Determining preservice teachers' goal orientations for learning through a card-sorting activity

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Abstract

This study aims at investigating and identifying preservice teachers' goal orientations in the learning environment through a card-sorting activity. This study also aims at examining preservice teachers' goal orientations in terms of certain variables such as gender, class level and department type. Participants consisted of preservice teachers attending different departments at Nevşehir Hacı Bektaş Veli University in Turkey. In this research, a card-sorting activity and a semi-structured interview form were used as data collection tools. As suggested by Friedrichsen and Dana (2003; 2005), a card-sorting activity comprising scenarios was prepared and used by the researchers to identify preservice teachers' goal orientations for learning. In this activity, goal orientation scenarios were formed according to Elliot and McGregor's (2001) 2x2 goal orientations structures. The scenarios and the semi-structured interview form used in this research were designed through consultation with specialists. This study follows the case study approach of qualitative research methodology. Finally, the data collected were analysed by the descriptive analysis technique. The results indicated that preservice teachers mostly associated themselves with the learning approach goal orientation and least associated with performance avoidance goal orientation. Recommendations for implementation were offered to practitioners.

Keywords: Preservice teachers, goal orientations, card-sorting activity, semi-structured interviews

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1. Introduction

In a learning environment, individual differences such as readiness towards the learning material, age, intelligence, general stimulation state, past experiences, motivation and attention are most significant. In recent years, such significance has been subjected to psychological theories and research. Special focus has been attributed to learning and success within the learning environment. Among these focal points, motivation is considered as one of the most important components that affects the learning process and enables students to cope by optimally using the cognitive resources needed for success and in improving their knowledge (Pintirch, 2003).

Motivation is a process that involves special guidance and stimuli properties (Brophy, 1983) and, in this regard, individuals may manage themselves in the learning process, give an aim to their behaviours, allow behaviours to resist challenges and select among priority behaviours (Ames, 1986). Meanwhile, if these motivational structures are positive and at a high level, this will enable individuals to better focus on the learning process, better seize opportunities, make a greater effort towards learning and become more resistant (Zimmerman & Schunk 2008). Highly motivated individuals are able to initiate actions required for learning or attaining their objectives, identify appropriate targets and plan learning activities. Such individuals are able to employ learning strategies in an efficient and conscious manner, make high quality efforts towards regulating their self-learning process, are less anxious about failure and experience opportune feelings towards learning (Goetz, Nett & Hall, 2013).

According to learning models in line with the principles of social-cognitive theory, individual motivational structures vary such as self-sufficiency, task value, goal orientation, anxiety, outcome expectancy and interest. Research proves that belief in self-sufficiency is significant in academic success. Throughout the learning process, goal orientation that interacts with belief in self-sufficiency becomes a crucial motivational factor. Goal orientation deals with why an individual determines a specific objective, how she or he will attain these goals and what standards she or he uses to evaluate the performance. For example, the desire of a student to give 10 out of 10 correct answers in a test concerns the goal; meanwhile, the reasons why she or he wishes to attain this, how she or he shall attain this goal and what standards she or he will apply concerns goal orientation (Pintrich & Schunk 1996).

Various definitions of goal orientation, which focus on an individual's perceived requirements in an academic environment (Midgley et al., 1998), have been found in the literature. Elliot and McGregor (2001) define goal orientation as an individual's preferences in case of success and Zimmerman (2000) contends that it is the continuation of an individual's motivation throughout the learning process and focus on outcomes. Various models of goal orientation have also been proposed. For instance, Elliot and Harackiewicz (1996) divided goal orientation into two: first as a learning performance approach (student aiming at earning appreciation of others in developing learning), and second, as learning performance avoidance (student preventing others from noticing one's failure). Elliot and McGregor (2001) suggested that goal orientation is a 2x2 structure of learning and performance goal orientations with sub-dimensions of approach and avoidance orientations. Students with learning goal orientation focus on gaining new skills, try to comprehend their tasks and increase their skill levels, while performance oriented individuals focus on exhibiting their performance before others to get good results and avoid punishment (Pintrich, 2000). Again, the learning approach goal orientation is concerned with the efficient use of self-regulatory strategies to focus on learning and comprehension, as well as in-depth understanding of the task at hand, while the learning avoidance goal orientation deals with avoiding not understanding or misunderstanding the task, as well as adopting standards to ensure the avoidance of failure (Patrick, Ryan & Pintrich, 1999). Moreover, in the performance

