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## **The Use of Humor by Primary School Administrators and Its Organizational Effect on Schools**

**Ahmet Şahin<sup>i</sup>**

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### **Abstract**

The purpose of this study is to determine the aim of primary school administrators' use of humor and the organizational effects of their use of humor according to the opinions of the school administrators and teachers. The study was modelled as a multiple holistic case study. The study group consists of 9 administrators and 12 teachers working in the primary schools in the province of Antalya in the year of 2015. For data collection, the researcher developed and used a semi-structured data collection form. The data obtained were subjected to both descriptive analysis and content analysis. As a result, both the administrators and the teachers reported that the constructive use of humor of the primary school administrators was superior to the destructive ones. The results also revealed that the positive effects of the humor used by administrators were higher than the negative effects on school and subordinates.

**Keywords:** *Humor, use of humor, organizational effects of humor, primary schools, school administrators.*

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## **Introduction**

Humor, which can lead us to experience both positive as well as negative emotions, is an important part of our everyday life as well as our business environment. While humor at times can create a positive environment with both sides caught up in laughter, at other times it can also be destructive where one is having fun and the other is unhappy. In other words, humor can play a constructive or destructive role between parties and can have both positive and negative consequences for organizations (Cann, Watson and Bridgewater, 2014, p.309; Lyttle, 2007, p.239; Malone, 1980, p.359; Meyer, 2000, 329). Accordingly, it is expected that the destructive effects decrease and the constructive effects increase in an organizational environment where humor is used effectively. It is understood that effective humor use has significant effects on many factors, such as organizational performance, organizational effectiveness and organizational productivity. In this regard, it was deemed necessary to focus on the use of humor in organizations and the determination of its effects on the organization as a result.

The use of humor in organizations is not just a joke symbolically spoken at the beginning of meetings or office comics that only a few employees can understand. On the contrary, humor is both a dynamic communicative behavior that connects people together as well as an effective administrative tool. Humor is a strategy that can be learned and developed that everyone can use to create a positive working environment (Crawford, 1994, p.28). Humor helps to increase morale, productivity, motivation and creativity within organizations, as well as to create a more positive organizational culture (Hoffman, 2007, p.1). Cann, Watson and Bridgewater (2014, p.309, 317) state that positive humor styles among employees, which are supported by their administrators, need to be associated with high job satisfaction and high organizational commitment. In short, in organizations where a positive atmosphere of humor is dominant, job satisfaction and organizational commitment will be higher; if the opposite holds true, job satisfaction and loyalty will decrease.

It is stated that humor has an important role in facilitating communication and improving the atmosphere in organizations. It is also mentioned that administrators who use humor and enjoy humor can strengthen their relationships in business life as perceived by their subordinates. It is expected that the effect that emerges when negative humor is used may have the opposite effect on a number of leadership outcomes (Decker and Rotondo, 2001, p.459).

The use of humor in organizations is one of the fundamental variables affecting the organization's culture and atmosphere and often evokes positive and constructive feelings. Although this is the general perception of humor, humor can also have destructive effects. However, the conscious and effective use of humor can turn even destructive outcomes into constructive situations. Therefore, in terms of organizational effectiveness and efficiency, the use of humor in organizations is remarkable. As a matter of fact,

Vacharkulksemsuk, Sekerka and Fredrickson (2011, p.105) indicate that positive emotions will create a positive emotional atmosphere in organizations, and such an atmosphere will lead to organizational growth and increase in performance.

It is emphasized that humor is a tool that can be used to design and plan the culture of an organization in a business environment while also mentioning that it is a central factor in organizational culture (Crawford, 1994, p.15; Leslie-Bole, 1985, p.168). When used in a supportive and positive manner, humor can establish a business environment where employees in the workplace enjoy their work, team spirit is nourished, and unity is valued offering rich content for creative humor. All these elements contribute to the development of the organization's culture in which humor is considered not a destructive part but rather a constructive part of workplace interaction (Holmes, 2007, p.534).

Organizational humor includes amusing and ridiculous communications that produce positive emotions and cognizance in individuals and organizations (Romero and Cruthirds, 2006, p. 59). Humor's psychological, cognitive, and emotional responses and its impact on the communication process indicate that humorous working environments can shape the atmosphere as well as informal social relationships (Decker and Rotonda, 2001, p.251). Therefore, it can be said that humor that awakens positive feelings can also have a positive effect on the organizational atmosphere.

It is suggested that administrative effectiveness increased through using humor in establishing positive communication to gain an optimistic perspective in the work environment, creating a positive atmosphere in the workplace, playing a role in facilitating and developing social relationships, providing a different and more correct perspective on solving problems by providing the ability to break ineffective thinking styles and cycles of inferior thinking, or in other words bringing about employees' positive organizational output by being a tool to spearhead creative problem solving and innovation in the workplace (Güler and Güler, 2010, p.207; Lyttle, 2007, p.240; Meyer, 2000, pp.328-329). However, when considering the role of humor in organizations, if all humor is not considered to be positive and constructive, it is necessary to take into account both the positive and negative effects of humor. Nevertheless, many organizations have ignored that in studies of organizational atmosphere, it has been shown that humor may be an important part of organizational atmosphere (Cann, Watson and Bridgewater, 2014, p. 309). In this respect, it can be said that humor needs to be analyzed in an organizational context and comprehensive explanations put forth.

Throughout the school day, teachers are busy with a series of unplanned activities other than teaching, such as making photocopies, from preparing course material to communicating with parents, following legislative changes and writing reports. Oftentimes, these things cause unpleasant negative emotions such as worry, anxiety, burnout and stress in teachers (Hurren, 2008, p.83). It is stated that a

positive organizational culture and atmosphere are very effective in removing all of these negative emotions (Çelik, 2000, p.v; Doğan, 2013, p.101, 163-164; George and Jones, 2012, p.28; Türk, 2007, p.34; Vural, 1998, p.71). With regard to the topic, Hurren (2006, p.383) suggests that humorous environments and humorous environments supported or created by principals can be used as an effective means of increasing teachers' job satisfaction. George and Jones (2012, p.73) see humor as a tool that can be used to give employees a more positive mood. Aslan (2006, p.1) states that individuals tend to have positive emotions during moments of positive thinking and negative emotions during moments of negative thinking. In fact, humor can create an atmosphere that allows individuals to feel better about the unit they work with, even though they may not be satisfied with their leader (Avolio, Howell and Sosik, 1999, p.225). In this case, it can be stated that humor is important in terms of providing a positive organizational atmosphere. Based on the positive and negative effects of humor on organizations, it can be said that research is needed to investigate the use of humor by school administrators and the organizational effects that arise as a result.

In conclusion, this study is important in the creation of a constructive organizational atmosphere in schools, so that it can make a positive impact on organizational output, such as employee motivation, job satisfaction and performance, organizational health and organizational effectiveness. The purpose of research in this direction is to determine the purpose primary school administrators use humor, and the organizational effects their humor has on the school. In line with this general objective, answers to the following questions were sought. According to the views of primary school administrators and teachers:

1. What are school administrators' intentions in using humor?
2. What organizational effects on the school does the humor that school administrators use in their work environment have?

## **Method**

### **Research Model**

Aiming to determine the organizational effect of primary school administrators' use of humor on the school according to the views of administrators and teachers, this study utilizes one of the qualitative research methods, the holistic multiple-case study design (Fraenkel, Wallen and Hyun, 2011, p.435; Güler, Halıcıoğlu and Taşğın, 2013, p.39; Yıldırım and Şimşek, 2011, p.77, 290).

### **Working Group**

The working group consisted of nine administrators and twelve teachers working in ten different primary schools in the province of Antalya in the year of 2015. When the study group was determined, the maximum variation sampling method from among the purposeful sampling methods was used taking into

consideration variables such as task, gender and branch (Büyüköztürk, Çakmak, Akgün and Demirel, 2010, p.89). Four of the school administrators participating in the qualitative study were principals, and five of them were assistant principals. Of the administrators, seven participants were men and two were females. One administrator had graduated with an associate degree, one from a three-year education institute, five with a bachelor's and two with master's degrees. The administrators had worked as administrators for between two and twenty-seven years, and it seemed that the total working time for them was between 8.5 and 34 years. Half of the twelve teachers who participated in the study were female participants. When the distribution of teachers according to their branches was examined, it was observed that there were four classroom teachers, one guidance counselor and seven branch teachers. The teachers' working periods ranged from five to thirty years. Of the teachers, one had an associate degree, ten a bachelor's degree and one a master's degree.

### **Data Collection Tools and Collection of Data**

Interviewing and observation techniques were used together in the data collection process. In the interviews, data was gathered through semi-structured interview forms consisting of open-ended questions. In the first part of the interview form, questions were asked to determine the demographic characteristics of the participants. In the second part, two open-ended questions were used to determine the depth of the administrators' use of humor and the effects of their humor on the organization. Voice recording was used to collect interview data.

An observation form developed by the researcher was used to collect the observation data. In the observations, the environment, the people and their characteristics found in the surrounding environment, the events that occurred in the observations, the body language and the sound levels of the people, the emotions that were felt (For example, because the person using humor is angry, it is allowed. Everyone laughs. I see the person at the center of the humor crying.), the humorous atmosphere felt, and the style of humor were taken note of.

In the interviews, the data were collected through a semi-structured interview form consisting of open-ended questions. At the same time, the researcher in the interviews recorded attention-grabbing environmental factors and recorded the participants' body language and voice tones as interview notes and used them in evaluations. In the first part of the interview form, questions were asked to determine the demographic characteristics of the participants. In the second part, two open-ended questions were used to determine the depth of the administrators' use of humor and the effects of their humor on the organization. At the same time, detailed questionnaires were prepared for each question so that the participants were able to evaluate every aspect of the research topic. Questions were asked to each individual participant during the interviews, and they were asked to express their opinions. When expressing their opinions, the researcher

made note of the details mentioned in the interviews and asked detailed questions about issues not covered in the probes asking the participants to express their opinions on the related issues. Within this framework, participants were asked, *“(1) For what purpose do your school administrators use humor? Can you explain? (2) What are the organizational effects the humor your school administrators use in their work environment have on the functioning of the school, in particular with regards to teachers?”* Administrators involved in the study were asked to evaluate all the above questions according to their own viewpoint.

Within the scope of the study, the nature of the qualitative research method required only information gathered from volunteer teachers and administrators. In the study, face-to-face individual interviews with participants and observations throughout the school were made. Due to the fact that the research also carried the characteristics of a case study, the interviews were conducted with administrators and teachers' in schools in their own natural work environments. Voice recording was used to collect interview data. Teacher interviews lasted an average of 38 minutes, and administrator interviews lasted an average of 29 minutes.

### **Analysis of Data**

Both the descriptive analysis and the content analysis were performed when analyzing the data, and the NVivo program was used (Yıldırım and Şimşek, 2011, pp.224-229). Later, analytical generalization was carried out on the results of the research (Güler, Halıcıoğlu and Taşgım, 2013, p.344).

With regard to the validity and reliability of the data, a course of action was prepared by the expert in the field of educational management and supervision, along with the researcher, on the conceptual framework of the research and on the basis of the research questions, the criteria and the thematic framework for harmonization and coherence in the analysis of the data. In terms of cohesion and adaptation in the analysis, an administrator's and a teacher's data were analyzed together according to the determined course of action. The analyses that the researcher and field specialist had done independently of each other increased the credibility of the research because of the fact that the coding is in great agreement. Later research findings were shared with two administrators and two teacher participants, and they were asked to read and confirm whether the findings obtained correctly reflected their views (Güler, Halıcıoğlu and Taşgım, 2013, p.360). The experiences of the participants in the findings were found to correlate with the results of the research. This situation was accepted as an internal validity factor. The inclusion of the opinions of school administrators and teachers from different educational areas with different demographic characteristics and their consistency with each other increases the external applicability of the research. It also improves the reliability of studying the research process clearly, archiving raw data and, if it is deemed necessary, to be open to testing düzeyini (Yıldırım and Şimşek, 2011, p.256-274).

In order to keep the participant information confidential from the investigator, code names were used, such as A1, A2, etc. for administrator participants and T1, T2, etc. for teacher participants.

## Findings

In this section, primarily the purpose for the use of humor by primary school administrators is given, and then the organizational effects on the school resulting from the humor are presented.

### School Administrators' Purpose for Using Humor

The opinions of administrators and teachers about the purposes for humor of primary school administrators in relations with administrators are presented in Table 1 and Table 2.

**Table 1:** Purpose for Using Humor According to the Opinions of the Administrators

Opinions	A1	A2	A3	A4	A5	A6	A7	A8	A9
<b>Constructive Use</b>									
To manage conflict	✓	✓	✓	✓	✓	✓	✓	✓	✓
To strengthen the relationship and communication between people	✓	✓	✓	✓	✓	✓		✓	✓
To forward messages or instructions through humorous to prevent offense	✓	✓	✓	✓		✓	✓	✓	
To create a cheerful, happy and sincere environment, to have a good time	✓		✓	✓	✓	✓	✓		✓
To empower personal emotion in a positive way	✓	✓	✓	✓	✓		✓		
To criticize	✓			✓		✓	✓		✓
To increase the morale and motivation of colleagues as team members	✓	✓	✓				✓	✓	
To entertain, to make them happy and peaceful		✓	✓	✓					
To change the point of view through humor							✓	✓	
To be able to present different perspectives (to develop different ideas, to look at events from a different perspective)			✓				✓		
To prevent distraction			✓						
To change the negative administrator perception and create a particular image								✓	
To encourage creative thinking			✓						
<b>Disruptive Use</b>									
To ridicule (to criticize someone)							✓		

The use of humor most frequently expressed by the administrators involved in the study regards the use of humor in conflict. In relation to the subject, A3 expressed his opinion that the purpose of humor is to soften the environment or situation and that s/he tries to reduce the tension by drawing their attention to something else by saying, *"I am trying to use humor to distance and relax the staff in an environment where there is a high level of conflict during a stressful and tense situation."* As for A5, s/he expressed his opinion regarding the use of humor during conflict and tension. *"You use humor. Of course. Because as I said, humor brings about positivity when it is balanced. It creates a positive environment. Humor is also one of the most important factors in reducing the tension when trying to create a positive atmosphere. Humor is one*

*of the most important tools used for this purpose. Little jokes or tiny jests may be very effective... usually to soften the environment.”* Another reason for using humor in conflict is to try to reduce the tensions between people. In this context, A3 says, *“For instance, if the environment appears to be tense when I am explaining something, I start to use humor when I begin to feel that there is a problem arising or something to be misunderstood by the other party.”*

Another purpose of the administrators’ use of humor was to strengthen interpersonal relationships and communication. Administrators touched on the fact that they try to use humor as a means of communicating and chatting about this situation. They also point out that they use it to eradicate boring environments, create positive energy in the environment, and work to develop social interaction and communication. In this regards, A3 expresses his ideas as follows. *“Another thing is to improve the social interactions within the group. I act jokingly or use humor in a group setting to create the atmosphere, which would bring the group to socialize or come closer together, or to bring about a closeness eradicating frigid emotions and formalities in between. I use it to set up an environment that allows individuals to build strong relationships that bring them side-by-side. I use it to make people laugh, to create a more close-knit environment, to get away from fatigue or from formalities.”* As for A2, s/he emphasizes the importance of humor when it comes to communication by saying, *“I use it to establish positive relations with people. I am trying to develop in-house social interaction using different types of humor ... So, of course, I use humor to develop interaction in the group. To facilitate relationships in the school, to create a positive environment. I do these joke and wisecracks in that moment to create positive energy.”*

Another use of humor is the use of humor by people to convey messages or instructions without causing offense. In this regard, A1’s views were as follows. *“When you give the message that I want to give humorously, the effect on the opposite person is great; it is permanent; and it is farther away from being offensive. Think about it, the teacher was late. You call him/her to the principal’s office instead of rebuking and reproaching him/her by asked him/her why s/he was late, you try to figure out why s/he was late by saying something like ‘The child must not have slept; you must have been rocking the cradle.’ This creates comfort in this friend and tells candidly why s/he was late.”*

Administrators also talked about the use of humor to create a cheerful, happy and sincere environment and to have a good time. When examined in depth, administrators seemed to use humor to refresh, to relieve tiredness and stress, to allow others to calm down and to cheer them up. One of the administrators, A1, said, *“I usually use humor to make people feel relaxed, to allow people to overtake the tension, and to create a cheerful, loving and friendly atmosphere. For example, I see my teacher friend in school having low morale. I invite him/her to my room and sit with him/her. I definitely comfort him/her by using humor such as did you see a bad dream or something.”* A3 expresses that s/he also uses humor for this

purpose, saying, *“I use humor to make the other staff happy, make them laugh, create a more friendly environment, get rid of that tiredness or whatever else of being formal.”*

Other constructive purposes for using humor by administrators were to strengthen and criticize employees’ personal emotions in a positive way, to increase morale and motivation in team members, to make them happy and at peace, to be able to change and persuade their point of view through humor, to offer different perspectives, to change the negative perception of administrators, and to encourage creative thinking.

Another use of humor by the administrators was the use of humor for satire, which is a destructive type. On this subject, A7 mentions that humor can be used to ridicule by saying, *“We can say that sometimes ridiculing an event, and ridicule occupies a great deal of our literature, goes hand-in-hand with humor, even if it is not exactly the same, it’s somewhat close.”*

**Table 2:** *The Intentions of Humor Usage of Administrators according to Teachers*

Opinions	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
<b>Constructive Use</b>												
To have a good time, to relieve stress, to relax, to improve morale	✓	✓				✓	✓				✓	✓
To manage conflicts				✓	✓			✓		✓	✓	✓
To motivate employees		✓				✓						✓
In order to draw attention to deficiencies and faults (in a critical and witty way)		✓				✓						✓
To improve relationships between people and their social relationships									✓	✓		✓
To support us and guide us in dealing with our problems		✓										✓
To rid us of our tiredness	✓	✓										
To develop different perspectives						✓						
To make the other party proud												✓
To win over a person												✓
To make matters permanent in the mind						✓						
To expound, to explain								✓				
To tell of the work that needs to be done												✓
<b>Disruptive Use</b>												
To criticize (destructive)						✓	✓					
To warn and intimidate			✓							✓		
To gather attention at meetings (in a sarcastic manner)										✓		
To express our shortcomings and mistakes (destructively)											✓	
To transfer administrative instructions to employees sarcastically			✓									

The most commonly expressed use of humor by teachers participating in the study was to have a good time, to relieve stress, to relax, and to improve morale. In this regard, it was seen that the teachers emphasized laughing, cheering up, improving morale, being happy, relaxing, relieving stress and creating a positive environment. On the subject, T2 said, *“So, they call for us when they see our morale is down and that we are sad and tired. S/he joke with us, hangs out, tells jokes, makes us laugh. S/he tries to motivate us.”* As for T12, s/he expresses his/her thoughts by saying, *“So I’ve seen jokes that cheer up the group and fills the person at the center of the joke with pride, and even makes him/her laugh. It is meant to make people happy.”*

Another use of humor seems to be related to the use of humor in conflict. Teachers emphasize that administrators use humor in conflict to reduce the tension in conflicts, soften the environment and resolve the conflict. On this topic, the views of one of the teachers, T8, are as follows: *“They can use it to soften the environment.”* T10 says, *“To slow down the environment, to calm it down. If there is tension in the environment and if that person is not in that particular situation, I think humor is being done to comfort the environment. In other words, the environment is relaxed; I think that humor is used to relax the environment. You know how it’s as if their job is to manage and direct the environment because they’re the school administrator. Maybe they think in that context and use it as a means of humor for that purpose.”*

Other constructive opinions expressed by teachers about the administrators’ use of humor include motivating their employees, attracting attention to deficiencies and mistakes through humor, improving interpersonal relationships, improving social relations, helping to cope with problems, relieving tiredness, making sure things are kept in mind, making people proud and winning them over, giving orders and instructions without offending through humor, and allowing different perspectives to be developed.

O6 says the following regarding using humor to motivate teachers. *“I swear the humor that administrators use is often used to pump us up at work when they see a lack in motivation.”* T12 conveys his views on this subject as follows. *“Sometimes in schools, things have to be done in teams. And when choosing that team, if it was grunt work, only through their portraying it as a ‘super women’s group’ were they able to pull it off, and we’ve always made jokes such as for this reason, we’ve only given this work to our female friends and women, and in this way I think they have ended up giving a bit more support through humor. In other words, s/he understands the joke; s/he also is able to jokes. As a result, the team working with him/her is also encouraged a bit.”*

Some teachers state that the administrators criticize them in a constructive way through humor regarding deficiencies and mistakes, wisely pointing out their own deficiencies and mistakes. In this respect, T6 states, *“So what you are doing wrong or what you should not do is not presented through rough language, but rather by joking and trying present it in a better way without creating offense.”* As for T2, *“If*

*I work in my school, I have to prepare my students and my tasks, I do not constantly do it in my documents, I am a person who makes mistakes. Of course, the administrator across from me makes a joke. S/he criticizes me without offending. Of course, this will happen, and I think it's a positive action. So, why didn't you do it? Why doesn't it say none? I am both laughing and grieving as a result of the well-placed humor. I will try not to do it again."*

As for developing relationships between people, T10 says, *"Maybe things are done to ensure the environment warms up."* As for T12, s/he talked about the humans using humor to improve and facilitate social relations by saying, *"Besides, it's one of the purposes of using humor. As far as I understand, it's to develop social relations. Sometimes, it makes social relations easier."*

Other uses of humor that teachers referred to were to criticize, warn and intimidate destructively, to attract attention to meetings sarcastically, to speak of deficiencies and mistakes destructively, and to convey to employees the instructions from the administration with a sarcastic attitude. Some of the teachers said the following.

*"She uses humor as a means of criticism. But while s/he uses it, s/he creates destructive negative emotions in the other party, and you just begin to get angry."* (T7)

*"At meetings, there may be sarcasm to garner attention. It may be through words spoken."* (T10)

*"I do not even want to say hello when I go to that school (to the new school). They don't attract but rather repel, and I'd say that the humor they use is constantly sarcastic. It's like putting down or humiliation. That's what we call it. Whether you want to or not, if you are constantly being hanged or cut, you end up distancing yourself or disliking the school."* (T3)

### **The Organizational Impact of School Administrators' Humor in the Work Environment**

The views of the administrators and teachers on the effect of the humor used by administrators on the school are gathered under two headings as constructive and destructive effects and presented in Table 3 and Table 4.

**Table 3:** *The Organizational Effects on Schools of Humor from the Perspective of the Administrators*

<b>Opinions</b>	A1	A2	A3	A4	A5	A6	A7	A8	A9
<b>Constructive Influences</b>									
It provides a positive working environment.	✓	✓	✓	✓	✓			✓	✓
It motivates teachers and enhances their performance.		✓	✓	✓			✓		
It improves relationships and communication between people and facilitates cooperation.		✓		✓	✓			✓	
Employees are happier, cheerful.	✓				✓	✓	✓		

It has a positive effect.	✓	✓			✓	✓
It breaks any teacher resistance of not doing any work and makes you work fast, healthily and self-sacrificially.		✓	✓	✓		
It creates feelings of comfort, peace, and safety.			✓	✓		✓
It softens the environment.	✓	✓			✓	
It increases employee loyalty and organizational commitment.	✓					✓
It establishes empathy and brings superiors and subordinates closer together.	✓					✓
It increases productivity and effectiveness.				✓		
<b>Disruptive Effects</b>						
It causes the work to be neglected, slowed down, slacked off, and relaxed.					✓	✓

According to Table 3, administrators believed that their own humor provides a positive working environment in their schools. In this context, A3 points out that humor provides a positive work environment for the school by saying, *“I believe that I am happy and that being in a positive atmosphere allows for constantly gain for the school organization, and I am doing everything I can for it to develop. Or, do whatever it takes for it to be like that. In fact, humor provides a positive working environment, and it provides an atmosphere of work.”*

At the same time, it was also mentioned that the humor that administrators use motivates teachers, increasing their job satisfaction and performance. In this regard, A3 and A4 both say, *“Now, it improves the performance of the staff at the top, teachers, and the other staff. This also means that the performance of the school also increases. Teacher motivation is also very important. Because, it’s the teachers who work in school. The more they are ready, the more their performance improves in such a school, and this situation is reflected in a positive way for people and our country. Whenever humor is absolutely not destructive and does not hurt human dignity, it always motivates people in a positive way. The result is always positive. It is a situation that is favorable to all.”* (A3) *“The motivation of teachers improves their performance. Absolutely. I think if we talk about from one to ten, we can say six to seven. It affects six to seven. Because humor brings people closer together.”* (A4)

Other constructive effects of the humor used by administrators are that they enable the teachers to feel comfortable, peaceful and safe, because it can improve the relations and communication between the people, facilitate their cooperation, make the employees happy and cheerful, break off the teachers’ resistance against working, allow work to be fast, healthy and devoted, allow teachers to feel comfortable, at peace and secure, soften the environment, improve employee loyalty, increase organizational commitment, allow superiors and subordinates to become closer, and increase organizational productivity and effectiveness. Some administrators’ views on the constructive effects on the school of the humor used by administrators are as follows.

