styles and procrastination behaviors of prospective teachers. There is a positive relation between avoidant decisionmaking style and procrastination. From analysis of the subdimensions of decision-making styles, it is expected that avoidant decision-makers will be more likely to exhibit procrastination behaviors. Findings of both this study and others with similar

agendas reveal parallel results. Ferrari and Pychyl (2012) in their study on academic procrastination and perceived social loafing found that there is a positive relation between the two. Results of this study agree that administrators with avoidant decision-making styles are more likely to procrastinate. Again the result of the negative relationship between the rational decisionmaking and procrastination shows similarity with results of similar studies, which indicate a negative relation between being responsible and procrastination (Dilmaç and Bozgeyikli, 2009; Balkis, 2007; Watson, 2001).

It is found that rational, intuitive, dependent, avoidant, and spontaneous decision-making styles are related with different variables. According to the results of this study, rational and spontaneous decision-making styles are in negative relation with procrastination, whereas dependent, avoidant and intuitive decision-making styles are in positive relation with procrastination. It can be concluded that school administrators with rational or spontaneous decision-making styles tend not to procrastinate. These results correspond with the findings of previous studies in the literature. For example, people with higher motivation and self-esteem are less likely to procrastinate (Klassen and Kuzucu, 2009; Klassen, et al., 2009; Ferrari, 2001), procrastination is negatively related with academic achievement (Balkis, 2011; Balkis and Duru, 2009; Wesley, 1994), procrastination is in minor correlation with stress and stress-related illnesses (Sirois, 2009). Rational, dependent and spontaneous decisionmaking styles of school administrators reduce their procrastination behaviors. School administrators with avoidant and intuitive decisionmaking styles on the other hand, exhibit more procrastination.

Examining decision-making styles of school administrators and their procrastination behaviors with respect to age, it is found that rational decision-making style and procrastination variables do not differ significantly. School administrators between 36 and 50 years of age are found to exhibit more intuitive decision-making styles compared to school administrators aged 35 and younger. This finding can be explained by assuming that school administrators' intuitions get better as they grow older and more experienced. Similarly, school administrators between 36 and 50 years of age are found to be more dependent in decision making. As they get older, school administrators tend to be more avoidant and spontaneous decision-makers. We can conclude from these results that school administrators are more attentive and selective in their decision-making styles as they possess more experience with age. Thence, procrastination decreases with age. According to Steel, 2007; Gröpel and Steel (2008), age is effective in procrastination. There is a negative correlation between age and procrastination. Eerde (2003) states that age creates a resistance against procrastination and even prevails it.

Examining the results of multiple regression analyses performed to reveal if there is a predictive relationship between subdimensions of decision-making styles of school administrators and procrastination, it can be concluded that rational, intuitive, dependent, avoidant, and spontaneous decision-making styles and procrastination are correlated significantly. Rational, dependent and spontaneous decision-making styles are negative predictors and intuitive and avoidant decision-making styles are positive predictors of procrastination. Examining the styles as a whole, they explain

29% of the variance in procrastination. This shows that procrastination behaviors of school administrators are affected by their decision styles. More attentive management of the decision-making process lowers the procrastination of school administrators. Gröpel and Steel (2008) concluded that there is a negative relation between goal setting, interest enhancement, and procrastination. It can be concluded that there will be less procrastination when school administrators focus on the objectives of the school and reserve their energy for school. For this reason, high motivation of school administrators can be viewed as preclusive for procrastination. Spada, Hiou and Nikcevic (2006) and Owens and Newbegin (1997) also found that procrastination is positively correlated with increasing depression and anxiety.

### Conclusion

The result favoring older school administrators in decision-making styles enables us to conclude that the best scenario would be if school principals were chosen from experienced ones, if there could be a positive school climate, and a healthy surrounding. Also rational decisions are necessary for an effective management process in schools. Since decision-making styles of school administrators are related with their procrastination behaviors, they require a school atmosphere where they can make more qualified decisions. The result of this study can be considered important since school administrators self-evaluated themselves and the result showed a relation between decisionmaking styles of school administrators and procrastination. Policy makers in education can be expected to be attentive on qualifications of school administrators while selecting them. As the results of the study affirmed, there are less procrastination behaviors with increasing age proving that school administrators achieve more maturity with time. Thence, a criterion can be set for selecting school administrators who have worked in educational institutions for a while. Just like Eerde (2003) stated, procrastination is lowered with age. An increase in the quality of cognitive skills and consciousness helps to reduce procrastination with age. For this reason, encouraging school administrators to attend administrative training can be considered a fair requirement.