approach goal orientation there are numerous positive and few negative processes and outcomes. Positive outcomes and processes are controlling, regulating and resisting challenges and making an effort; negative ones are suffering from anxiety during the assessment of success, the failure of attaining meaningful learning and lacking motivation in case of need for assistance. The performance avoidance goal orientation, on the other hand, is considered to be among negative processes and outcomes in the learning process, meaningless determination, unplanned studying, lacking the willingness to ask for help, trying to avoid assessments, lower performance and inner motivation (Elliot, 1999).

The issue of goal orientation has been subjected to research at different grades. For example, Koç and Karabağ (2013) showed a positive correlation between meta-cognitive skills students of elementary school and their learning goal orientation. Yerdelen, Aydın, Gürbüzoğlu-Yalmancı, Göksu (2014) found that high school students with learning goal orientation have greater inner motivation and tend to learn subject content better. In a study on university students, Bouffard, Boisvert, Vezeau and Larouche (1995) stated that those with learning goal orientation employ a greater number of cognitive and meta-cognitive strategies. Kozlowski et al. (2001) also determined that learning goal orientation makes a significant impact on information structuring among university students and that goal orientation of the students has meaningful effects on their perception of self-sufficiency. Again, Hsieh, Sullivan Normn and Guerra (2007) observed a meaningful correlation between goal orientations of college students and their perceptions of self-sufficiency and concluded that those with learning goal orientations have greater perceptions of self-sufficiency. In a study on science teacher candidates, Atasoy (2015) also suggested that learning approach goal orientation statistically predicts the use of meta-cognitive strategy to a great extent.

Since the education system in Turkey evaluates student success rates via centralised examinations and, thus, academic success is test-oriented, students tend to engage in performance-based activities with a rote-learning attitude. Students focus on improving examination results instead of gaining skills when learning new subjects. Therefore, it is believed that the majority of learners in Turkey are performance goal oriented (Tutaş, 2011). However, for a nation to train individuals that are independent and keen on lifelong learning (individuals who can cooperate in team work, learn efficiently, control and divert self-learning processes), the education system needs to be restructured accordingly (Barron and Harackiewicz, 2000). The literature review also shows that reforms alone are not adequate for attaining goals but the knowledge, skills, beliefs, attitudes and objectives of teachers as the practitioners of reforms play a considerable role in this process (Aydın and Çakıroğlu, 2010; Cheung and Ng 2000; Han, 2013). It is considered that implementation of these new practices will be possible through efficient teacher training (Aydın and Boz, 2012). Indeed, teachers play a determinant role in objective structures in the classroom environment and individual goal orientation selection of the students (Wolters and Daugherty, 2007). The type of goal orientation underlined by the teacher in the classroom environment and the actual goal orientation adopted by students in the learning environment play an effective role in determining the quality of the process and achieving learning and success (Eryenen, 2008).

Therefore, it is essential to determine both the goal orientations of teacher candidates towards educational sciences subjects (the basis of the pedagogic field knowledge) and the processes affecting their goal orientations. The main purpose of this research is then to determine the goal orientations of teacher candidates in two different departments towards learning through card-sorting activities. Furthermore, it is aimed at examining teacher candidates' goal orientations in terms of the variables of class level, gender and department type. The following sub-problems were sought to be resolved in line with the above objectives:

- What are the goal orientations of teacher candidates towards educational sciences subjects?

- How do the goal orientations of participants vary according to class level, gender and department type?

- What are the views of teacher candidates on the learning process with respect to their goal orientations?

2. Method

Research design, participants, the data collection process and data analysis are included in this section.

2.1. Research Design

This study was carried out using the case study design, which is one of the qualitative research models. The most fundamental property of case studies is that factors affecting the case are investigated with an integrated approach and focus is directed on how they affect and are affected by the case (Yıldırım and Şimşek, 2006). Case study research is a qualitative approach in which the investigator explores a case or multiple cases over time through detailed, in-depth data collection involving multiple sources of information (such as observations, interviews, audiovisual materials and documents) (Cresswell, Hanson, Plano & Morales, 2007).