“People become more sincere towards each other.” (A2)

“Because humor brings people closer together. Teachers also like that. That is why teachers now have to open themselves up to using such humor. “(A4)

“Humorous language strengthens communication between people; it strengthens their ties ... They feel closer to you and they becomes more open to communication and cooperation. Humor actually facilitates communication and cooperation; it is used as a facilitator ... They see that warmth, sincerity, and emotion below the skin, and they feel close and safe.” (A8)

“At the same time, they feel your support through the humor you use when they see you, and they become committed and loyal to you. Because they see you as one of them.” (A1)

The devastating effects of the humor that the administrators use are thought to have caused the work to be put off, slow down, slack off and relax. In this regard, A6 says, *“There is no trouble caused by the humor used with primary school teachers. Maybe it’s because I’m a primary school teacher. There’s no humor there. But, I see and feel like you’re getting sidetracked. I do not know why? A relaxation becomes a relaxation in the teacher in secondary school. So, when I get approach work with humor, I begin to feel like the job will get done even if we don’t work.”*

**Table 4:** *The Organizational Effects on Schools of Administrators’ Humor from the Perspective of the Teachers*

Opinions	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
<b>Constructive Influences</b>												
It motivates employees and increases our performance.	✓	✓				✓		✓	✓	✓		✓
It promotes rapport and sincerity.	✓		✓							✓	✓	
It comforts the employees.	✓		✓				✓			✓		
It softens the environment.							✓			✓		✓
It makes employees happy.	✓										✓	
It improves the communication and relationships between people.	✓		✓								✓	
It breaks off resistance to not doing work and turns desires into requests.					✓							✓
It improves educational success.		✓										
It provides unity			✓									
It has positive effects.								✓				
<b>Destructive Effects</b>												
It lowers my motivation, makes me unhappy, creates a negative environment, and creates destructive feelings.			✓				✓					
It offends employees and makes them upset.							✓			✓		
It causes the employees to be embarrassed and causes them to withdraw from the administrators.										✓		

The most voiced view of teachers about the influence on the school of humor by administrators is that the administrator's humor motivates the employees and increases teacher performance. In this regard, T8 says regarding the effect of humor in terms of motivation in his work, *"Once in a while, I think it is very effective in motivation."* As for T10, s/he refers to the constructive effect of humor on motivation and performance by saying, *"Those in the hallways and those in the room motivate me, draw closer and sympathize. It increases the performance of teachers and increases motivation."*

Another effect of the humor that administrators use is to increase the closeness and sincerity among employees. As far as the subject is concerned, a teacher said, *"It draws people closer together. I think it's beautiful. This is how it should be. But you still have to have a natural limit. It's needs to be about not going beyond that friend but the closeness between friends. If we are very sincere, sincerity will grow even more."* (T10)

It was also stated that the humor that the administrators used makes the employees feel comfortable, happy and it softens the environment. Some teachers' opinions on this are as follows.

"If humor is being used, of course, people will feel more comfortable. Our movements will change based on that." (T7)

"I think it loosens up the environment. It's very positive. It is relaxing." (T10)

"I think it also makes it a little more forward and provides more relaxation." (T1)

"We laugh and we're happy, if I can say so myself." (T11)

The other constructive effects on the school of the administrators' use of humor are to develop interpersonal communication and relationships, to break off resistance towards work, to strengthen interpersonal relations, to increase success in education and training, and to bring about cooperation with employees.

With regards to communication between people and the development and strengthening of their relationships, T3 says, "it strengthens communication." T11 says, "It increases communication. I believe that relationships are strengthened." T1 says, "Sincerity also improves friendships."

Some teachers have pointed out that the use of humor breaks off resistance towards not doing work, and they argue that the administrators' use of constructive humor allows them to do their jobs self-sacrificially. In this regard, T5 shares his opinion saying, "It is absolutely positive. Because there are some things that the teacher will do from the heart and soul, giving of him/herself, not just with regards to their formal tasks. There is a meeting outside of school. We all have to come together and do something. Or there are situations in which we have to stay for extracurricular activities and help the school. It's certainly a

situation that will pave the way for giving of ourselves. In other words, you cannot say no. For example, you cannot say no to someone who is smiling back when they say something to you. But you can easily reject someone who is sulking at you.”

Teachers who are concerned about the destructive effects of the administrator’s humor on the school suggest that they reduce my motivation, make me unhappy, create a negative environment, create destructive feelings, offend and bother workers, cause employees to be ashamed and withdraw from administrators. In these regards, T3 points out that his/her motivation falls and s/he is unhappy in the school environment by saying, *“So the humor they are actually using creates a negative environment. Yes, it’s negative and destructive for me. So, it’s not a positive influence for me. It reduces my motivation. Of course, you are also unhappy when you step into such a school environment. You are happy when you leave.”* T10 expresses his embarrassment, brokenness and sadness as follows. *“Those ridicules in the meetings keep me away. Because I feel like a student at that moment in everyone’s eyes. Actually, sometimes I think that. There are times when I do things to students. To embarrass them. But as for me I call on the students next time who I had intended to embarrass. I do this consciously. I explain the reason that I did it to bring shame on them. I am terribly sorry when it is done at meetings. I feel very saddened. I do find it right though. Because of our deficiencies.”*

### **Discussion and Conclusion**

When the purpose for administrators’ humor in their relationships is evaluated, it is seen that constructive use patterns are higher than destructive use patterns according to the opinions of administrators. According to the opinions of teachers, it can be said that the purpose for administrators’ humor are generally constructive. The fact that both teachers and administrators support each other strengthens both the idea that the humor used by administrators is constructive and the idea that an atmosphere where positive humor dominates in the school will create a positive working environment for the employees. Indeed, Williams and Clouse (1991, p.45) argue that administrators and teachers think that humor is important in terms of creating a satisfying work environment. Matthias (2014, pp.iii-iv), on the other hand, emphasizes that the use of humor in schools can make the atmosphere in schools efficient, and it is important for administrators to be able to use humor positively.

When the opinions of the administrators regarding the effects of the administrators’ humor on the school and the employees were examined, it was determined that the humor used by the administrators had two types of organizational effects: constructive and destructive on the school. Administrators believe that the humor they use creates a positive working environment in their schools, motivates teachers, increases job satisfaction and performance. As a matter of fact, Fields (2011, p.65) states that working with administrators who regularly use humor in their schools brings about higher job satisfaction in teachers than working with

administrators who little or rarely use humor, and he says that administrators who use humor in the school show that the teachers have received it positively. Other constructive effects of humor used by administrators are that it improves the relations and communication between the people, facilitates their cooperation, makes the employees happy and cheerful, reduces stress, breaks off resistance against teaching, allows work to be efficient, healthy and self-sacrificial, makes teachers feel comfortable, at peace, and secure, softens the environment, increases employee loyalty, increases organizational commitment, achieves closer superior-subordinate relationships, and increases organizational productivity and effectiveness. Administrators think that in regard to the destructive effects of the humor they use, humor causes work to be neglected, slowed down, slacked off of and relaxed upon. When the considerations of the administrators are evaluated, it can be said that the effect of the humor they use on schools is more constructive than destructive. This shows that administrators think that their humor usage has positive effects on the school.

A similar result was obtained when the opinions of teachers regarding the effects that the humor administrators use has on school were evaluated, and it was found that the humor had both constructive and destructive effects on the school. According to the teachers' opinions, there were more constructive effects than destructive. Teachers emphasized that the humor the administrators use motivates the staff, motivates the employees in the school, increases their performance, increases their rapport and sincerity, relaxes and cheers up the employees, softens the environment, develops the communication and relationships among the people, and unifies. Regarding the destructive effects of the administrators' humor on the school, teachers mentioned reducing the motivation of employees, making them unhappy, offending and hurting, embarrassing, creating a negative environment, causing destructive emotions and causing them to withdraw from the superior-subordinate relationship.

When the opinions of both the administrator and the teacher are evaluated together, it can be said that the effect of the administrator's humor on the school is more constructive than destructive. Similar to the results of Williams and Clouse (1991, p.1, 45), humor use improves the informal school atmosphere, increases social ties, helps conflict resolution, and increases loyalty. He also emphasizes that humor can be used as a means of reducing stressing in schools. Lyttle (2007, p.239) states that humor can have positive effects on organizational life such as reducing stress, team cohesion, occupational motivation, providing ideas and relieving frustration altogether.

When evaluated in general, it can be said that the administrators' purpose in using constructive humor in the primary school exists, and the humor they use is in direct proportion to the purpose for usage, effecting schools more constructively than destructively. The results strengthen the idea that administrators' use of humor is influential on the atmosphere of schools. Indeed, it is emphasized that in one study, administrators have more influence on the school atmosphere than anyone else, administrators use humor to improve the school atmosphere and strengthen teacher and administrator loyalty (Hurren, 2006, p.374-375).

Therefore, it can be said that a positive atmosphere is dominant through the use of humor in primary education institutions. In this case, it can be considered that schools have the necessary atmosphere for positive organizational outputs and that effective leadership and organizational efficiency and effectiveness can be increased (Tutar, 2003, p.253).

Based on all these results, it is possible to make primary school administrators and teachers aware of the effects of organizational humor and allow them to use it constructively through awareness raising activities regarding the humor that is used by the administrators of primary education institutions and their teachers in administrator relations. Guides for practitioners can be drawn up showing how to create school environments where a positive humor atmosphere can dominate by showing the constructive and destructive forms of humor used in schools in terms of influence and effect. The effects of school humor on organizational factors such as organizational attachment, job satisfaction, burnout, motivation and performance can be investigated.

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## **Solution Proposals of Prospective Teachers on the Problems of Pre-School Education**

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### **Abstract**

In this research, the proposals of prospective teachers in pre-school training about the problems of pre-school education which are defined by the literature analysis have been put forward. 700 solution proposals are gathered from 140 prospective teachers who are included in the research by providing 5 solution proposals each. When analyzing the gathered proposals, 140 prospective teachers concluded on highly important 5 solution proposals out of 40 solution proposals which they have already specified. These are in order 'arranging the pre-school buildings and classrooms conditions according to the characteristics of childrens' development', 'reducing the classroom size', 'explaining the importance of pre-school education to the parents and improving the cooperation and communication with them', 'enlarging the classroom space', 'mainstreaming inclusive education'. These prospective teachers concluded on the least important 5 solution proposals as follow: 'electing the pre-school prospective teachers by an interview', 'employment of doctors and nurses in the pre-school education institutions', 'emphasis more on skills like music and painting in the pre-school education process of prospective teachers', 'provision of experiential and informational support by the retired pre-school teachers', 'shortening the pre-school lesson hours'.

**Keywords:** *Pre-school Education, Compulsory Basic Education, problem, prospective teacher, solution proposal*

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## Introduction

The researches on the childhood history reveals that the initial information which indicates the difference of pre-school period in the process of child development disclosed in Ancient Greek. However, rediscovery of the childhood and focusing on it by the philosophers begins at around the 16th-17th centuries. Nowadays, the terms and concepts of 'pre-school period, pre-school education, institutions and programs of pre-school education' becoming more commonly used in educational references. The studies done about the child psychology in various countries supports the idea that the period between 0-6 ages in childhood has great influence on determining ones own future. The problems in these countries includes providing a better quality in pre-school education for the children more than urging them to get benefit from pre-school education (Oktay, 2002).

Historical background of pre-school education institutions goes back to the ages just before the period of II. Constitutional Monarchy in Ottoman Empire. In these years pre-school education institutions opened in many different cities of the country. It is known that there opened some private nursery schools in some cities before the 28th July in 1908 (Declaration of 2nd Constitutional Monarchy) and after the date they opened these schools in İstanbul as well (Akyüz, 1996; Öztürk, 1998). Famous pedagog Satı Bey opened a private nursery school in İstanbul, Beyazıt (Akyüz, 1996). Within the period of Constitutional Monarchy, pedagog Kazım Nami Duru opened a private nursery in Thessaloniki after his trip to the schools where educating the teachers of 'Children's Garden' in Austro-hungarian Empire (Oktay, 1999). Therefore, it is understood that the first formation of pre-school education institutions in our country dates back to Infant Schools (Sıbyan Mektepleri) in Ottoman Empire. While the first private nursery schools were being opened just after the declaration of the 2nd Constitutional Monarchy in 1908, the official nursery schools were agreed to open and make common all over the country with the amendment called 'Nursery School Regulations' (Ana Mektepleri Nizamnamesi) in 1915 (Şahin, 2005).

Since the conditions were required considering the priority of primary education, the quantity of pre-school education institutions didn't increase as the Turkish Republic established. Many of the resources were invested on the development of primary schools as the Young Republic has been aimed to develop a new type of fellow-citizen. Therefore, the necessities of pre-school education were carried out by parents and local authorities at that time (Oktay, 2002).

In the beginning of Turkish Republic, there were 80 nursery schools in 38 different cities and totally 5880 children were getting pre-school education in the process (Başal, 1998). In 1960, the Department of Child Development and Education was opened in the Girls' High Technical School of Pedagogy in order to train teachers who would be employed in the pre-school education. In 1962 there was launched the 'Regulations of Kindergardens and Nurseries'. Through the following periods, to popularise and to indicate

the significance of pre-school education, the issue was highlighted in government programs, national development plans, committee on national education and the meetings of National Education Council. Within the general structural framework of Turkish National Education, pre-school education was agreed to place into the formal education process by the Basic Act of National Education - No.1739 that launched in 1973. Because of the increasing significance of pre-school education in the country, General Directorate of Pre-School Education was established by the Act No.3797 launched in 1992 (Şahin, 2005).

It is stated that pre-school teacher trainings began in a class in Darülmüallimat in İstanbul in 1913-1914, the courses in the training program were similar what includes the teacher training programs today and was made possible to implement Froebel method in the country (Oktay, 1999). There was no need to get a Bachelour Degree to be employed as a teacher in pre-school education till 1970s in Turkey. The alumni from the Department of Child Development in Vocational Colleges could be employed in the field in general. The first College on Early Childhood Development Teacher Training programs opened in 1980. These colleges transformed to the faculties afterwards in 1991. On the other hand, teacher training programs in education faculties restructured firstly in 1998 and later on in 2006 by the Council of Higher Education [YÖK & AÇEV-ERG, 2013].

Indeed, the subject policies maintained about the early childhood education in Turkey do not lead sufficient and integral developments. In its 2010-2014 Strategic Planning, Ministry of National Education aimed to reach %70 schooling rate in 2014 where 48-72 months children get educated. In accordance with the schooling age re-formulated by the Act '4+4+4' launched in 2012-2014, the foreground age group in pre-school education re-regulated as 48-66 months old and the schooling rate for this group of age range has been determined as %55 in 2013, and %70 in 2014. In spite of this, in the Tenth Development Plan announced in 2013 the gross enrolment rate for 4-5 years old children has been aimed as %70 for the year 2018. Therefore, it is observed that there appear remarkably inconsistency between the goals of different political declarations and documents. The goal set for 2018 in Development Plan falls behind the goals set by the Ministry of National Education - MONE ( MEB) for the year 2014, and do not purpose any progress between the years 2014-18 (Oral, Yaşar & Tüzün, 2016). It is reported that % 70 of the 15 years old pupils in Turkey informed that they did not get any pre-school training by 2012, and it is informed that this is the lowest rate among the 65 countries which took part in PISA (Programme for International Student Assessment). It has been determined that children who have received pre-school education are at least one year ahead of their peers and those who have not received pre-school training are twice as likely to perform at the lowest level, especially in mathematical skills (Oral, Yaşar & Tüzün, 2016).

Pre-school teachers are observed to face with many problems in all of the subjects as occupational services, general services, education programs, student services, budgetary services and supervision. In this research, the solution proposals of prospective teachers regarding the pre-school education problems tried to

be defined by analyzing many researches. It is observed that the problems and solution proposals regarding pre-school education have not been addressed before on the basis of prospective teachers. The basic question of this research is the solution proposals of prospective teachers on the problems of pre-school education determined by the literature review.

## **Methodology**

### **Research Design**

In the study, among the qualitative research methods, descriptive case study method was used. The case studies are intended to provide a detailed, integral and in-depth analysis of a pre-determined topic, event, or pattern in its context (Yin, 2003).

### **Participants**

The study group of the research consists of 140 pre-school prospective teachers who are studying at Çanakkale Onsekiz Mart University Faculty of Education and voluntarily participated in the research. For the research, a semi-structured data collection tool was developed for the collection of data. Participants were asked to provide five solution proposals for the problems of pre-school education, in a written form.

### **Data Collection Tools**

A total of 700 solution proposals were gathered in the study. Getting more opinions of prospective teachers in a written form was appreciated to be more reliable rather than getting an oral interview with a small group since it is important to know to what extent prospective teachers figure out the pre-school education system and how they define the solution proposals for the problems. Distribution of pre-school prospective teachers participating in the survey by sex is presented in Table 1

**Table 1:** *Distribution Of Pre-School Prospective Teachers By Sex Participated In The Survey*

Sex	f	%
Female	129	92,1
Male	11	7,9
Total	140	100

According to data, %92,1 of total participants is female while %7,9 participants is male.

### **Data Analysis**

Descriptive analysis technique (Yıldırım & Şimşek, 2005) was used in the analysis of research data. According to the results obtained in the research, in the formulation process of the sub-themes, the 2 specialists have read all the data and have classified them by specific headings and formulated sub-themes, which are independently determined by the participants as solution proposals for pre-school education

problems. Afterwards, the specialists concluded with a consensus by discussing the opinions on the sorted out data which they have already evaluated as separate themes. The reliability of the study was calculated by the formula as "Reliability = Consensus / (Consensus + Dissensus) x100" (Miles and Huberman, 1994). The reliability rate among the specialists in the study was computed as 82%.

### Findings and Comments

140 pre-school prospective teachers who participated in the research wrote a total of 700 solution proposals. When these proposals were analyzed, it was revealed that 40 different solution proposals were determined by these prospective teachers. These proposals are also presented in tabulated forms indicated as decreasing frequency.

**Table 2:** *Solution Proposals With The Frequency Greater Than 30*

Sequence of Significance	Solution proposal	f	%
1	Arranging the pre-school buildings and classrooms conditions according to the characteristics of childrens' development	42	30,0
2	Reducing the classroom size	38	27,1
3	Explaining the importance of pre-school education to the parents and improving the cooperation and communication with them	36	25,7
3	Enlarging the classroom space	35	25,0
3	Mainstreaming inclusive education	35	25,0
4	Enrollment of preschool education in compulsory education	34	24,3
5	Separating pre-school buildings from the primary and secondary school buildings	33	23,6
6	Better and more frequent supervision of pre-school teachers	31	22,1
7	Supporting pre-school teachers more and in necessary matters in-service training / seminar / project etc.	30	21,4
7	Supporting the art, sports and science events, activities and spaces	30	21,4

When analysing Table 2, the most important proposal of prospective teachers in pre-school training about the problems of pre-school education concluded as "arranging the pre-school buildings and classrooms conditions according to the characteristics of childrens' development". Prospective teachers of % 30 in pre-school training considers the most important element among the problems of pre-school education is 'arranging the pre-school buildings and classrooms conditions according to the characteristics of childrens' development'. Prospective teachers of %27 in pre-school training scores the subject 'reducing the classroom size' as one of the other important solution proposals. 'explaining the importance of pre-school education to the parents and improving the cooperation and communication with them' is scored by the %25'7 of prospective teachers as a solution proposal while 'enlarging the classroom space' and 'mainstreaming inclusive education' are scored as more effective ways in solving problems by one out of every four prospective teachers. As being one of the late implementations, unfortunately, in Turkey 'enrollment of preschool education in compulsory education' is also among the solution proposals of prospective teachers (%24,3). In the sequence of significance, the proposal 'Separating pre-school buildings from the primary and

secondary school buildings' ranked as 5th order (%23,6). While 22% of the pre-school prospective teachers consider that there should be "the better and more frequent supervision of the pre-school teachers", 21.4% of them thinks that 'Supporting pre-school teachers more and in necessary matters in-service training / seminar / project etc.' and 'supporting the art, sports and science events, activities and spaces' would be effective in problem solving in pre-school education.

**Table 3:** *Solution Proposals With The Frequency Between 20-30*

Sequence of Significance	Solution proposal	f	%
8	Providing more financial support to the pre-school institutions	29	20,7
9	Arranging a wider outdoor area-garden for pre-school institutions	27	19,3
9	Locating the classrooms in primary schools at lower floors, in light, safe and noise-free areas	27	19,3
10	Opening more state and private pre-school institutions	25	17,9
11	Maintaining free pre-school education	23	16,4
12	Self-improvement of pre-school teachers about classroom management models	21	15,0

When evaluating the solution proposals with a frequency of 20-30, it is seen that the solution proposal with the 8th priority order (20.7%) is "providing more financial support to the preschool institutions". The solution proposal at the 10th order in the sequence of significance as follows: "arranging a wider outdoor area-garden for the pre-school institutions" and 'locating the classrooms in primary schools at lower floors, in light, safe and noise-free areas'. While 17.9% of the prospective teachers regards "opening of more state and private preschool institutions " as necessary, the less prospective teachers consider 'maintaining free pre-school education' necessary. Pre-school prospective teachers of % 15 believe that "Self-improvement of pre-school teachers about classroom management models" would be effective for solving the problems.

**Table 4:** *Solution Proposals With The Frequency Between 10 And 20*

Sequence of Significance	Solution proposal	f	%
13	Better and more frequent supervision of pre-school institutions	19	13,6
14	Installing monitor system to the pre-school classes	17	12,1
15	Giving motivational awards (salary, teacher of the year, teacher of the province) to the pre-school teachers	15	10,7
15	Supplying assistants to the classes	15	10,7
16	Proliferating of open-air activities for the pupils	14	10,0
17	Proficiency examination / interview instead of KPSS for placement	12	8,6
18	Encouraging old teachers to become retired	11	7,9
19	Providing breaks to pre-school pupils and teachers	10	7,1

Within the solution proposals with a frequency of 10-20, "better and more frequent supervision of pre-school institutions" much more voted than the other items in this category (13.6%). "installing monitor system to the pre-school classes", which can be considered as one of the extraordinary solution proposals, was chosen by 12,1% of the prospective teachers. Suggestions considering 'presenting motivational awards

(such as salary, teacher of the year, teacher of the province) to the prospective pre-school teachers', 'provision of assistants to the classes' and 'proliferation of open-air activities for the pupils' were evaluated as a solution by approximately one-tenth of the pre-school prospective teachers. The proposal for the problem that prospective teachers would inevitably face with, (ranked 8.6%) was "proficiency examination / interview instead of KPSS (Public Personnel Selection Exam) for placement". Ultimate solution proposals in this category were the issues concerning employee teachers like "encouraging old teachers to become retired" and "providing breaks to pre-school pupils and teachers".

