THE ROLE OF PERSONAL AND ORGANIZATIONAL FACTORS ON STUDENT ATTRITION FROM GRADUATE EDUCATION: DO OR DIE?

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Approval of the Graduate School of Social Sciences

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ABSTRACT

THE ROLE OF PERSONAL AND ORGANIZATIONAL FACTORS ON STUDENT ATTRITION FROM GRADUATE EDUCATION: "DO OR DIE?"

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Holding a graduate degree is a significant achievement as it provides students who have it with opportunity to become faculty member, to get professional development, and to gain professional seniority. Despite this appeal, not all who start a graduate degree program persist or complete the program. The current study aims to develop and test a model in order to determine the role of personal and organizational factors on student attrition from graduate education and to investigate graduate student attrition from the lenses of non-persistent students, persistent students, graduate school administrators, and advisors. The design of the study was mixed-model research. Quantitative part was a correlational study while qualitative part was based on phenomenology and document analysis. The population included graduate students in research universities. Three-staged clustered random sampling was used for quantitative part. Purposeful sampling was preferred for the qualitative part of the study. Quantitative data which were collected via scales were analyzed with Structural Equation Modelling, Logistic Regression and Hierarchical Regression Analysis. Qualitative data which were collected through interviews and documents were analyzed with content and descriptive analysis. The results of the study showed that persistence of the students was predicted by economic support, program level and gender. In addition, the structural equation model indicated that personal factors predicted graduate students’ intentions to leave school while hierarchical regression analysis showed mediation effect of institutional and goal commitment on these relationships. Phenomenological part of the study pointed out that personal factors were more dominant on student attrition than organizational factors.

Keywords: Student Attrition, Higher Education, Graduate Education, Organizational Climate

ÖZ

KİŞİSEL VE ÖRGÜTSEL FAKTÖRLERİN LİSANSÜSTÜ EĞİTİM'DE ÖĞRENCİ KAYBI ÜZERİNDEKİ ROLÜ: TAMAM MI, DEVAM MI?

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Lisansüstü eğitimden mezun olmak önemli bir kazanımdır çünkü lisansüstü eğitimden alınan derece öğretim üyesi olma fırsatı, mesleki gelişim imkanı ve mesleki kıdem edinme gibi katkılar sunmaktadır. Bu çekiciliğe rağmen lisansüstü eğitim için ısrarcı olmayan veya programlarını tamamlamayan öğrenciler bulunmaktadır. Bu çalışma kişisel ve örgütsel faktörlerin lisansüstü eğitimde öğrenci kaybı üzerindeki rolünü belirlemek için bir model geliştirerek onu test etmeyi ve öğrenci kaybını kalıcı olmayan öğrencilerin, kalıcı öğrencilerin, enstitü yöneticilerinin ve danışmanların gözünden incelemeyi amaçlamaktadır. Bu çalışmanın deseni karma modeldir. Nicel kısım korelasyonel araştırma iken nitel kısım olgu-bilim araştırması ve döküman analizi üzerine oturtulmuştur. Bu çalışmada evren araştırma üniversitelerindeki lisansüstü öğrencileri kapsamaktadır. Çalışmanın nicel kısmı için bu evrenden örneklem seçmek için üç adımda kümeli örneklem yöntemi kullanılmıştır. Çalışmanın nitel kısmı içinse amaçlı örneklem tercih edilmiştir. Nicel veri ölçeklerle toplanıp Lojistik Regresyon Analizi, Yapısal Eşitlik Modeli ve Hiyerarşik Regresyon Analizi ile incelenmiştir. Nitel veri ise görüşme formları ve dökümanlar ile toplanmış ve içerik analinize ve betimsel analize tabi tutulmuştur. Çalışma, öğrencilerin lisansüstü eğitimdeki sebatlarının ekonomik destek, program düzeyi ve cinsiyet tarafından yordandığını göstermiştir. Ayrıca, Yapısal Eşitlik Modellemesi kişisel faktörlerin lisansüstü öğrencilerin okulu bırakma niyetlerini yordadığını gösterirken Hiyerarşik Regresyon Analizi ise kurumsal ve amaçsal bağlılığın bu ilişkide aracı rolü üstlendiğini göstermiştir. Olgu-bilim çalışması ise kişisal faktörlerin örgütsel faktörlere kıyasla öğrenci kaybı üzerinde daha baskın bir rolü olduğunu göstermiştir.

Anahtar Kelimeler: Öğrenci Kaybı, Yükseköğretim, Lisansüstü Eğitim, Örgütsel İklim

To My Unique Daughter, and to all innocent babies in the earth

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CoHE	Council of Higher Education
MONE	Ministry of National Education
SEM	Structural Equation Modelling
EFA	Exploratory Factor Analysis
CFA	Confirmatory Factor Analysis
GPA	Grade Point Average
URAP	University Ranking on Academic Performance
IC	Inter-university Council
HEAB	Higher Education Audit Board
M.S.	Master of Science
Ph.D.	Doctor of Philosophy

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

In Turkish society, some fields are found valuable such that community members use frequently interesting phrases to show significance of these fields. These phrases narrate lots of meanings in a few words. To illustrate, people emphasize that health comes first. Moreover, there is a need to open a separate parenthesis for education. When people in Turkey face with undesired event, they say that education is must. Apart from health and education, economics, politics, and religion are other sociological institutions affecting individuals and communities. All of them are significant and interrelated to each other but education is a core value and has a meaningful place in minds and hearts of human beings.

Education has an impact on the entire life of human beings. They spend a considerable amount of time in school or school-related activities. From pre-school to higher education, people change and develop biologically, emotionally, and socially by learning new things. Higher education has a separate and special significance because human beings feel as free individuals who are independent from their families in these times. In addition, individuals get a chance to shape their future in this period. For example, they make decisions about their partners and occupations in these years. Formally, universities are educational organizations which contribute to social and academic improvement of the students, prepare students for their future careers, and build personal skills of the students.

Higher education system in Turkey puts a tripod on purpose of higher education. As the CoHE (Council of Higher Education in Turkey) stated, aim of higher education is to improve students in lots of dimensions, to make contributions to state, and to conduct scientific studies. Definitely, primary purpose focuses on training and improving students. Higher education system in Turkey mainly consists of two-year vocational schooling, four-year vocational tertiary education, four-year Bachelor's degree, and 5-year or 6-year Medical degree. Completion of latter three degrees brings an opportunity to be enrolled in 2-year M.S. (Master of Science) with thesis. Students can enroll in 4-year Ph.D. (Doctor of Philosophy) after M.S degree.

M.S. and Ph.D. education are parts of graduate education in Turkey. There are 480214 M.S. students and 91267 Ph.D. students in higher education system according to 2016-2017 dataset of the HEC. However, serious amount of these students are in the passive condition (Ertem & Gökalp, 2016). In other words, the students neither reregister in the semester nor attend regularly in the courses and thesis activities although they are enrolled in a graduate program. As a result, a part of the students do not hold a degree from graduate education. These students do not persist on keeping themselves in graduate education so that they are called non-persistent students (Berger, Ramiraz, & Lyon, 2012; Davidson, Beck, & Milligan, 2009; Litalien & Guay, 2015; Spaulding & Rockinson-Szapkiw, 2012; Xu, 2014). The literature has different names for this process. To name a few, departure (Lovitts, 2001), college dropout (Tinto, 1975), student attrition (Bean, 1980), college withdrawal (Pascarella & Chapman, 1983), absenteeism (Moore, Armstrong, & Pearson, 2008), and intentions to leave (Bean, 1982) are the phrases which are closely related to each other but not synonymous. The current study picks up these terminologies under the umbrella term of the student attrition which corresponds to a process in which the students do not persist on getting a degree and number of students registering at present semester or attending courses and thesis studies decreases. Also, the students who experience student attrition process is called a non-persistent student.

Student attrition is studied generally in a longitudinal process (Ishitani, 2003; Pascarella & Terenzini, 1980; Tinto, 1975). As a longitudinal process, data are collected at two different points in time and relate to student attrition by considering other factors like background of students, organizational factors, and academic skills of the students. On the other hand, there are also studies investigating student attrition in a cross-sectional way because of difficulty of handing dropout behavior or student attrition in a short period of time (Bean, 1982; Litalien & Guey, 2015). These studies measure the intentions to quit education by referring to the strong relationship between behavior and intention. According to the results of meta-analysis of Sheeran (2002), there was a mean correlation of .53 between constructs of behavior and intention. To summarize, student attrition is studied both longitudinally and cross-sectionally.

The reasons student attrition from graduate education is higher in recent years in Turkey may be explained both at the macro-level and at micro-level. Policies related to higher education may encourage students to first begin graduate education and then to leave without completing the degree. There have been some amnesty laws to draw students back in Turkey. The law numbers 6111, 6353, and 6569 which came into operation between 2011 and 2015 in Turkey gave rights to come back to the university for students who left education at any time in the past. To illustrate, related article of law 6111 states the following:

> The ones whose education was broken off by considering his or her own will, those whose lateral transfer from abroad was cancelled after transfer, those who did not register despite achieving the conditions of the program, and those who were expelled for whatever reasons except terror crimes during all classes (included pre-classes) of adaptation, upper secondary education, Bachelor integration, Bachelor education, and graduate education of higher education institutions until the effective date of this code can begin their education at 2011-2012 semester providing that they make an application to higher education institution from where they were expelled within five months beginning from the validity date of this law according to article 44 of this law.

These laws may both promote students to complete their degrees and encourage students to leave the education because they may carry hope of coming back again even if they were expelled. There are some studies showing both positive and negative effects of amnesty laws on Turkish higher education system. Karakütük, Aydın, Abalı, and Yıldırım (2008) found that amnesty laws made work of institutions difficult. On the other hand, a study by Çoruk, Çağatay, and Öztürk (2016) showed that results of amnesty laws were positive for graduate education. For another example, military law of number 1111 gives an opportunity for male students to complete their military duty 2 years after graduation. The 36th article of this law states the following:

> Military service of graduates of faculty or college and leavers from faculty or college may be delayed two years by grounding on the end of their 29-year. Military service of students who registered in a higher education institution in postponement period is delayed because of their studentship status… Deployment date can be delayed till one year for graduates of Master of Science.

Some students begin graduate education to be able to postpone military service. Sözer et al. (2002) found that one of the reasons why graduates begin to graduate education was to postpone military entry. On the other hand, there are hidden policies influencing higher education. In other words, policies public is aware of but government does not declare have impact on higher education. One of these policies is related to employment. Students enrolled in undergraduate and graduate education are not evaluated as unemployed and so unemployment rates do not inflate. As a result, the policy-makers encourage students to enroll in graduate education after undergraduate education. To summarize, macro-level reasons of student attrition are related to state policies.

In addition to macro-level reasons, it can be stated that huge gap between completers and non-completers of the graduate education is caused by micro-level reasons. These reasons for the student attrition are at the university scale. In other words, reasons arising from organizational side and personal side in a university may cause student attrition. Lovitts (2001) explains a variety of reasons for student attrition from individual characteristics to structural contexts of the universities. For example, organizational climate is a significant term depicting the atmosphere of an organization, which may be open or closed, warm or cold, and formal or informal so that organizational climate of institutions has an impact on higher education (Moran & Volkwein, 1988; Manuela, Cecila, & Joao, 2014; Sokol, Gozdek, Figurska, & Blaskova, 2015). By extension, a negative organizational climate may be an indicator for student attrition. Open climate may keep the students in graduate education whereas closed climate may keep students away from the graduate education. Coso and Sekayi (2015) investigated retention and preparation for doctoral students for academic career and found that institutional climate affected the engineering doctoral students' preparation for diverse career planning, especially future faculty by developing teaching abilities. With respect to type of organization, Chaney and Farris (1991) calculated and compared attrition rates for public and private universities. They found that attrition rate of public universities was higher than that of private ones. By considering the departmental differences, Golde (2000) interviewed with three students from three different departments and found that experiences of attritors differed by departments. The organizational factors related to student attrition may be summarized as admission process (Ishitani, 2006), organizational support (DesJardins, Ahlburg, & McCall, 2002), faculty attitude (Lundquist, Spalding, & Landrum, 2002), university type (Scott, Bailey, & Kienzl, 2006), and program characteristics (Spaulding & Rockinson-Szapkiw, 2012). As a result, student attrition is affected by organizational factors.