2.2. Participants

The research sample consisted of teacher candidates at 'Science Teaching' (ST) and 'Primary School Teaching' (PST) departments of Nevşehir Hacı Bektaş Veli University, Turkey. Table 1 shows the distribution of participants with regard to the variables of class level, gender and department type. Accordingly, 84.8% of the participants were females while 15.2% were males. The percentage participants who attended Primary School Teaching were 51.7%, while 48.3% attended Science Teaching. The percentage of participants who were in their second year of their studies were 39.1%, 31.8% in their third year and 29.1% in their fourth year, respectively. All participants had taken courses in educational sciences. First year teacher candidates were not involved in this research since they had not yet taken an adequate amount of subjects in the educational sciences.

Table 1. Distribution of teacher candidates according to class level, gender and department

Variables	Property	Frequency	%
Gender	Female	128	84.8
	Male	23	15.2
Department	Primary School	78	51.7
	Science Teacher	73	48.3
Class level	Year 2	59	39.1
	Year 3	48	31.8
	Year 4	44	29.1

2.3. Data Collection

A card-sorting activity and a semi-structured interview form were used as data collection tools. As suggested by Friedrichsen and Dana (2003; 2005), a card-sorting activity consisting of scenarios was prepared and used by the researchers in order to identify preservice teachers' goal orientations for learning. In this activity, goal orientation scenarios were formed according to Elliot and McGregor's (2001) 2x2 goal orientations structures. The researchers reviewed the literature to identify common examples of four components (learning approach/avoidance, performance approach/avoidance) of

goal orientations and authored card-sorting scenarios for each goal orientation. Specialists were then consulted about the scenarios and pilot studies were carried out to verify conformity and finalised after necessary amendments. Participants were asked to divide the cards into three groups. The first group included scenarios reflecting a learning goal orientation, the second group included scenarios that did not reflect a learning goal orientation and final group included the ones where a teacher candidate was unsure whether it reflected a learning goal orientation. Teacher candidates were asked to sort cards in order to determine their goal orientations and provide the reason they being sorted as such. Also, at the end of the card-sorting activity, 19 teacher candidates with various goal orientations were deliberately selected. Consultation with specialists was undertaken to prepare an interview form for an in-depth analysis of goal orientations and learning processes; this was given to the candidates. The form also identified such demographic attributions as gender, department type and class level of the participants.

2.4. Data Analysis

Data collected in this research were analysed descriptively. Researchers used pre-determined themes to sort the views of teacher candidates, which were supported with direct quotations from the participants. In this regard, the following codes were attributed to the participants according to their goal orientations: learning-approach goal orientation (LAp.), performance-approach goal orientation (PAp.), learning-avoidance goal orientation (LAv.) and performance-avoidance goal orientation (PAv.).

3. Findings

Findings of research are included in this section.

3.1. The Goal Orientations of Teacher Candidates Towards Educational Sciences Subject

Table 2 shows the goal orientations of teacher candidates towards subjects of educational sciences According to Table 2, teacher candidates expressed 'represents me' as much as 75.1% for the learning approach goal orientation, 51.4% for the performance approach goal orientation, 43.3% for the learning avoidance goal orientation and 18.1% for the performance avoidance goal orientation. They expressed 'does not represent me' as much as 8.5% for the learning approach goal orientation, 32.2% for the performance approach goal orientation, 36.4% for the learning avoidance goal orientation and 59.9% for the performance avoidance goal orientation. Teacher candidates were found to associate themselves with the learning approach goal orientation the most and the performance avoidance goal orientation the least. Also, some participants did not have only one specific goal orientation and identified themselves with more than one goal orientation.

Table 2. Distribution of Teacher Candidates According to Their Goal Orientation preferences

Goal Orientation	Represents me	Does not represent me	Unsure
	%	%	%
Learning Approach	75.1	8.5	15.6
Performance Approach	51.4	32.2	16.4
Learning Avoidance	43.3	36.4	20.3
Performance Avoidance	18.1	59.9	22