**Table 5:** *Solution Proposals With The Frequency Between 6-10*

Sequence of Significance	Solution proposal	f	%
20	Not recruiting and placing non- preschool graduates to the pre-school education process	9	6,4
20	Testing of preschool teachers at certain intervals (such as 5 years to 7 years)	9	6,4
20	More emphasis on the code of behaviour in the classrooms	9	6,4
20	Dividing the spaces for games, resting, eating, sleeping and sports	9	6,4
21	Practising home and family visits by the pre-school teachers	8	5,7
21	Increasing security measures in pre-school institutions	8	5,7
21	Creating separate classes for each age level	8	5,7
22	Supporting pre-school teachers for experimental / field trips	7	5,0

The solution proposals with a frequency of 6-10 includes the solution proposals preferred by 5-6% of the prospective teachers; "more emphasis on the code of behavior in the classrooms" and "dividing the spaces for games, resting, eating, sleeping and sports", "testing of pre-school teachers at certain intervals (such as 5 years to 7 years)" were recommended only by the nine of the 140 prospective teachers. Additionally, eight prospective teachers rated for each of the following items as important in problem solving; these items are "practising home and family visits by the pre-school teachers ", "increasing security measures in pre-school institutions " and "creating separate classes for each age level " as important in solving the problems. Only 5% of the prospective teachers agreed that "Supporting pre-school teachers for experimental / field trips".

**Table 6:** *Solution Proposals With The Frequency Between 0 And 5*

Sequence of Significance	Solution proposal	f	%
23	Increasing guidance and counselling services at pre-school institutions	5	3,6
24	Augmenting the practicing hours of pre-school prospective teachers	4	2,9
24	Building of earthquake resistance pre-school institutions	4	2,9
25	Electing pre-school prospective teachers by interview	3	2,1
25	Employment of doctor & nurse in pre-school institutions	3	2,1
26	Emphasis more on skills like music and painting in the pre-school education process of prospective teachers	2	1,4
26	Provision of experiential and informational support by the retired pre-school teachers	2	1,4
26	Shortening the pre-school lesson hours	1	0,7

Reviewing Table 6 presents the least preferred solution proposals disclosed by 1 to 5 pre-school prospective teachers regarding the problems of pre-school education. These are; " increasing guidance and counselling services at pre-school institutions ", " augmenting the practicing hours of pre-school prospective teachers ", " building of earthquake resistance pre-school institutions ", electing pre-school prospective teachers by interview ". In addition, solution proposals such as "employment of doctor & nurse in pre-school institutions", "emphasis more on skills like music and painting in the pre-school education process of prospective teachers" and "Provision of experiential and informational support by the retired pre-school teachers" rated by very few pre-school prospective teachers The proposal concerning the working hours of preschool teachers rated just by one of the pre-school prospective teachers so got the lowest frequency. This proposal presented as " Shortening the pre-school lesson hours "

### **Results, Discussion and Suggestions**

The research can be regarded as one of the first studies in Turkey to reflect the perspective of the next-generation teachers about the solution of problems of pre-school education. In the research, 140 prospective teachers concluded on highly important 5 solution proposals out of 40 solution proposals as follow in order: 'arranging the pre-school buildings and classrooms conditions according to the characteristics of childrens' development', 'reducing the classroom size', 'explaining the importance of pre-school education to the parents and improving the cooperation and communication with them', 'enlarging the classroom space' and 'mainstreaming inclusive education". The 5 solution proposals that the prospective teachers perceive as the least important are the followings: 'electing the pre-school prospective teachers by an interview', 'employment of doctors and nurses in the pre-school education institutions', 'emphasis more on skills like music and painting in the pre-school education process of prospective teachers', 'supporting prospective teachers with the experience and information of the retired pre-school teachers', 'shortening the pre-school lesson hours'. Another important result of this research is the sensitivity of prospective teachers participating in the research to the solution of preschool education problems. Since there is no corresponding or matching research with this one, the results of the research tried to be explained and discussed under the illumination of similar researches.

The most important solution proposal for prospective teachers in the research is "*arranging the pre-school buildings and classrooms conditions according to the characteristics of childrens' development*". The organization of educational institutions according to the needs of students is that great importance for the personal and social development of students (Friend and Cook, 2007; Fullan, 2006; Waldron and Mcleskey, 2010).In recent years, pre-school education and pre-school education institutions are rapidly becoming widespread in Turkey. However, despite this rapid widespreading, it is noteworthy that ergonomics and equipment in preschool institutions are still not satisfying enough. The buildings constructed for pre-school education can perform efficiently providing that the educational environment and equipments are

conveniently arranged for the age and health characteristics of the children who will be educated in them (Karadağ and others, 2003).

The second significant solution proposed by the prospective teachers in the research is "*reducing the classroom size*". According to the 'Pre-school Education Institutions Regulation', the number of children in a group mustn't be less than 10 and more than 20; providing that the class capacity is in favorable conditions, the number of children in the group can be increased up to 25. The average standard in OECD countries is in favour of 18 students per teacher. Non-OECD countries where present accessible data, 15 pupils per teacher is the available average standard (AÇEV-ERG, 2013).

Among solution proposals that the prospective teachers rated as the third most important item in the research is "*explaining the importance of pre-school education to the parents and improving the communication and cooperation with them*". According to Kaya's (2013) study conducted in 50 provinces of Turkey, the 208 pre-school teachers rated the most important proposal as 'raising the awareness throughout the community about the significance of promoting pre-school education with the help of organizing various activities like seminars, conferences, exhibitions, etc.' by 53%. The study reveals the necessities about the subject.

The third most prominent solutions proposed by prospective teachers in the research is "*enlarging the classroom space*". In Norway, the related regulation ensures at least 4m<sup>2</sup> per child in closed areas of nursery schools, while the OECD average is 2.9m<sup>2</sup>; this area in Turkey narrows to 1.5m<sup>2</sup>. On the other hand, the OECD average is 7m<sup>2</sup> per child for outdoor space while this outdoor space allocated per child in Turkey is 2m<sup>2</sup> (ACEV-ERG, 2013).

The latest third proposal presented by the prospective teachers in the research is "*mainstreaming inclusive education*". Education at early ages is not only a necessity for the individuals who displays the normal physiological development, but also for the handicapped individuals who need special education (Odluyurt, 2012). Pre-school education is highly important for the handicapped children who need special education as much as for the ones who displays normal development. The aim of pre-school education is to accelerate the development of special needs children in all developmental areas, to increase the possibility of using common education environments when they become school-age children and to reduce the emotional and social problems experienced by their families (Akçamete, 1998).

Prospective teachers rated another item as the forth important one. The item considers "*enrollment of preschool education in compulsory education*". The age of compulsory schooling in the world countries varies between 4 and 7 years according to the characteristics of the countries of origin, and in most cases it is obligatory (such as Germany, Austria, Belgium) (Star and Vulture, 2013: 1745). According to Kaytaz's (2005: 8) pre-school education benefit-cost analysis in Turkey, each unit investment made in early childhood

education, in other words in pre-school education, provides a return of about 6.3 TL to the country's economy. This result in the research reveals the necessity and prevalence of pre-school education. The study of Gögebakan (2011: 67); confirms that the mothers who let their children to get pre-school education agreed about the necessity of at least one year of compulsory pre-school participation. The features of mothers and their agreement rates as follow: 83.9% of primary school graduate, 82.6% of secondary school graduate, 88.5% of high school graduate and 94.6% of university graduated mothers.

The fifth solution proposal the prospective teachers presented in the research is "*Independent pre-school buildings from the primary and secondary school buildings*". This situation has become more and more remarkable especially after launching 12-year compulsory intermittent training. Primary and secondary schools have been separated from primary education buildings, but pre-school classes still going on their studies in these buildings.

The sixth solution proposal that prospective teachers chose in the research is "*better and more frequent supervision of pre-school teachers*". Prospective teachers may proposed this solution particularly to the problems that arise from the impressions they received from their school experience and teaching practice courses.

Among the most important proposals of the seventh solution that prospective teachers presented is "*Supporting pre-school teachers more and in necessary matters in-service training / seminar / project etc.*" Different research results also support the fact that such activities have enriched the experience of teachers and prospective teachers at different levels of education in the classroom (Mc Mullen, 2001; Lee et al., 2006; Işıkoğlu, 2008). As stated in the "Pre-School Education Process Internal Audit Report" dated 2010, the vast majority of in-service training, seminars and professional development activities at local level for pre-school teachers do not meet the needs and expectations of preschool teachers and this situation consequently influence the quality of teachers negatively (MEB, 2010). According to Kaya's (2013) study made with the help of 208 primary and secondary school teachers in 50 province of Turkey, 37.5% of the teachers have participated in in-service training activities organized by the Ministry of National Education when they are carrying out their professions.

In the research, one of the other seventh solution proposals that prospective teachers emphasized on is "*supporting the art, sports and science events, activities and spaces more*". Oktay (2007) defined the preschool period as the most critical period of human life in terms of enabling the opportunities provided or not provided to the child physically and socially in the pre-school period in order to realize child's own potential to the highest level in the future.

The proposal located in the eight position by the prospective teachers is "*providing more financial support to the pre-school institutions*". International researches and studies in Turkey underline the fact that

the return on investment in Early Childhood Education -ECE is very large as the development speed of children is high and the related investment costs are relatively low. The ECE benefit-cost analysis has shown that there becomes 7 TL social return in the future on for each 1 TL invested (Kaytaz, 2005). The level of education in families and household income are one of the most basic elements associated with the access to pre-school education. A study conducted in 56 countries revealed that having low income families and / or having mum in low education level, regardless of factors such as age, sex, and residence, were the main obstacles to access to early childhood education (Aran et al., 2009). However, when the findings of the research conducted by Cömert and Aktan Kerem (2006) on the problems of preschool education in Siirt province were examined, among the problems that the teachers who participated in the research defined as "Never Important", finance ranks the 3rd insignificant element with the 1.7%.

Among the ninth solution proposals that prospective teachers mostly emphasis on in the research is *"the arrangement of a wider outdoor area-garden for preschool institutions"*. It is highly favourable for a preschool education institution to have a building in single-storey or two-storey in terms of children's safety and fulfilling its functional goals. The project builders need to be attentive to the facts that the playrooms look to the south, the windows are low, the entrance is large enough to prevent the troubles on the school gate, as well as to the organization of necessary divisions required for the schedule, while building the project (Zembat, 2001). Open-air areas should be organized appropriate to a specific plan and program as in the inside of the school building, the ideal measurement of open-air areas should be at least twice as wide as the school building (Yılmaz, 1994).

The next important ninth solution suggested by the prospective teachers is that *"Locating the classrooms in primary schools at lower floors, in light, safe and noise-free areas"*. In the study conducted by Göçhan (2011), it was emphasized that within the dissemination efforts of pre-school education, there arised equipment problems while transforming the academic units into the kindergartens and the situation of deficient transformed classes caused decreasing of quality in education process in pre-school education classes.

The most important tenth solution proposal for prospective teachers in the research is *"opening more state and private pre-shool institutions"*. Although the level of schooling in pre-school education is the lowest in the Turkish National Education System, the schooling rate in pre-school education in developed countries have been tried to be increased up to 100% as well as starting preschool education at a younger age. However, the enrollment rate in pre-school education is still neither quantitative nor qualitative enough in Turkey (Derman-Taner and Başal, 2010). In the pre-school education, the student population increased by an annual average of 110 thousand throughout the seven years from 2004 to 2010. Nevertheless, MoNE has built an average of 900 classrooms annually in kindergartens or nursery schools. In other words, one classroom was constructed for each 131 children stepping in the education system during this period (AÇEV-

ERG, 2013). On the other hand, when the findings of the research done by Cömert and Aktan Kerem (2006) about the problems of pre-school education in Siirt province are analysed, among the problems that pre-school education teachers participated in the research consider "Not so important" is, the disseminating of pre-school education ranks in the 2nd insignificant position with the rate 2.2%.

In the research, the eleventh solution proposal prospective teachers emphasised on is "*maintaining free pre-school education*". Among the European countries, Turkey is the only country in which pre-school education is not in free of charge and families are not supported in any way for this education period, as well. Within this context, the following suggested policy options can be questioned and put on the countries agenda like maintaining free pre-school education for all the kids, legally ensuring the right to get pre-school education and / or taking steps for providing financial support for pre-school education of those who has inconvenient socio-economic conditions (AÇEV -ERG, 2013). It is necessary to increase public resources and use of them in a balance in pre-school education. It is estimated that public resources allocated to pre-primary education in Turkey corresponds to 0.1% of GDP. The average rate of OECD countries is 0.4%, and the World Bank's suggestion for Turkey is 0.23%. An important indicator that the public may offer free pre-school education is the removal of university fees. Government authorities pointed out that the central budget effect of removing university fees is about 1.3 billion TL. This amount is equivalent to about 0.1% of Turkey's 2011 GDP. In other words, the removal of university fees and the expenditures made by the public for school education are equal to the removed fees effect on central budget. (AÇEV-ERG, 2013). Since the period of planned development in Turkey, it has been aimed to widespread the pre-school education however have not been reached the enrollment rates in the developed countries. Pre-school education costs a lot for the families. Therefore, poor families benefits much less out of pre-school education when compared to the wealthy ones. The situation leads to an obvious inequality of opportunities in pre-school education. Furthermore, the contributions of business world, voluntary organizations and local authorities is insufficient for the pre-school education (Eğitim-Bir-Sen, 2010).

The twelfth solution proposal that the prospective teachers underlined in the research, is "*self-improvement of pre-school teachers about classroom management models*". Teachers have to improve themselves on the preventive and developmental model against the behavioral problems that stems from the features of modern life style (late marriage, soon divorce, single-child families, computer-mobile phone dependency, etc.).

The thirteenth solution proposal that the prospective teachers highlighted as important in the research is "*better and more frequent supervision of pre-school institutions*" and the fourteenth solution proposal is "*Installing monitor system to the pre-school classes*". The qualitative research carried out by Ada, Küçükali, Akan and Dal (2014), figured out some problems as follows: the school supervisors are not master on the field and they do not accept this reality, the supervisors visit the schools very rarely and they inspect much

more than guiding, deficiency of supervisors master on the field, their lack of innovative thinking and their tendency towards following up the old practices.

Among the proposals, one of the fifteenth solution that the prospective teachers have most emphasized in the research is "*giving motivational awards (salary, teacher of the year, teacher of the province) to the pre-school teachers*". The International Student Assessment Program (PISA), which is implemented by the Organization for Economic Co-operation and Development (OECD) every three years on students in the age group of 15 in various countries of the world, involves useful information on ECE (Early Childhood Education). Finally, according to the data of the PISA evaluation conducted in 2012, among the OECD countries, the math score of students who express that they got more than one year of pre-school education is 53 points higher than their peers who express that they did not get any pre-school education. This gap on score is approximately equal to the ultimate target of a school year (Oral, Yaşar and Tüzün, 2016). For this reason, to motivate the teachers of this highly important stage of training is crucial.

In the research, the next most important fifteenth solution proposed by the prospective teachers is "*supplying assistants to the classes*". The majority of pre-school institutions are located in major city centers. This situation can be explained by the fact that working women and large workplaces are found more in big cities, however it is highly important to open preschool education institutions in towns and villages in order to provide equal opportunity and to decrease the education gap among the families. It is expected to maximize the number of these institutions and to accelerate their works especially in order to minimize the differences among them (Eğitim-Bir-Sen, 2010: 20). Within this process, it is also fundamental to provide assistants to the class teachers who work without any break.

The sixteenth solution proposal that the prospective teachers reached a consensus in the research is "*proliferating of open-air activities for the pupils*". Independency of pre-school education institutions is one of the leading factors that will stimulate the positive effect on the situation.

The seventeenth and eighteenth solutions proposed by the prospective teachers are "*proficiency examination / interview instead of KPSS for placement*" and "*encouraging old teachers to become retired*". Both proposals stem from the placement problems of teachers. In spite of the fact that pre-school teachers can be placed more easily than the other brach teachers, they defined these items also significant.

The nineteenth solution was proposed by the prospective teachers in the study is "*providing breaks to pre-school pupils and teachers*". This item can also be illuminated with the evaluation of fifteenth item that suggests '*giving assistant staff to the teachers*'.

The twentieth solutions proposed by the prospective teachers in the study are "not recruiting and placing non- preschool graduates to the pre-school education process", "testing of preschool teachers at

certain intervals (such as 5 years to 7 years), " more emphasis on the code of behaviour in the classrooms ", and "dividing the spaces for games, resting, eating, sleeping and sports ". Within the framework of the three-year protocol signed between the General Directorate of Pre-School Education and Anadolu University in 2000, the teachers who get two-year theoretical courses and practice the profession for one year, can teach as a "temporarily employed master trainer" in pre-school education institutions. This regulation contributes to increasing the number of children for their enrollment in pre-school education. However, this implementation is not sufficient enough to cover the deficiency in the field and furthermore it can negatively affect the quality of pre-school education in long-term as well (Eğitim-Bir-Sen, 2010). According to the results of the study conducted by Gündüz and Çalışkan (2013), it is observed that the 60-66 month old children have lower maturity characteristics of their school-age, 66-72 and 72-84 month old children have average maturity characteristics of their school-age, and 72-84 month old children have the highest level of all maturity characteristics of their school age.

The twenty-first solution proposed by the prospective teachers is " practising home and family visits by the pre-school teachers ", "increasing security measures in pre-school institutions " and " creating separate classes for each age level ". This result supported by Cevher- Kalburan's (2014) study. That study examined to prospective preschool teachers' reveal problems and solutions. The importance of pre-school education is largely associated with the child's academic success in older ages and the future of the country, rather than being addressed with a pedagogical perspective on the current improvement of the child. To evaluate the situation just from the point of view of human capital and latest official figures, prevents to grasp the specific situations of Turkey. That's why it would be a miscalculation to associate the low pre-school enrollment rates to the 'lack of awareness of the society about the necessity and importance of pre-school education'. Beyond all, the investments made in pre-school education in developed countries are directly associated with the women's employment participation rate. In the study conducted by OECD (2006) with the participation of twenty countries for the period between the years 1998-2004, it seems that the most concrete reason for investing pre-school education in these countries, is the conditions of women in the society (reported: Gür & Çelik, 2009)

Twenty-second solution proposal that prospective teachers highlighted is " *supporting pre-school teachers for experimental / field trips* ". The findings supported by Cevher- Kalburan's (2014) study. The Cevher - Kalburan's (2014) study indicated that prospective teacher's emphasize that the number of practice courses needs to be increased. Teaching methods and techniques are also crucial for the pre-school education. In the education process of formal education it will be a good beginning for the children especially to get their education out of the intramural environment.

The twenty-third solution that the prospective teachers underlined is "*increasing guidance and counselling services at pre-school institutions*". Disagreements between the parents, deterioration of family

integrity (Sezer, 2006), growing up in a stressful family environment (Beautrais, Fergusson and Shannon1982), poverty (Sezer, 2006; Anselmi et al., 2004), absence of father, being insensitive of the family to children, training of the child away from the family for a long time, abandonment of the child by one of the parents (Ziyalar, 1984) can cause some problems for the child like eating nails, lying, stubbornness, unwillingness to go to school, loss of appetite and stealing (Sezer, 2006).

The most important twenty-fourth solution proposals for the prospective teachers in the study are "*augmenting the practicing hours of pre-school prospective teachers*" and "*building of earthquake resistance pre-school institutions*". In recent years, the number of academicians in many universities are becoming insufficient for students because of increasing quantity of the departments of pre-school education teachers and the situation may prevent the students to get a qualified aducation. During the four-year university education, the practice and traineeship courses that the teachers will get likely the most benefit and develop themselves during their professional career, do not reach the targeted goal due to the inadequacy of the faculty members (Oral, Yaşar and Tüzün, 2016). In the study conducted by Küçüköğlu and Kızıldaş (2012), pre-school teacher training programs in England, Germany, France, Italy, Russia and Turkey were compared. According to the results of the research, it is found that teaching professional practicing courses in Turkey much more focused on than the other countries in the study; however there is no additional period of time left exactly just for implementation as it is in France. To sum up, it is obvious that the process devoted to practice and qualified teacher studies is not sufficient in the department program in Turkey. Natural disasters are the facts of Turkey. The initial expectation is constructing the public institutions and buildings according to this reality.

Twenty-fifth of the solution proposals that the prospective teachers rated as the most important in the study are "*electing pre-school prospective teachers by interview*" and "*employment of doctor & nurse in pre-school institutions*". The other precautions that can be taken for the earthquake are as the appointment of a doctor-nurse to the preschool institutions. Besides, for entering the faculties of pedagogy, it would be better to elect the students by interviewing instead of choosing prospective teachers according to their test scores.

The least important solutions proposed by the prospective teachers in the study are "*emphasis more on skills like music and painting in the pre-school education process of prospective teachers*" and "*provision of experiential and informational support by the retired pre-school teachers*" and "*shortening the pre-school lesson hours*". According to Kaya's (2013) study conducted in 50 provinces of Turkey with the 208 pre-school teachers, 66.8% of the teachers found themselves proficient about pre-school education, in their pre-school education courses during the training process. Hassard, (1999) states that dialogues that the prospective teachers make with the teachers and children can influence positively or negatively the feelings and thoughts of the children and may affect their choices of profession about being a teacher or not. For this reason, it is necessary to organize educational environments in which prospective teachers should not get any

negative experiences and should prepare themselves for teaching profession. Experiences gained by prospective teachers in schools allow them to create their own knowledge by practicing on real life problems (cited in Oguz, 2004).

In the last decade, important developments have been experienced in preschool education and the subject has started to be included in education policies. In 2008, the Ministry of National Education (MONE) announced its goal of 100% schooling for pre-school education for 5 years old children. However, due to the "4 +4 +4" education system implemented in the 2012-13 academic year, starting age to the primary education is lowered and the pre-school education is not included in the scope of compulsory education. This regulation caused a considerable loss of the gains obtained since 2008 regarding preschool education (Oral, Yaşar and Tüzün, 2016). A qualified early childhood education and compulsory education are inevitable requirement of prerequisites for maintaining national development and sustainable competing on the international platform. Today's executives and decision-makers have to invest in education in order to build a safe and confident future in Turkey. Additionally they have to take actions to solve educational problems within a systematic integrity beginning from pre-school and primary education. This is an essential role and obligation much more than an option. (Özdemir, Bacanlı & Sözer, 2007).

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## Identifying Psychometric Properties of the Social-Emotional Learning Skills Scale

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### Abstract

This study aims to develop a comprehensive scale of social-emotional learning. After constructing a wide range of item pool and expertise evaluation, validity and reliability studies were carried out through using the data-set of 439 primary school students at 3<sup>rd</sup> and 4<sup>th</sup> grade levels. Exploratory and confirmatory factor analysis results revealed a valid and reliable 27-item, seven-factor model including the following factors: Relationship among Friends, Perception of Friendship, Persistence, Success, Self-Management, Impulse Control and Self-Confidence. Cronbach Alpha coefficient is calculated as .856 for the whole scale.

**Keywords:** *Social-emotional learning skills, scale development, psychometric properties, validity, reliability*

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## Introduction

Social-Emotional Learning has become popular following the research conducted upon *Multiple Intelligence* (Gardner, 1993) and *Emotional Intelligence* (Goleman, 1995) since 1990s (Çapan, 2006; Zins ve Elias, 2006). Social-emotional learning can be explained as the capacity to deal with behaviors, cognition and emotions, and establishing positive relationships through increasing the academic, social and emotional achievements of children (Kabakçı & Korkut-Owen, 2010; Waltz, 2013; Zins & Elias, 2006). Collaborative for Academic, Social and Emotional Learning ([CASEL] 2013), which is a leading institution that has a mission to develop social-emotional learning skills of students from pre-primary to upper secondary education and to support conducting research about it, indicates that social-emotional learning involves knowledge acquirement, understanding and managing emotions, determining positive goals and spending effort to reach these goals. Besides, social-emotional learning also involves understanding and empathizing other people's feelings, establishing and maintaining relationships and effective decision-making skills. It has been emphasized since early 2000s that students' social-emotional learning skills as well as their cognitive development influence their academic achievement (Lopes & Salovey, 2004; Zins et al., 2004a). Research highlights the importance of social-emotional learning programs that influence the academic achievement of students in all grade levels from pre-primary to high school education (Diekstra, 2008; Greenberg, Weissberg, O'Brien, Zins, Fredericks, Resnik, & Elias, 2003; Wilson, Gottfredson, & Najaka, 2001; Weissberg, Kumpfer, & Seligman, 2003; Zins, Weissberg, Wang, & Walberg, 2004).