In addition to organizational factors, personal factors have an impact on student attrition. "Institutional and goal commitment" is closely related to student attrition. At this point, commitment refers to degree of loyalty towards the goal and institution. Most of the studies in the attrition and retention literature showed that commitment was one of immediate antecedents of dropout or attrition (Bean, 1980; Davidson, Beck, & Milligan, 2009; Spady, 1970; Tinto, 1975). Demographic characteristics such as age, gender, race, and socio-economic status (Bean & Metzner, 1985; Braxton, Brier, & Hossler, 1988; Ferreira, 2003; Hossler & Vesper, 1993; Litalien & Guay, 2015; Lott, Gardner, & Powers, 2009; Pascarella & Chapman, 1983; Stage, 1988; Stage and Hosler, 1989; Terenzini & Pascarella, 1978) affected students' decisions to leave education. In the context of Turkey, Özmen and Güç (2013) investigated the problems that female graduate students experienced. Their study showed that female students experienced problmes related to births, child care, and domestic work in their private life so that these problems reflected on their educational lives. These problems may push them from graduate education. On the other hand, personality traits are determinants of student attrition. Study by Faunce (1968) showed that non-completers had weaker interpersonal relationship and stronger inner tensions whereas completers were more conventional, temperate, and modest. Moreover, Hall, Kaufmann, Wuensch, Swart, DeUrquidi, Griffin, and Duncan (2015) conducted a study related to retention of engineering students and found that conscientiousness which is one of the Big Five Personality Traits was a significant predictor of retention. Apart from demographics and personality, some individual characteristics are closely related to student attrition. To name a few, past performance, academic achievement, and intellectual development were in a relation with student attrition (Chaney & Farris, 1991; Kahn & Nauta, 2001; Kruzicevic, Barisic, Banozic, Esteban, Sapunar, & Puljak, 2012). However, academic performance of the students has a special place for student attrition literature because researchers have a debate on this topic. In the literature, there are studies both claiming or finding the relation between attrition and academic or past performance (i.e. Bean, 1980) and claiming that attrition was independent from academic performance (i.e. Lovitts, 2001). Additionally, psychosocial factors like psychological well-being, academic and social integration, and self-esteem (Eaton & Bean, 1995; Napoli & Wortman, 1998; Golde, 2000) had a role on student attrition. In summary, personal factors are also related to students' attrition decisions.

Although student attrition is investigated frequently in international literature, studies in Turkey focus on more limited context like dropout problem in lower levels (Bülbül, 2012; Özbaş, 2010; Şimşek, 2011) and unidimensional problems like attendance, infrastructure, scholarship, family responsibilities, and academician problems (Çoruk, Çağatay, & Öztürk, 2016; Nayır, 2001; Sevinç, 2011). Moreover, President of Gazi University gave an interview to Hürriyet Newspaper in 2015. He declared that Institution of Natural and Applied Sciences had 2878 active students and 3405 passive students by considering 2015 data. Attrition rate corresponds to almost 55% (Hurriyet, 2015). This attrition rate has served as a warning to this popular capital city university. In addition, Ertem and Gökalp (2016) conducted a document analysis study related to attrition rates in graduate education. They found that three public universities in Ankara had attrition rates of 42%, 26% and one percent although these universities were in the top 10 universities of Turkey according to 2015 dataset of URAP (University Ranking by Academic Performance).

Moreover, the results showed that attrition rate was higher for M.S. and male students. Another dramatic conclusion was that attrition rate for two universities seems to an upward trend when the last five years are considering. Although these studies give valuable knowledge about student attrition and graduate education, they are limited to unidimensional and descriptive data. To summarize, student attrition from graduate education in the context of Turkey is investigated in a limited, descriptive and unidimensional way so that there is a need for studies approaching student attrition in a multidimensional way, setting relationships, and investigating student attrition in-depth.

1.2 Purpose of the Study

Overall, the current study aims to develop and test a model in order to determine the role of personal and organizational factors on student attrition from graduate education and to investigate graduate student attrition from the lenses of non-persistent students, persistent students, graduate school administrators, and advisors. More specifically, this study seeks answers for research questions as follows:

1. In what ways, student attrition is related to personal and organizational factors?
    a. How well do personal factors (gender, marital status, and program level) and organizational factors (university type, economic support, and department) predict persistence of the student?
    b. How well do personal factors (age, semester, and past performance) and organizational factors (dimensions of organizational climate) together with mediating role of institutional and goal commitment predict intentions to leave graduate education?
2. How is the student attrition perceived by students and faculty members?
    a. What have non-persistent students experienced from enrollment to this day?
    b. How do persistent students perceive student attrition?
    c. What are the perceptions of graduate school administrators about student attrition from graduate education?

d. What are the perceptions of advisors about student attrition from graduate education?

3. What are the attrition rates for the higher education institutions in terms of program level (M.S. and Ph.D.) and semester (2015-2016, 2016-2017, and 2017-2018)?

1.3 Significance of the Study

The current study has significance in terms of research, practice, and theory because results of the study will make a contribution to the higher education field. In terms of research, this study had an attempt to close a gap related to student attrition in the context of higher education system in Turkey. The literature in Turkey had studies related to dropout in lower levels of education such as primary schools, high schools, and undergraduate education. In the level of graduate education, researcher of the current study did not come across a study related to drop-out or student attrition. Indeed, literature on Turkey has studies mostly focusing on graduate education problems. However, these studies were mostly descriptive. To name a few, registration problems, lack of attendance, and mismatch between educational life and occupational life are visible. Moreover, there are studies listing the reasons of attendance problem in graduate education as academician deficiency, economic problems, infrastructure problems for library, occupational problems, and thesis and seminar problems. On the other hand, the literature on Turkey does not have any studies bringing causal explanations for student attrition. For this reason, the current study had tried to set relationships between student attrition and personal and organizational factors. In terms of personal factors, relations of gender, marital status, program level, age, semester, and past performance to persistence of students and to their intentions to leave were examined. In terms of organizational factors, relations of university type, economic support, department, and organizational climate to persistence of students and to their intentions to leave were investigated. At the same time, the researcher of the current study recognized that organizational climate was less studied topic in higher education context. Moreover, there was no study assessing organizational climate in organizations having graduate education in Turkey. For education field, frequently studied topic was school climate. The researcher of the current study did not come across a study focusing on organizational climate at the graduate education level in the context of Turkey such that there were only studies investigating organizational climate of higher education institutions in Turkey. In other words, studies in Turkey do not distinguish higher education institutions in terms of level of education. Although it is difficult to seperate graduate level from undergraduate level in terms of academic and physical sources, they are different in terms of some issues. To name a few, research and development, relation with advisor, and admission procedures are more apparent. Therefore, the current study gave an opportunity to assess organizational climate in the higher education institutions offering graduate education. On the other hand, the current study combined quantitative and qualitative methods so that findings of both methods were cross-validated for whether they converged or diverged. With the help of this approach, there was a chance to evaluate student attrition in a multidimensional way. Moreover, perceptions and experiences of non-persistent students, persistent students, graduate school administrators, and advisors were investigated. The nature of this diversity may give opportunity to engage in analyzing the research problem considering micro and macro level social and personal dynamics and to improve common perspectives and approaches of higher education stakeholder. Overall, this study revealed individual and organizational factors causing student attrition. All of them may give clues about the quality of higher education by mapping graduate education.

In terms of practice, the results of the current study presented valuable information for educators and policy makers about process and structure of graduate education. By considering the results of the study, they may produce strategies to adapt new perspectives in the governance and administration of higher education. Investigation of student attrition from the lenses of persistent students, non-persistent students, graduate school administrators and advisors may give opportunity to produce more comprehensive and sustainable strategies in order to deal with student attrition problem in graduate education. Additionally, HEC and rectors may become aware of the need to create positive climate in the universities. Results related to organizational climate may give information about the quality of instruction and academicians. Inner dynamics of university may be reorganized to develop social relations among students so that interactions between faculty and students also may be indicators for social and institutional atmosphere of the universities. More specifically, student-advisor and student-faculty member relationships may be improved to decline student attrition rates. Moreover, results related to administrative climate may give opportunity for university administration to improve leadership skills of administrators while results related to departmental climate may warn faculty members such that opportunities provided by departments may be developed. Additionally, the results of this study may be useful in academician training policies or target for high number of students with Ph.D. degree in Turkey. In recent days, the HEC has implemented scholarship for Ph.D. student through project of “100/2000 PhD Scholarship” in order to increase number of students with Ph.D. degree in some fields. Furthermore, HEC has announced that graduate students will be promoted by scholarship if they are participated in Scientific Research Projects of universities (HEC, 2017). Furthermore, HEC had a plan to classify universities as research, teaching, and regional development oriented universities. Saraç (2016), the head of HEC, stated that universities must become different in terms of their mission and they must be specialized in their fields such as research, teaching, and regional development. A year later, President of Republic of Turkey declared research universities in opening ceremony of higher education as following: Ankara University, Boğaziçi University, Erciyes University, Gazi University, Gebze Technical University, Hacettepe University, Istanbul University, Istanbul Technical University, Izmir Institute of Technology, and Middle East Technical University. In this respect, student attrition may be evaluated as an indicator for research universities because research universities focus on graduate education. The Head of HEC interviewed with Hürriyet newspaper (2017) and stated that research universities were selected by considering some criteria like doctoral education, research culture, and training strong researchers. These descriptions are closely related to graduate education. Therefore, the results of the current study may give feedback to research universities about the quality of their graduate education. Furthermore, student attrition may be evaluated as a signal for shortage of academicians. And finally, some laws and regulations at macro-level may be implemented to promote sustainability in quality of graduate education through university-community partnership.

Finally, this study made contribution to theory by investigating relationship between student attrition and personal factors and organizational factors, and exploring experiences of non-persistent student, persistent students, graduate school administrators, and advisors from lens of Bronfenbrenner's *Bioecological Theory* (1977, 1986) and *Attribution Theory*. With respect to Bioecological Theory; relation between student and departments, interaction between faculty members and advisors, impact of higher education policies including university and departmental structure, climate of higher education institutions, and time passing on student attrition which are related respectively to microsystem, mesosystem, exosystem, macrosystem, and chronosystem were examined firstly in higher education system of Turkey. Moreover, roles of both organizational and personal factors on student attrition were covered within this theory. The current study was the first study testing personal and organizational predictors of student attrition in literature on Turkey. With respect to *Attribution Theory*, reasons of student attrition were evaluated from both student side and organization side. The current study included four groups of participants and placed them on a continuum. Non-persistent students and persistent students were on student side while graduate school administrators and advisors were on organization side. The researcher expected that non-persistent students and graduate school administrators were on opposite two ends of the continuum. Moreover, persistent students and advisors were placed in the middle of continuum. Therefore, the responses of the questions of whether organizational or individual factors were more dominant for attrition decisions, and whether onus of responsibility for attrition behavior was attributed to students or institution by students or academicians may be now clearer for the context of the current study.

1.4 Theoretical Framework of the Study

Theoretical framework of the current study is based on *bioecolgocail theory* and *attribution theory*. In order to fit causes for attrition into organizational and personal factors, the study was framed in terms of *bioecological theory*. Also, *attribution* *theory* was the second theory to check which participants attributed attrition to personal or organizational factors.

1.4.1 Bioecological Theory

Bioecological Theory of Bronfenbrenner (1977, 1986) emphasized interactions between person and environment. These interactions had a role on increasing academic achievement, decreasing psychological problems, and improving social relations of the individuals. Personal factors coming from biological side of human and organizational factors coming from ecological side of environment may have a role on student attrition. To name a few, socio economic status, religion, ethnicity, and genetics (Bronfennbrenner & Ceci, 1994) can be considered as personal factors. On the other hand, organizational factors can be listed as work conditions, organization structures, and economic influences (Bronfenbrenner, 1986). The literature has studies examining alienation among higher education students (Rovai & Wighting, 2005), school dropout (Bowen, 2009), educational attainment (Marjoribanks, 2003), participation of students with disabilities in school activities (Eriksson, 2005), academic acculturation of international PhD students (Elliot, Baumfield, & Reid, 2016) and college retention (Cordell-Mcnulty, 2009) from the lens of bioecological theory, which were related topics with student attrition.

This theory has five layers which were coherent with the aim of the current study. Figure 1.1 depicts the layers of the theory. The first layer is microsystem in which child and its environment are in a relationship. For example, a student may be influenced by attitudes of the department. The second layer is the mesosystem which remarks the interaction among elements of environment of the person. To illustrate, a healthy bridge between family and department may increase academic achievement of the student. The third layer is exosystem which focuses on societal conditions such as parental conditions, media, and policies. By considering this layer in higher education context, persistence of students in higher education is affected from higher education policies or faculty-based strategies. The fourth layer is macrosystem that is based on cultural and social interchanges. Organizational climate of faculties or departments may influence either attrition decisions of students or their retention in graduate education. The last system is chronosystem that is related to changes over time. Increases or decreases in student attrition year by year may be both an example for this layer and an indicator for sustainable higher education policies. In conclusion, microsystem, mesosystem, exosystem, macrosystem, and chronosystem layers of the Bioecological Theory match up with the purpose of the current study.