3.2. The Effect of Gender, Class Level and Department Type on Goal Orientations of Teacher Candidates

Table 3 shows the goal orientations of participants towards educational sciences subject with regard to gender. According to Table 3, the distribution of the gender variable for four goal orientations with regard to the 'represents me' option was as follows: 76.4% females and 72.5% males for the learning approach goal orientation; 51.7% females and 49.6% males for the performance approach goal orientation; 44.5% females and 36.5% males for the learning avoidance goal orientation and 18.1% females and 17.6% males for the performance avoidance goal orientation. The distribution of the gender variable for the four goal orientations with regard to the 'does not represent me' option was as follows: 7.8% females and 13% males for the learning approach goal orientation; 33% females and 27.8% males for the performance approach goal orientation; 36.9% females and 33.6% males for the learning avoidance goal orientation and 60% females and 14.9% males for the performance avoidance goal orientation. It appears that the majority of both female and male teacher candidates have a tendency towards learning approach and performance approach goal orientations.

Table 3. Distribution of Teacher Candidates According to Their Gender

Goal Orientation	Gender	Represents me %	Does not represent me %	Unsure %
Learning Approach	Female	76.4	7.8	15.7
	Male	72.5	13	14.5
Performance Approach	Female	51.7	33	15.3
	Male	49.6	27.9	22.6
Learning Avoidance	Female	44.5	36.9	18.6
	Male	36.5	33.6	29.6
Performance Avoidance	Female	18.1	60	21.9
	Male	17.6	14.9	67.4

Table 4 shows the goal orientations of participants towards educational sciences subject with regard to class levels. According to Table 4, the distribution of the class level variable for the four goal orientations with regard to the 'represents me'" option was as follows: 76.2% of second year students, 71.9% of third year students and 79.5% of fourth year students for the learning approach goal orientation; 47.8% of second year students, 59.6% of third year students and 47.3% of fourth year students for the performance approach goal orientation; 44.4% of second year students, 52.1% of third year students and 37.7% of fourth year students for the learning avoidance goal orientation and 16.1% of second year students, 19.8% of third year students and 18.9% of fourth year students for the performance avoidance goal orientation. The distribution of the class level variable for the four goal orientations with regard to the 'does not represent me' option was as follows: 8.8% of second year students, 8.7% of third year students and 8.3% of fourth year students for the learning approach goal orientation; 32.2% of second year students, 27.5% of third year students and 37.3% of fourth year students for the performance approach goal orientation; 34.6% of second year students, 30.4% of third year students and 45.4% of fourth year students for the learning avoidance goal orientation; and 60% of second year students, 56.2% of third year students and 64% of fourth year students for the performance avoidance goal orientation. Fourth year teacher candidates were found to prefer the learning approach goal orientation while third year teacher candidates the performance approach, the learning avoidance and the performance avoidance goal orientations had the highest levels, respectively.

Table 4. Distribution of Teacher Candidates According to Their Class Levels

Goal Orientation	Class levels	Represents me %	Does not represent me %	Unsure %
Learning Approach	Year 2	76.2	8.8	15
	Year 3	71.9	8.7	19.4
	Year 4	79.5	8.3	12.2
Performance Approach	Year 2	47.8	32.2	20
	Year 3	59.6	27.5	12.9
	Year 4	47.3	37.3	15.4
Learning Avoidance	Year 2	44.4	34.6	25.1
	Year 3	52.1	30.4	17.5
	Year 4	37.7	45.4	16.8
Performance Avoidance	Year 2	16.1	59.9	24
	Year 3	19.8	56.2	24
	Year 4	18.9	64	17

Table 5 shows the goal orientations of participants towards subject of educational sciences with regard to department types. According to Table 5, the distribution of the department type variable for the four goal orientations with regard to the 'represents me' option was as follows: 75.6% of ST students and 76.1% of PST students for the learning approach goal orientation; 53.1% of ST students and 49.8% of PST students for the performance approach goal orientation; 44.4% of ST students and 42.3% of PST students for the learning avoidance goal orientation and 18% ST students and 18.2% of PST students for the performance avoidance goal orientation. The distribution of the department type variable for the four goal orientations with regard to the 'does not represent me' option was as follows: 9.4% of ST students and of 8.6% PST students for the learning approach goal orientation; 27.7% of ST students and 36.4% of PST students for the performance approach goal orientation; 34.5% of ST students and 38.2% of PST students for the learning avoidance goal orientation and 55.9% of ST students and 63.7% of PST students for the performance avoidance goal orientation. It appears that the majority of PST and ST students preferred learning approach and performance approach goal orientations the most.