Similar to most countries in the world, Turkey has recently focused on the development of students' social-emotional learning skills. Ministry of National Education (MoNE) in Turkey has updated the primary school curriculum [1<sup>st</sup> – 8<sup>th</sup> grade levels] by adding a lesson named as *Emotional and Social Development* in 2012. Thus; the number of research conducted on social-emotional learning has been increased. Within this framework, the requirement for a scale development has emerged in order to understand social-emotional learning skills of students. The literature revealed that social-emotional learning involves several skills. CASEL (2013) explains the concept of social-emotional learning through the skills of self-awareness, self-management, social awareness, establishing and maintaining relationships and responsible decision-making skills. In the *Emotional and Social Development* lesson program in Turkey social-emotional learning is explained through self-acceptance, communication, understanding feelings, emotional-rational management, and problem-solving skills. These skills are also considered important by CASEL.

Establishing a relationship has a significant role in social-emotional learning among the skills mentioned above. CASEL (2013, p. 4) defined social and emotional learning as a 'process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions'. Relationship among Friends and Perception

of Friendship refer to the potential of an individual to establish a relationship with people. Besides, students who have well-developed social and emotional skills have high level of achievement and self-esteem. Moreover, Self-management skill can be explained as coping with one's own feelings, thoughts and behaviors effectively and Impulse Control refers to keep one's impulses under control take also important place for social-emotional learning (Bar-On, Tranel, Denburg & Bechara, 2004; Bodrova & Deborah, 2007; Denham, 2006; Frey, Hirschstein & Guzzo, 2000; Zins et al., 2004). As emphasised above, social-emotional learning is related to both social life and feelings of students. Managing feelings and thoughts directing one's life make him/her stronger concerning the social and emotional aspects. On the other hand, many students with low level of social-emotional learning skills have some problems such as behavioral disorder and violence tendency. This can be explained through managing the instinctual behaviors. Therefore, the literature emphasizes the importance of social-emotional learning which helps students to gain self-awareness via controlling impulses. Thus, this study aims to develop a scale involves these skills that help us to understand students' social-emotional learning skills.

Previous studies demonstrated that there are several scales on social-emotional learning developed for primary school students (Bernard, 2003; Coryn et al., 2009; Merrel, 1993; Gresham & Elliot, 2008; Baydan, 2010). These scales usually focused on the aspects such as academic skills, interrelationships and self-management (Merrel, 1993), social skills, problem behaviors and academic performance (Gresham & Elliot, 2008), task achievement, peer relationships and self-regulation (Coryn et al., 2009), emotional skills, social skills, learning skills, house, school, and society (Bernard, 2003). Some research highlights mainly problematic behaviors of social skills (e.g. Merrel, 1993). However, some studies focused on social skills without considering emotional skills (Gresham & Elliot, 2008; Coryn et al., 2009). Bernard (2003) developed a scale of social-emotional learning in which the aspects of the school, house and society as well as social, emotional and learning skills are emphasised. Besides, there is also some research conducted in Turkey (Baydan, 2000; Arslan & Akm, 2013). For example, Baydan (2000) developed the Scale of Social-Emotional Learning Skills Perception that consists of the dimensions like communication skills, problem solving skills, etc. to understand the perception of social-emotional skills of students who are at 4<sup>th</sup> and 5<sup>th</sup> grade. In addition, Arslan and Akm (2013) adapted the Social-Emotional Learning Scale developed by Coryn et al. (2009). The scale dimentions consisted of task achievement, peer relationships and self-regulation.

Collectively, these studies indicate that the relationship between emotional and academic skills have not been examined sufficiently. However, the literature pointed out that social, emotional and learning skills complete each other (CASEL, 2013). Therefore, the studies especially in Turkey highlight the need for a scale which considers social, emotional and academic aspects of learning skills together for primary school students.

Thus, unlike the scales developed previously, this study attempts to integrate the aspects of social-emotional learning skills which emphasize the dimension of *persistence* and *success* which indicated the relationship between the academic achievement and social-emotional learning. So far; although the literature pointed out the relationship between social-emotional development and academic achievement, there are limited number of scales developed that considers this issue. For instance, social-emotional learning programs such as You Can Do It!, RULER, and 4Rs emphasise this through considering persistence, realizing, understanding, as well as behaving respectfully, being organized, establishing relationships, making decisions. This helps us to explore the relationship between social-emotional and academic learning skills. Many of the scales investigating this relationship mostly were conducted to evaluate the results of particular a social-emotional learning program focused on the issues including social skills, problem behaviors, aggressiveness, hostility, violence, task completion, and peer relationships or social-emotional learning skills of a disadvantaged students having problem behaviors. This indicates that there is a need for a more comprehensive scale of social-emotional learning for students who do not need special treatment. For this reason, the scale developed in this study considered the skills of relationship among friends, perception of friendship, persistence, success, self-management, impulse control and self-confidence.

Although previous studies indicated that limited number of scales recognize the relationship between social-emotional and academic skills (Bernard, 2003 [The Social Emotional Well-Being Survey]), there is no such scale developed for Turkish students. Accordingly, this study emphasizes the aspects differ from the existing scales such as impulse control, friendship perception, continuity, and self-confidence as well as relationship among friends, perception of friendship, persistence, success, self-management, impulse control and self-confidence. Therefore, this study has a significant contribution to both national and international literature.

Regarding the explanations above, this study seeks to develop a valid and reliable scale for measuring social-emotional learning skills of primary school students in 3<sup>rd</sup> and 4<sup>th</sup> grade levels regarding the developments in Turkey as well as throughout the world.

## **Method**

### **Study Design**

This research was designed as a scale-development study to understand the social-emotional learning skills of primary school students in 3<sup>rd</sup> and 4<sup>th</sup> grade levels. First of all, the researchers examined the relevant literature in depth and analyzed the previous scale-development studies of social-emotional learning. Afterwards, the structure was outlined and in the scale, they focused on issues such as; social skills, self-awareness, self-management, social awareness, communication, and effective decision-making skills.

Some of the social-emotional learning programs as well as the Emotional and Social Development program (TTKB, 2012) in Turkey drawn attention to the relationship between social-emotional learning and academic achievement. Within this context, a 107-item pool was generated. An item pool should have items as much as possible regarding the concept to be measured (DeVellis, 2012). However, considering developmental characteristics of 3<sup>rd</sup> and 4<sup>th</sup> grade level students and reviewing the previous scales of similar age groups; a 107-item scale was decided too long for this age level (Bilek, 2009; Evergreen & Coryn, 2012). Accordingly, the items were reviewed and the ones have similar meanings were excluded from the scale. Thus, the number of items was finally decreased to 67 items.

The scale was sent to three experts for their review regarding content validity. Necessary amendments were applied. Through the experts' suggestions number of items was decreased to 42 in the scale. The items were also examined by a Turkish Language Teaching expert to understand whether they are clearly understood. Thus, several changes were also made as a result of the feedbacks received. Furthermore, the scale was given to a primary school teacher and 6 primary school students who attend 3<sup>rd</sup> or 4<sup>th</sup> grade for proof reading. Both students and the teacher were asked to mark the items which they did not find clear and understandable. They made suggestions about the items. Thus, the final version of the scale was ready to be administered to the study group. 3-point Likert-type scale which includes the expressions of "*always*", "*sometimes*", and "*never*" was used in this study.

### **Sampling**

The population of research consists of 12 primary schools located in the central district of Canakkale Province. The classrooms of 3<sup>rd</sup> and 4<sup>th</sup> grade levels in these 12 primary schools were listed in order to use simple random sampling. Then, the participants were accessed randomly until the required sample size was provided. A total of 439 students from 5 primary schools located in the central district were reached throughout the data collection during the 2014-2015 academic years.

There are different views by researchers regarding the number of minimum sample size for the factor analysis. While some researchers point out that at least 300 participants are required for a reliable number of sample size (Tabachnick & Fidell, 2001; Çokluk et al., 2012), Kline (1994 as cited in Çokluk et al., 2012) stated that 50 is too low, 200 is rather enough, 300 is enough, 500 is highly enough and 1000 is perfectly fine. The population in 3<sup>rd</sup> and 4<sup>th</sup> grade levels in the primary schools in Canakkale consisted of 2500 students in 3<sup>rd</sup> and 4<sup>th</sup> grades. Accordingly, a sample of over 400 students was considered adequate for this study.

## Findings

### Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) was performed in order to explore the factor structure of the scale. First of all, Kaiser-Meyer Olkin (KMO) and Bartlett's Test of Sphericity (BTS) were applied in order to test the adequacy of sampling and data-set suitability for performing factor analysis. The findings regarding KMO and BTS were presented in Table 1.

**Table 1:** *KMO and Bartlett's Test Values*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,872
Bartlett's Test of Sphericity	Approx. Chi-Square	2344,321
	df	375
	Sig.	,000

As observed, correlation coefficients and partial correlation coefficients were compared. KMO should be greater than .50 (Kalaycı, 2009). Therefore, values under .50 are not acceptable for the test of KMO measure of sampling adequacy (Kaiser, 1974 as cited in Şencan, 2005). KMO values between 0.50-0.60 are considered insufficient, 0.60-0.70 reasonable, 0.70-0.80 medium, 0.80-0.90 good, and the values greater than 0.90 are considered very good (Büyüköztürk et al., 2012; Field, 2009; Kalaycı, 2009; Şencan, 2005). As shown in Table 1, KMO value is 87.2% (.872) >.50 and Bartlett's test is calculated as .000 < .50 showed a significant result. Therefore, based on the findings from KMO and BTS, the data-set was decided as suitable for performing EFA.

Results of the eigenvalues and percentages of variances explained through the EFA are presented in Table 2.

**Table 2:** *Eigenvalues and Percentages of Variances*

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,953	22,896	22,896	5,953	22,896	22,896	2,813	10,821	10,821
2	1,484	5,708	28,604	1,484	5,708	28,604	1,987	7,641	18,461
3	1,397	5,374	33,978	1,397	5,374	33,978	1,955	7,521	25,982
4	1,269	4,882	38,860	1,269	4,882	38,860	1,888	7,262	33,244
5	1,236	4,752	43,612	1,236	4,752	43,612	1,714	6,593	39,837

6	1,115	4,289	47,901	1,115	4,289	47,901	1,642	6,317	46,154
7	1,059	4,073	51,975	1,059	4,073	51,975	1,513	5,820	51,975
8	,976	3,756	55,730						
9	,902	3,470	59,200						
10	,865	3,329	62,529						
11	,850	3,270	65,799						
12	,804	3,093	68,893						
13	,746	2,871	71,763						
14	,731	2,811	74,574						
15	,697	2,683	77,257						
16	,669	2,572	79,829						
17	,639	2,460	82,288						
18	,631	2,428	84,716						
19	,599	2,304	87,020						
20	,583	2,243	89,263						
21	,535	2,058	91,321						
22	,523	2,011	93,332						
23	,450	1,731	95,063						
24	,448	1,722	96,786						
25	,431	1,657	98,443						
26	,405	1,557	99,345						
27	,491	1,456	100,00						

As Table 2 shows, the scale has a seven-factor structure and consists of 27 items. The seven factors explain 51.9% of the total variance.

Table 3 reveals the results of the rotated component matrix. The table includes the factor loadings for each item in the scale of social-emotional learning skills.

**Table 3:** *Rotated Component Matrix*

	Component						
	1	2	3	4	5	6	7
Item 1	,664						
Item 2	,610						
Item 3	,596						
Item 4	,548						
Item 5	,533						
Item 6	,530						
Item 7	,501						
Item 8	,491						
Item 9		,708					
Item 10		,664					
Item 11		,456					
Item 12			,707				
Item 13			,676				
Item 14			,543				
Item 15				,713			
Item 16				,678			
Item 17				,657			
Item 18					,715		
Item 19					,639		
Item 20					,610		
Item 21						,723	
Item 22						,651	
Item 23						,462	
Item 24						,461	
Item 25							,730
Item 26							,501
Item 27							,456

Factor loadings are considered as one of the important values in EFA. Stevens (2002; cited in Field, 2009) suggested that values explaining 16% of total variance and having factor loadings greater than .40 should be taken into consideration during factor analysis. Thus, the items #7, #15, #17, #24, #28, #29, #37, and #42 with a factor loading under .40 were excluded from the scale. According to Şencan (2005), each

factor should have at least three items. For this reason, the factors having less than three items were also excluded from the scale even though their factor loadings are greater than .40. Thus, the items, #1, #4, #5, #8, #9, and #18 were also excluded from the scale because of the factors they pertain has less than three items. The items of #22 and #23 with a factor loading greater than .40, associated with two separate factors were also excluded from the scale. As a result of the EFA, the scale had a seven-factor structure that consisted of 27 items. In the final version of the scale, there are 8 items under the Friendship Perception factor, 3 items under the Success factor, 3 items under the Self-Management factor, 3 items under the Relationship among Friends factor, 3 items under Impulse Control factor, 4 items under the Self-Confidence factor, and finally 3 items under the Persistence factor.

Cronbach's Alpha coefficient is one of the techniques to test the reliability of the scales (Evin Gencel & Güzel Candan, 2015). Thus, Cronbach's Alpha coefficient was utilized to examine the reliability of the scale and its factors. The Cronbach's Alpha value for the subscales calculated as .759 for Friendship Perception, .600 for Success, .564 for Self-management, .609 for Relationship among friends, .539 for Impulse Control; .529 for Self-confidence, and .510 for Persistence. Overall, the Cronbach's Alpha coefficient for the whole scale is calculated as .856. This pointed out that the scale is highly reliable (Kalaycı, 2009). Another technique to test the reliability of the scales through calculating the Pearson Correlation coefficients. For this reason, the scale was applied to a 144-student sub-sample twice within a 4-week time period. The findings regarding the Pearson Correlation coefficients were presented in Table 4.

**Table 4:** *Pearson Correlation Coefficients*

		Application 1	Application 2
Application 1	Pearson Correlation	1	,984**
	Sig. (2-tailed)		,000
	N		144
Application 2	Pearson Correlation	,984**	1
	Sig. (2-tailed)	,000	
	N	144	

Table 4 shows that the Pearson Correlation coefficient was calculated as  $r=.984$  ( $p<.05$ ) for the scale. This revealed that there was a high level of positive significant correlation between two applications. When the value of correlation coefficient ( $r$ ) is getting closer to +1, it means a strong relationship exists (Büyüköztürk, 2011; Kalaycı, 2009).

The factorial structure of the Scale of Social-Emotional Learning Skills found out through EFA was also tested through using Confirmatory Factor Analysis (CFA) in order to understand whether it was confirmed as a model or not.

### Confirmatory Factor Analysis

LISREL 8.7 was used for carrying out the Confirmatory Factor Analysis (CFA). The factorial structure of the scale including seven factors and 27 items was tested through using CFA. The goodness of fit indices were found as  $\chi^2 = 501.49$ ,  $df = 303$ ,  $RMSEA = 0.038$ ,  $NFI = 0.92$ ,  $NNFI = 0.96$ ,  $CFI = 0.97$ ,  $GFI = 0.92$  and  $AGFI = 0.90$ .

Chi-Square test statistic ( $\chi^2$ ) is the criteria for common goodness of fit test (Yılmaz & Çelik, 2009). It 'assesses the magnitude of discrepancy between the sample and fitted covariances matrices' (Hu and Bentler, 1999: 2). Chi-Square/Degree of Freedom ( $\chi^2/df$ ) ratio should be small for a good model (Yılmaz & Çelik, 2009).  $\chi^2/df \leq 5$  indicates a moderate fit level;  $\chi^2/df \leq 3$  shows perfect fit level (in large samples);  $\chi^2/df \leq 2$  also show perfect fit level (Kline, 2000; Sümer, 2000; Tabachnick & Fidell, 2001). The Chi-Square/Degree of Freedom ( $\chi^2/df$ ) was found in this study as 1.65 which indicates a perfect fit level ( $\chi^2/df = 1.65$ ).

Another fit index used in CFA is Root Mean Square Error of Approximation (RMSEA). RMSEA was calculated as .038 ( $RMSEA = 0.038$ ) for this scale. RMSEA is used to estimate the population covariance matrices within the non-central chi-square distribution (Çokluk et al., 2012). RMSEA values range from 0 to 1 and it indicates perfect fit as the values getting closer to 0 (Çokluk et al., 2012; Tabachnick & Fidell, 2001). To have a satisfactory model RMSEA fit index cut-off value should be close to 0.60 (Hu & Bentler, 1999).  $RMSEA \leq 0.10$  indicates poor fit (Browne & Cudeck, 1993 as cited in Yılmaz & Çelik, 2009),  $RMSEA \leq 0.80$  indicates close fit (Hooper, Coughlan & Mullen, 2008), and  $RMSEA \leq 0.50$  indicates perfect fit (Schumacker & Lomax, 2010). Thus RMSEA value calculated in this study points out perfect fit.

According to CFA results, Normed Fit Index (NFI) is calculated as 0.92 and Non-normed Fit Index (NNFI) is calculated as 0.96. NFI and NNFI values for both NFI and NNFI range between 0 and 1 (Çokluk et al., 2012; Tabachnick & Fidell, 2001; Yılmaz & Çelik, 2009).  $NFI \geq 0.90$  implies good fit (Hu & Bentler, 1999; Schumacker & Lomax, 2010),  $NFI \geq 0.95$  implies perfect fit (Tabachnick & Fidell, 2001). Greater NNFI values indicate better fit (Yılmaz & Çelik, 2009).  $NNFI \geq 0.95$  indicates perfect fit (Hu & Bentler, 1999; Schumacker & Lomax, 2010). Thus, results revealed that  $NFI = 0.92$  indicates good fit and  $NNFI = 0.96$  indicates perfect fit in this study.

Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) were developed by Jöreskog and Sörbom as an alternative to Chi-Square in order to test model fit independent from sample size (Çokluk et al., 2012).  $GFI \geq 0.90$  points out good fit (Hu & Bentler, 1999; Schumacker & Lomax, 2010),  $GFI \geq 0.95$  points out perfect fit (Hooper, Coughlan & Mullen, 2008),  $AGFI \geq 0.90$  implies good fit (Schumacker & Lomax, 2010), and  $AGFI \geq 0.95$  implies perfect fit (Hooper, Coughlan & Mullen, 2008). The goodness of fit indices in this research calculated as  $GFI = 0.92$  and  $AGFI = 0.90$  which indicate good fit. The results also revealed that there was a significant correlation ( $r = 0.7$ ) between the error covariances of

the items, #4 and #6. It was realized that the items were under the same latent variable within the scale. However, they did not substitute each other regarding their meanings. The researcher, then, decided to retest the structural model through adding the high error covariance matrices observed between the items. After that, the GFI and AGFI values were found to be 0.93 and 0.91 respectively.

Comparative Fit Index (CFI) analyzes the model fit by examining the discrepancy between the data and the hypothesized model, while adjusting for the issues of sample size inherent in the chi-squared test of model fit, and the normed fit index (Tabachnick & Fidell, 2001). CFI values range from 0 to 1 (Tabachnick & Fidell, 2001).  $CFI \geq 0.90$  indicates good fit (Hu & Bentler, 1999),  $CFI \geq 0.95$  indicates perfect fit (Hu & Bentler, 1999; Schumacker & Lomax, 2010). The comparative fit index was calculated for this scale as  $CFI = .97$  which pointed out a perfect fit. The fit index values obtained from CFA were presented in Table 5.

**Table 5:** *Social-Emotional Learning Skills Scale Fit Indices*

Fit Indices	Social-Emotional Learning Skills Scale
$\chi^2$	501.49 (p= 0.00)
$\chi^2/ df$	1.65 (501.49/303)
RMSEA	0.036
NFI	0.92
NNFI	0.96
GFI	0.93
AGFI	0.91
CFI	0.97

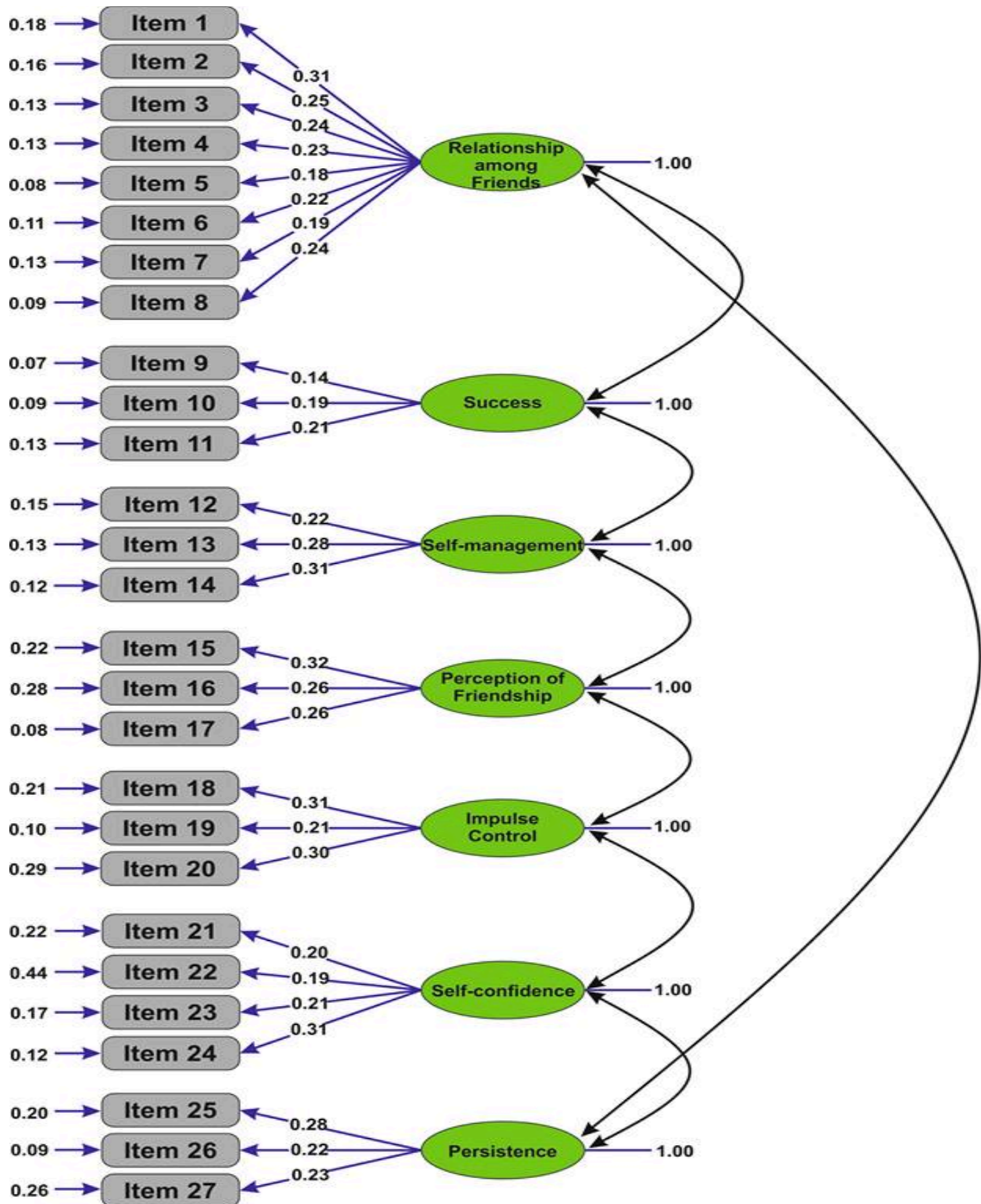


Figure 1: Path Diagram

## **Conclusion, Discussion and Suggestions**

As a result of this study, a valid and reliable scale was developed to understand primary students' social-emotional learning skills in depth. The previous scales of social-emotional learning generally focused on problematic and disadvantaged students or they have been conducted to understand the effects of particular programs about social-emotional learning. The scales generally considered the social-emotional learning skills that emphasised in the particular programs. By contrast, this indicates the need for a scale that examines primary students' social-emotional learning skills in depth. Thus, the Scale of Social-Emotional Learning Skills developed in this study examined the social-emotional learning regarding the dimensions of Relationship among Friends, Friendship Perception, Persistence, Success, Self-Management, Self-Confidence, and Impulse Control.