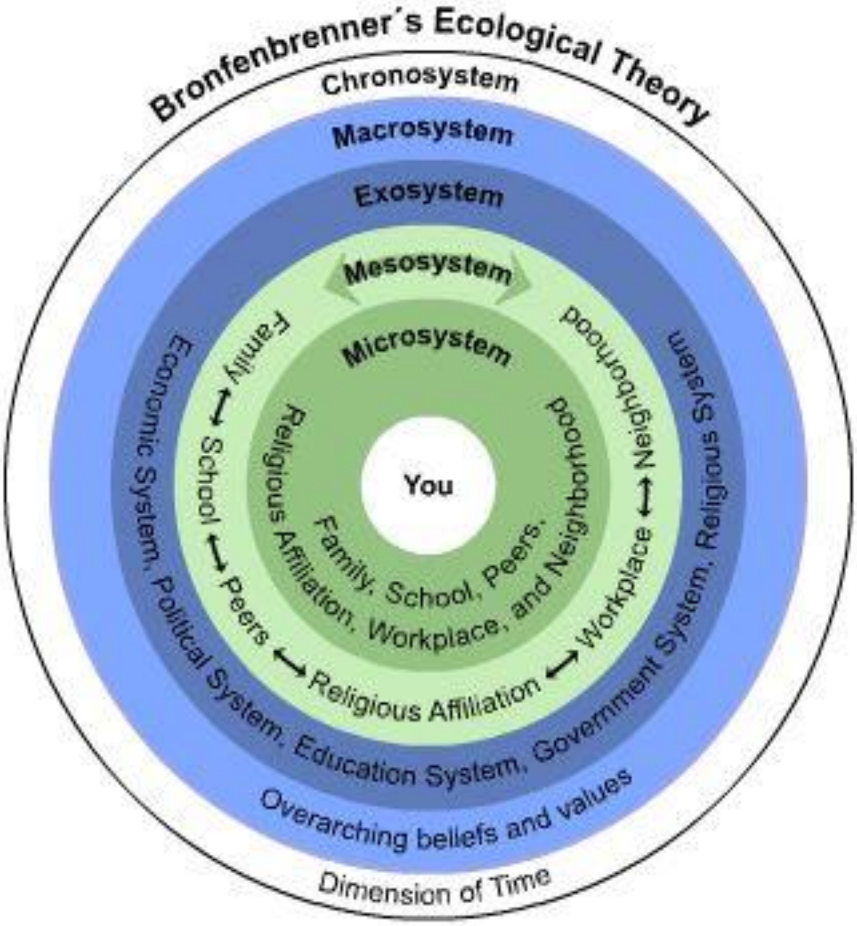


Figure 1.1 *Layers of Bio Ecological Theory*

1.4.2. Attribution Theory

This theory which is rooted in social psychology is based on perceptions of individuals such that they try to bring causal explanations for the events or behaviors (Weiner, 1972). In educational setting, achievement motivation is the core of the attribution theory. Attribution is implemented in three stage: i) observing behavior, ii) checking behavior whether it is deliberate, and iii) attributing behavior to internal or external causes. These attributions which are causal (internal or external) explanations are classified into locus of control, stability, and controllability. If an event is attributed to someone's ability or knowledge, then it is related to internal locus of control. However, if that event is attributed to external factors, then it is related to external locus of control. Stability means that whether an event changes over time or not. Controllability is related to whether an event is controlled by someone's own skills or controlled by chance or luck. In addition to stages, attribution theory has a model of actor-observer (Jones & Nisbett, 1971). According to this model, actors consider situation while observers focus on actors' personal dispositions.

In the current study, researcher aimed to explore whether reasons of student attrition would be attributed to personal factors or organizational factors. Students and academicians may think differently about the reasons of student attrition. Similar concerns are available in other studies in the literature. Lovitts (1996) conducted a research titled as "Who is Responsible for Graduate Student Attrition- The Individual or the Institution? Toward an Explanation of the High and Persistent Rate of Attrition" and claimed that if the attrition rates were standard across time, then university would be responsible for attrition whereas if the attrition rates did not have a pattern on attrition, then students would be responsible. On the other hand, the author shared a finding from the study by Berelson (1960) who found that responsibility of student attrition was attributed more to students than to the institution. In another study, Gardner (2009a) conducted a research investigating attrition attributions by faculty and doctoral student. The results showed that one third of the students declared departmental issues as cause to attrition whereas no faculty members mentioned departmental issues. More than half of the faculty members pointed students' lack of ability. The current study claimed that if attribution theory was used in a continuum to investigate attributions of student attrition from student and organization side, results may be more comprehensive. Non-persistent students and persistent students were on student side while graduate school administrators and advisors were on organization side. One end of this continuum belongs to non-persistent students who were actors while the other end of continuum belongs to graduate school administrators who were observers. Non-persistent students possibly would attribute to organizational factors whereas graduate school administrators possibly would attribute to personal factors. On the other hand, persistent students from students-side and advisors from organization-side were placed in the middle. However, it was expected that they would moderate student attrition attributions. As a result, *attribution theory* was useful to examine differences in perceptions such that either individual or organization was responsible for student attrition from graduate education.

1.5 Definition of the Terms

Student attrition: a process in which students do not persist on getting a degree and number of students attending courses decreases. Student attrition includes the non-persistent students who are described below.

Attrition rate: ratio of not-registered (passive) students in total number of registered and passive students.

Non-persistent student: student who is not registered, or is not re-registered, or is disenrolled in the present semester. Moreover, non-persistent students do not attend courses or thesis studies in a regular way. Also, the students who think to either quit education or transfer the other organization are evaluated as non-persistent students. However, the students who were withdrawn because of academic dismissal at the semester before, the students who will change department in the same higher education institution, and the ones who will take a break because of any reason like health report or military duty are not considered non-persistent student.

Persistent student: student who is both enrolled and registered in the program for relevant semester. Persistent students attend courses or thesis studies in a regular way.

Student retention: a process in which students have resistance and persistence to keep themselves in the system and to have a degree.

Organizational climate: shared perceptions of individuals about the quality or characteristics of environment which may be working places, learning spaces, or service areas.

Institutional and goal commitment: quality of willingness to reserve person's time and energy for person's organization quality of being devoted to goal.

CHAPTER 2

LITERATURE REVIEW

This chapter of the study presents the sections of higher education system in Turkey, student attrition, organizational climate, and the discussion and summary of literature review including hypotheses and models.

2.1 Higher Education System in Turkey

The higher education system in Turkey is described in terms of development of, significance of, and administration and governance of higher education as well as graduate education.

2.1.1 Development of Higher Education

Higher education in Turkey begins with the completion of secondary education. Higher education system in Turkey consists the period from two-year vocational college to the PhD education. The elements of higher education system are explained in Law of Higher Education (the law no.2547). For example, the purpose of higher education is to improve students in terms of skills, values, and culture; to develop Turkish State economically, socially, and culturally; and to improve science and research activities as they emphasized in article four. Moreover, administration of higher education is organized in this law. According to this law, administration of higher education in Turkey is based on trivet: The Council of Higher Education (CoHE), Inter-university Council (IC), and Higher Education Audit Board (HEAB). HEC regulates establishment and development of new higher education institutions, organization of teaching and research activities, training of academicians, and providing resources for universities as it is declared in article seven. IC regulates the activities of education, research and publication, and evaluation of academicians' degree as it is declared in article 11. Finally, article eight and nine state that HEAB supervises higher education institutions and related units, and academicians and their activities.

Review of historical development of higher education system in Turkey may flash on recent discussions about higher education. By considering historical development of higher education in Turkey, it is possible to see the fact that higher education system dates back to old times. In period of Seljuq Empire, Nizamiye Madrassah which was established by Nizamülmülk in Baghdad in 1068 can be evaluated as a higher education institution (Erdem, 2004). In period of Ottoman Empire, effects of theology-based Madrassa education had continued with Madrassas of Fatih the Conqueror and Süleyman the Magnificent until the 18th century. Tekeli (2010) claimed that Madrassas were the places in which science was not a concern. In 1773, Sultan III Mustafa established the Mühendishane-i Berri-i Humayin (Istanbul Technique University of today’s Turkey) by imitating Western higher education system. Moreover, Darülfünun (Istanbul University of today’s Turkey) was founded on faculty of arts and science, law, and natural sciences and math in 19th century (Erdem, 2005). As a result, roots of higher education were hold on older times.

After the wars and collapse of Ottoman Empire, Republic of Turkey arised through a war of independence. Shortly after announcement of Republic, Madrassas and other religious schools were forbidden in the law of Tevhid-i Tedrisat. That is the first attempt to make universities modernist. Atatürk called Prof. Albert Malche from Switzerland to implement the first university reform of republic (Namal & Karakök, 2011). As a result, the law no. 2253 (1933) brought new regulations for higher education system such as establishment of Istanbul University instead of Darülfünun, selection of deans and Presidents, and assignment of Professors. Erdem (2005) entitled this regulation as a real “university reform” while Gürüz, Şuhubi, Şengör, Türker, and Yurtsever (1994) called this law starting point of modern higher education system in Turkey. On the other hand, foreign scientist began to come to Turkey by 1933. Namal (2012) stated that scientists escaping from Nazi Germany were embraced by Turkey and Turkey benefitted from their experiences in terms of higher education policies and practices. Considering pre-republic and republic period of Turkey, Arap (2010) concluded that higher education system in Turkey had carried French perspective in pre-republic period while German effect was felt in higher education by the announcement of republic in 1923 and 1933 university reform.

In the multi-party period of the Republic of Turkey, higher education experienced different processes. In 1946, “Law of Universities” (the law no.4936) in which universities were described as “high research, science and teaching associations” came into operation. This law stated terms related to scientific and administrative autonomy (Official Journal, 1946). By year 1955, Turkish higher education system focused on regional university concept. Turkey investigated Land-Grant system of USA and opened region universities. To name a few, Ege University, Karadeniz Technical University, and Atatürk University were founded to support social, cultural, and economic side of respectively Aegean region, Black Sea region, and East Anatolian Region (Erdem, 2005). In 1973, again a law of university was regulated with the law number of 1750. This law focused on teaching and instruction with national values. Moreover, publication term was added to definition of university in law number of 4936 in 1973. Furthermore, it was the first law establishing the Council of Higher Education and Higher Education Audit Board (Offical Journal, 1973). However, these associations were removed by constitutional court decision in 1975 (Gür & Çelik, 2011).

1982 Constitution Act, the current constitution of Turkey, included regulations related to higher education. The law number of 2547 went into operation in that period. That was the cornerstone for the higher education system. While the period beginning with 18th century and continuing until 1980’s was based on perspectives of continental Europe, the period after 1980 military coup has been based on Anglo-Saxon model of USA (Erdem, 2004). That period also brought the opening of private universities. Bilkent University, Koç University, and Kadir Has University were founded between 1984 and 1992. The law number of 3837 which was regulated in 1992 gave opportunity to open universities and advanced technology institutes in 22 cities. According to Gürüz (2001), this law was very important because higher education was expanded over all regions of Turkey.

The period coming from beginning of millenium to the recent days witnessed the opening of universities in each city and lots of private universities. While there were a total of 70 universities in 2003 (Günay, 2013), there are 113 public universities and 72 private universities in 2017 in Turkey (HEC, 2017). Arap (2010) conducted a study related to newly opened universities and concluded that two reasons for opening universities were local economic development and political effects. Not only the number of university has increased in last decade but also huge increments has been seen on the number of university students, graduates, and academicians. While there were 2914 higher education students, 321 annual graduates, and 307 academicians in 1924s' Turkey (Baskan, 2001), there are 7198987 students, 802822 graduates, and 151763 academicians in higher education institutions in 2015-2016 semester (HEC, 2017). On the other hand, Günay and Günay (2011) investigated the quantitative developments in higher education and found that number of academicians, universities, and students have been increasing constantly while some indicators giving a clue about quality of education showed a negative condition. For example, student number per academician was 13.85 in 1984 while student number per academician in 2011 was 18.86. Moreover, the study showed that although publication number of Turkey has increased three times more from 2000 to 2010, Turkey is still behind many developed countries.

In conclusion, higher education system in Turkey has some cornerstones in its historical development in terms of policies, perspectives, and periods. The first one is Madrassas which were religion-focused. This perspective was valid in Seljuqs and Ottoman Empire periods. The second one is role-model of European context within the birth of university term. It was seen in the periods of recent times of Ottoman Empire and first times of Republic of Turkey. These periods come up to painful years of Turkey like the world and independence wars, political competitions, and ideological conflicts. The third one is the effect of Anglo-Saxon system on administration and governance of higher education system. Anglo-Saxon system included the periods of 1982 Constitution Act, 1990s in Turkey, and millennium in which huge quantitative increments have been lived in higher education of Turkey. This perspective shows still its effect in Millenium's Turkey.

2.1.2 Significance of Higher Education

Higher education is valuable for not only shaping the educational life of the students but also promoting governmental, social, and economical investments of the state and improving scientific research. In terms of student-benefit, students have many advantages under favor of higher education. According to Ishitani (2006), higher education led to gain economic earnings and develop better career options. According to OECD (2015) report, people with higher level of education had better job prospects. Furthermore, OECD (2017) report showed that employment rates were averagely %85, %75, and % 60 for respectively tertiary graduates, upper secondary graduates or post secondary graduates with non-tertiary, and ones who do not have an upper secondary degree for the OECD countries by considering 2016 data. In same dataset, those rates for Turkey were about %75 for tertiary graduates, about %65 for upper secondary graduates or post secondary graduates with non-tertiary, and about %55 for ones who do not have an upper secondary degree. On the other hand, Ergen (2006) stated that higher education had social returns for the individuals in addition to individual returns. Individual returns were related to differences between incomes of high school graduates and incomes of university graduates whereas social returns were related to differences between taxes of educated labor force and unskilled labor force. Study by Türkmen (2002) showed that individual return rate for a person in higher education was %27.6 while social return rate was %9.81 (as cited in Gölpek, 2011). In Turkish society, higher education is accepted as a way of getting social status the fact that this condition encourages poor students from low socio-economic status to continue university in order to get a degree. Moreover, life satisfaction, life expectancy, and voting were three social benefits according to OECD (2015). In addition, Gölpek (2011) explained some intangible and social returns such as more positive care on children, lower crime rates, and more emphasis on women education and occupation. To sum up, higher education provides significant economic, individual, and social advantages and returns for students.