Table 5. Distribution of Teacher Candidates According to Their Department Types

Goal Orientation	Department types	Represents me %	Does not represent me %	Unsure %
Learning Approach	Science Teaching (ST)	75.6	9.4	15.1
	Primary School Teaching (PST)	76.1	8.6	15.3
Performance Approach	Science Teaching (ST)	53.1	27.7	19.2
	Primary School Teaching (PST)	49.8	36.4	13.8
Learning Avoidance	Science Teaching (ST)	44.4	34.5	21.1
	Primary School Teaching (PST)	42.3	38.2	19.5
Performance Avoidance	Science Teaching (ST)	18	55.9	26
	Primary School Teaching (PST)	18.2	63.7	18.1

3.3. Participants' Views on Learning with Respect to Their Goal Orientations in Educational Sciences Subject

At the end of the card-sorting activity, 19 teaching candidates with various goal orientations were selected and semi-structured interviews were conducted. Table 6 shows the goal orientations of the 19 participants who were interviewed. Accordingly, five participants reflected the learning approach

(LAp.) goal orientation, seven participants reflected the learning approach and performance approach (LAp. + PAp.) goal orientations, three participants reflected the performance approach (PAp.) goal orientation and four participants reflected the learning approach and learning avoidance (LAp. + LAv.) goal orientations.

Table 6. Distribution of Goal Orientation of 19 Teacher Candidates

Goal Orientation	Number of Candidates
Learning Approach (LAp.)	5
Learning Approach + Performance Approach (LAp. + PAp.)	7
Performance Approach (PAp.)	3
Learning Approach + Learning Avoidance (LAp. + LAv.)	4

The following nine themes were developed as a result of the interviews with 19 participants.

3.3.1. Use of Additional Materials

Teacher candidates were found to be using additional materials such as colorful cardboard, the internet and videos besides the printed materials (such as books and magazines) used during class by the academicians delivering the educational sciences course. Furthermore, they consulted specialists in this field to learn new things. Meanwhile, teacher candidates with the PAp. goal orientation were observed that content with what was introduced during class and did not tend to use any additional materials. Although teacher candidates had different goal orientations, it was observed that in general there were no differences when it came to using additional materials.

3.3.2. Using Learned Things in Daily Life

Teacher candidates expressed that they applied what they learnt during the educational sciences courses in their daily lives through various means and all participants with different goal orientations were observed to be using learnt subjects in their daily lives in a similar manner. Moreover, a teacher candidate with the PAp. goal orientation expressed that they made no use of learned subjects outside of the classroom. The following are some comments from participants with different goal orientations as to how they used learnt subjects in their daily lives:

- *I try to apply them on young children. (LAp.)*
- *I have a younger sibling at high school and I advise my family how to reach him. (LAp.)*
- *I try to exhibit it in my behaviours against my nephew and other children around me. (LAp.)*
- *I use it during my teaching practicum and interactions with others in my daily life. (LAp. + PAp.)*
- *I approach children for as I understand their psychology. I empathise with them. (PAp.)*
- *For now, I only use these skills during presentations in the scope of the course, since we are taught how to approach future students and deliver the courses. (PAp.)*
- *I will use it during my interaction with my students when I become a teacher and with my children when I become a mother in the future. (LAp. + LAv.)*
- *I use what I learnt in solving problems in daily life. (LAp. + LAv.)*

3.3.3. Challenges Faced During Class

Teacher candidates with all sorts of goal orientations expressed that the concepts introduced during educational sciences course were complex and that they had difficulty comprehending them. In this regard, it was determined that students with different goal orientations faced similar challenges while learning the course subject.

3.3.4. Strategies Used to Cope with Challenges During Class

Teacher candidates with the LAp. + PAp. goal orientations expressed that they associated what was learnt in daily life; they repeated the subject, summarised it and did additional online research in order to cope with the challenges faced during the class. Those with the LAp. goal orientation stated that they tried to cope with challenges by discussing them with their peers and instructors. Teacher candidates with the PAp. goal orientation said that they overcame challenges by means of watching videos and doing further research from different books. Teacher candidates with the LAp. + LAv. goal orientations expressed that they overcame the challenges of the course subject by getting help from peers and instructors and making use of other sources. Furthermore, the majority of teacher candidates with different goal orientations stated that they learnt the material in a meaningful manner by outlining the main subjects, delivering it to their peers, repeating the subject, rephrasing the definitions in their own words, combining information gathered from various resources such as notes from the classroom, reading tasks and discussions, applying their ideas in other classroom activities and associating past information with the recent. However, the majority of teacher candidates also pointed out that they did not engage in activities such as setting fundamental questions to enable them to focus on the subject and seek the means to answer those questions. Interestingly, teacher candidates with the PAp. goal orientation stated that they tried to learn the definitions in the exact manner as delivered by the academicians or that appeared in the textbooks and by memorising the list of important definitions they created.