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### Okul Yöneticilerinin Karar Verme Stilllerinin Genel Erteleme Eğilimi Davranışlarına Etkisi

#### Atıf:

- Uğurlu, C.T. (2013). Effects of decision making styles of school administrators on general procrastination behaviors. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 51, 253-272.

#### (Özet)

##### Problem Durumu

Yönetim sistemlerinin temelinde karar süreci vardır. İnsan davranışlarının sistemli bir yapı içerisinde yönetilmesinin kaynağı olarak *karar verme* her zaman başvurulması



gereken bir süreçtir. Örgütlerin varlıklarının sürekliliği amaç, işbirliği, eşgüdüm gibi örgüt değişkenlerinin iyi yönetilmesine bağlıdır.

Kararın etkili bir şekilde alınması yöneticiler için önemlidir ve onların iş yaşamlarının önemli bir kısmını doldurmaktadır. Teknolojik yenilikler, küreselleşme, yerelleşme gereksiniminin getirdikleri, sosyal sorunlar yöneticilerin karar verme davranışlarını etkileyebilmektedir. Karar verme davranışlarına ilişkin tutum ve davranışlar, işlerin nasıl, ne kadar sürede, nerede, kiminle yapılabileceğinin belirleyicisi olabilmektedir. Karar verme sürecine ilişkin yöneticilerin yaklaşımları, karar verirken gösterdikleri karar stilleri, sonuç olarak farklı yönetsel durumların oluşmasına neden olabilirken, kendi karar stilleri yine kendi davranış biçimlerinin oluşmasına da neden olmaktadır. Bunlardan bir tanesi de erteleme eğilimi olabilir.

Erteleme davranışının bazı nedenlerinin, bireyin zamanı etkili bir şekilde yönetebilme, önceliklerini belirleyebilme, verimli ve etkili çalışabilme alışkanlıklarının olmaması olduğu görülmektedir. Diğer nedenleri ise, bireyin kişilik özellikleri yanında kendine ve çevresine yönelik olarak yaptığı hatalı bilişsel yüklemelerdir. Bu noktada erteleme davranışını tetikleyen nedenlerin daha çok bireyin kendini yönetme becerileri, kişiliği ve bilişsel süreçlerle açıklanmasıdır. Bu durum kişinin karar verme stilini yansıtan bir sonuç yaratır ki, karar verme stili ve erteleme davranışları ilişkisi kaçınılmaz olur.

*Araştırmanın Amacı:* Bu çalışmada okul yöneticilerinin karar verme stillerinin ve erteleme eğilimlerinin yaş değişkenine göre düzeyleri, karar verme stilleri ile erteleme davranışları arasındaki ilişkinin betimlenmesi amaçlanmaktadır.

#### *Araştırmanın Yöntemi*

Araştırmanın çalışma grubunu Sivas Merkez İlçe ile bağlı belde ve köylerinde bulunan ilköğretim okulları ve liselerde görev yapan okul müdürleri ve müdür yardımcılarıdır. İlköğretim okulları ve liselerde 2011-2012 eğitim öğretim yılında görev yapan toplam okul müdürü ve müdür yardımcısı sayısı 397'dir. Araştırmada Genel Erteleme Ölçeği, (GEÖ) ve Karar Verme Stilleri Ölçeği, (KVSÖ) kullanılmıştır. Araştırma bulgularının analizinde SPSS istatistik paket programından yararlanılmıştır. Araştırmada yöneticilerin karar verme stillerinin ile erteleme eğilimleri ve alt boyutlarına ilişkin görüşlerini saptamak için aritmetik ortalamaya bakılmıştır. Karar verme stilleri ölçeğinden alınabilecek puanlar 25-100 puan aralığındadır. Genel erteleme eğilimi ölçeğinden alınabilecek puanlar ise 15-75 puan aralığındadır.