As it is stated in the purposes section of the higher education law, higher education is a key factor to develop the country in all fields. Erdoğan (2001) related economic development to the fruitfulness of human resource and function of education. Moreover, Şimşek and Kadılar (2010) found that while increase in GDP was supporting human capital save, human capital was empowering long-term economic development. The literature has similar studies showing close relationship between economic development and education (Beşkaya, Savaş, & Şamiloğlu, 2010; Çakmak & Gümüş, 2005; Genç, Değer, & Berber, 2010; Kar & Ağır, 2003; Mercan & Sezer, 2014). On the other hand, a foundation of Turkish Education Association (TEDMEM) published a report on evaluation of education in 2016 in Turkey. This report emphasized two important conclusions related to effect of economy on education. The first one was that rate of spending money for education to GDP was 3.5%. The second one was that Turkey was at the 33rd place among 45 OECD countries in terms of spending per student. Moreover, spending per student was 3.327 U.S. Dollars which was too below OECD average (10.493 U.S. Dollars). In addition to economic development, higher education provides opportunities for social changes and progress. According to Kuyumcu and Erdoğan (2008), higher education has a role on a planned social and cultural change by spreading it in social base such that decrement in social class differences and increment in social consolidation and mobility are affected by developments in higher education. In conclusion, higher education institutions are valuable organizations for the state because of economic, social, and cultural development.

In terms of science-benefit, higher education institutions have a significant responsibility and opportunities to improve scientific research activities. In global world, significance of science has begun to increase because science is a tool to gain and manage more money. Therefore, position of universities has been replaced around this perspective. In parallel to this evolvement, the term of *Entrepreneur University* gained importance. Odabaşı (2006) conducted a research based on entrepreneur university and claimed that university which is affected by global, national, and organizational dynamics can be entrepreneur in order that they provide innovative, creative, competitive, fruitful, inventor, and transparent environment. A similar study was conducted by Özer (2011) who investigated the reasons why entrepreneurship became so important for universities and which model could be suitable for it. The author listed main reasons for becoming *Entrepreneur University* as changing global world, university-industry partnership, expectations of knowledge society, and decrements in income resources. Furthermore, he underlined the importance of qualitative development of universities, university-industry cooperation, autonomy, and entrepreneur culture of academicians and students for the effective model of *Entrepreneur University*. Research and development activities are also important for higher education institutions because knowledge emerged with these activities are put into service of society. According to Öztemel (2013), universities have three important responsibilities which are production of new knowledge through research and development, improving present knowledge, and teaching that knowledge such that even if one of these responsibilities does not work, then there is no chance of being an effective university. The author claimed that former two responsibilities are weaker in Turkey so that developing and improving knowledge may be achieved through innovation and research culture. On the other hand, Şen (2012) stated that development in science and technology depends on the education in higher education institutions such that content of higher education curriculum should be reorganized by considering history of science, philosophy of science, and logical implications which are based on own culture and experiences. As a result, higher education allows for doing science and research and in return community benefits from this process.

2.1.3 Administration and Governance of Higher Education

Law of higher education in Turkey changed in 1960, 1973, and 1982 with three military coups that took place in these years. Development of higher education went through painful and anti-democratic periods. Therefore, higher education is one of the frequently discussed fields in agenda of Turkey in terms of structure and process. Turkish Higher Education System is based on strict centralized structure in which decisions are made at top and are implemented straight down. Moreover, Turkish higher education has experienced quantitative increments in recent years. Çelik and Gür (2014) stated that higher education system has grown dramatically in recent years so that excessive centralized structure cannot satisfy this growth. Similarly, Özer (2012) emphasized that the current structure of higher education cannot carry new higher education because of progress in schooling rates, new stakeholders in higher education, and increase in the number of universities so that there is a need for quality assurance system. In addition to structural problems, higher education has some issues related to process such as allocation of resources, academician inadequacy, and deterioration in personnel rights drawing attention to higher education. Establishments of new universities, Bologna process, reform attempts of higher education, problems faced in universities, paradigms for new universities, and higher education systems are frequently studied topics in higher education field (Altınsoy 2011; Arap 2010; Kondakçı, 2003; Şimşek and Adıgüzel, 2012). In addition, recent years witnessed the foundations of many private universities. Şenses (2007) criticized private universities because they took position in higher education without providing adequate academician and infrastructure. As a result, all of these changes in structure and process of higher education increased the significance of "administration and governance of higher education".

As a structure, it can be stated that "administration and governance of higher education" is based on two-stage management in Turkey. In the first stage, the Council of Higher Education, Interuniversity Council, and Higher Education Audit Board are placed. These institutions can be named as top management. Head of Council of Higher Education is assigned by President of Republic for four years. In the second stage, university management are placed and includes rectorship and its bottom mechanism. Rectors are also assigned by President of Republic for four years. Çelik and Gür (2014) investigated the history of management of higher education and concluded that there were many system changes in elections or assignments of Rectors and Head of Higher Education Council. More recently, votes of faculty members were determinants of rector election until 2016 whereas President of Republic are assigning the Rector nowadays by remarking executive order (676 no. Decree Law). To summarize, it can be stated that President of Republic is the selector while the Head of Higher Education Council and the Rectors are operators in administration and governance of higher education.

Although the terms of administration and governance have similar meanings, they are not the same. Sporn (2007) differentiated administration and governance such that administration is related to structure and process to lead and manage institution while governance is related to structure and process to make decisions. On the other hand, there are nuances between government and governance. Government corresponds to hierarchical and bureaucratic structure but governance refers to interaction between organizations and individuals in decision-making process (Yüksel, 2000). Not only changes in Turkey but also changes in international arena affect higher education. To name a few, diverse and changing environment, inflation of college costs, dilemmas of student access and retention, fluctuations in economic prosperities of countries, unpredictable events, public accountability, and impact of politicians make higher education complex (Altbach, 2006; Bess & Dee, 2008; Gayle, Tewarie, & White, 2003; Keller, 2007) so that effective administration and governance become a need rather than an alternative to struggle with these changes.

Reform is the key word for administration and planning of higher education. In order to implement an effective reform, the critical thing is strategic planning. Strategic planning can be defined as the process in which purpose and direction are given to organization to accomplish long-term objectives by using resources effectively. Bess and Dee (2008) explained five types of model for organizational strategy in higher education in terms of environmental determinism and perceived organizational choice. Environmental determinism is to what extent an organization is controlled by external environment whereas perceived organizational choice is to what extent members of organizations can choose options. The first model is linear model which is based on sequential and rational model. The organizations with this model have higher environmental determinism and lower perceived organizational choice. The second model is adaptive model that is based on responsiveness to expectations of external environment. Organizations with adaptive model have higher environmental determinism and higher perceived organizational choice. The third one is emergent model which is based on action emerging from previous behaviors. Organizations with this model have lower environmental determinism and higher perceived organizational choice. The fourth model is symbolic model which is based on values, beliefs, and culture. In this model, environmental determinism is lower while perceived organizational choice is higher. Finally, post-modern model focuses on political value and balance of power. To sum up, strategic planning has significance.

Finance of universities has an important place in administration and governance of higher education. One of the most serious problems of the universities is finance and this problem is studied by many researchers (Aypay, 2003; Gürüz, 2001; Nerlove, 1975; Şimşek, 1999). Hauptman (2007) stated that financial issues in higher education were interpreted differently by stakeholder. Policy-makers thought about how much public purse can be separated for higher education by considering also other sectors such as health, safety, and transportation. Universities had a concern to teach students and to do research in scarcity of resources. And finally, students and families worry about how much they will pay for higher education. OECD (2015) report compared 2000 and 2009 data in terms of some financial indicators. Share of national weight spending on education was about five percent in 2000 while this share was about six percent in 2009 for OECD countries. Share of public spending on education was same with about 13% for the years of 2000 and 2009. However, share of private spending on education came up 15% in 2009. In order to manage financial condition of higher education institutions effectively, there is a need for a tripod: autonomy, accountability, and resource allocation. Estermann, Nokkala, and Steinel (2011) explained the four types of autonomy by considering classification of European Universities Association, which were organizational, financial, staffing, and academic autonomy. Specifically, financial autonomy includes topics related to public funding, surplus, borrowing money, having own buildings, tuition fees for EU and non-EU students. Usage of different fundings and outcomes of higher education have increased the importance of accountability because public attention and scrutiny fronted to balance between investments on higher education and returns. Accountability means that governments put obligations to check institution. Neave

(1998) defined accountability briefly “evaluative state”. El-Khawas (2007) revealed three themes for accountability, quality assurance, and assessment by investigating accountability literature: “influence of accountability policies on relationship between government and higher education, policy analysis, and impact of accountability policies”. In other words, studies related to accountability focus mostly on policies. Resource allocation is other important issue for an effective financial management. Gayle, Tewarie, and White (2003) stated that increase of income and reduction of expenses made contributions to institutional mission of universities. Moreover, the authors recommended that responsibility-centered management that is based on decentralized and dynamic budgeting may be effective for resource allocation.

Organizational culture is significant for the administration and governance of higher education. It is assumed that an organization can be managed in an effective way if its culture is known. Organizational culture was related to perceptions of individuals about organization and characteristics of the organization. In other words, it can be stated that organizational culture is the atmosphere which individuals smell and react. Bergquist and Pawlak (2008) executed six cultures of academy. The first one was collegial culture that was based on discipline-oriented research, professional autonomy, and educational quality. The second one was managerial culture that was based on goals and measurement of performance. The third one was developmental culture that was based on integration of mind, body, and spirit of individuals. The fourth culture was advocacy culture which focused on access, equity, power, and bargaining. The next culture was virtual culture which was visible in dynamic and flexible environments. Finally, the sixth culture was tangible culture which had value-based and embedded patterns. On the other hand, there are some organizational perspectives transmitting culture of academy. Bess and Dee (2008) studied application of organizational theories to the universities. Three paradigms which were positivist, social construction, and post-modern perspectives emerged in organizational theory. Positivist perspective supports the objective reality and accuracy of scientific method. Social construction perspective assigns a meaning to social events through communication, interpretation, and perception. Lastly, postmodern perspective emphasizes effects of power, diversity, and paradoxes by criticizing modernism. In conclusion, three paradigms may be used to understand aspects of cultures in administration and governance of higher education such that usage of only one paradigm is not recommended to identify the organization.

Assignment, training, and promotion of academicians have critical importance for *"administration and governance of higher education"* as well. In Turkey, higher education system suffers from both quality and quantity of academician (Doğan, 2013; Günay, 2011; Şenses, 2007; Yalçınkaya, Koşar, & Altunkaya, 2014). Research assistants in academia may be evaluated as beginning point to become an academician. The law of Council of Higher Education defines research assistants as "teaching assistants who do research, analysis, experiment, and other duties given by authorized people in higher education organizations". Research assistants in Turkey are assigned to academic position with two ways. The first one is 33/a article in which research assistants have a permanent staff position. The second one is 50/d in which research assistants have a temporary position. On the other hand, OYP (Faculty Development Program of Turkey) consisted of 33/a research assistants by providing budgets for them and some additional opportunities like foreign language education and study abroad in the previous years. However, positions of research assistants in OYP converted to 50/d after the coup attempt in 2016 in Turkey. As a result, a serious amount of research assistants have a temporary position in Turkish higher education system. Korkut, Yalçınkaya, and Muştan (1999) conducted a research and found that temporary position affected performance of research assistant in work and their perspective of academic career negatively. This condition is too thought-provoking despite the declaration of Head of Higher Education Council (Çetinsaya, 2014) about more need for Ph.D. graduates. The ones getting a PhD degree may be assigned to position of Assistant Prof. Dr. while the ones showing adequate performance for becoming Associate Prof. Dr. after Ph.D. may be promoted to Associate Prof. Dr. from Assistant Prof. Dr. In Turkish literature, there are studies recommending to reorganize criterions for becoming Associate Prof. Dr. (Bursalıoğlu, 1996; Demir, Güloğlu Demir, & Özdemir, 2017; Ölçer & Koçer, 2015; Tuzgöl Dost & Cenkseven, 2007; Türkoğlu, 1991). And finally, the ones waiting adequate time and showing good performance are assigned to Prof. Dr. position. However, unfortunately, Professors enter a stabile position and this condition affects their fruitfulness (Şenses, 2007). Moreover, report of Eğitim Bir-Sen (2013) showed that professors give additional courses to earn extra income instead of developing projects, educating assistants or conducting scientific research because their salary is too low when compared to salary of other occupation groups. For an overall perspective, Kalaycı (2009) investigated the evaluation methods of academician performance and found that summative evaluation is the main evaluation method in Turkey and there is a need for more formative evaluation. To conclude, staffing postions, promotions, and performance evaluations in academic world may be organized with active administration and governance of higher education.

2.1.4 Graduate Education

Graduate education is examined in terms of structure and process, significance and opportunities, problems, future of M.S. and Ph.D. graduates, and its examination.