3.3.5. Aim at Earning High Grades

Teacher candidates with the LAp. goal orientation stated that earning high grades was not their main aim in the scope of their educational sciences course, but rather that they wanted knowledge to be used while performing their profession in the future. Teacher candidates with the PAp. goal orientation stated that their aim was to earn high grades in the educational sciences course and they considered high grades as proof of having comprehended the subject. Teacher candidates with the LAp. + PAp. goal orientations were observed to be in competition with their peers and expressed that earning high grades was crucial before proceeding to graduate school. However, they added that they enjoyed learning the subject and aimed to have permanent knowledge to be used during their teaching profession in the future without much anxiety over good grades. Those with the LAp. + LAv. goal orientations did not provide any comment.

3.3.6. Objectives to Become Successful

Teacher candidates with the PAp. goal orientation expressed that their principal reason for becoming successful was to prove their achievements to the academicians and peers and being recognised and appreciated by them. Teacher candidates with the LAp. + PAp. goal orientations wanted to become successful in order to be effective teachers and having authority on the subject. Those with the LAp. + LAv. goal orientations believed that becoming successful in these subjects was a criterion to become an academician in the future.

3.3.7. The Element of Examinations

Teacher candidates with the PAp. goal orientation stated that they studied the particular course material they needed for school finals and the KPSS (Government Personnel Examination for Public Service) or they did not bother studying it. For example:

- I do not study this material during finals due to fear of confusing my mind.
- I try to learn useful knowledge and the parts asked during finals; it is my habit to try to save the day.
- I will not study it unless needed for KPSS because our entire system is centralised examinations-based.

Teacher candidates with the LAp. goal orientation, on the other hand, viewed the content of educational sciences as important for them and said that they would study even if it was not included in the examinations. For example:

- I will study all materials in order to be able to make a connection among all subjects I am curious about.
- I will study it even if it is not asked about during examinations. I believe those subjects are crucial for me to exercise my teaching profession in the future.

3.3.8. Causes of Anxiety

Teacher candidates with various goal orientations expressed that they were anxious about lacking pre-information on the subjects. They also stated that they became anxious over failure in the examinations, and especially the KPSS, because the subjects (the courses such as 'introduction to educational sciences', 'education psychology' and 'developmental psychology') were heavily verbal and included complex concepts. Teacher candidates with the LAp. + PAp. goal orientations underlined that they were also anxious over applying their theoretical knowledge in practice; therefore, they would become traditional teachers in the future. Teacher candidates with the LAp. goal orientation were observed to be anxious about failure of attaining self-set objectives for their own learning process, while those with the LAp. + LAv. goal orientations were afraid of failure or making an error. The following are some quotations from the participants:

- I will suffer from anxiety about forgetting what I learnt because I cannot keep verbal subjects in my long-term memory.
- There are too many theories in developmental psychology.
- Education psychology is very complex and rote-based; I am worried about failure from time to time.
- I am afraid of ending up as a traditional teacher should I forget the contents of this subject; I want to perpetuate my future students' learning by reinforcing through different methods and techniques.
- It is because these subjects are the basics that teaching misconceptions can be equated to constructing a building with a loose foundation.
- If I learn it wrong, I will face challenges in my teaching life in the future.
- I am worried about misguiding people in my future career and have difficulty in connecting with my students.
- I like to realise the objectives I set for myself, I will be anxious otherwise.
- I am anxious of not learning everything I need to reach my targets that I set.