During the generation of the item pool in the scale development process, issues like learning skills, self-awareness, self-management, social-awareness, establishing relationships, and effective decision-making skills were taken into consideration. However, validity and reliability analyses results showed that learning skills dimension separated into two factors named as success and persistence. Similarly, different studies also addressed that learning skills involves success and persistence (Bernard, Mangum & Urbach, 2012). Besides, the literature on social-emotional learning have also considered the dimensions of persistence and success separately while persistence refers to being consistent to achieve (Bender & Wall, 1994; Elias, 1997; Payton, Weissberg, Durlak, Dymnicki, Taylor, Schellinger & Pacnan, 2008) success refers the capacity of using knowledge (Durlak et al., 2011, Elias & Arnold, 2006; Greenberg et al., 2003; Zins, 2004; Zins et al., 2004). This, draw attention to the need for the examination of these two dimensions and emphasized the role of these dimensions in social-emotional learning.

Validity and reliability analyses revealed that self-awareness skill refers to the awareness of one's own feelings and thoughts was placed in the self-confidence factor in this study. This might be explained by high level of self-confidence of students who are aware of their own feelings and thoughts; and thus, evaluate their capacity accurately. Furthermore, while self-management skill remained same in the dimension, impulse control is appeared as a different dimension from the self-management skills. Impulse control has an important place of emotional intelligence (Salovey & Mayer, 1989; Atabek, 2000). There are studies related to emotional intelligence, which were conducted for different age groups, and used the scales involves the dimension of Impulse Control (Bar-On, 1997; Çelik, Yıldırım, Metin, Tahiroğlu, Toros, Avcı, Öngel & Karayazı, 2011). Social-emotional learning studies are substantially based on the research on emotional intelligence (Cohen, 1999; Çapan, 2006). Therefore, it seems that the literature supports the consideration of impulse control and self-management skills separately.

Establishing relationships skill refers to establishing healthy relationships with people was examined in two dimensions in the scale. One of them is named as Relationships among Friends and another one is Friendship Perception. Previous studies investigating social relationships for similar age groups pointed out the importance of friendship perception (Bloemer, Odekerken-Schröder & Kestens, 2003; Hunter & Elias, 1999; Grime, 2005; Li & Lai, 2007; Öpengin & Sak, 2012) and relationship among friends skills (Avcı, 2009; Çelik, 1994; Hilooğlu & Cenkseven-Önder, 2010; Parker & Asher, 1993; Valkenburg & Peter, 2006). Establishing relationships with people is one of the developmental features for children in their childhood (Demir & Kaya, 2008). These relationships make great contribution to children's social development (Guralnick, 2005). The way children perceive is of great importance in social-emotional learning (Demir & Kaya, 2008). Considering, friendship perception and relationship among friends separately in this study can be explained by the reason that student establishing relationship among friends depends on the students' perceptions of friendship.

The items regarding the social awareness dimension implies the adaptation to the environment and conditions in which individual exists (Doğan, Totan & Sapmaz, 2009) were excluded from the scale since they have low factor loadings as a result of validity analyses. The literature indicates that the concept of social awareness related to social intelligence (Goleman, 2006) has been embedded into early childhood education as well as social studies curricula in Turkey (Doğan, Totan & Sapmaz, 2009; Demir & Doğanay, 2010; Gülay, 2009; Kaf, 2000). However, the sample of these studies consisted of older age groups (Ardahan, 2012; İlhan & Çetin, 2014; Tagay, Baydan & Acar, 2010).

The results revealed that items concerning the effective decision-making dimension were also excluded from the scale due to the low factor loadings. Decision-making refers to one's making wise and healthy decisions on behalf of him/herself or other people (CASEL, 2013). Previous literature showed that studies regarding decision-making were also carried out with adult participants in Turkey (Çelikten, 2001; Karaköse & Kocabaş, 2006; Üstün ve Bozkurt, 2003). By contrast, there are several studies in the international literature investigating effective decision making skills of children and young people (Coppie & Bredekamp, 2009; Lansdown, 2001; Treseder, 1997). This may indicate that cultural variables and differences in a society and education systems influence the way we develop effective decision making skills.

As a result of this study, The Social-Emotional Learning Skills Scale was developed for measuring the social-emotional learning skills of primary school students in 3<sup>rd</sup> and 4<sup>th</sup> grades in depth. Since there is no other valid and reliable scale developed for primary school students in 3<sup>rd</sup> and 4<sup>th</sup> grade level previously in Turkey, this study has an important contribution. In future, the scale should also be re-tested for its validity and reliability to understand the social-emotional learning skills of students in older age groups. Besides,

parental and teacher forms might be generated to evaluate the social-emotional developments of students comprehensively from the parents and teachers point of view of their.

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## Effectiveness of Learning Strategies Taught To Teacher Candidates

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### Abstract

The research was carried out with 41 people educated in Ege University, Faculty of Education, Social Studies Teacher Training Department during the fall semester of 2015 - 2016 academic year. Quasi-experimental design was used in the study. Within the scope of the research, prospective teachers were taught learning strategies lasting for ten weeks. The effectiveness of the training was determined through interview forms, *Learning Strategies Training Assessment Questionnaire* prepared by the researchers, and also by *Motivated Strategies for Learning Questionnaire* (Büyüköztürk, Akgün, Demirel and Özkahveci, 2004). As a result of the research, a significant increase is observed in the level of use of rehearsal, metacognitive, elaboration, regulation, peer learning strategies of teacher candidates. There have been seen no differences in the dimensions of time management, critical thinking, help seeking as well as effort management.

**Keywords:** *Learning strategies, Memory, Permanent learning, Motivation, Awareness.*

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## **Introduction**

The behaviorist approach, having been dominant in the world of education for so long, explained learning by exterior condition levels and through focusing on stimulant-reaction relation, reward, punishment and reinforcer (Senemoğlu, 2011; Hergenhahn and Olson, 2005). The uniqueness of learning for every individual has come into focus following the change in the paradigm. This uniqueness takes its source from the cognitive diagrams, ways used in learning and the level of awareness during the process formed as a consequence of the lives of learners (Senemoğlu, 2011; Açıköz,2002).

The issues of what the individuals think about how they learn and try to improve it by realizing their ways of learning is a subject which has always been important until today and the significance of it still keeps and even raising its value. According to Weinstein and Mayer (1983:3), even though we know the necessity that students should acquire how to learn, it is interesting that we are not challenged to teach them how to learn. We think that the skills of students for problem-solving should be improved; yet we rarely teach them how to do that. We ask students to remember what we tell them, yet we do not conduct any study on memory techniques. It is high time that educators bridged this gap. We need teaching programs that enable us to implement and teach students how to learn, solve problems and remember what we teach them. All of these thoughts are still preserving its actuality and prominence.

In the literature, many studies have been carried out regarding the learning strategies defined as behaviors and thoughts (Weinstein and Mayer, 1983) enabling the process to be more effective as individuals select, code, store and edit the information that is taught (Olaussen & Braten, 1999; Ray, Garavalia, & Murdock, 2003; Fortney, Johnson, & Long, 2001, 2001; Akyol, Sungur and Tekkaya, 2010; Roebbers, Krebs, and Roderer, 2014). Yet, it is seen that the learning strategies have been classified differently in various resources.

Öztürk (1995) has suggested a classification for learning strategies in seven categories in his doctorate study. These categories are; “Attention Strategy”, “Rehearsal Strategy”, “Interpretation Strategy”, “Placing in Mind Strategy”, “Remembering Strategy”, “Cognition Management Strategy” and “Affective Strategies”.

Erden and Akman (2006) have also suggested naming the learning strategies in three categories; which are, “Rehearsal Strategy”, “Interpretation Strategy” and “Organization Strategy.”

In the classification offered by Senemoğlu (2011), she classified learning strategies under six main titles. These strategies are; attention strategies, strategies increasing storing in short-term memory, increase in interpretation, increase in restoring, and motivated strategies as well as metacognitive strategies (Senemoğlu, 2011).

While Senemoğlu (2011) defined the attention strategies as ways for students to focus on subjects, she stated that strategies that increase storing in short-term memory are the ways that expand the permanence period of information in long-term memory, and enable active process of information until being transferred into long-term memory. Strategies that increase storing in short-term memory do not allow the connection between the old and the new information and also the deep interpretation among the information. They are primarily used in simple educational activities requiring the use of short-term memory. In other words, they do not help with the coding of information into the long-term memory (Pintrich, Smith, Garcia & McKeachie, 1991).

Strategies that increase interpretation are defined as the ways that help students with associating the prior knowledge following new information (Senemoğlu, 2011). Interpretation strategies require more cognitive effort and critical thinking when compared to strategies that increase storing in short-term memory (Areepattamannil, 2014). Strategies that increase restoring are considered as the means processing the information in long-term memory, in other words, assist the information in long-term memory to be brought to short-term memory (Senemoğlu, 2011).

Motivated strategies are defined as the applications which facilitate students to be eager to learn. Lastly, metacognitive strategies serve students to think about their own learning process and guide them into managing this process (Senemoğlu, 2011).

Metacognitive strategies are about the metacognitive process of students, their awareness about the process and the ability to control their own learning (Senemoğlu, 2011; Pintrich et al., 1991). Academic motivation and self-confidence of students practicing metacognitive learning strategies are much higher compared to students who do not use this strategy. Students who exercise metacognitive learning strategies are also able to select more appropriate methods and techniques while solving any problem (OECD, 2003; Ghazali Yusri & Nik Mohd Rahimi, 2010).

“Learning strategies” is a field that can be both taught and learned. For that reason, it is of great importance that teachers conduct studies related to teaching strategies. The term “the individual learning to learn” within the change of program, taking place in 2005 (The Ministry of National Education, 2005) coincides with this idea. Today’s teacher candidates are those who will implement these programs. Therefore, it is highly important that teachers are informed about this subject during their pre-service occupational education.

## **Literature Review**

When the literature is reviewed, it is seen that many studies have been conducted on this subject. The results of these researches show that strategy training improves communication skills, advance cognitive

skills and even psychomotor skills, causing an increase in self-confidence and self-sufficiency (Alley ve Deshler, 1979; Fortney, Johanson ve Long, 2001; Young, 2008; Mandich, Polatajko, Missiuna & Miller, 2001).

Mandich et. al. (2001) studied the use of cognitive strategies of handicapped people in their research. Under the light of the research, 13 out of 14 children aged 7-12, who have had difficulty in motor skills, stated that they could practice 39 skills such as cutting meat, throwing ball and writing, which they priorly used to define as difficult.

Fortney, Johnson & Long (2001) unified a lesson, which aims at improving the communication skills via learning strategies training. Consequently, it is concluded that students who participate in the lesson and supported with learning strategies felt themselves more sufficient compared to students who participate in lessons with traditional methods.

Topuzkanamış (2009) reviewed the level of understanding of candidate teachers while reading. According to the study, the level of the Turkish Teaching students was the highest and the one of the Social Sciences Teaching students was the lowest.

The training of “learning strategies” improves the awareness of individuals regarding their learning process, and positively affect their ability to observe their learning process (Alley and Deshler, 1979; Young, 2008). At the same time, this process, besides being formed of the mental processes of individuals concerning themselves, helps prepare a ground for the increase of performance thanks to feedbacks received by peers and teachers alike (Fortney, et. al., 2001). Students, who make use of learning strategies, can adapt their learning strategies and develop their own learning methods once they encounter different learning aims (Olaussen & Braten, 1999). Moreover; students can reach higher success through the design of learning programs including learning strategies (Olaussen & Braten, 1999; Ray, Garavalia& Murdock 2003).

### **The Aim and the Importance of the Research:**

As mentioned before, while the learning strategies can be acquired by individuals by themselves, it can also be taught by experts facultatively. According to Özer (2002:160), the information and skills that students need to acquire about learning strategies are; learning strategies and their features, the ways of using learning strategies and the places to use them. Teachers are of paramount role for the students to acquire this information and skills related to learning strategies. Eroğlu (2012) offered a suggestion for the university students in their first year supporting this idea; that is to write education programs in order to determine their learning strategies and develop them and focus on the importance of giving seminars to instructors about learning and teaching strategies.

As a result, it is a necessity of the age that teachers, and thereby teacher candidates, shall be informed about the training of learning strategies since learning about the learning strategies is effective on the students' perception of self-sufficiency and self-confidence (Alley ve Deshler, 1979; Fortney, Johanson and Long ,2001; Young, 2008) besides being highly influential on their academic success (Akyol et al. 2010; Roebbers, Krebs, and Roderer, 2014). As Baykara (2011) and Zhang (2016) also state, making good use of learning strategies, specifically having comprehensive knowledge on metacognitive strategies, helps teachers to have a high perception of their occupational sufficiency. In this research, by providing the training of learning strategies, it is aimed to promote the knowledge and skills of teacher candidates regarding the subject and bring attention to the vitality of this subject.

### **Question Of The Research:**

What is the influence of the Learning Strategies Training on the candidates of Social Sciences Teaching?

### **Sub-Problems**

- In the total points of Social Sciences Teaching Candidates Motivated Strategies for Learning Questionnaire, is there a significant differentiation before and after the training?
- Is there a significant differentiation in all sub-dimensions of Social Sciences Teaching Candidates Motivated Strategies for Learning Questionnaire before and after the training?
- According to the Motivated Strategies for Learning Questionnaire, is there a change in the use of levels of Social Sciences Teaching Candidates Learning Strategies before and after the training?
- What are the opinions of Social Sciences Teaching Candidates about learning strategies and training before and after the training?

### **The Method**

This research is designed with pre-test/post-test single group experimental pattern. In the beginning of the research, "Motivated Strategies for Learning Questionnaire" (MSLQ) related to learning strategies and pre-interview questions prepared by researchers are used and during the process, teaching candidates are provided with the training of learning strategies. At the end of the process, which was carried out in the beginning, post interview questions prepared by researchers, as well as "Learning Strategies Training Assessment Questionnaire" (LSEAQ) are applied. The research design is presented in Table 1" (Fraenkel, Wallon and Hyun, 2012).

**Table 1:** Research Design

Pre-Test	Research Process			Post-Test
MLSQ	Learning	Strategies	Training	MLSQ
Pre-Interview	Process			LSEAQ
				Post-Interview

### Study Group

This study is carried out with 41 teacher candidates studying their first year at Social Sciences Teaching Department, Faculty of Education, Ege University in the fall semester of 2015-2016 school year. 9 volunteer teacher candidates out of 41 are interviewed.

### Experimental Process Material

Activities of learning strategies used in the research are designed by researchers in five main titles which are attention strategies, strategies that increase storing in short-term memory, strategies that increase interpretation, strategies that increase re-storing and monitoring strategies (Senemoğlu, 2011). The array and the order of the activities, carried out weekly, are given in Table 2.

**Table 2:** The array and the order of the activities

Week	Activity	Time (Min.)	Period of the Activity in the Course
Week 1	Introduction to the Learning Strategies Training – Attention Strategies	30	Beginning the Course
Week 2	Short Term Memory Strategies - Attention Strategies	30	During the Course
Week 3	Elaboration Strategies	20	During the Course
Week 4	Rehearsal Strategies	20	During the Course
Week 5	Making Matrix	60	Beginning the Course (Theoretical) End of the Course (Practice)
Week 6	SQ4R Strategies	60	Beginning the Course (Theoretical) During the Course (Practice)
Week 7	Concept Map	20	Beginning the Course (Theoretical) During the Course (Practice)
Week 8	Schema Strategies	40	Beginning the Course (Theoretical) End of the Course (Practice)
Week 9	Mnemonic Devices	60	Beginning the Course (Theoretical) During the Course (Practice)
Week 10	Cognition- Metacognition Strategies	60	Beginning the Course

As can be understood from Table 2, some of the activities are integrated with the subject and some of them are directly presented. Activity durations vary depending on the features of the strategies. Activities are applied in different ways, considering the features of the strategies; in the beginning, in the end or throughout the lesson.

## Data Gathering Tools

In the research, four scaling tools are used; MLSQ, pre and post interview questions and TSEAQ (Teaching Strategies Training Assessment Questionnaire). Evaluation instruments are introduced below.

**Motivated and Learning Strategies Scale:** Motivated Strategies for Learning Questionnaire, developed by Pintrich, Smith, Garcia and McKeachie (1991) is adapted into Turkish by Büyüköztürk, Ş., Akgün, Ö. E., Demirel, F. and Özkahveci, Ö. (2004). The scale is consisted of two parts; Motivation Strategies and Learning Strategies. As there is no education regarding the motivated strategy within the training of strategy, motivation scale is not used in the research. However, all aspects of Learning Strategies Scale are taken into consideration. Below, Learning Strategies Scale names of sub-dimensions, article numbers in dimensions and reliability co-efficient of dimensions are given in Table 3.

**Table 3:** MSLQ Reliability Coefficient

Questionnaire	Number of Item	Cronbach Alpha
Rehearsal	4	0.62
Metacognitive	4	0.75
Elaboration	4	0.74
Time Management	8	0.61
Critical Thinking	12	0.74
Regulation	6	0.61
Peer Learning	4	0.46
Help Seeking	5	0.49
Effort Management	3	0.41
Learning Strategies	50	

## Results

### • Findings Related to the Research Question

Learning strategies total point (pre-posttest) paired groups *t* test results are given below in Table 4.

**Table 4:** Learning strategies total point (pre-posttest) paired groups *t* test results

	N	X	Ss	sd	t	p
Pre-test	41	217.60	41.42	40	-3.346	.002
Post-test	41	235.38	32			

It is found that after receiving the training of strategy, teacher candidates have a significant increase compared to the total point received from the learning strategies scale before the training [ $t(40)=-3,346$ ,  $p<.05$ ]. While the learning strategies total point average of candidate teachers before the training was  $X=217,60$ , the average raised to  $X=235,38$  after the training. This finding has shown that strategy training has caused a positive differentiation in the learning strategies usage levels of teacher candidates.

• **Findings Related to Research Question**

**2a)** Rehearsal strategies sub dimension (pre-posttest) paired groups *t* test results are given in Table 5.

**Table 5:** *Rehearsal strategies sub dimension (pre-posttest) paired groups t test results*

	N	X	Ss	sd	t	p
Pre-test	41	17.80	5.02	40	-3.949	.000
Post-test	41	20.82	3.26			

A significant increase is found in teacher candidate's total point after the strategy training compared to the total point received from rehearsal strategies sub dimension [ $t(40)=-3,949$ ,  $p<.05$ ]. While teacher candidates' rehearsal sub dimension total point average before the training was  $X=17,80$ , it raised to  $X=20,82$  after the training. This finding has shown that strategy training has caused a significant increase in teacher candidates' level of use of rehearsal strategies.

**2b)** Meta-cognition strategies sub dimension (pre-posttest) paired groups *t* test results are given in Table 6.

**Table 6:** *Meta-cognition strategies sub dimension (pre-posttest) paired groups t test results*

	N	X	Ss	sd	t	p
Pre-test	41	52.84	12.47	40	-3.489	.001
Post-test	41	58.67	8.23			

A significant increase is found in teacher candidate's total point after the strategy training compared to the total point received from meta-cognition strategies sub dimension [ $t(40)=-3,489$ ,  $p<.05$ ]. While teacher candidates' meta-cognition sub dimension total point average before the training was  $X=52,84$ , it raised to  $X=58,67$  after the training. This finding has shown that strategy training has caused significant increase in teacher candidates' level of use of the meta-cognition strategies.

**2c)** Elaboration strategies sub dimension (pre-posttest) paired groups *t* test results are given in Table 7.

**Table 7:** *Elaboration strategies sub dimension (pre-posttest) paired groups t test results*

	N	X	Ss	sd	t	p
Pre-test	41	27.71	6.84	40	-2.463	.018
Post-test	41	30.78	5.32			

Significant increase is found in teacher candidate's total point after the strategy training compared to the total point received from elaboration strategies sub dimension [ $t(40)=-2,463$ ,  $p<.05$ ]. While teacher candidates' elaboration sub dimension total point average before the training was  $X=27,71$ , it raised to  $X=30,78$  after the training. This finding has shown that strategy training has caused significant increase in teacher candidates' level of using meta-cognition strategies.

**2d)** Regulation strategies sub dimension (pre-posttest) paired groups *t* test results are given in Table 8.

**Table 8:** Regulation strategies sub dimension (pre-posttest) paired groups *t* test results

	N	X	Ss	Sd	t	p
Pre-test	41	18.66	4.70	40	-2.392	.022
Post-test	41	20.25	3.97			

Differentiation is found in teacher candidate's total point after the strategy training compared to the total point received from regulation strategies sub dimension [ $t(40)=-2,392$ ,  $p<.05$ ]. While teacher candidates' regulation strategies sub dimension total point average before the training was  $X=18,66$ , it raised to  $X=20,25$  after the training. This finding has shown that strategy training has caused significant increase in teacher candidates' level of the regulation strategies use.

**2e)** Peer learning strategies sub dimension (pre-posttest) paired groups *t* test results are given in Table 9.

**Table 9:** Peer learning strategies sub dimension (pre-posttest) paired groups *t* test results

	N	X	Ss	Sd	t	p
Pre-test	41	9.73	3.83	40	-2.126	.040
Post-test	41	11.15	4.36			

Differentiation is found in teacher candidate's total point after the strategy training compared to the total point received from peer learning strategies sub dimension [ $t(40)=-2,126$ ,  $p<.05$ ]. While teacher candidates' peer learning strategies sub dimension total point average before the training was  $X=9,73$ , it raised to  $X=11,15$  after the training. This finding has shown that strategy training has caused significant increase in teacher candidates' level of using peer learning strategies.

**2f)** No significant differentiation is found statistically between the pre-test and post-test points of help seeking, effort management, critical thinking and time management sub-dimensions of the scale.

**3)** Results of the Learning Strategies Training Assessment Questionnaire are given in Table 10.

**Table 10:** Results of the Learning Strategies Training Assessment Questionnaire

Learning Strategies	Before the experimental process		After the experimental process		
	I don't use (%)	I use (%)	I don't use (%)	I can use (%)	I use (%)
Underlining Strategies,	15	85	6	6	87
Not-taking Strategies (Side of the text),	23	77	13	13	74
Putting Symbol Strategy,	38	62	6	30	64
Matrix (table) strategies,	94	6	49	34	17
Schematization strategy,	68	32	19	36	45
Rehearsal strategy,	15	85	7	4	89
Organization strategies,	55	45	13	19	68
Note taking strategies,	7	93	2	4	93
Summarizing strategy,	13	87	6	6	87
The strategy of creating the main lines,	38	62	9	23	68

SQ4R strategy,	100	0	53	42	5
Elaboration strategy,	45	55	11	26	64
Mnemonic Devices;	26	74	11	9	81
Metacognition strategies	36	64	15	19	66

When the Table 10 is reviewed, it is seen that there is an increase in the total number of people who circled “I’m thinking of using it after the training” and “I’m using it” which takes place in learning strategies training assessment questionnaire.

- Reviews of Social Sciences Teaching Candidates about learning strategies and training before and after the learning strategies training are given below.

#### **4.1. Interviews before the experiment**

4.1.1.) In the interviews conducted before the training, 1 person out of 9 stated that s/he did not use any of the 3 attention strategies, 3 people stated only using 1, 4 people stated that they used 2 attention strategies and 1 person stated using all of them.