2.1.4.1 Structure and Process in Graduate Education

In Turkish Higher Education System, graduate education is structured as Master of Science without Thesis, Master of Science with Thesis, Qualification in Arts, Integrated Doctorate, and the Doctor of Philosophy. There are some requirements for being accepted to these degrees. To name a few, graduate exams (like Academic Staff and Graduate Education Exam and Graduate Record Examinations), oral exams, English exams (like Foreign Language Exam and Higher Education Institutions Language Exam), letter of intention, reference letters, and a minimum GPA. Quantity of some criteria may change in terms of expectations of the departments. Study by Karakul-Kayahan and Karakütük (2014) showed that half of academicians found central exams essential while most of the academicians found foreign language and GPA essential but did not find Academic Staff and Graduate Education exam unnecessary. The students who applied to, are accepted to, and are enrolled in the graduate program are responsible from some activities such as courses, proposal defenses, qualification exams, and thesis defenses. A student has to achieve seven courses, one thesis preparation course or proposal, and defence of thesis in order to get M.S. degree. For a Ph.D. degree, a student has to complete eight courses, qualification exam, thesis proposal defence, and defence of Ph.D. dissertation successfully. In addition, all activities and whole education period have maximum duration. To illustrate, normal education period of M.S. is two years while maximum time to get a M.S. degree is three years. Also, a student in a Ph.D. program has to complete courses successfully at the latest until the end of fourth semester, enter qualification exam at the latest fifth semester providing minimum GPA of 3.00, and defend Ph.D. thesis in front of a jury at the latest in the sixth year of Ph.D. education (Graduate Education Regulations, 2016). To sum up, structure of graduate education is based on selection criteria, responsibilities, and durations to get a degree.

In the graduate education process, there are some issues which are based on organizational dynamics and individual efforts. Some factors such as academic activities including teaching and research provided by organization, social relations, and organizational culture steer the process in graduate education by interacting with individual characteristics. During the graduate education process, students make important decisions about different academic activities. It can be stated that this process begins with course selection that affects career paths and thesis topics of the students. Ersöz, Kabak, and Yılmaz (2011) conducted a study related to course selected in graduate education and developed a model in which content of course, time of course, instructor, experiences of student, sufficiency of course, and theory and practice determined priorities of the courses. Aktan (2007) investigated global trends and changing paradigms in higher education. He concluded that student-centered, electronic, and lifelong learning and interdisciplinary and multidisciplinary perspectives replaced with traditional and Taylorist approaches in higher education. Graduate students have an opportunity to download many articles electronically. Lectures on the graduate education are based on team works and student-centered approaches. Moreover, institutions giving graduate education emphasize and promote more interdisciplinary studies in which at least two fields come together by becoming integrated in terms of concept, method, procedure, terminology, and knowledge base because interdisciplinary approaches improve some skills like holistic view and multiple thinking (Graybill, Dooling, Shandas, Withey, Greve, & Simon, 2006; Manathunga, Lant, & Mellick, 2006; Şimşek & Adıgüzel, 2012; Yıldırım, 1996). Therefore, academic activities play a role in the process of graduate education.

In addition to academic processes in graduate education, social relations including peer interaction and student-faculty interaction together with organizational culture are important processes. In social relations, communication process is the key factor. Ölçer and Koçer (2015) investigated communication of academicians in a public university and found that face-to-face communication, independent work rather than group work, formal communication, and mistrustful communication with administration were more visible in communication process while communication with other departments, motivation, and organizational commitment were at lower or limited level. In academia, student-advisor relations also have significance. Study by Seçkin, Aypay, and Apaydın (2014) examined the opinions of graduate students about the student-advisor relationships and showed that gender of student affected the "comfortable personality" dimension of ideal advisor-student relationships while "academic title" affected "honesty" dimension of these relationships. Socialization as a framework of organizational culture (Tierney, 1988) is also a process in which newcomers try to become a member of that society. Like families, higher education institutions which are places for students to be socialized show care for their student. To summarize, social relations may improve graduate education processes.

2.1.4.2 Significance and Opportunities of Graduate Education

Graduate education, as a level of higher education, can be evaluated as the field in which individuals pursue their career developments in a systematic way. There are benefits from the graduate education. To illustrate, the students may become future faculty, develop themselves in their work, or have more income. On the other hand, graduate education is important for the universities which claim that they are researched-based universities because they compete with each other in order to produce more research and so to gain more resources. In addition, community and state may provide opportunities from graduate education such as solution of social problems and improving policies.

In terms of individual opportunities, the graduate students have a chance to enter academia as a research assistant. According to the Law of Higher Education, research assistants are the ones who are teaching assistants for research, analysis, experiments, and other duties determined by authorized institutions. The regulation related to selection and assignments of research assistant put two main criteria: minimum Bachelor degree and maximum 35-year. Apart from these criterions, higher education institutions put some special conditions such as being student in M.S. or Ph.D., completing M.S., and getting a degree from a special field. Ergün (2001) stated that academicians are trained through M.S. and Ph.D. education so that scientific research and teaching must be provided effectively for them in these periods. As a result, graduate education may open the doors of academia. On the other hand, the students may have a desire to develop themselves. Başer, Narlı, and Günhan (2005) conducted a research with preservice teachers and found that they found undergraduate education insufficient and began graduate education in order to improve themselves. Similar findings were revealed in the study of Alabaş, Kamer and Polat (2012). They found that personal growth, seniority in occupation, and desire to be academician were the primary reasons for graduate education. Moreover, study by Erkılıç (2007) showed that socio-economic reasons were more dominant on graduate education desire than psycho-social reasons. To summarize, individual opportunities gained due to a graduate degree vary from being an academician to improving ownself and draw the students to graduate education.

In terms of organizational opportunities, research function of graduate education provides benefits for the higher education institutions. Published articles, conducted projects, and thesis studies which are significant outputs of graduate education play an important role on research and development activities of the universities. University Ranking by Academic Performance (URAP, 2015) sorted the last five-year performance of universities in terms of nine criteria such as number of article, rate of Ph.D. student, and number of Ph.D. student. All of these criteria are related to graduate education process. Results showed that the best ten universities were absolutely same for the period of 2009-2013. This means that universities investing in research and development activities were placed among the best universities and in turn used the benefits of this condition for research and development activities. Head (Acar, 2017) of Turkish Academy of Science spoke to Anatolian Agency about the scientific publications and declared that Turkish academia produced about thirty-one thousand publications which correspond to the 17th best row among the all the countries producing many publications. According to the Scientific and Technological Research Council of Turkey (2017), number of supported projects increased to 4198 from 1242 between 2002 and 2016 despite decrements in some years. Moreover, thesis studies are important for the universities since they provide significant implications and recommendations to practitioners. In the opening ceremony of higher education, President of the Republic announced the research universities which are Middle East Technical University, Ankara University, Gazi University, Hacettepe University, Boğaziçi University, Istanbul University, Istanbul Technical University, Erciyes University, Gebze Technical University, and İzmir Advanced Technology University (HEC, 2017). According to thesis dataset (HEC, 2017), Middle East Technical University, Ankara University, Gazi University, Hacettepe University, Istanbul University, and Istanbul Technical University are at the same time among the top 10 universities which produced the most thesis. To sum up, organizations benefit from graduate education in terms of research and development activities.

In terms of benefits on community and state, graduate education produces policies and solutions to problems of the country. Head (Saraç, 2017) of HEC explained the criteria to be identified as a research university (Hurriyet, 2017). One of them was Ph.D. programs training powerful researchers and contributing to world science and development of the country. Therefore, Ph.D. education has a powerful emphasis for the development of the country. Fazlıoğulları and Kurul (2013) investigated Ph.D. dissertations conducted between 1986 and 2007 and found that most (94.4%) of the studies were based on positivist approach. In this approach, there is objective reality but no place for conflict and all problems must be solved by considering observations and measurements. Additionally, Ph.D. education has a purpose to train academicians planning, conducting, concluding, and disseminating the results for economic and technological development. Therefore, Ph.D. dissertations have sections of implications and recommendations in terms of practice, theory, and research. Karayalçın (1988) stated that the society needed academicians who were trained through graduate education and served the community by providing psycho-social and scientific benefits. Moreover, Sevinç (2001) emphasized that graduate education was the key to developing the country and to raise human capital that the country needs. Furthermore, graduate education trains the academicians who are sensitive to social problems, eager to solve problems of community, thrifty at usage of country resources, and good at production of the needs of the country (Karaman & Bakırcı, 2010; Sayan & Aksu, 2005; Varış, 1972). Similarly, Ünal and İlter (2010) conducted a research to investigate attitudes of graduate students towards graduate education. The study showed that graduate students related graduate education to development of the country, progress in technology, psycho-social, economic and cultural benefit, national science policy, and modern life. As a result, community and state have many opportunities coming from graduate education which trains quality academicians and researchers for the benefit of the country.

2.1.4.3 Problems in Graduate Education

Although graduate education presents opportunities for individuals, organizations, and the community, graduate education has some structural problems. Determination of the problems in an accurate way and developing solutions have crucial significance in order to sustain benefits of graduate education. The problems in graduate education are caused by different factors which may be classified in four headings. Firstly, global perspectives like marketization and academic capitalism affect graduate education negatively. Secondly, local policies or reforms may have a negative impact on graduate education. Thirdly, organizational factors influence graduate education. Lastly, individual factors reveal problems in graduate education.

In terms of global impacts, graduate education is suffering from perspectives of globalization. Sporn (2007) stated that neoliberal policies related to globalization such as deregulation, privatization, marketization, and competition have affected higher education institutions. Even if these effects sometimes show positive results, they may be problematic for graduate education. Competition which is frequently seen in capitalist countries cause temporary staffing. For example, a recent law (law no.7033, 1.07.2017) removed the permanent position of research assistants who are significant elements of graduate education so that staffing position of research assistant become temporary. Karaman and Bakırcı (2010) evaluated temporary position as an important problem and stated that becoming research assistant lost attraction because of lack of assurance. For the Turkish higher education system, Erdem (2013) criticized globalization such that communities interfered in higher education institutions because they gave financial support to universities. According to Şenses (2007), the term of university has come down to values of free market so that higher education has lost the perspective of equality. To sum up, global perspectives may have a negative influence on graduate education.

In terms of local impacts, laws, reforms, and policies may be roots of problems in graduate education. According to Karakütük and his colleagues (2008), legislative regulations were not sufficient to improve graduate education. Moreover, the authors found that student quota for graduate education were not determined by considering community necessities. Nayır (2011) conducted a research with school principals, inspectors, and teachers in graduate education and found that participants criticized graduate education regulations because of permissions such that they could not take the courses on time. Bozan (2012) investigated the quality of graduate education in Turkey and reached some conclusions. Although there were increments in the number of scientific publication after 1980s, same success was not present in term of the quality of publications and impact factors. Moreover, the number of social science publications were lower when compared to other fields. Furthermore, number of researchers in research and development activities were much lower than average of OECD countries. And finally, the author claimed that because graduate education was far away from the freedom of thought and democratic environment, high quality could not be achieved. Arap (2010) investigated newly established universities by analyzing the parliamentary minutes and discussions in terms of higher education. Based on these documents, author stated that new universities which were called as *"Signboard University"* were results of pressures of politicians. Similarly, Doğan (2013) examined newly-founded universities and criticized that increments in the number of university because of political reasons could push the universities back to past. Moreover, the author concluded three important problems: lack of institutionalization, physical inadequacies, and quality academician inadequacy. Because of these problems, most of the universities can not open graduate programs. In conclusion, reforms and policies related to higher and graduate education system in Turkey have provided a quantitative development but there are still quality problems.

By considering organizational impacts, graduate education faces problems such as mobbing, inadequacy for organizational support, and anti-democratic implementations. Celep and Konaklı (2013) investigated mobbing experiences of instructors in a university and found that mobbing was negatively related to the job performance and desire to attend work. Moreover, study by Gül, İnce and Özcan (2011) showed that emotional burnout and depersonalization were affected by mobbing attacks towards self-realization and communication. On the other hand, Akbulut, Şahin, and Çepni (2013) investigated the problems of graduate students in terms of thesis procedure and found that PhD students had problems about decision of thesis topic, search for resources, data collection, working environment, and presentation of reports to "Thesis Monitoring Committee". Moreover, Aslan (2007) investigated problems faced by PhD students in a public university. Frequently remarked academic problems were related to library, infrastructure, and teaching materials. Similarly, study by Güven and Tunç (2007) showed that students had problems about computer-internet usage and counseling service. Karakütük et al. (2008) found that graduate school administrators complained about insufficient academician number for some departments, problematic process of PhD dissertation monitoring, insufficient opportunities about archiving and open access, high number of graduate student per advisor, insufficient classrooms, much tuition, budget of graduate school, and insufficient services like health, sports, and dormitory. Anti-democratic activities which are seen in higher education institutions may produce problems in graduate education as well. Değirmencioğlu (2008) explained some examples like research assistants carrying bags of their advisers, university and building entrances with turnstile, holes with red carpets, waiters with bow tie, expensive office automobiles, and priority parking. Instead of investment in research and development activities, spending money on these types of anti-democratic actitivies repulse the sense of community. To summarize, there are organizational reasons behind the problems in graduate education.