3.3.9. Questioning

In case of failure, teacher candidates questioned why those with the LAp. + PAp. goal orientations tried to find out reasons within themselves and questioned the reasons for their failure. Meanwhile, a teaching candidate with the PAp. goal orientation expressed that he did not put the blame for failure all on himself, but rather questioned the instructor. Additional comments are as follows:

- Because I know I fail when I do not do my best; I will question myself, such as why did I not study hard?
- What have I done wrong? I have not studied hard enough or I need to prepare a better studying environment.

- Why do I not get it? What shall I do to understand which methods to apply?
- I wonder if I applied a wrong study method, how can I learn more efficiently?
- Why can't I succeed? Do I have problems understanding?
- Why did I fail or not learn? What is wrong?
- What subjects did I fail? Why was I not better prepared? Do I regret it?

4. Discussion and Conclusion

The findings of this study draw attention to some important points. First of all, the majority of teacher candidates adopt the learning approach goal orientation the most and the performance avoidance goal orientation the least. In parallel with this finding, in a study on elementary school students, Meece, Herman and McCombs (2003) determined that the majority of learners preferred the learning approach goal orientation. Furthermore, as in the case of the present study, some participants in Dowson and McInemey's (2003) study were also found to be inclined towards multiple goal orientations at once. Again, Mattern (2005) also found that students adopt multiple goal orientations in the scope of their study on university students.

Secondly, while the majority of both female and male teacher candidates have a tendency toward the learning approach and performance approach goal orientations, the majority of females were not concerned with the performance avoidance goal orientation. Other studies by Bouffard et al. (2006), Elliot and Church (1997), Patrick et al. (1999) also concluded that females were more inclined toward the learning approach goal orientation, as compared to males.

Thirdly, the learning approach goal orientation was preferred at the highest level among fourth year students, and the performance approach, learning avoidance and performance avoidance goal orientations were more common among third year students. Burley, Turner and Vitulli's (1999) study showed that the learning approach goal orientation preference increases in line with aging. Eryenen (2008) also concluded that third year students less commonly preferred the performance approach goal orientation when compared to first and second year students.

Another conclusion of this research is that PST candidates expressed 'represents me' for learning approach and performance avoidance goal orientations, while ST candidates preferred performance approach and learning avoidance goal orientations at a greater rate. Furthermore, the majority of teacher candidates from both departments were found not to be inclined toward the performance avoidance goal orientation.

Finally, as a result of the card-sorting activity, 19 students with various goal orientations were picked and semi-structured interviews were conducted with them, thus enabling in-depth analysis on their use of additional materials, applying subjects in daily life, the challenges faced during class, strategies used to cope with challenges, the objective of gaining good grades, aims for becoming successful, the element of examinations, causes of anxiety and questioning. Accordingly, it was found that in spite of adopting different goal orientations, teaching candidates used additional materials similarly in order to learn new things outside educational sciences course materials and apply them to their daily lives in a similar manner.

Teaching candidates with all sorts of goal orientations felt that concepts introduced in the scope of the education sciences were complex and they had difficulty comprehending them. They also expressed that they engaged in additional research to tackle these challenges. Teaching candidates with the learning approach goal orientation underlined that earning high grades in educational sciences was not their main objective, but rather that they were interested in applying their knowledge in exercising their teaching profession; those with the performance approach goal orientation expressed that their aim was to earn good grades at education sciences, assuming it as proof of comprehension. Teaching candidates with the performance approach goal orientation also

stated that the main reason why they wanted to become successful was to prove their achievements to peers and academicians, being recognised and appreciated by academicians, while those with learning approach and performance approach goal orientations wanted to become efficient teachers, authorized in their fields, experience good learning and deemed it as a step towards success. Teaching candidates with the performance approach goal orientation stated that they studied the particular content of the educational sciences courses for the sake of examinations and the KPSS and did not otherwise study the material, while examinations were not a priority for those with the learning approach goal orientation and they felt this knowledge was crucial in exercising their teaching profession in future.

Future research may be conducted, in addition to existing variables, on intra-class goal structure, school environment, individual features of the students and family background. Adopting a different research method and using different data collection tools may repeat this study. Experimental studies on goal orientation may also be carried out considering the significance of educational sciences course in terms of improving the pedagogic field of knowledge of teaching candidates. Teaching candidates in the present study were found to be inadequately applying sense making and organization strategies in the scope of educational sciences course, therefore it is important to conduct applied studies in order to raise awareness on the use and significance of those strategies.

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