K9: One section looks important to me and I think that this section is important. I underline it.

K4: I note important sentences on a notepad or paper and hang it beside my bed.

K8: I take short notes on the free space in my book.

K7: I use Preparing Questions. For example, something is taught in History lesson. I ask myself a question; if I don’t know the answer, that means I didn’t understand the subject well and so I focus on the subject one more time.

4.1.2.) In the interviews conducted before the training, 7 out of 9 people stated that they used 1 interpretation strategy out of 4 and 2 people stated using 2 interpretation strategies.

Organization and forming chart/table/matrix strategies are not used by any teacher candidates.

K6: Later, I write down what I have internalized without memorization.

K6: If it is in the way to prepare the subject titles as a mind map, I do it and hang it where I can clearly see it.

K1: ...I think something has happened because of something but I don’t write it on a paper. I don’t have such habits...

4.1.3) Although mind supporting hints learning strategies are under the main title of interpretation strategies, they are considered as a separate title as activities regarding key word method, regulation with

initial letter and loci method are conducted. Before the training, 3 people stated to have used 1 and 1 person stated to have used 2.

K4: I code in my mind. For example, 1402; it is my room number and in order not to forget my room number when I first came to the dorm, I coded it in my mind with Ankara War... In the lessons, I use the same method; for example, idealism is a Greek word meaning thought and idealism must be something related to thinking.

K1: Yes, codes (strategies of regulating with initials) help. I also do what is taught. I also come up with such absurd things. It is better. It is better when you find it on your own.

K7: I used them in middle school. They worked; it was easy to remember. However, as we cannot code everything, it is not that necessary.

K6: On my notebook, I stuck a small note I prepared on the right corner. During the exam I remember the paper I stuck, associate the colors and remember my notes and I recall the subject.

- In the interviews conducted before the training, 6 out of 9 people stated to have used rehearsal strategy which takes place within the concept of training.

K4: While I was preparing for the university exam, as there were more than 5 movements in Modern Turkish Literature, I separated them into weeks; for example, one week I study “maviciler”, the other week I study “ikinci yeniciler”. When the weeks are finished, I revise them all over.

- The last learning strategy that takes place in the interviews conducted before the training is the Executive Cognition strategies. 2 out of 9 interviewed people stated to have used executive strategies.

K9: I plan everything and I think I don't do anything without a plan; for example, I write down my lessons and see if I'm okay in that lesson, I need to see it. If it's okay, I pass it, if it is not, there is a question mark and it stays... There are times when I think like “I will study this subject for an hour, I will study this for 3 hours” ...

K7: If anything comes up with the study, I firstly try to understand the cause of the problem. For example, if this problem is not for 3 weeks but for 5, I understand that there is something wrong in my plan. I change the plan. If I have caused the problem, the notes I've taken needs to be spread into a week. If I can't do that, I look for the reasons. I try to take precautions accordingly. I think the most important thing is to find the problem.

- In the interviews conducted before the training, it is seen that teacher candidates' reason of using the learning strategies differ.

K9: I think that using the methods helps me find the thing that will be beneficial in learning.

K3: (Underlining and taking notes) I remember better this way. (Benefit of underlining and rehearsal) As my visual memory is stronger, the places I mark are more colorful and as I focus on them more, I remember these parts directly.

- Teacher candidates stated trying different learning strategies according to the level of difficulty and to remember the subjects.

K4: Underlining doesn't work sometimes because, although I have visual memory, I can confuse the parts I underlined as there are more than one note. For example, when I visualize in my mind, it is sometimes a paragraph with five lines and sometimes three. I try to remember which parts I have underlined and then I have a problem visualizing... (As a solution when it doesn't work) Instead of underlining and remembering as a visual, I think of the sentence in whole with the paragraph and I place the sentence within. If it fits, I say okay.

K7: (Learning strategies I used) changed in time. For example, when I was in middle school, subjects were easy for me. Listening to the lesson in class was enough for me. Then I would only revise before the exam. When they got harder, I began to use other methods. I started taking notes. In high school, the notes I took were enough. I would remember the subjects by looking at my notes before the exam. However, in university, even note-taking is not enough. You need to revise them. My way of studying came to this way by adding up.

- Teacher candidates stated that this study was important as they would learn efficient learning ways and they thought it would contribute to their work life.

K6: Now you tell me about a learning strategy. To be prepared for the lesson next week, I can use this method, which is different than the methods I use. I can say this method could work better for me in the future and try to internalize and adapt it into the subject. In that way, of course, it would be effective.

K7: Learning techniques are important for teachers.

- ***Interviews after the training***

4.2.1) During the interviews conducted after the training, it is seen that all teacher candidates use attention strategies.

K3: I use things like taking notes on the page as you have said... I often use note-taking. It is not like summary but I take note of important things.

K5: (This term while preparing for the posts) I will underline, I have already started... I will take notes on small note papers.

4.2.2) It is seen that 4 strategies approached within the concept of interpretation strategies in the interviews conducted after the training are used by candidate teachers. While none of the candidate teachers stated to have used matrix/table forming strategy in the pre-interviews, 6 of the teacher candidates stated using matrix/table forming strategy in the post interviews.

K2: They told us to use matrix, I started using them. For example, I use it in the lesson of Introduction to Teaching Profession.

K8: Earlier, I didn't use subject titles. I used to create schemas. Now I use them.

K3: I used to only read or take note of some things; now I use learning strategies such as summarizing.

4.2.3) Following the application of mind supporters, the use by candidate teachers increased and it raised to five people.

K3: ...Later I take notes of key words. It is not like memorization but I remember better when I write on colored papers.

4.2.4) 3 candidate teachers stated to have used meta-cognitive learning strategies after the training.

K1: If I can't do it, that means I haven't listened to the lesson properly. Because when I listen, I do all of them. In other words, I must have been interested in other things during the lesson. (Is there any precaution you took to manage this process?) If I sit in the back, I go to front rows and I listen more carefully next time and try not to talk to others.

4.2.5) Teacher candidates presented their views in the post interview about the benefits of the training and the lacks in the training; they suggested their ideas for these lacks and shared their ideas about the effectiveness of this training in their work life.

4.2.5.a) Teacher candidates' views about the benefits of the training

K2: ...I didn't even know about (the learning strategies). Now, I try to use them while I study. Sometimes I forget but still, when I remember I try to use other learning strategies and Matrix...

K6: It is that we implement the (learning strategies) right, after it is told.

K7: I don't know. I think the message, which was aimed to be given, is received. I mean the person who is listening must have understood; I think I understood. If it had been long, it would have been reinforced but I think it was enough.

4.2.5.b) Teacher candidates shared their suggestions regarding the fact that training process should be longer, more visuals should be used and the resources used in the training should be shared with them.

K2: I think it would be better if there were more visuals. And it was a little short. It would be better if the duration was longer... I also think it shouldn't be included in a lesson; it should be studied as a separate lesson... While you tell us about it, some take notes and some don't. That's why it can be forgotten. If you shared your (resources), everyone could have something in their hands.

K8: (The duration of the training) could be longer...

4.2.5.c) Teacher candidates stated that they thought of using it as it helped them learning the learning strategies in their work life and if they use it, their students will also use it.

K3: I'm thinking about (teaching it to my students) because it is really making it easier.

K4: Of course, I'd like to teach them. When I teach them, they can improve themselves in different ways. For example, when I come to the class with my notes as a modal, they would also take notes thinking of their teachers as an idol. When I underline, they will also underline.

K7: I'd definitely like to (give the information about strategies) ... (In smaller age groups) it can work if these strategies are applied in simpler ways but of course they shouldn't learn it in the way we did, it should be simplified.

### **Discussion Conclusion and Suggestions**

In the research, 41 teacher candidates take part studying at Social Sciences Teaching Undergraduate Program, in 2015-2016 academic year, at the fall semester. Teacher candidates are given training about learning strategies for 10 weeks and this training is supported with homework of related lesson. In the beginning of the implementation, teacher candidates are reviewed about the subject and MLSQ is applied. After the training, interview and MLSQ is repeated and also TSEAQ, prepared by the researchers, is applied.

Following the first sub-problem of the research, a positive differentiation is seen in the teacher candidates' level of using the learning strategies. In the third sub-problem of the research, an increase is realized in the total number of people who circled in all articles "I think of using it after the training" and "I am using" in TSEAQ. It can be understood from these results that the strategy training was effective. In the literature, there are studies that support the results. Sezgin, Selçuk and Ün Açıkgoz (2008) determined that

the strategy training for physics teachers was effective on the use of strategy. De Corte, Verschaffel, Van De Ven (2001) found out that strategic reading and understanding skills training is effective on teachers. De La Paz (2010) stated that the strategic writing training for students who have and haven't got difficulty in learning was effective. Guthrie, Anderson, Alao and Rinehart (1999) found out as a result of their research that the group who received training about using the strategy, learning concept and interpreting the text presented high-level skills compared to the group who continued with a traditional education.

Following the second sub-problem of the research, a significant increase is observed in the level of teacher candidates' use of rehearsal, metacognitive, elaboration, regulation, peer learning strategies. No differentiation is found in time management, critical thinking, help seeking and effort management dimensions. Literature, in which there is differentiation in the strategy preferences of candidate teachers, draws attention (Kuzu,Balaman, Canpolat, 2014; Yusri, Rahimi, Shah & Wah, 2013; Kılınçer and Uygun, 2013).

In the concept of fourth sub-problem of the research, statements of teacher candidates in pre-interviews are reviewed. It is found out that none of the teacher candidates, who participated in the interviews, has known exactly about the learning strategies mentioned in the training and there is differentiation in their levels of use. Teacher candidates stated to have used attention strategies more after the training. It is highlighted that there is an increase in the usage of matrix, chart and table (Senemoğlu, 2011) which help re-organizing the information, compare what they have learned and store the information in long-term memory. In metacognitive strategies, the aimed level of development could not be achieved. Before the training, while two people stated to have used meta-cognitive strategies, this number increased to three after the training. This situation supports the literature (The Ministry of National Education, 2005) which states that strategy teaching, mainly the meta-cognitive strategies, should start in early ages. The lack of this training in early ages should clearly be compensated later. Opposite to our research result in literature, it is possible to find examples stating that the use of meta-cognitive strategies is more common in university students.

Al-Shaboul, Asassfeh & Alshboul (2010) found out regarding the learning strategies university students use for language learning that following their research, students use the learning strategies above in the average level. Students use the strategies while assessing their own learning in general. In Jordan education system, it is expected that rehearsal strategies are used more as they still use traditional learning methods. However, it is seen that especially in language learning, applications such as flash cards are not preferred in university students but they are used more in early age groups. This research also shows us that the learning strategies preferred by different age groups differ. It is important that teacher candidates are informed about all these strategies and as the needs of the group can differ, they should diversify these strategies and introduce them to their students. Similarly, Areepattamannil (2014) stated that efficiency of

the use of learning strategies can be increased by implementing and developing applications of learning strategies for teachers.

It is also of importance to the career development that teacher candidates are encouraged to use the strategies. In the study, Zhang (2016), in the accuracy level of scoring in the English compositions, aimed at determining the effects of cognition and meta-cognitive strategies are used by the scorers. 13 composition scorers are classified into two groups; those who score according to the accuracy and those who score less accurate. Simultaneous thinking out loud is used to reveal cognitive and meta-cognitive strategies that evaluators used during the assessment. The process of thinking in both groups is compared in qualitative and quantitative aspects. In the research, it is concluded that those who have high awareness about the scoring and who are more experienced are in the classification of accurate scorers.

There have been researches about the relation of age, sex, culture, motivation, learning styles and talent to the use of strategy. Politzer (1983), Ehrman and Oxford (1989) stated that women use the social strategies more than men. Wharton (2000), on the other hand, claimed that in the usage of strategy, pre-learning experiences are more important than the sex. Yusri, Rahimi, Shah & Wah (2013) examined the learning strategies used by the students learning Arabic in Malaysia in terms of their previous life, sexes and both of their interaction. When the students are examined in general, it is seen that they use cognitive and meta cognitive strategies in average level. The strategies which are mostly used by the students are the rehearsal strategies. The reason of this is that the questions in the program are formed by the word structures that take place in the learning program and also due to its relation to remembering. However, it is stated that, for the students to have better information about the language, they should use more complex, high learning strategies. The results of this research are also supported by the results of Kuzu et al. (2014). According to Kuzu et. al., from the most preferred to the least preferred by teacher candidates, the learning strategies are; observing the learning, rehearsal, elaboration and organization strategies. This situation highlights the strategy trainings to be given to teacher candidates with teacher candidates.

There are also presses which defend that cultural features are effective in the use of strategy. For example, while the Asians mostly use the memory strategies, Spanish people state to prefer social strategies more (Politzer,1983). This statement also supports the results of the research.

Above, many variables (age, sex, and learning experiences) that affect the preference of strategies in literature are approached. However, the common point in all researches is that learning strategies have positive and significant effect on learning. Besides that, learning takes place in similar process in all individuals. In other words, learning units and the way that help in learning these units (learning strategies) can be taught, thereby, can be learned. Some criticisms on the program, within the frame of teacher candidate

views related to strategy teaching program used in this research will be shared here and it will be suggested that further researches should be planned considering these criticisms.

Teacher candidates think that the duration of the strategy teaching program used in this research is short (10 weeks). They believe that it is not appropriate to teach this within the course of Introduction to Teaching Profession and suggest that it should be implemented as a separate course. This suggestion can be taken into consideration within teacher training program. It is criticized by the students that the resources of the teaching program are not shared. Following researches can offer the resources for open access. Teacher candidates stated that the training was effective and that they would like to provide such training in their professional life. For this reason, in further researches, it can be designed how the teacher candidates will teach these strategies and the efficiency of these trainings can be done by observing the applications used by teacher candidates in their classes after they are appointed.

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## Phrase-Meaning Relationship According to Situational and Incidental Texts<sup>1</sup>

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### Abstract

The purpose of the current study is to conduct a comparative analysis of the situational story of Sait Faik Abasıyanık entitled as “Alemdağ’da Var Bir Yılan” and the incidental story of Refik Halid Karay entitled as “Boz Eşek” in terms of syntax on the basis of their deep structures. The current study employed case study, one of the qualitative research methods. Within the context of the study, the situational story of Sait Faik Abasıyanık called “Alemdağ’da Var Bir Yılan” was analyzed in comparison with the incidental story of Refik Halid Karay called “Boz Eşek” in terms of syntax on the basis of their deep structures. Therefore, document analysis technique was considered to be suitable for data collection. The sentences in the texts used in the current study were analyzed in terms of syntax and the meaningful units in these sentences were found and named according to their meanings. These meaningful units were named by using the names of the terms explained in grammar books. The results were qualitatively and quantitatively compared on the basis of the term and the meaning.

**Keywords:** *Syntax, deep structure, surface structure, sentence analysis*

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## Introduction

Syntax that is shaped within the internal world of a language is of great importance in terms of both the meaning and order; thus, meaning and order are two basic elements complementing each other. In the construction of a sentence, the trio of skill-mind-reason operates in a synchronized manner and these have to be in harmony. In case of lack of harmony, sentences cannot be constructed in line with the demands of a language and meaning-syntax relationship cannot be established. Each language has its own unique syntactical rules. The syntactical rules of the world languages included in different language families differ from each other and these rules have been elicited through the studies focusing on particular languages. Similarly, in the Turkish language, there have been many studies conducted on syntax of sentences. For this purpose, there are different studies focusing on grammar. In such studies, meaningful units constituted by words or phrases making up a sentence were separated and these separated meaningful units have been attempted to be named with the names of the terms such as subject, indirect object, adverbial clause, direct object and verb in line with the logic of question-answer.

In such studies, almost always written materials have been used. And almost all of these materials are literary texts. In our country, the studies exploring the syntax of Turkish language are usually presented in a limited context in the syntax sections of Turkish grammar textbooks. There is hardly any book focusing solely on the syntax. Moreover, in such studies, sentences are divided into structures that are considered to be units and these units are named with the names of the terms. These studies have been focusing on the surface structure in line with the logic of question-answer. The path followed in these studies does not allow eliciting deep meanings. In this regard, students taking grammar education have difficulties in finding the borders of the units of a sentence and frequently commit errors in syntactical analyses. Trying to make sense of something on the basis of the surface structure and ignoring the deep structure leads to inadequate development of language skills. Overt emphasis on the surface structure means only asking a few questions by heart and receiving their answers. However, it is only possible to enhance the language skills through the analysis of the deep structure. Conducting activities focused on the deep structure can contribute to the development of language skills in terms of language-thought-imagination relationship. It is often difficult to activate thinking in terms of the deep structure. For thinking to be activated, it is necessary to have a rich vocabulary reservoir and to activate the world of imagination. Syntax analysis works should be initiated at the elementary level in a graded manner, from simple to complex on the basis of the exploration of the deep structure. To do so, sample activities are needed.

The purpose of the current study is to conduct a comparative analysis of the situational story of Sait Faik Abasıyanık entitled as “Alemdağ’da Var Bir Yılan” and the incidental story of Refik Halid Karay entitled as “Boz Eşek” in terms of syntax on the basis of their deep structures.

## Method

### Research Design

The study employed case study, one of the qualitative research methods. Case study is a means of deep description and investigation of a limited system (Merriam, 2013: 40). As the data collection method, the document analysis technique was selected. The document analysis technique involves the analysis of the documents including information about the target phenomenon or phenomena. In qualitative research, document analysis can be used as a means of data collection on its own or together with other data collection methods (Yıldırım and Şimşek, 2011: 187).

### Data Collection Instrument

In the current study, the situational story of Sait Faik Abasıyanık called “Alemdağ’da Var Bir Yılan” and the incidental story of Refik Halid Karay called “Boz Eşek” were used as the data collection instruments.

### Data Analysis

Within the context of the study, the situational story of Sait Faik Abasıyanık called “Alemdağ’da Var Bir Yılan” was analyzed in comparison with the incidental story of Refik Halid Karay called “Boz Eşek” in terms of syntax on the basis of their deep structures. The sentences in the texts used in the current study were analyzed in terms of syntax and the meaningful units in these sentences were found and named according to their meanings. Then these meaningful units were named by using the names of the terms explained in grammar books. The results were qualitatively and quantitatively compared on the basis of the term and the meaning.

### Findings

In the current research of syntax, units found on the basis of meaning were also named according to meaning. The term and meaning-based names of the units making up the sentence are given in Table 4.1.

**Table 4.1.** *The term and meaning-based names found in the elementary school third and fourth-grade Turkish language textbooks for the units making up the sentences in the texts analyzed*

Grammar Terms	Meaningful Units
<b>Subject</b>	The thing affecting (Ey-v)
	The thing affected (En-v)
	The action affecting (Ey-e)
	The action affected (En-e)
<b>Object</b>	The thing affecting (Ey-v)
	The thing affected (En-v)
	The action affecting (Ey-e)
	The action affected (En-e)
<b>Direct object</b>	Space

	The thing affecting (Ey-v)
	The thing affected (En-v)
	The action affecting (Ey-e)
	The action affected (En-e)
<b>Adverbial clause</b>	Manner, time, process, reason, purpose, prediction, means, condition, similarity, togetherness, direction
<b>Verb</b>	Heart

Depending on the meaning attained in the sentence, the concepts such as “manner, time, process, reason, purpose, prediction, means, condition, similarity, togetherness and direction” were named as a term by using a single phrase “adverbial clause”. On the other hand, these concepts were found to be occupying the positions of the one affecting and the one affected in the deep structure. The same is true for the other elements. Thus, the terms of “subject”, “object” and “indirect object” are named as “the thing affecting, the thing affected, the action affecting, the action affected”. The term of “indirect object” also means the concept of “space”. The basic element to which the other elements are connected, “verb” is named as “heart” in the sentence when the meaning is considered.

**Table 4.2.** Grammar terms found in the texts called “Alemdağ’da Var Bir Yılan” and “Boş Eşek”

Grammar Terms	Texts					
	Alemdağ’da Var Bir Yılan		Boz Eşek		Total	
	f	%	f	%	f	%
Verb	163	32,6	183	29,1	346	30,7
Subject	163	32,6	183	29,1	346	30,7
Object	40	8	46	7,3	86	7,6
Direct object	58	11,6	63	10,04	121	10,7
Adverbial clause	76	15,2	152	24,2	228	20,2
Total	500	100	627	100	1127	100

When Table 4.2 is examined, it is seen that after the basic elements of a sentence (subject-verb), the adverbial clause is the element most frequently used in both of the texts. Analysis of texts in terms of grammar terms can yield certain results related to the sentence structures possessed by the texts and makes it possible to make comparisons. Therefore, a need arises to analyze words and phrases in texts according to their meanings because deep structure-focused analyses can only be conducted by considering the meaning.

**Table 4.3.** Meaningful units found in the texts called “Alemdağ’da Var Bir Yılan” and “Boş Eşek”

Meaningful units	Texts					
	Alemdağ’da Var Bir Yılan		Boz Eşek		Total	
	f	%	f	%	f	%
Heart	163	32,6	183	29,1	346	30,7
The thing affecting	101	20,2	108	17,2	209	18,5
The thing affected	104	20,8	119	18,9	223	19,7
The action affecting	6	1,2	23	3,6	29	2,5
The action affected	-	-	1	0,1	1	0,08
Space	46	9,2	38	6,06	84	7,4
Time	37	7,4	37	5,9	74	6,5

Process	1	0,2	-	-	1	0,08
Style	28	5,6	97	15,4	125	11,09
Purpose	1	0,2	1	0,1	2	0,1
Means	3	0,6	8	1,2	11	0,9
Condition	1	0,2	2	0,3	3	0,2
Togetherness	4	0,8	1	0,1	5	0,4
Similarity	5	1	1	0,1	6	0,5
Reason	-	-	3	0,4	3	0,2
Prediction	-	-	4	0,6	4	0,3
Direction	-	-	1	0,1	1	0,08
Total	500	100	627	100	1127	100

The meaningful units detected in the texts analyzed are shown in Table 4.3. From the table it is seen that while the most used element in the text called “Alemdağ’da Var Bir Yılan” is “space” (f.46; 9.2%); it is “style” in the text called “Boz Eşek” (f.97; 15.4%). As attitudes are given a greater priority in incidental texts, here the element of style is used relatively more frequently because situations are turned into incidences through the style. For an event to occur, styles should be involved in. For example, eating is a state; yet, eating fast results in something sticking across the throat and thus, the state of eating turns to an incident. While the element of style recurs 97 times in the incidental story of Refik Halid, it recurs only 28 times in the situational story of Sait Faik; in this regard, there is a great difference between the two texts. The sample sentences in which the element of style was found in the incidental and situational texts are given below.

En-v/Similarity/**Style**/Heart

Subject/Adverbial Clause/**Adverbial Clause**/Verb

One of them/ like a horse with glanders/was coughing/badly. (Boz Eşek, p.53)

En-v//**Style**/Ey-e/Heart

Subject/**Adverbial Clause**/Adverbial Clause/Verb

Panco/ is trying/ to hide himself/**by using Luka Efendi as a shield** (Alemdağ’da Var Bir Yılan, p.27)

The same is true for the actions affecting and elements of means. As there are elements involved in the plot, in incidental texts, these elements are seen to be usually used. While there are 23 elements of action affecting in the incidental text analyzed in the current study, there are 6 elements of action affecting, there is a great difference between these two texts in this regard. In a similar manner, while there are 3 elements of means in the situational text, there are 8 elements of means in the incidental text; thus, there is a great difference between these two texts in this regard. Sample sentences in which the elements of actions affecting and means were detected are given below.