Attitudes, preferences, and skills of individuals may also cause some problems in graduate education by considering individual impacts. Agonism in academia may give harm to processes in graduate education. Erdem (2013) stated that academic autonomy depends on not only external forces but also personal animosity, academic jealousy, and ideological differences of academicians. Thess types of academicians can not find time to do research due to personal conflicts which are problematic for graduate education. On the other hand, Aslan (2007) found some social and economic problems in the lives of Ph.D. students. To illustrate, students preferred not to involve in social and cultural activities because of money problems. Moreover, they could not spare time for their friends and families to complete tasks in time. Güven and Tunç (2007) found that graduate students were not able to attend scientific conferences, find enough time to do research, and follow the periodicals because of individual opportunity and preferences. Büyüköztürk and Köklü (1999) investigated research competencies of M.S. and Ph.D. students and found that MS students did not have research competence (i.e. describing research problem, reviewing literature, interpreting findings, discussing results by justifying theoretical framework, and writing report) enough. In addition, both students and advisors had problems in research and statistics section of the theses. Sayan and Aksu (2005) investigated the problems of graduate students who were not academic staff and summarized the problems as economy, time, permission, attendance in course, and counseling. In conclusion, individuals bring along some personal problems which may affect graduate education negatively.

2.1.4.4 Future of M.S. and Ph.D. Graduates

The student passing all the stages deserves to get a degree. Graduate students have a desire to become successful and graduate with a degree. This process is called as student retention. Student retention depends on some factors like academic preparedness, academic experience, institutional commitment, academic and social match, finance, family support, and university support (Thomas, 2002). Getting a degree brings together some advantages or opportunities for MS and PhD graduates. As it was stated in the previous sections, graduate education aims to train academicians and improve the students from other occupations in many fields.

Academicians are trained through graduate education. The ones getting a PhD degree deserve to be a faculty member. Generally, research assistants who work as academicians during the graduate education get the opportunity to become faculty members when they complete PhD successfully. However, PhD graduates out of academia sometimes can get a chance to be assigned to position of faculty member providing PhD degree. Faculty Development Program (FDP-ÖYP) is the most common way in the recent years to train research assistants through graduate education. According to Basis and Procedures of Faculty Development Program (2015), this program mainly aims to train research assistants in graduate education program of a developed university in order to meet the faculty member need of developing universities. Yalçınkaya, Koşar, and Altunay (2014) investigated views of research assistants about training process of scholars and found that this process could not achieve the purpose because of course loads, economic problems, promotion criteria, lack of support, and matching problem between training process of scholars and the structure of graduate education. Moreover, study by Karakütük and Özdemir (2011) showed that although research assistants in the FDP were satisfied with the opportunities provided by FDP, they were complainant about the economic problems and compulsory service bills. Similar results were found in study of Çelebi and Tatık (2012). The study revealed that research assistants listed advantages of FDP as permanent staffing, opportunities to improve themselves, and satisfaction with the program while they listed disadvantages as compulsory service bills, delay in budget transfer, and dissatisfaction with faculty members and implementation of program. Apart from FDP, another research assistant position is 50/d which does not provide permanent staffing. Turkish literature has the studies showing drawbacks of 50/d position (Altay & Tekin Epik, 2016; Halıcı, Ötkan, & Demir, 2017; Kara, Duman, Sevim, & Yıldırım, 2014). To summarize, graduate education gives students opportunity to become research assistant and faculty member through some procedures.

Not only actors inside university but also outsiders have a chance to get opportunity from graduate education. Holding a M.S. or Ph.D. degree is attractive for school teachers, principals, and inspectors. According to decisions of Board of Arbitration for Civil Servants (2012), the teachers who have a degree with M.S. and Ph.D. gained rights to take respectively five percent and 15% more additional course fee than other teachers. Moreover, *Regulation of Assignment and Appointment of Teachers (2015)* stated that teachers might apply to change his or her working place because of education excuse. In addition to these external motivators, the teachers have internal motivators to enroll in graduate education. Alabaş, Kamer, and Polat (2012) conducted a study with 30 teachers who completed a graduate degree. The results of the study showed that they chose graduate program to gain advanced knowledge about their fields and learning new teaching methods while the teachers showed reasons of enrollment in graduate education as personal development (n=14), career (n=8), desire to become an academician (n=6), and other reasons (n=2). Baş (2013) investigated the expectations of teachers from graduate education and found that prestige, professional development, promotions, and desire to become academician were the expectations from the graduate education. On the other hand, Turhan and Yaraş (2013) conducted a research in order to learn contribution of graduate education to teachers, principals, and inspectors. The study showed that the main reasons for graduate education were specialization and academic career while contributions of graduate education were solutions to problems of practice of education, development of leadership behaviors, administrative processes, and professional development. In conclusion, graduate education contributes to school teachers, administrators, and inspectors in terms of assignment and promotion, personal and professional development, and academic career.

Despite the charm of graduate education, there are students who leave graduate education after a while. The reasons why the students quit graduate education are either organizational or individual (Lovitts, 1996). Those students are firstly described as passive students and after that they become non-completers through the process. The result of students' voluntary decisions to leave education is called student attrition. There are serious consequences of student attrition for both organizations and individuals. To begin with, organizations lose the human resource, prestige, and money because they can not keep the students in the program. Also, individuals face with economic, social, and psychological problems (Lovitts, 2001; Xu, 2004; Wells, 2003). To sum up, leaving graduate education may produce undesired consequences for both institutions and individuals in the future.

2.1.4.5 Examination of Graduate Education in Turkey

Graduate education system in Turkey is examined in terms of roles, responsibilities and expectations, advisor-student relationships, and management of resources. Roles, responsibilities, and expectations are related to positions of stakeholders. Advisor-student relationships are based on interaction, cooperation, and communication. Laslty, management of resources includes effective usage of budget.

Roles, responsibilities, and expectations were derived from regulations. According to graduate school regulations (2016), students must meet some requirements like written exam scores and GPA for admission. When the student is accepted to graduate program, two periods which are course and thesis periods shape educational achievements of the student. In these periods, advisors are key actors. Within course period, an advisor must be assigned to each student in order to follow and approve course loads of the students. In this aspect, Demir and Ok (1996) examined perceptions of advisors and students about elective courses. Study showed that advisors and students agreed with the idea of informing each student about the elective courses. However, they had different expectations related to course registration. Students emphasized that students in the department had a priority to select and register courses while advisors had a desire to open more courses for students coming from other faculties.

In terms of the thesis period, the student may either change advisor or continue with same advisor to conduct a thesis study since students have a right to change their advisor at any time. Bakioğlu and Gürdal (2001) investigated role perceptions of advisors and students in the process of the thesis period. Their study showed important results. Firstly, advisors did not give written feedback to students. Secondly, graduate schools did not inform students about student repsonsibilities and thesis manual or construction. Lastly, students were not affiliated with scientific organizations. To sum up, stakeholders of graduate education had different roles, responsibilities, and expectations.

Secondly, graduate education gives a special emphasis on relationship between advisors and students. Sever and Ersoy (2017) conducted a study to examine advisorship in doctoral education. Doctoral students stated that their advisors were supportive, directive, and instructive. Students claimed that there should have been a balance between student and advisor in terms of relations. According to students, relationship must be limited to professional dimension. In Turkey, there are problems related to cooperation. Study by Bakioğlu and Gürdal (2001) showed that students and advisor did not even publish a conference paper together. Summak, Summak, and Balkar (2010) compared opinions of advisors and students. They found that students were dissatisfied with the relation with advisor although both advisors and students had similar expectations. It seemed a dilemma which was related to the fact that thoughts of students were not transferred to actions.

Finally, management of resources in graduate education has some problems. First of all, graduate schools do not have a sufficient budget. Karakütük et al. (2008) found that graduate schools suffered from low budgets and lack of resources. Study by Bakioğlu and Gürdal (2001) pointed out that graduate students could not use tangible opportunities of universities for their thesis studies. Also, they did not have an opportunity to make copies of needed documents for free. The second issue is related to distribution of resources. Although there were many huge and magnificient buildings, these universities have infrastructure, material, and academician problems (Aslan, 2007; Doğan, 2013; Güven & Tunç, 2007). On the other hand, even within the same university, resources are not distributed fairly. Generally, Graduate Schools of Natural Sciences get more money and resource than Graduate Schools of Social Sciences in most of the universities. In conclusion, lack of resources and unfair distribution of resources affect graduate education negatively so that many problems like student attrition are visible in graduate education.

2.2 Student Attrition

In this section, definition of student attrition, models on student attrition, institutional and goal commitment, intentions to leave, causes and consequences of student attrition, retention programs, and student attrition in international context are presented.

2.2.1 Definition of Student Attrition

Student attrition was theorized in the second half of the 1900s. Spady (1970), Tinto (1975), and Bean (1980) developed causal model of student attrition by referring to the suicide propositions of Durkheim (1961). According to Suicide Theory of Durkheim (1961), suicide occurs when the individual cannot integrate with the fabric of society. By making analogy with it, students leave the school when they cannot integrate with social and academic system of the college (Tinto, 1975). Bean (1980) defined student attrition as a kind of pause in membership of student in a higher education institution. On the other hand, Spady (1970) related student attrition to dropouts from higher education. The author supported the sociological model of dropout process, which is explained by interaction between individual and environment. Conversely, the researcher of the current study chooses the term *“student attrition”* rather than *“dropout process”* because dropout is attributed mostly to students’ drawbacks and choices. In other words, “dropout” is evaluated as giving up of the student due to academic failure. However, leaving the college or graduate education is a loss or disadvantage for the higher education institution rather than an excuse for the student. Therefore, in the current study the phrase *“student attrition”* is used, which is an umbrella term including voluntary dropout, non-persistence of students, and intentions to leave. As a result, student attrition can be defined as a process in which number of students attending courses decreases because of any reasons.

The literature has some discussions on what attrition means. Spady (1970) discussed that one definition of attrition is based on leaving a college in which person is registered while other definition is based on leaving a college and not receiving degree from anywhere. Former definition gives an advantage for reliability and methodologically easy usage but fails to get an actual attrition rate. Latter definition is useful for social stratification, educational mobility, and human resources. Therefore, these definitions have both benefits and costs. On the other hand, some terms have different meanings although they seem alike. To name a few, voluntary withdrawal, academic dismissal, permanent dropout, and transfer are different concepts in student attrition. Hackman and Dysinger (1970) differentiated these terms by using concepts of commitment and academic performance. Academic dismissal is related to inability to meet academic demands or standards of the college while voluntary withdrawal is based on own choice which is caused by incongruence between individual and institution. Also, the students with low commitment and solid academic performance have a tendency to either transfer to other institution or re-enroll in same institution at another time while students with low commitment and low academic performance have a tendency for permanent dropout.

Researches related to student attrition can be examined in three periods. The first period of student attrition research is based on the attempts to develop models of student attrition. To name a few, Tinto’s Student Integration Model (1975), Bean’s Student Attrition Model (1980), Spady’s Sociological Model of Dropout Process (1970), and Pascarella’s Student-Faculty Informal Contact Model (1980) are the models explaining student attrition in different dimensions. The second period of student attrition research tried to investigate attrition rates varying by the field. Generally, the lowest attrition rates are seen in laboratory sciences because of requirements for cooperative learning whereas the highest rates are seen in social sciences and humanities because of their individualized structure (Bair & Haworth, 2004). The third period mostly focuses on the roles of different factors on student attrition. To illustrate, departmental culture (Valero, 2001), interpersonal relationships and motivational resources (Litelien & Guay, 2015), student and faculty attributions (Gardner, 2009a), and emotional exhaustion (Hunter & Devine, 2016) have impact on student attrition. In conclusion, the field of student attrition experienced a progress in terms of theory and practice.

2.2.2 Models on Student Attrition

There are some models or theories explaining student attrition. First of all, Spady (1970) investigated dropouts from higher education by reviewing and synthesizing studies in the literature. The author concentrated on sociological side of dropout process through interdisciplinary approach. In this approach, some sources like courses and faculty members influenced the interaction between student and environment. After that, Spady (1971) developed the model of undergraduate dropout and tested the relationships among variables. According to this model, undergraduate students' decisions to leave were related to these variables: "family background, academic potential, normative congruence, friendship support within structural relations, intellectual development, grade performance, social integration, satisfaction, and institutional commitment."

Tinto (1975) adapted Durkheim's theory of suicide into voluntarily drop-out. Interaction between individual and social-academic systems modify the commitments and this process may result in dropout decisions. According to this model, students enter higher education with family background, individual attributes, and pre-college schooling characteristics. The background of the student affect the development of goal and institutional commitments which are reflections of their experiences. These commitments lead students to integrate into academic and social system of the college. Academic system includes grade performance and intellectual development while social system consists of peer-group interactions and faculty interactions. The degree of academic and social integration is related to education's continuance that influences goal and institutional commitments of the students. And finally, low commitment is concluded as dropout whereas high commitment ends in degree completion as it is represented in the figure 2.1. In 1993, Tinto amended this model by integrating rites of passage in tribal society (Van Gennep, 1960) and adding external commitments. In the process of passage, student experiences the stages respectively as follows: the person separates oneself from previous environment, the person transits to new community, and the person incorporates to acquire norms and values of new community. On the other hand, initial and subsequent commitments are influenced by external commitments like family and job commitments.