#### *Araştırmanın Bulgular*

Araştırma bulgularına göre, karar verme stilleri ile erteleme eğilimi ilişkisinin  $r = -0,20$ ; rasyonel karar ile kaçınan karar ilişkisinin  $r = 0,97$ ; kaçınan karar ile sezgisel karar ilişkisinin  $r = 0,58$  ve anlık karar ile erteleme ilişkisinin  $r = -0,61$  düşük ya da negatif yönlü olduğu bulgusuna ulaşılmıştır.

Yaş değişkenine göre, karar verme stillerinden rasyonel boyut ile erteleme eğilimi yaş değişkenine göre anlamlı bir farklılık göstermemektedir. Karar verme stilleri ile okul yöneticilerinin erteleme eğilimleri arasındaki yordayıcılık ilişkisinde; Karar

verme stillerinden rasyonel, sezgisel, bağımlı, kaçınan ve anlık karar verme stilleri birlikte, okul yöneticilerinin erteleme eğilimleri ile düşük düzeyde ve anlamlı bir ilişki vermektedir. Regrasyon katsayılarının anlamlılığına ilişkin t-testi sonuçları incelendiğinde ise, bütün değişkenlerin erteleme eğilimi üzerinde anlamlı bir yordayıcı olduğu görülmektedir.

*Araştırmanın Sonuçları ve Önerileri:*

Araştırmanın sonuçları karar verme stilleri ve alt boyutlarının erteleme eğilimi arasında bir ilişki olduğunu ortaya koymaktadır. Karar verme stilleri genel olarak erteleme eğilimi ile düşük ve negatif bir ilişki içerisindedir.

Araştırma sonuçlarına göre, rasyonel karar ve anlık karar ile erteleme ilişkisinin negatif olduğu; bağımlı, kaçınan ve sezgisel karar ile pozitif ilişkili olduğu sonuçlarına ulaşılmıştır. Rasyonel ve anlık karar veren okul yöneticilerinin daha az erteledikleri ya da erteleme davranışlarında bulunmadıkları söylenilebilir.

Okul yöneticilerinin karar verme stilleri alt boyutları ile erteleme eğilimlerinin yaş değişkenine göre anlamlı bir şekilde farklılaşma göstermediği görülmüştür. Okul yöneticilerinin karar verme stilleri alt boyutlarının erteleme eğilimlerini yordayıp yordamadığına ilişkin analizi sonuçları incelendiğinde, rasyonel, sezgisel, bağımlı, kaçınan ve anlık karar verme stilleri ile erteleme eğilimleri arasında anlamlı bir ilişkinin olduğu görülmektedir. Rasyonel, bağımlı ve anlık karar verme stillerinin erteleme eğilimi ile negatif yönlü bir yordama ilişkisinin olduğu, sezgisel ve kaçınan karar verme stillerinin erteleme eğilimi ile pozitif ilişkili olduğu görülmüştür. Bütün olarak incelendiğinde ise, karar verme stilleri alt boyutları, erteleme eğilimlerinin % 29'unu açıklamaktadır.

Okul yöneticilerinin karar verme stillerinin daha yaşlı okul yöneticileri lehine anlamlı farklılaşması, okulların yönetiminde belli bir süre çalışmış kişilerin yönetici olarak görev almasının önemini ortaya koymaktadır. Okullar için olumlu iklim, sağlıklı bir okul çevresi, rasyonel karar verme biçimleri okulların yönetim sürecinin etkili ve verimli işlemesi için gereklidir. Okul yöneticilerinin karar verme stilleri erteleme eğilimleri ile ilişkili olduğundan, okul yöneticilerinin nitelikli karar verme tercihlerini kullanacakları ortamlara gereksinim duymaktadırlar. Karar verme stilleri ile erteleme eğilimleri arasındaki ilişkiyi test eden bu çalışmada, karar verme stillerinin farklı boyutlarının erteleme eğilimi ile olan ilişkisi, okul yöneticilerinin kendilerini değerlendirmeleri açısından önemli bir sonuç olarak kabul edilebilir. Okulların yönetiminden sorunlu üst sistemlerin ise okullarda görev yapacak olan yöneticilerin seçiminde niteliğe önem vermeleri beklenebilir.

*Anahtar sözcükler:* Karar verme, karar verme stilleri, erteleme, genel erteleme eğilimi

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