Space/Means/En-e/**Ey-e**/Heart

Indirect object/Adverbial Clause/Subject/**Object**/Verb

From far away/with his keen eyes/someone/saw/**that the empty donkey had returned**. (Boz Eşek, p.60)

En-v/En-v/Style/**Ey-e**/Heart

Subject/Indirect Object/Adverbial Clause/**Object**/Verb

The woman/was telling/me/**how the cat jumped down from the fifth floor**/in Turkish. (Alemdağ'da Var Bir Yılan, p.26)

En-v/**Means**/Ey-v/Heart

Subject/Adverbial Clause/Object/Verb

The old man/was telling/something/**with his exhausted voice**. (Boz Eşek, p.54)

**Means**/Heart/En-v

Adverbial /Verb/Subject

Everything/ starts/ **with loving someone**. (Alemdağ'da Var Bir Yılan, p.25)

Moreover, in the texts analyzed, while the elements of space, time and style are frequently employed; the elements such as purpose, reason, condition, prediction, togetherness, direction are seen to be rarely used. As these elements are not widely used in the daily life and they are more widely used in special situations, they are employed in both of the texts relatively less frequently when compared to the other elements. Sample sentences in which the elements of reason and purpose were found are given below.

En-v/Purpose/Heart

Subject/Adverbial Clause/Verb

(They)/ slowed down/ to see my face. (Alemdağ'da Var Bir Yılan, p.23)

Reason/Space/En-v/Heart

Adverbial Clause/Indirect Object/Subject/Verb

With the noise made by the coming people/faces/looked through the doors/one by one. (Boz Eşek, p.55)

**Table 4.4.** Patterns found the texts called “Alemdağ’da Var Bir Yılan” and “Boş Eşek”

Term-based patterns	f	Meaning-based patterns	f
<b>Subject/Verb</b>	<b>92</b>	<b>Ey-v/Heart</b>	<b>46</b>
		<b>En-v/Heart</b>	<b>44</b>
		Ey-e/Heart*	2
<b>Subject/Adverbial Clause/Verb</b>	<b>46</b>	<b>Ey-v/Style/Heart</b>	<b>13</b>
		En-v/Style/Heart*	10
		Ey-e/Style/Heart*	2
		En-v/Purpose/Heart	1
		Ey-v/Purpose/Heart*	1
		En-v/Similarity/Heart	3
		Ey-v/Similarity/Heart	1
		<b>Ey-v/Time/Heart</b>	<b>4</b>
		<b>En-v/Time/Heart</b>	<b>6</b>
		En-v/Reason/Heart*	2
		En-v/Condition/Heart*	1
		Ey-v/Prediction/Heart*	1
		En-v/Process/Heart	1
<b>Subject/Object/Verb</b>	<b>29</b>	En-v/Ey-v/Heart	5
		<b>Ey-v/En-v/Heart</b>	<b>13</b>
		<b>En-v/Ey-e/Heart</b>	<b>11</b>
<b>Subject/Indirect Object/Verb</b>	<b>20</b>	<b>En-v/Space/Heart</b>	<b>6</b>
		Ey-v/Space/Heart	5
		<b>En-v/Ey-v/Heart</b>	<b>9</b>
<b>Subject/Adverbial Clause/Adverbial Clause/Verb</b>	<b>17</b>	En-v/Time/Time/Heart	1
		Ey-v/Style/Time/Heart*	1
		Ey-v/Time/Togetherness/Heart	1
		Ey-v/Style/Style/Heart*	3
		En-v/Style/Style/Heart*	3
		En-v/Togetherness/Style/Heart	1
		En-v/Similarity/Style/Heart*	1
		En-v/Prediction/Style/Heart*	1
		<b>En-v/Time/Style/Heart</b>	<b>5</b>
<b>Subject/Adverbial Clause/Indirect Object/Verb</b>	<b>15</b>	Ey-v/Style/Space/Heart	4
		Ey-v/Style/En-e/Heart*	1
		En-v/Style/Space/Heart*	2
		En-v/Time/Space/Heart*	1
		En-v/Time/Ey-e/Heart*	1
		En-v/Style/Ey-v/Heart	1
		En-v/Style/En-v/Heart*	1
		<b>En-v/Style/Ey-e/Heart</b>	<b>3</b>
		En-v/Similarity/Ey-v/Heart	1
<b>Indirect Object/Subject/Verb</b>	<b>15</b>	<b>Space/Ey-v/Heart</b>	<b>12</b>
		<b>Space/En-v/Heart</b>	<b>3</b>
<b>Adverbial Clause/Subject/Verb</b>	<b>11</b>	Time/Ey-v/Heart	5
		<b>Time/En-v/Heart</b>	<b>3</b>
		Condition/Ey-v/Heart	1
		Style/Ey-v/Heart*	1
		Style/En-v/Heart*	1
<b>Subject/Indirect Object/Object/Verb</b>	<b>11</b>	<b>En-v/Space/Ey-v/Heart</b>	<b>5</b>
		Ey-v/Space/En-v/Heart	1
		En-v/Ey-v/Ey-v/Heart*	3
		Ey-e/En-v/En-v/Heart*	1
		En-v/Ey-v/Ey-e/Heart	1

<b>Subject/Adverbial Clause/Object/Verb</b>	<b>10</b>	<i>En-v/Style/Ey-e/Heart</i>	<i>1</i>
		<i>En-v/Style/Ey-v/Heart*</i>	<i>2</i>
		<i>Ey-v/Style/En-v/Heart*</i>	<i>1</i>
		<i>Ey-v/Time/En-v/Heart*</i>	<i>1</i>
		<i>Ey-v/Means/Ey-v/Heart*</i>	<i>1</i>
		<b>En-v/Time/Ey-v/Heart</b>	<b>4</b>
<b>Subject/Object/Indirect Object/Verb</b>	<b>5</b>	<i>Ey-v/En-v/Space/Heart</i>	<i>4</i>
		<i>Ey-v/Ey-v/Space/Heart*</i>	<i>1</i>
<b>Subject/Object/adverbial Clause/Verb</b>	<b>5</b>	<b>En-v/Ey-v/Style/Heart</b>	<b>5</b>
<b>Indirect Object/Subject/Indirect Object/Verb</b>	<b>4</b>	<i>Space/En-v/Means/Heart</i>	<i>1</i>
		<i>Space/Ey-v/Style/Heart*</i>	<i>3</i>
<b>Subject/Indirect Object/Indirect Object/Verb</b>	<b>2</b>	<i>En-v/Space/Space/Heart</i>	<i>1</i>
		<i>Ey-v/Space/Ey-v/Heart*</i>	<i>1</i>
<b>Adverbial Clause/Subject/Indirect Object/Verb</b>	<b>2</b>	<i>Time/En-v/Ey-v/Heart</i>	<i>1</i>
		<i>Time/En-v/En-v/Heart*</i>	<i>1</i>
<b>Subject/Adverbial Clause/Object/Adverbial Clause/Verb</b>	<b>2</b>	<i>En-v/Time/Ey-v/Style/Heart</i>	<i>1</i>
		<i>Ey-v/Style/En-v/Style/Heart*</i>	<i>1</i>
<b>Subject/Adverbial Clause/Adverbial Clause/Object/Verb</b>	<b>2</b>	<i>Ey-v/Time/Style/En-v/Heart</i>	<i>1</i>
		<i>En-v/Style/Condition/En-v/Heart*</i>	<i>1</i>
<b>Adverbial Clause/Adverbial Clause /Indirect object/Subject/Verb</b>	<b>2</b>	<i>Time/Time/Space/Ey-v/Heart</i>	<i>1</i>
		<i>Time/Style/Space/En-v/Heart*</i>	<i>1</i>
<b>Subject/Adverbial Clause/Adverbial Clause/Indirect Object/Verb</b>	<b>2</b>	<i>Ey-v/Style/Togetherness/Space/Heart</i>	<i>1</i>
		<i>Ey-v/Style/Style/Space/Heart*</i>	<i>1</i>
<i>Verb/Subject</i>	<i>2</i>	<i>Heart/Ey-v</i>	<i>2</i>
<i>Indirect Object/Adverbial Clause/Subject/Verb</i>	<i>2</i>	<i>Space/Tarz/Ey-v/Heart</i>	<i>2</i>
<i>Subject/Indirect Object/Adverbial Clause/Object/Verb</i>	<i>2</i>	<i>En-v/En-v/Style/Ey-e/Heart</i>	<i>1</i>
		<i>Ey-v/Space/Time/En-v/Heart</i>	<i>1</i>
<i>Subject/Verb/Indirect Object</i>	<i>1</i>	<i>Ey-v/Space/Space</i>	<i>1</i>
<i>Object/Subject/Verb</i>	<i>1</i>	<i>En-v/Ey-v/Heart</i>	<i>1</i>
<i>Adverbial Clause/Verb/Subject</i>	<i>1</i>	<i>Means/Heart/En-v</i>	<i>1</i>
<i>Subject/Adverbial Clause/Verb/Indirect Object</i>	<i>1</i>	<i>En-v/Time/Heart/Space</i>	<i>1</i>
<i>Subject/Indirect Object/Verb/Adverbial Clause</i>	<i>1</i>	<i>En-v/Space/Heart/Style</i>	<i>1</i>
<i>Subject/Adverbial Clause/Verb/Adverbial Clause</i>	<i>1</i>	<i>En-v/Style/Heart/Time</i>	<i>1</i>
<i>Indirect Object/Subject/Object/Verb</i>	<i>1</i>	<i>Space/En-v/Ey-v/Heart</i>	<i>1</i>
<i>Subject/Adverbial Clause/Adverbial Clause/Verb/Indirect Object</i>	<i>1</i>	<i>En-v/Time/Style/Heart/Space</i>	<i>1</i>
<i>Adverbial Clause/Subject/Indirect Object/Adverbial Clause/Verb</i>	<i>1</i>	<i>Time/En-v/Space/Style/Heart</i>	<i>1</i>
<i>Subject/Object/Adverbial Clause/Indirect Object/Verb</i>	<i>1</i>	<i>Ey-v/En-v/Style/Space/Heart</i>	<i>1</i>
<i>Subject/Indirect Object/Object/Indirect Object/Verb</i>	<i>1</i>	<i>Ey-v/Space/En-v/Space/Heart</i>	<i>1</i>
<i>Subject/Adverbial/Clause/Object/Adverbial Clause/Adverbial Clause/Indirect Object/Verb</i>	<i>1</i>	<i>Ey-v/Time/En-v/Style/Togetherness/Space/Heart</i>	<i>1</i>
<i>Subject/Adverbial Clause/Adverbial Clause/Object/Adverbial Clause/Adverbial Clause/Object/Verb</i>	<i>1</i>	<i>Ey-v/Means/Time/En-v/Time/Style/En-v/Heart</i>	<i>1</i>
<b>Subject/Indirect Object/Adverbial Clause/Verb*</b>	<b>9</b>	<i>En-v/Space/Style/Heart *</i>	<i>3</i>
		<i>Ey-v/En-v/Style/Heart *</i>	<i>3</i>
		<i>En-v/Ey-v/Means/Heart *</i>	<i>2</i>
		<i>Ey-v/Space/Style/Heart*</i>	<i>1</i>
<b>Adverbial Clause/Subject/Adverbial Clause/Verb*</b>	<b>3</b>	<i>Time/En-v/Style/Heart*</i>	<i>2</i>
		<i>Time/Ey-v/Style/Heart*</i>	<i>1</i>
<b>Subject/Adverbial Clause/Adverbial Clause/Adverbial Clause/Verb*</b>	<b>2</b>	<i>Ey-v/Time/Means/Style/Heart *</i>	<i>1</i>
		<i>Ey-v/Style/Style/Style/Heart *</i>	<i>1</i>

Indirect Object/Indirect Object/Subject/Object/Verb*	2	Space/Means/En-v/Ey-e/Heart*	1
		Space/Time/Ey-v/Ey-v/Heart*	1
Subject/Adverbial Clause/Adverbial Clause/Indirect Object/Verb*	2	En-v/Time/Style/Ey-e/Heart*	1
		En-v/Time/Time/Space/Heart *	1
Adverbial Clause/Indefinite Object /Verb*	2	Time/Ey-v/Heart*	2
Adverbial Clause/Indirect Object/Indefinite Object/Verb*	1	Time/Space/Ey-e/Heart *	1
Adverbial Clause/Adverbial Clause/Subject/Verb*	1	Time/Togetherness/Ey-v/Heart *	1
Adverbial Clause/Indirect Object/Subject/Verb*	1	Reason/Space/En-v/Heart*	1
Adverbial Clause/Subject/Adverbial Clause/Object/Verb*	1	Prediction/En-v/Style/Ey-v/Heart *	1
Adverbial Clause/Subject/Indirect Object/Indirect Object/Verb*	1	Style/En-v/Space/Space/Heart *	1
Subject/Adverbial Clause/Object/Indirect Object/Verb*	1	En-v/Style/En-v/Space/Heart*	1
Subject/Indirect Object/Adverbial Clause/Adverbial Clause/Verb*	1	En-v/Space/Style/Style/Heart *	1
Subject/Adverbial Clause/Object/Object/Verb*	1	En-v/Prediction/Ey-e/Ey-e/Heart *	1
Adverbial Clause/Subject/Adverbial Clause/Indirect Object/Verb*	1	Process/En-v/Style/Space/Heart*	1
Adverbial Clause/Adverbial Clause/Subject/Adverbial Clause/Adverbial Clause/Verb*	1	Means/Time/Ey-v/Time/Style/Heart*	1
Subject/Adverbial Clause/Adverbial Clause/Adverbial Clause/Adverbial Clause/Verb*	1	En-v/Style/Means/Style/Style/Heart *	1
Subject/Adverbial Clause/Indirect Object/Object/Adverbial Clause/Verb*	1	En-v/Time/Space/Ey-v/Style/Heart*	1
Subject/Adverbial Clause/Adverbial Clause/Adverbial Clause/Adverbial Clause/Verb*	1	Ey-v/Style/Style/Style/Style/Direction/Heart*	1
Subject/Adverbial Clause/Object/Adverbial Clause/Adverbial Clause/Adverbial Clause/Verb*	1	Ey-v/Time/En-v/Time/Style/Distance/Heart*	1
Subject/Adverbial Clause/Adverbial Clause/Adverbial Clause /Object/Adverbial Clause/Verb*	1	Ey-v/Time/Means/Style/Ey-v/Style/Heart*	1
56 term-based phrases	346	120 meaning-based phrases	346

The patterns determined in the texts analyzed in the current study are given in Table 4.4. The patterns shared by both of the texts are given in “**bold**”, the patterns only found in the text called “Alemdağ’da Var Bir Yılan” are presented in “*italic*” and the patterns only found in the text called “Boz Eşek” are indicated with “\*”.

As a result of the analysis of the total 346 sentences found in the texts explored in the current study, 56 term-based phrase and 120 meaning-based phrase. Of the 56 meaning-based phrases, 19 are common in both of the texts; 16 are only found in the text called “Alemdağ’da Var Bir Yılan” and 21 are only found in the text called “Boz Eşek”. Of the 120 meaning-based phrases, 17 are shared by both of the texts; 42 are only found in the text called “Alemdağ’da Var Bir Yılan” and 61 are only found in the text called “Boz Eşek”.

When all these data are considered, it is seen that the number of the meaning-based phrases is higher than that of the term-based phrases. This shows the richness of Turkish language.

**Table 4.5.** *The first elements of the phrases found in the texts called “Alemdağ’da Var Bir Yılan” and “Boş Eşek”*

Grammar Terms	f	%	Meaningful Units	f	%
<b>Subject</b>	290	83,8	Ey-v	163	47,1
			En-v	122	35,2
			Ey-e	5	1,4
<b>Adverbial Clause</b>	29	8,3	Time	20	5,7
			Condition	2	0,5
			Style	2	0,5
			Means	2	0,5
			Reason	1	0,3
			Prediction	1	0,3
			Process	1	0,3
<b>Indirect Object</b>	24	6,9	Space	24	6,9
<b>Verb</b>	2	0,5	Heart	2	0,5
<b>Object</b>	1	0,2	En-v	1	0,3
<b>Total</b>	346	100	Total	346	100

The frequencies and percentages of the first elements of the phrases found in the texts analyzed in the current study are given in Table 4.5. From Table 4.5., it is seen that in 83.8% of the sentences, the subject is the first element; yet, when the deep structure is examined, it is seen that in 47.1% of the sentences, the thing affecting; in 35.2% of the sentences, the thing affected and in 1.4% of the sentences, the action affecting is the first element of the sentence. In a standard sentence constructed according to the rules of syntax in Turkish language, the initial position is occupied by the subject and the final position is occupied by the verb. Thus, in light of the findings of the current study, it can be argued that both of the authors adhered to the rules of syntax of Turkish language to a great extent in their works.

The research findings also show that Refik Halid Karay and Sait Faik Abasıyanık not only used the subject in the initial position of their sentences, but also some other elements such as adverbial clause, indirect object and object. Furthermore, in the text written by Sait Faik, inverted sentences were also used. Thus, in 8.3% of the analyzed sentences, the initial position is occupied by an adverbial clause; in 6.9% of the sentences, the first element is the indirect object; in 0.5% of the sentences, the first element is the verb and 0.3% of the sentences, the first element is the direct object. When we look at the deep structure, it is seen that space (6.9%) and time (5.7%) elements are used more frequently as the first element than the other elements. As these elements are widely used in the daily life, they might have been attached greater priority in both of the texts.

## **Discussion, Results and Suggestions**

### **Discussion**

In the current study, it was concluded that detection of the words and phrases in texts on the basis of the meaning they possess enables the reader to reach a better understanding and internalization of the meaningful units making up sentences. The findings of Üstünoğlu (2010), Demirci (2010), Kurudayıoğlu (2014) and Börekçi (2015) also support this finding. In these studies, it was emphasized that meaning should be taken into consideration in syntax analyses because deep-structure focused studies can only be conducted by considering the meaning.

Consideration of the meanings of the words gained in sentences and meaning-focused syntax analyses allow us to discover the richness of a language. In a study conducted by Işık (2012), it was concluded that internalization of the phrase-meaning relationship can make positive contributions to the development of language skills. This finding concurs with the findings of the current study.

### **Results**

Inadequate amount of research focusing on syntax in our country, its being restricted to grammar books and investigation of it mostly on the basis of surface structure result in lack of emphasis on thought and imagination while studying the concept of sentence. However, the concept of sentence that is always with us in our life is our regular, real and continuous partner. Understanding and making sense of the sentence primarily depends on what kinds of works are conducted on it. One of these works, probably the most important one, is meaning-based activities focusing on syntax.

In the current study, the sentences were analyzed according to both the meanings they possess and the existing grammar terms. It was found that sentence analysis conducted on the basis of the grammar terms is quite superficial when compared to the one conducted on the basis of the meaning. Thus, it was concluded that the sentence analysis conducted considering the meaning enables us to discover the deep structure of sentences, to establish language-thought-imagination relationship and to reveal the richness of a language.

### **Suggestions**

In syntax analysis studies conducted in line with the classic approach, the main focus is on the surface structure and deep structure is mostly ignored. In order to focus on the deep structure, the trio of language-thought-imagination should operate in harmony in human mind. For the construction of this trio and establishment of the harmony, there is a need for a serious instruction on language-thought-imagination relationship. This instruction should be initiated at the elementary education and proceeds through schooling in a systematic manner.

Research conducted on the basis of phrase-meaning relationship is believed to offer guidance for academicians and practitioners studying in this field. Such research can make contributions to the detection of the meaningful units making up a sentence by investigating the deep structure, to the comprehension of these meaningful units by referring to the daily life, to the development of listening, speaking, reading and writing skills within the context of language-thought-imagination, to the easier comprehension of abstract constructs and to the generation of proper and accurate associations between abstract and concrete entities (abstract-abstract, abstract-concrete, concrete-concrete).

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## The Validity of Educational Disadvantage Policy Indicators

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### Abstract

Many countries have implemented policies to prevent or combat educational disadvantage associated with socioeconomic factors in the students' home environment. Under such policies, educational institutions generally receive extra support from the central or local government. The support is normally based on indicators available in the home environment of the children, mostly family-structural characteristics. In the Netherlands, the core of educational disadvantage policy is the so-called weighted student funding scheme, which awards schools with disadvantaged students additional financial resources. When this scheme was developed in 1984, three indicators of disadvantage were selected, namely: parental education, occupation, and ethnicity. Analyses conducted at the time established a predictive validity estimate of 0.50, amounting to 25 percent of explained variance. Nowadays, some thirty years later, the funding scheme is based on only one indicator, namely parental education. Analyses performed on data collected in 2014 show a validity estimate of 0.20, thus accounting for no more than four percent of variance. This dramatic decrease of the indicator's predictive validity shows that the empirical basis of the Dutch weighted student funding scheme has become highly problematic. It is suggested that instead of employing family characteristics as educational disadvantage indicators, the actual performance of students based on test achievement and teacher observations may offer a more valid alternative.

**Keywords:** *Educational Disadvantage Policy, Weighted Student Funding, Predictive Validity, The Netherlands*

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## **Introduction**

A recent review of education systems complimented the Netherlands for its excellence, which is evidenced by a strong average performance, but at the same time cautioned her for a widening achievement gap between students from disadvantaged socioeconomic backgrounds and more privileged students (OECD, 2016). The latter is not a unique development and can be witnessed in several Western countries (Davis-Kean & Jager, 2014; Goodman & Burton, 2012; Goodman, Sands & Coley, 2015; Machin & McNally, 2012). This occurs despite the fact that in most countries under the umbrella of educational disadvantage policy targeted school financing schemes and stimulation programs have been implemented specifically designed to address these inequalities (Ballas et al., 2012; OECD, 2012; Ross, 2009; Stevens & Dworkin, 2014). Such compensatory policy instruments aim at achieving equality by unequal treatment according to the principle of giving more to those who have less (Demeuse, Frandji, Greger & Rochex, 2012). For the allocation of the support, a wide range of indicators are used to identify the policy's target groups, that is the disadvantaged students. Most indicators concern family structural characteristics, such as parents' education, parents' occupation, ethnicity/race, home language, family structure, family income, and free school-meal eligibility. Research into the reliability and, especially, the predictive validity of these proxy measures for disadvantage is scarce, or typically not up to date. Insofar results are available, caution is warranted as to the appropriateness of the indicators (Colpin et al., 2006; Gorard, 2012; Kounali, Robinson, Goldstein & Lauder, 2008; Ladd & Fiske, 2009).

In the present study, the focus is on the Dutch educational disadvantage policy, and specifically on the most important instrument of this policy, the weighted student funding scheme which is used to allocate additional financial resources to schools with disadvantaged students. In the next section, this policy and funding scheme will be further explained. Then, the results of empirical analyses into the validity of the educational disadvantage indicators will be presented, and some conclusions will be drawn.

## **The Dutch Educational Disadvantage Policy**

Educational disadvantage policy in the Netherlands has been in effect since the 1970s. It aims at preventing and combating educational disadvantage caused by social, economic and cultural factors in the home environment of children. Its origin lies in the meritocratic ideal that educational opportunities should be solely determined by innate abilities and that environmental factors should play no role (Meijnen, 2003). To compensate for deficiencies, or lack of cultural capital, for children living in lower socioeconomic milieus (Bourdieu & Passeron, 1977; Huang & Liang, 2016), a policy was initiated to award schools with disadvantaged students extra financial support. Especially politicians from the political left (i.e. the Labour Party) supported this policy.

Initially, the policy focused on children of native-Dutch parents from lower socio-economic environments. However, in the 1960s the number of children from non-Western immigrants in Dutch education institutions started to increase dramatically. Three categories can be discerned: (1) immigrants from former Dutch colonies (Surinam and the Netherlands Antilles); (2) so-called guest workers from Mediterranean countries (especially Turkey and Morocco) and subsequent waves of immigration from these countries for purposes of family reunification and family formation; and, more recently (3) asylum seekers from Eastern Europe, Africa and the Middle East. In 2016 the Netherlands had nearly 17 million inhabitants, and the largest non-Western immigrant groups had the following origins and numbers: Turkey (397,000), Morocco (386,000), Surinam (349,000), and the Netherlands Antilles (151,000) (Statline, 2017). One characteristic shared by most of these non-Western immigrants is their comparatively low level of education. Because of their low socio-economic status and immigrant background (and inherent language and cultural differences), the children of the non-Western immigrants soon became the main target groups of the educational disadvantage policy.