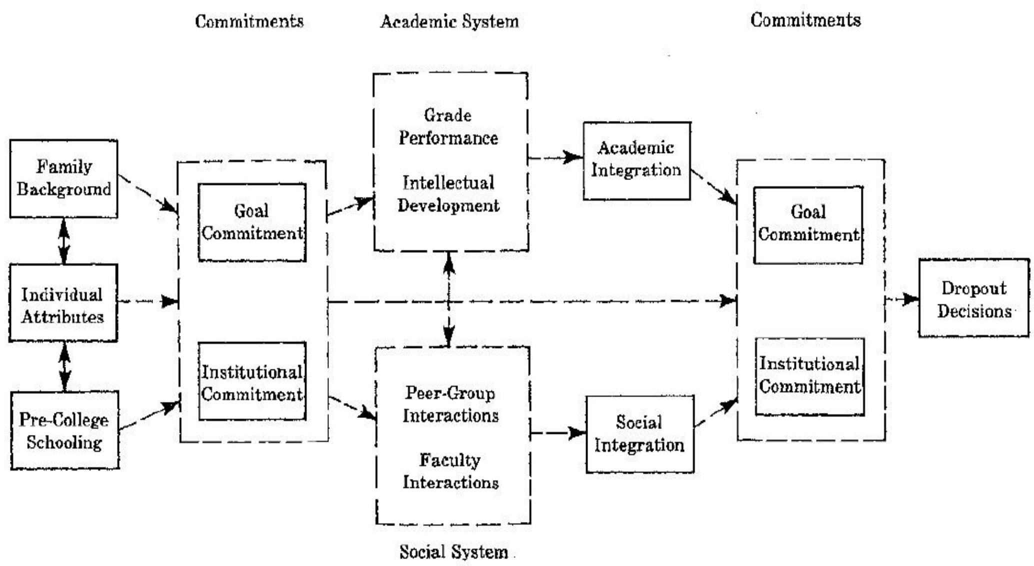


Figure 2.1 *Conceptual Schema for Dropout from College*

Bean (1980) likened student attrition to turnover in work organizations and explained student attrition in a sequential process: some factors decrease life satisfaction of individual, this decrease increases probability of intentions to leave education, and process is resulted in dropout behavior. The author criticized the link between suicide and school dropout which Spady (1970, 1971) and Tinto (1975) set. Moreover, Bean (1980) stated that those theories were insufficient because of lack of causal relationships. Therefore, the author developed a causal model which was borrowed from employee turnover in work settings. According to this causal model, background variables like performance, institutional variables like opportunity, and intervening variables like institutional commitment are the determinants of dropout.

Furthermore, it was concluded that male and female students had different reasons to leave but institutional commitment was the most important determinant for both genders. In 1982, Bean updated his model by incorporating intentions to leave and claiming that intentions to leave was the main indicator for student attrition.

The last model related to student attrition belongs to Pascarella (1980) who underlined the importance of informal interactions and developed Student-Faculty Informal Contact Model referring to the studies of Spady (1970, 1971) and Tinto (1975). The author assumed that informal interaction between students and faculty was related to commitments and dropout. According to this model, students have informal (non-class) interaction with faculty society and this interaction may decrease the probability of dropout by affecting students' institutional commitments. In conclusion, all of the models explain student attrition by considering some determinants and correlates which can be summarized as personal and organizational factors.

2.2.3 Institutional and Goal Commitment

The literature on student attrition shows that commitments and intentions to leave are two of the most significant determinants of the student attrition in higher education (Bean, 1982; Davidson, Beck, & Milligan, 2009; Litalien & Guay, 2015; Pascarella & Terenzini, 1980; Tinto, 1975). Organizational commitment can be defined as "thought of as the extent to which employees are dedicated to their employing organizations and are willing to work on their behalf, and the likelihood that they will maintain membership" (Jex & Britt, 2008, p.153). On the other hand, Tett and Meyer (1993) defined intentions to leave as kind of attitude based on conscious and deliberate willfulness to leave the organization.

Institutional and goal commitment is the topic that is frequently studied as predictors of dropouts or withdrawal intentions. Mallette and Cabrera (1991) examined the determinants of decisions to withdrawal from institutions of higher education. The authors found that final institutional commitment differentiated persisters from the drop-outs while both final institutional and goal commitment were found significant in explaining differentiation between persisters and transfers to other higher education institutions. In another study, Bennett (2003) investigated factors affecting undergraduate student dropout rates in a Business department and found that financial hardship had a direct impact on dropout decisions and a moderating effect on the relationship between dropout and commitment. The study also showed that commitment was the predictor of staying in an institution or quitting education there. Davidson, Beck, and Milligan (2009) investigated factors predicting student attrition and found that institutional commitment was the best predictor.

2.2.4 Intentions to Leave

Like the current study, studies focusing on student attrition relate “intentions to leave” to student attrition. In graduate education, Cooke, Sims, and Peyrefitte (1999) conducted a research to examine relationships among commitment, intentions to leave, and student attrition. It was found that affective commitment (the term including university and goal commitment) and intent to remain were predictors of attrition. Moreover, Cabrera, Nora, and Castaneda (1993) investigated college persistence by testing a structural equation model about retention and found that persistence intentions had the strongest direct effect on actual persistence. The study also revealed that institutional commitment was the strongest predictor of intention to persist. Furthermore, Bean (1982) developed a causal model that analyzed student attrition and its predictors. The model showed that intent to leave was the strongest predictor of dropout. All of these studies proving empirically that there is a close link between dropout behavior and intentions to leave justified and derived from the cornerstone studies (Bentler & Speckart, 1981; Fishbein & Ajzen, 1974) which assumed one-way causal sequence of attitude, intention and behavior.

Apart from the link between dropouts and intentions to leave, the student attrition literature has studies investigating only intentions to leave. To illustrate, Hunter and Devine (2016) conducted research with Doctoral students to analyze their emotional exhaustion and intentions to leave academia. The authors found that supportive relationships with departments and advisors decreased the intentions to leave and emotional exhaustion. In addition, advisor experience, and frequency of meetings did not affect intentions to leave while emotional exhaustion was positively correlated to intentions to leave. In another study, Litalien and Guay (2015), examined a model on dropout intentions from the lens of interpersonal relationships and motivational resources. The study showed that the students perceiving themselves more competent and having greater support from other students, advisor, and faculty had less dropout intentions than ones perceiving themselves as less competent and having less support from others listed above. The study by Duque (2014) showed that dropout intentions were influenced negatively by student satisfaction and perceptions of affective outcomes. To sum up, intentions to leave have causal relationships with negative outcomes.

2.2.5 Causes and Consequences of Student Attrition

Despite lack of attrition literature in Turkey, international literature on student attrition mostly focuses on causes and consequences of attrition. There are lots of reasons for student attrition in higher education. These reasons have both personal and institutional roots. In addition to causes, leaving from the higher education institutions brings undesired consequences together.

2.2.5.1 Personal Factors on Student Attrition

Personal factors affecting student attrition and its derivatives may be grouped as demographics and individual characteristics. In terms of the demographics, gender, age, socioeconomic status, marital status, and ethnicity have an impact on or related to student attrition (Ferreira, 2003; Litalien & Guay, 2015; Lott, Gardner, & Powers, 2009). Gender which is one of the most studied topics in student attrition field is an important predictor for student attrition. Study by Ferreira (2003) showed that female student attrition was higher than male student attrition. Contrarily, Hassell, Seston, Eden, and Willis (2007) found that probability of graduation for female students were higher than that for male students. In addition, Kurtz-Costes, Helmke, and Ülkü-Steiner (2006) investigated gender issue in Doctoral studies and concluded that both female and male students had a desire to balance their professional and personal lives and a commitment to get a degree without quitting education. On the other hand, Araque, Roldan, and Salguero (2009) conducted a study with students in higher education to find out factors on university dropouts. They found that low level of socioeconomic status, lower academic performance background of parents, and higher start age to higher education made contribution to increment in the probability of dropout. In terms of ethnicity, Stratton, O'Toole, and Wetzel (2007) found that racial or ethnic characteristics were related to attrition for part-time students such that Hispanics were more likely to make dropout decisions. Lott, Gardner, and Powers (2009) investigated doctoral student attrition in terms of marital status. The study showed that the students who were married had more persistence than single and unmarried ones. In contrast with these studies, Pauley, Cunningham, and Toth (1999) found that there were no significant relationships between doctoral completion and gender, marital status, and age. To summarize, demographics of individuals are related to student attrition.

In addition to demographics, individual characteristics may be linked to student attrition. It is possible to divide these characteristics into academic performance and psychosocial development. According to study of Terenzini and Pascarella (1978), perceptions of academic program, cumulative grade-point average, and perceived progress in intellectual development which are variables of academic integration predicted significantly student attrition in freshman years. Chaney and Farris (1991) investigated undergraduate retention in higher education institutions and found that poor academic progress were on the third sequence among the most important eight reasons to make a decision to leave undergraduate education. In addition, Kruzicevic, Barisic, Banozic, Esteban, Sapunar, and Puljak (2012) conducted research to find out reasons and predictors of student attrition in the medical field. Kruzicevic et al. (2012) found that attrition rate was 26% and unsatisfactory academic record was one of three common reasons for attrition. The study also showed that high school grades and entrance exam score were the predictors of dropout decisions. Similarly, Ishitani (2003) found that high school GPA had a significant effect on student retention in first year of college. In another study, Kahn and Nauta (2001) found that past performance of the students was significant predictor of persistence in freshmen to sophomore in college. Study by Araque, Roldan, and Salguero (2009) revealed that academic performance, success, and average mark were related to dropout behaviors of students such that low level of academic performance, success, and mark led to high probability of dropout. To sum up, academic performance is an indicator for student attrition.

Psychological and social factors play a role on student attrition. Eaton and Bean (1995) conducted research to find out psychological and sociological factors in student attrition and found that these factors which included intentions to leave, academic and social integration, academic and social approach, academic and social avoidance, and background characteristics explained 37% variance in student attrition. In another study, Green (1997) investigated psycho-social factors influencing PhD dissertation completion. The study showed that procrastination and dependence decreased the probability of completion of dissertation. Similarly, Napoli and Wortman (1998) aimed to check effects of psycho-social factors on persistence and found that psychological measures of conscientiousness, agreeableness, psychological well-being, self-esteem, social support, student satisfaction ratings, negative life events, and negative school events explained 21% variance in withdrawal decisions of the students. Martinez, Sher, Krull, and Wood (2009) examined student attrition in first-generation college students and found that student attrition was predicted by drug use, psychological distress, and academic challenges. On the other hand, Golde (2000) interviewed with three students who left doctoral education and three themes emerged as the reason of student attrition: relationship with faculty, relationship with student community, and telling others why they left. Study by Stallone (2004) showed that faculty-student relations were evaluated as the most significant factor for the doctoral completion. Spaulding and Rockinson-Szapkiw (2012) conducted a research with doctoral candidates and underlined the importance of academic, social, and economic integration into university for doctoral persistence. As a result, psycho-social factors are closely associated with student attrition. Apart from personal factors including demographics, academic performance, and psycho-social characteristics of the students, there are institutional factors to be considered for student attrition.

2.2.5.2 Institutional Factors on Student Attrition

In addition to personal factors, there are institutional causes to student attrition. First of all, admission procedure is shown as a reason for student attrition. Ishitani (2006) called student attrition as departure from initially enrolled institution and found that departure of students was positively and significantly related to non-selectivity of admission. Students in non-selective institutions were 1.4 times likely to leave than those who attended selective institutions. Chaney and Farris (1991) investigated admission policies and selectivity in U.S. In terms of admission policy, retention rates were higher for no-open admission than open admission for some students and open admission for all students. In terms of selectivity, the institutions rejecting more students had more retention rate than institutions accepting many students. Therefore, admission and selectivity are important factors affecting student attrition.

Institutional support is a factor to either continue in education or drop out. This support may sometimes be visible in tangible forms while sometimes it is based on human relations. Ishitani (2006) found that students with grants and work-study jobs had respectively 31% and 41% less probability to depart than students who did not have any aid. Similar finding was found in the study by DesJardins, Ahlburg, and McCall (2002). The study showed that grant programs may reduce the student attrition. In another study, Martinez, Sher, Krull, and Wood (2009) found that lack of scholarship, lack of loan, and full-time job status predicted student attrition. On the other hand, social relations have an impact on student attrition. Devos et al. (2017) conducted a research related to experiences of Doctoral students. The authors found that peer support and supervisor support had an effect on persistence or attrition but supervisor support did not give an opportunity to make a clear distinction between completers and non-completers. Lundquist, Spalding, and Landrum, (2002) examined impacts of faculty attitudes and behavior on students' thoughts about leaving university and found that supporting student needs, responding to phone calls and emails on time, and being approachable were significant predictors of thought about leaving. Litalien and Guay (2015) investigated dropout intentions and found results which were related to both tangible and intangible issues. The study showed that student-adviser relationships, interaction between student and faculty, and peer support played an important role on persistence while scholarship of students distinguished non-completer students from completer students. Similarly, Pauley, Cunningham, and Toth (1999) found that level of financial support and supports of family, peer, faculty, and chairperson were positively related to completion of doctoral education. To sum up, both tangible and intangible supports are valuable to keep students in education.