Right from the start, there has been discussion regarding which indicators of disadvantage should be used to award schools extra budgets. Two approaches can be distinguished, a groupwise versus an individual approach. In the first case, support is given for *all students* who have one or more family structural characteristics in common, regardless whether they actually have educational delays or not. It is assumed that all students who meet these characteristics suffer from a comparable lack of stimulation in the home environment, and therefore need to be compensated for these deficiencies at school. It is then crucial to select indicators in the home that best predict educational opportunities. In the second case, support is given to *individual students* who actually show educational delays. The relationship with the child's social milieu in this approach is indirect. Both approaches have advantages and disadvantages (Colpin et al., 2006; Jepma & Beekhoven, 2013). In the groupwise approach, the predictive validity of the indicators is paramount. When the validity is low, there is a high probability of false-positives and false-negatives, or on the one hand students who wrongly receive support, or on the other hand students who wrongly do not receive support. An advantage of the groupwise approach is that it facilitates preventive action at an early stage. Furthermore, it is relatively easy and cheap to collect the information on the indicators. In contrast, a disadvantage of the individual approach is that it can be costly, because children need to be tested individually. In addition, action takes the form of remediation *after* it is established that a child has delays. Also, there is discussion regarding the reliability of testing very young children. An advantage – certainly for the older children – is that there will be fewer false-positives and false-negatives. After heated discussions in the Dutch Parliament as to the pros and cons of both approaches, the groupwise approach eventually was chosen and a so-called student weight funding scheme was developed to award schools additional financial resources for combating educational disadvantage.

### **The Student Weight Funding Scheme**

The basis for the student weight funding scheme, which in essence is still functioning now, lies in analyses performed in 1984 (Doesborgh, 1984). At the time, the predictive power of three indicators – professional level of father and educational level of father and mother – of the children's educational attainment was estimated using a national large-scale dataset. Ethnic origin was also considered, but as there were no comparable data available containing information on ethnicity, this indicator could not be included in the analyses. The results showed that the educational level of the father was the best predictor with a correlation of 0.42 and 17.6% ( $=0.42^2$ ) of variance accounted for. Adding both other indicators resulted in only a limited improvement of the prediction: educational level of mother 2.7% extra, and professional level of father another 1.0% extra. It was decided to dichotomize the three indicators (low versus intermediate and high educational and professional level). For educational level of father, this resulted in 11.9% of explained variance, for professional level of father in 3.6% extra, and for educational level of mother in another 2.1% extra; thus, a total of 17.6% explained variance and a multiple correlation  $R$  of 0.42.

In the course of the years, the student funding scheme has been reconsidered several times (Claassen & Mulder, 2011; Fettelaar & Smeets, 2013). The most important changes implemented included, first, dropping professional level as an indicator, and then also ethnicity (or more precisely: parental country of birth). At present, there is only one indicator left, namely parental level of education: the more students with low-educated and very low-educated parents a school caters for, the higher the extra budget the school receives. Three categories are distinguished: a student weight of 1.2 for very low-educated parents, a weight of 0.3 for low-educated parents, and a weight of 0.0 for parents with an intermediate or higher education; the two previous categories are considered the disadvantaged students, the latter the non-disadvantaged students (CFI, 2006).

In the 2013/14 school year, the total budget for the student weight funding scheme in the primary education sector was €358 million. However, as the Early Childhood Care and Education policy is also based on this scheme, the total sum amounted to €729 million (Algemene Rekenkamer, 2015). In that year, 89% of the primary school student population had a weight of 0.0, 6% a weight of 0.30, and 5% a weight of 1.20 (StatLine, 2016). In the 2008/09 school year, the average budget for a 0.0 student was €900, for a 0.3 student €6900, and for a 1.2 student €10800. Consequently, for a 1.2 student a school received more than twice as much as for a 0.0 student (Kuhry & De Kam, 2012).

The student weight funding budget is awarded to the school boards as part of the lump sum they receive from the Ministry of Education (De Vijlder, Verschoor, Rozema, Van Velden & Van Gansewinkel, 2012). Although the extra funding is based on individual characteristics, this budget is not earmarked, either at the individual, or at the group level. School boards and schools are free to spend it. Therefore, it is the question if the extra financial resources end up with the students for whom they were awarded. A previous

study concluded that an important part of the schools indicated that they were not aware of the fact that they received extra funding. Furthermore, only a small number of these schools deployed the money for specific activities aimed at combating educational disadvantage. In practice, the extra means were considered as regular budget which in most cases resulted in smaller classes (Mulder, 1996). More recent studies showed that nothing much has changed in the intervening years (Claassen & Mulder, 2011; Ministerie van Financiën, 2017).

An important question is whether the employment of extra financial means, via the student weight funding scheme, has resulted in achieving the central goal of the educational disadvantage policy, which is reduction of the achievement gap caused by socioeconomic factors in the home environment of the students. A limited number of studies have tried to answer this question. Because no random control group design was employed, reservations were made with regard to causality. The general conclusion was that the policy has not led to a permanent reduction of language and mathematics delays of disadvantaged students. Several reasons for this were put forward: a continuous changing of goals, target groups and instruments; goals that were ambiguous and contradictory; a policy characterized by input financing without output obligations; as a consequence of deregulation and decentralization processes a limitless freedom for school boards and schools as to how to spend their budgets; the lack of a theory on the origin of educational disadvantage and evidence-based solutions (Algemene Rekenkamer, 2001; Karsten, 2006; Ladd & Fiske, 2010; Leuven, Lindahl, Oosterbeek & Webbink, 2003; Mulder, 1996).

Several monitoring studies have been conducted focusing on the development of the various target groups. A recent study concluded that large differences exist between disadvantaged and non-disadvantaged students at the start of primary school. Ethnic minority target group students have a substantial language delay. In the last year of primary school, this delay has diminished somewhat but is still substantial. The relative position of the non-minority target group students (i.e. the native-Dutch low-SES students) regarding their language skills has deteriorated. It was also concluded that there are often hardly any differences between disadvantaged students with the 0.3 weight and students with the 1.2 weight, while at the same time, ethnic minority students achieve substantially lower than non-minority students with the same weight (Driessen & Merry, 2014; Herweijer, 2009).

### **Research Questions**

Thirty years ago, the student weight funding scheme was developed. Since then, the circumstances have changed and the funding scheme has been reorganized several times. The main question this study aims at answering is if the scheme is still adequate. More specifically, the research questions are:

1. How strong are the correlations between family structural indicators of educational disadvantage on the one hand, and language and mathematics achievement of young children on the other?

2. How do these correlations relate to the correlations found thirty years ago, when the weight funding scheme was developed?

To answer these questions, analyses were performed on recent large-scale data. In the next section, the results of these analyses will be presented.

### **Method**

The data for the present study come from the Dutch cohort study COOL<sup>5-18</sup> collected in the 2013/14 school year (Driessen, Elshof, Mulder & Roeleveld, 2015). A total of 437 primary schools with 28529 students in grades 2, 5 and 8 (6-, 9- and 12-year-olds) participated in this national large-scale study. The total sample consisted of a so-called reference sample of 340 schools, which is representative of all Dutch primary schools, and a supplementary sample of 97 schools with many disadvantaged students. The latter sample was added to obtain sufficient numbers of students from smaller categories of disadvantaged students. Furthermore, disadvantaged students and, especially, minority disadvantaged students tend to be concentrated in particular schools in large cities. The over-representation of these schools in this supplementary sample thus provides a 'typical' picture of the minority disadvantaged student.

In this study, the focus is on grade 2. The students in this grade took a standardized language and mathematics test developed by CITO (the Dutch National Institute for Test Development). The results of both tests were expressed in so-called proficiency scores. For the sake of comparability, these scores were transferred into *z*-scores, with a mean of 0 and a standard deviation of 1. Information on the student weight came from the school administrations: 88% of the students had a weighting factor of 0.0 (i.e. with intermediate or higher educated parents), 7% had a weighting factor of 0.3 (low educated parents) and 5% with a weighting factor of 1.2 (very low educated parents). The students' parents had completed a questionnaire with both the mother and the father answering questions on their education, country of birth, work, religion, and language. This written questionnaire was accompanied by an instruction in Dutch, English, Turkish and Arabic. Nevertheless, not all of the parents returned the questionnaire. Especially the response among immigrant parents was low, 38%, compared to 65% among native-Dutch parents. Also, the test scores of children of parents who had not returned the questionnaire were lower than those of children whose parents had completed the questionnaire (a difference of 0.30 standard deviation). This points to selective response. To check whether this response possibly influences the results, analyses were performed on the original representative sample, that is including the students whose parents had not returned the questionnaire. This sample also includes information on the parents' education and country of birth and the student weight factor provided by the school administrations (but not, as in the parents' questionnaire, on work, religion, language choice and language proficiency). The correlations between these indicators and the language and mathematics test scores were practically identical to the ones that will be presented hereafter. Thus, it does not appear that the selective response has led to deviating correlations. In addition, because the

aim of this study is not to present representative data but to explore relationships, this selective response is less problematic here (Zetterberg, 1963).

The parent questionnaire includes the following information on fathers and mothers. *Family structure* discerns one-parent and two-parent families. Regarding *country of birth*, two categories were discerned: The Netherlands and other Western countries (hereafter taken together as ‘The Netherlands’), versus non-Western countries. *Education* distinguishes the highest level attained, and the highest level completed with a diploma. *Paid work* indicates having a paid job for at least 12 hours per week, or not. *Religion* has two categories, namely religious, versus not religious. *Language choice* discerns Dutch versus a foreign language. *Language proficiency* refers to the average score of the four modalities listening, speaking, reading, and writing with categories (1) very low; (2) low; (3) intermediate; (4) high; (5) very high.

The original sample included 5257 grade 2 students whose parents completed the questionnaire. For 4871 students in this sample both language and mathematics test scores were available and they serve as the final sample for the analyses. Table 1 presents an overview of the indicators selected for analyses, with a short explanation of their meaning. For some of the indicators, combinations were constructed, for instance, for country of birth the *number* of parents within a family who were born in the Netherlands, and for highest education the *average* and the *highest* level of the mother and the father.

< insert Table 1 about here >

## Results

In the left panel of Table 2, descriptive statistics are presented, in the right panel the bivariate correlations between each of the indicators and the language and mathematics test scores. Two types of correlations are discerned, namely Pearson  $r$  and  $\eta^2$ , or the linear correlation and the total correlation, that is the linear plus not-linear correlation. In the case of dichotomous indicators, the  $\eta^2$  coefficient is the same as the  $r$  coefficient and is therefore not included in the table. The difference between  $\eta^2$  and  $r$  gives an impression as to how much the correlation deviates from linearity.

< insert Table 2 about here >

The bivariate correlations between the indicators and test scores show that the correlations  $r$  vary in strength from 0.02 (language choice child-friends) to 0.26 (education: average mother + father). According to the rule of thumb provided by (Cohen, 1988), a correlation of 0.10 is weak, a correlation of 0.30 is moderate, and a correlation of 0.50 is strong. A first conclusion therefore is that all correlations in this table point to less than moderate associations. The correlation between the present indicator, the student weight, and the language and mathematics scores is not stronger than 0.20. In general, the correlations for language are somewhat stronger than those for mathematics, but the differences are very small indeed. As such, these

marginal differences are rather unexpected, as language is something which is learned both at home and at school, while mathematics typically is learned at school. Mathematics proficiency, therefore, is expected to be less dependent on family characteristics. A second conclusion is that in almost all cases, the correlations for the mother indicators are somewhat stronger than those for the father indicators. A third conclusion is that the correlations for the multiple (or combined) indicators (e.g., education mother plus education father) in general are hardly any stronger than those for single indicators (such as mothers' education, or fathers' education). Multiple indicators therefore appear to not result in added value. A fourth conclusion is that when the linear correlations  $r$  are compared to the total correlations  $\eta^2$  the differences are only minimal. This means that there are hardly any deviations from linearity. Taken together, the findings from this table show that the importance of all of these indicators as a basis for the funding of extra financial budgets for combating educational disadvantage is very weak.

In the analyses reported thus far, a total of 34 indicators were included, all of them separately. To get an impression of the correlations when several indicators are analysed simultaneously, regression analyses were performed. Because many of these indicators within the same block (e.g. country of birth) are strongly inter-correlated (e.g. country of birth of mother with country of birth of father), a selection within each block was made for the mothers' indicators. The reasons for this choice are that in general these indicators are somewhat stronger correlated with the test scores than the fathers' indicators; that the number of missing values for mothers is considerably lower than that for fathers because in most one-parent families, there is a mother but not a father; and that as a result of this criterion a consistent selection was obtained. Within the block of education, a selection was made of the highest education level attained because the correlation of this indicator with highest education completed with a diploma was very strong (0.87). In the selection process of the final indicators, a lower boundary for the correlation with test scores of 0.20 was employed. This resulted in the following indicators: country of birth, highest level of education attained, and language proficiency. In Table 3, the results of the regression analyses are presented. [1]

< insert Table 3 about here >

When we take the indicator with the highest percentage of explained variance as a starting point, the table shows that there are differences between the prediction of the language and of the mathematics test scores. In the case of the language test scores, language proficiency of the parents appears to explain most of the variance, namely 6.2%. Highest level of education attained adds 2.5%, and country of birth another 1.0%. Taken together, these three indicators explain 9.6% of the differences in language test scores. In the case of the mathematics test scores, highest level of education explains most of the variance, namely 5.6 %. Language proficiency of the parents adds 1.7 %, and country of birth another 0.5%. A total of 7.8% of the variation in mathematics test scores is thus being explained by the three indicators, which is less than for the language test scores.

In the analyses performed for the validation of the student weight scheme back in 1984, only information on parents' educational and professional level was used. This amounted to a multiple correlation  $R$  of 0.42. Country of birth was not available at the time, but from later studies it appeared that this also was a relevant predictor of educational disadvantage. To arrive at an indication of the size of the extra predictive power of this indicator, a rough estimation was made with the help of the present data. For the language test scores  $R$  for student weight plus paid work of father and paid work of mother was 0.22, which results in 4.9% of explained variance. Adding country of birth of father and country of birth of mother resulted in a  $R$  of 0.27 and 7.4 percent of explained variance, which is about half more. For the mathematics test scores  $R$  was 0.21 and 4.4% of explained variance, and after adding country of birth 0.24 and 5.8 % of explained variance, which is about one third more. If we translate these results back to the situation of 1984, this means that to the  $R$  of 0.42 and 17.6% of explained variance between one half and one third must be added for country of birth, which thus results in a total  $R$  of about 0.50 and 25% of explained variance. As a point of reference, the present student weight (based solely on parental educational level) has a  $r$  of 0.20 and 4% of explained variance.

## Discussion

The results of the analyses unequivocally show that the validity of the present indicator of educational disadvantage is very limited. At the start of the Dutch educational disadvantage policy, some thirty years ago, the multiple correlation of the three indicators was estimated at 0.50 with 25% of explained variance; nowadays, with parental education as the only indicator left, this correlation is 0.20 with not more than 4% of explained variance.

Two explanations of this decrease can be put forward. On the one hand, the decrease may be caused by characteristics of the indicator(s) used, but on the other hand may also be caused by changes in society. Regarding the latter, in a society with more equality, the children's social and/or immigrant background may have lower explanatory power on educational achievement than in societies with less equality. The question is if this explanation holds for the Dutch situation, and elsewhere. In the introduction section of this article, several studies were mentioned that proved the opposite to be true (Davis-Kean & Jager, 2014; Goodman & Burton, 2012; Goodman, Sands & Coley, 2015; Machin & McNally, 2012; OECD, 2016). Recently, the Dutch Inspectorate of Education in her annual report also warned that the educational gap between children from different social backgrounds is increasing, and this not only holds for primary, but – as a consequence – also for secondary education and higher education. In addition, in both primary and secondary education achievement of immigrant children is significantly lower than that of native-Dutch children (Inspectie van het Onderwijs, 2016). This conclusion is in line with findings from the large-scale longitudinal study by Driessen and Merry (2014) who showed that although immigrant children have improved their educational position in the last decades, they still lag substantially behind their native-Dutch peers. Especially, the

position of Turkish and Moroccan children is worrisome, even more as many of them are second or third generation. It is obvious that this group still needs extra attention. The question is how.

A far-reaching implication of the dramatic decrease in validity of the indicator is that the hundreds of millions of Euros yearly awarded to schools is based on quicksand. As a consequence, this inevitably leads to unacceptable numbers of false-positives and – probably even worse – false-negatives, or students for whom the schools unwarranted are awarded extra budget, respectively students for whom the schools unwarranted are *not* awarded extra budget. An additional problem is that many schools indicate that they are not aware of the fact that they receive extra budgets for combating educational disadvantage because this is part of the lump sum they receive from the Ministry of Education. In practice, the extra budgets therefore are often spent on creating smaller classes, as a result of which in principle *all* students, both disadvantaged and advantaged, may benefit from the extra budgets. This not only leads to dilution effects (the extra budget is spent on more students than intended), but also so-called Matthew effects may occur. The latter means that the better students, mostly the non-disadvantaged students, profit more from the extra budget than the disadvantaged students, which will result in an even wider achievement gap; Stanovich, 1986). To this should be added that there is no evidence that creating smaller classes *sec* is an effective strategy for combating educational disadvantage (Vignoles, Levacic, Walker, Machin & Reynolds, 2000).

To summarize, the analyses show that serious doubt is warranted as to the empirical foundation of the most important instrument of the Dutch educational disadvantage policy, viz. the weighted student funding scheme. The question then arises whether the present groupwise approach of educational disadvantage is still justified and whether one should not look for alternatives. Until recently, the individual approach was held off, mainly because this was assumed to be very expensive and in the case of very young children would lead to unreliable results. However, linguists argue that nowadays, a range of adequate language tests for young children are available (Colpin et al., 2006; Onderwijsraad, 2002; Verhoeven & Vermeer, 2005). And most Dutch institutions for Early Childhood Education and Care targeting children between 2 and 6 years (playgroups and kindergartens) already work with comprehensive child monitoring schemes that often combine standardized tests and observations by staff and teachers. A recent Dutch study shows that subjective teacher assessment adds significantly explanatory power to cognitive test scores in predicting student ability (Feron, Schils & Ter Weel, 2015). Another option is a two-stage approach: a first screening by teachers followed by a more elaborate testing, or a first selection on the basis of structural family characteristics followed by (repeated) individual testing (Onderwijsraad, 2001).

### Note

1. In addition to the monolevel regression analyses presented here, multilevel regression analyses were also performed. The results were identical. Language achievement: intercept -1.46; language proficiency

0.17; highest level of education 0.11; country of birth 0.31 ( $p < 0.001$ ). Mathematics achievement: intercept - 1.24; language proficiency 0.12; highest level of education 0.12; country of birth 0.25 ( $p < 0.001$ ).

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Table 1. *Overview of the Indicators*

Indicator	Information on	Values
Family structure	mother + father	1=one parent; 2=two parent
Country of birth (grand)parents NL	mother	0=non-Western; 1=NL*
	father	
	mother's mother	
	mother's father	
	father's mother	
	father's father	
	mother + father: number	0=0 NL; 1=1 NL (mixed); 2=2 NL
Highest level attended	mother	1=primary school ... 6=university
	father	
	mother + father: average	
	mother + father: highest	
Highest diploma	mother	1=no diploma ... 7=university
	father	
	mother + father: average	
	mother + father: highest	
Paid work	mother	0=no work; 1=work
	father	
	mother + father: number	
Religion	mother	0=no religion; 1=religious
	father	
	mother + father: number	
Language choice NL	child with mother	0=no NL; 1=NL
	child with father	
	child with siblings	
	child with friends	
	mother with father	
	family: number	
Language proficiency NL	mother	0=in no area ... 5=in 5 areas
	father	
	mother + father: average	
	mother + father: highest	
Student weight factor	mother + father	1=0; 2=0.30; 3=1.20

\*NL = The Netherlands

Table 2. *Indicators and correlations with language and mathematics achievement: means, standard deviations, numbers of respondents, correlations  $r$  and  $\eta$*

Indicator	Information on	%M	SD	N	Language		Mathematics	
					$r$	$\eta$	$r$	$\eta$
Two-parent family	m + f*	92%		4843	0,06		0,04	
Country of birth	mother	86%		4745	0.23		0.18	
	father	86%		4519	0.21		0.19	
	mother's mother	82%		4773	0.24		0.20	
	mother's father	83%		4749	0.24		0.20	
	father's mother	83%		4671	0.22		0.20	
	father's father	82%		4655	0.22		0.20	
	m + f: number	1.72	0.65	4812	0.24	0.24	0.21	0.21
Highest education	mother	3.94	1.35	4804	0.24	0.25	0.24	0.25
	father	3.88	1.38	4515	0.23	0.24	0.22	0.24
	m + f: average	3.89	1.23	4832	0.26	0.28	0.26	0.27
	m + f: highest	4.25	1.31	4832	0.24	0.25	0.24	0.25
Highest diploma	mother	4.68	1.66	4686	0.23	0.24	0.22	0.23
	father	4.55	1.75	4479	0.21	0.22	0.20	0.22
	m + f: average	4.59	1.53	4826	0.25	0.26	0.24	0.26
	m + f: highest	5.05	1.55	4826	0.24	0.24	0.23	0.24
Paid work	mother	70%		4772	0.12		0.12	
	father	92%		4491	0.11		0.10	
	m + f: number	1.59	0.63	4834	0.15	0.16	0.14	0.15
Religion	mother	58%		4788	-0.12		-0.10	
	father	55%		4492	-0.12		-0.12	
	m + f: number	1.13	0.94	4816	-0.13	0.14	-0.12	0.13
Language choice	child with mother	90%	0.31	4716	0.14		0.12	
	child with father	90%	0.31	4452	0.13		0.09	
	child with siblings	94%	0.24	4324	0.07		0.05	
	child with friends	97%	0.18	4635	0.02		0.02	
	m with f	81%	0.39	4549	0.19		0.14	
	family: number	90%		4817	0.15	0.20	0.11	0.15
Language proficiency	mother	4.62	0.67	4780	0.25	0.26	0.21	0.22
	father	4.63	0.64	4509	0.22	0.23	0.18	0.19
	m + f: average	4.62	0.61	4799	0.26	0.28	0.22	0.24
	m + f: highest	4.72	0.54	4799	0.23	0.24	0.20	0.21
Student weight factor	m + f	1.17	0.49	4747	-0.21	0.21	-0.20	0.20

\*m = mother; f = father

All correlations  $p < 0.001$ , except for Language: Language choice child-friends  $p = 0.185$ , and for Mathematics: Family structure  $p = 0.002$ ; Language choice child-siblings  $p = 0.001$ ; Language choice child-friends  $p = 0.195$ .

Table 3. *Results regression analyses language and mathematics achievement and selected mother indicators: unstandardized coefficients (B), standardized coefficients (Beta) and percentages (additionally) explained variance (%  $R^2$ )*

	Language				Mathematics		
	Full model		Stepwise model		Full model		Stepwise model
	<i>B</i>	<i>Beta</i>	% $R^2$		<i>B</i>	<i>Beta</i>	% $R^2$
Constant	-1.65			Constant	-1.42		
Language proficiency	0.19	0.13	6.2	Highest education	0.14	0.18	5.6
Highest education	0.12	0.16	+2.5	Language proficiency	0.15	0.10	+1.7
Country of birth	0.34	0.12	<u>+1.0</u>	Country of birth	0.25	0.09	<u>+0.5</u>
Total			9.6	Total			7.8

All effects  $p < 0.001$ .

## **Miscellany**

### **Scope of the EPASAD**

Journal of Educational Policy Analysis and Strategic Research (EPASAD) is a peer reviewed interactive electronic journal sponsored by the International Association of Educators and in part by the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign. EPASAD is a core partner of the Community Informatics Initiative and a major user/developer of the Community Inquiry Laboratories. EPASAD takes an interdisciplinary approach to its general aim of promoting an open and continuing dialogue about the current educational issues and future conceptions of educational theory and practice in an international context.

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