There are also studies depicting differences among departments or institutions in terms of student attrition. Student attrition differentiates in terms of institution type. Some of the studies in the literature found that attrition rate in public universities was higher than that in private universities (Chaney & Farris, 1991; Ishitani, 2006) while some of them showed that attrition in private universities was higher than attrition in public universities (Ishitani & DesJardins, 2002; Scoot, Bailey, & Kienzl, 2006). Elgar (2003) found that doctoral attrition rates are lower for Natural & Applied and Life Sciences whereas they are higher for Arts & Humanities and Social Sciences. Similar study was conducted by Araque, Roldan, and Salgueiro (2009) whose study showed that dropout rates for Humanities (63.5%) was higher than that for Software Engineering (49.6%) and Economic Sciences (43.6%) for the condition in which students' fathers did not complete secondary education. Gardner (2009a) investigated doctoral student attrition in six different departments by considering attribution theory. She found that psychology students showed poor advising and negative effect of departmental politics as reasons for attrition whereas mathematics students showed academic inability as a reason for attrition. Similarly, Golde (2005) examined role of department on student attrition form doctoral education and interviewed with 58 students who left PhD. The results showed that although the themes which were related to mismatches, poor fittings, and isolation did not differentiate in terms of departments, the author concluded that structure and culture of the departments had an impact on student experience which may affect the decisions of students to quit education. The other factors influencing student attrition are institutional habitus (Çelik, 2017; Thomas, 2002), program characteristics (Spaulding & Rockinson-Szapkiw, 2012), program culture (Ehrenberg, Jakubson, Groen, So, & Price, 2007; Stallone, 2004), departmental policies, practices, and climate (Valero, 2001). In conclusion, student attrition can be explained by institutional factors such as climate, departmental differences, and institutional type. Student attrition caused by either individual or organizational factors brings together some consequences for both individuals and community.

2.2.5.3 Consequences of Student Attrition

Consequences of student attrition may produce some negative costs for all stakeholders of higher education. Litalien and Guay (2015) stated that student attrition touches on not only students but also university and community. Similar idea was declared by Gardner (2009a) who expressed that high attrition rates mean high costs for institutions, faculty, and students. Furthermore, Xu (2014) emphasized that negative costs of student attrition seem as economic, social, and emotional. In base of attrition from PhD education, Lovitts (2001) stated both personal and labor market consequences. Personal consequences are related to emotional and psychological reactions of the students. The students who left PhD may face with lower self-esteem. Labor market consequences are related to economic conditions including job acquisition, occupational and salary attainment, and career advancement. To illustrate, the students who drop out have fewer opportunity for employment. DesJardins, Ahlburg, and McCall (1999) listed costs of leaving college as institutional costs including funding decreases and scarce resources, societal costs including decrement in public revenue, and personal costs including unemployment and antisocial behavior. To summarize, community, institutions, and students suffer from attrition.

The literature has uni-dimensional studies which investigated attrition in smaller scale. According to Pauley, Cunningham, and Toth (1999), student attrition causes irremediable costs for the programs in terms of admission, advising, planning, and implementing. Horn, Berger, and Carroll (2004) showed student attrition as a national concern and found that it produced barriers to upward social mobility and economic success. Smallwood (2004) stated “high attrition from Ph.D. programs is sucking away time, talent, and money -- and breaking some hearts, too”. In terms of financial consequences, the author found that attrition was expensive for institution such that 10% decrement in attrition rate of a university supplied to save 1 million US Dollars in the stipends of university in a year. Correspondingly, American Institutes for Research (2010) published a report calculating economic cost of first-year student attrition and found that a grant of 2.9 billion U.S. dollars in total were spent for first-year students who did not return in the second year such that this condition was evaluated as waste of potential and a threat to economic power. To sum up, it can be stated that financial costs of student attrition dominate other costs of attrition in researches.

In addition to negative consequences of student attrition, there are optimistic perspectives about attrition. According to Litalien and Gauy (2015), the ones who invested a lot of time and energy in education may spare more time and energy on other parts of their lives after leaving. There are also studies stating that earlier attrition is not bad such that leaving earlier may be a positive decision for both the institution and the student (Gardner, 2009b; Golde, 1998; Lott & Gardner, 2008). In this choice, money, time, and energy will not be wasted a lot. In summary, in spite of these optimistic perspectives, there is a reality such that student attrition causes undesired consequences for students, institutions, and community.

2.2.6 Student Retention Programs

Despite the high rate of student attrition, there are some opportunities to reduce attrition such that retention programs are beneficial to prevent student attrition. Retention is related to students' desire and effort about remaining in education. There are some ways to improve student retention. Bean and Eaton (2002) claimed that factors affecting leaving or remaining in schools were based on psychological processes so that they investigated student retention by considering psychological theories like coping-behavioral theory, self-efficacy theory, and attribution theory. The authors recommended that service learning, learning communities and freshman interest groups, freshman orientation seminars, and mentoring programs were successful retention program because they had effects on coping strategies, self-efficacy, and locus of control. Chaney and Farris (1991) collected data from higher education institutions to draw a picture about how these approaches affected student attrition. The authors found that 81% of the institutions applied special programs to increase student retention and most of them were related to selectivity in admission, financial help for students, academic help to remedy poor grades, and testing and performance assessments. Crombie, Brindley, Harris, Marks-Maran, and Thomson (2013) asked “What makes students stay?” and responded to this question through an ethnographic study. Crombie et al. (2013) found that practice and mentorship were the factors affecting student retention in nursing programme. Tinto (2006) investigated student retention in terms of research and practice and recommended three ways: institutional action related to understanding why students leave and persist, implementation for action, and providing equity such that gaps in access to higher education for poor students should be closed. To sum up, supportive activities like mentorship, orientation, and academic help are beneficial for student retention.

Socialization is a key factor for student retention. Gardner (2008) investigated the effect of socialization on student retention and found that attrition and retention linked to socialization process. Moreover, she concluded that graduate education experience and socialization processes of underrepresented students in terms of gender, race, age, enrollment, and familial status did not fit their diversity backgrounds and lifestyles. In another study, Gardner (2010) found that socialization processes including support, self-direction, ambiguity, and transition were important in student retention for both low-completing and high-completing departments. Furthermore, Bowman, Mazerolle, Pidney, Dodge, and Hertel (2015) conducted a study with program directors to compare retention rates in Bachelor’s and Master’s degrees in professional programs. By considering the results of the study, authors suggested that agents for socialization such as orientation sessions, introductory courses, social gatherings, program outings, and peer mentoring and purposeful selectivity may be useful for student retention. In conclusion, socialization process is significant to keep students in the school.

In the literature, there are empirical studies making implementations related to retention. Nandeshwar, Menzies, and Nelson (2011) found that family characteristics like SES, past performance, and test scores had an impact on student retention. By considering these findings, the authors recommended financial aid packages, support programs, incentives for life on-campus, guidance and supplemental instruction to increase rates of student retention in that context. On the other hand, Cabrera, Nora, and Castaneda (1993) stated that financial aid, academic advising, considering past behavior, counseling, and other support services may not be useful in a single-handed way for student retention but bringing together different student support services addressing student attrition and institutional research units may be more beneficial for persistence process. Pleitz, MacDougall, Terry, Buckley, and Campbell (2015) examined the discrepancy between expectations and experiences of students in the colleges and found that discrepancy between expectations and experiences in terms of social and institutional discontinuity predicted student retention. Therefore, the authors implied that training the students to provide realistic expectations and expectation-lowering procedure might be beneficial for higher education institutions. Yorke and Thomas (2003) conducted research to analyze retention of disadvantaged groups of students in universities. In the study, supportive institutional climate, emphasis on first year in terms of support and formative assessment, social dimension of learning activities, and preparedness to respond to continuity of change were recommended to improve student retention. To summarize, researchers recommend and imply some retention programs.

2.2.7 Student Attrition in International Context

Student attrition is a problem not only for a limited local area but also for a widespread international context. The studies in international context focus on both reasons why the students in higher education take early withdrawal decision and the ways how the students persist in school in order to get a degree. These studies are based on the forms of books, book chapters, articles, projects, reports, and theses. As a result, this section of the current study discusses attrition and retention studies under four international contexts: European, American, East Asian and Australian, and Middle East, African and Arabic.

2.2.7.1 European Context

The topic of student attrition was studied mostly in the context of United Kingdom (UK) and Italy in the European context. Jones (2008) conducted a research synthesis in order to examine student retention in UK. By investigating 10 reports, the authors reached to some conclusion. First of all, studies in UK focused on rates of attrition and retention. Although OECD reports depict higher rates of retention of UK compared to other countries, Dodgson and Bolam (2012) found that one out of four students thought of leaving. Secondly, UK studies on student retention or attrition focused on causal factors underlying attrition. Yorke and Longden (2008) identified some factors such as wrong choice, problems with finance, and problems with social integration. Thirdly, there are some factors improving student retention in UK. The author synthesized them as “pre-entry and admission procedure, transition support, curriculum development, social engagement, student support, and data and monitoring”. Lastly, studies focusing on UK context had a concern about experiences and implications of early withdrawal for all stakeholders.

Apart from research syntheses, there are empirical articles studying attrition in UK. Hassell, Seston, Eden and Willis (2007) studied attrition in Pharmacy departments and found that attrition rates differentiated in terms of institution, gender, and student type. Attrition rates were between 3.6% and 35.5% for different institutions. Also, male students were more likely to drop-out than female students. Moreover, attrition rate for overseas students were higher than that of EU and home students. On the other hand, study by Smith and Naylor (2001) showed that academic preparedness, social integration, and unemployment estimated the probability of drop-out. Johnes and McNabb (2004) examined the reasons why UK students left school and found that peer groups, quality of match between institution and student, gender, quality in learning, teaching and research, access to higher education, and staff-student ratio were determinants of student attrition. In conclusion, social, academic, and economic issues are visible in UK context.

In addition to UK, it is possible to see attrition studies in Italy and in other EU countries. Belloc, Maruotti, and Petrella (2010) analyzed attrition rates in a university in Italy. The authors found that probability of drop-out was higher for the students with higher secondary school final mark, the women, the students with lower academic performance in university, Italian students, and students with high income, and short time between high school graduation and university enrollment. Most of these findings are contrary to claims of predominant literature. On the other hand, Di Pietro and Cutillo (2008) conducted a study in order to see impacts of a reform which was related to flexible degree program structures in Italian university and found that the students with high academic performance in high school were less likely to leave than students with poor academic performance in high school. In addition, their study showed that the ones who enrolled in university before the reform were more likely to drop out than the ones who enrolled in the university post-reform period. In another study, Cingano and Cipollone (2007) investigated impact of family background on university withdrawal and found that probability of leaving the university decreased proportionally with increment in years of father's education. Similarly, Triventi and Trivellato (2009) conducted research to examine Italian higher education in terms of performance, participation, and inequality. The study showed that dropout rate was higher for lower-middle class students. In addition to Italian context, Jakobsen and Rosholm (2003), Gury (2011), Hovdhaugen (2009), Lassibille and Gomez (2008) investigated student attrition respectively in Denmark, France, Norway, and Spain. Generally, results represented that individual and family backgrounds such as ethnicity, migration, parental education, marital status, socioeconomic status, and age were linked to student attrition. To summarize, studies in European literature focused more on individual and family characteristics.

ATTRACT (Enhance the Attractiveness of Studies in Science and Technology) is a project considering whole Europe in terms of student attrition. By using the findings of this project, some reports (Kairamo, 2012; Lucas, Gonçalves, & Kairamo, 2012; Rintala, Andersson, & Kairamo, 2012) were published. These studies provided three important issues related to attrition and retention in Europe: statistics about attrition in terms of programs, assessment of retention policies, and comparison of Europe with other contexts. More specifically, Rintala, Andersson, and Kairamo (2012) emphasized that wrong choice of program was revealed as the most-reported attrition reason in ATTRACT project. Moreover, Kairamo (2012) shared data from Belgium, Finland, Ireland, Italy, Portugal, and Sweden in terms of some topics like background information, student progression monitoring system, and student association role. The author stated that most of the dropouts were seen in the first year and concluded that first year had significance for student retention. Furthermore, study by Lucas, Gonçalves, and Kairamo (2012) showed that the southern countries in Europe had lower retention rates whereas the northern and central countries had higher retention rates. The authors also remarked that intrinsic factors were more dominant on student attrition than institutional factors. In conclusion, like individual empirical studies, this project showed that personal factors are more visible in student attrition in Italy.

2.2.7.2 American Context

United States of America (USA) received a larger body of studies about student attrition and retention. To illustrate, the studies that led to theoretical models and framework of Spady (1970), Tinto (1975), and Bean (1980) were all conducted in USA context. By considering the student attrition studies in USA, it is possible to summarize studies in terms of dissemination type. The first group is the books (Forest & Altbach, 2006; Lovitts, 2001; Nettles & Millett, 2006) in which student attrition is analyzed in US context in terms of attrition rate, reasons behind attrition, and recommendations for retention. Moreover, these books concentrated on PhD education. To illustrate, Lovitts (2001) published a book named as *"Leaving the Ivory Towers: The Causes and Consequences of Departure from Doctoral Study"*. The author began by emphasizing high rate of PhD attrition as a problem background. In her methodological procedure, mixed-model was conducted through surveys with the students, interview with non-completer students and faculty members, document analysis including attrition rates, and observation of environment of departments. Next, she explained departure behavior by considering some theories from sociology, psychology, and economy. After that, the author concentrated on graduate school experiences of students, which were cognitive process, academic integration, quality of learning environments, and student-advisor relationships. And finally, Lovitts concluded with how decision to leave was taken and what personal and labor-market consequences were experienced. To summarize, Lovitts (2001) explained the attrition process by underlying causes and consequences of attrition.

Secondly, reports belonging to higher education, federal, and state institutions (ACT, 2017; AFT, 2011; NCES, 2003) examine student attrition. Troxel (2010) analyzed this type of reports through a research synthesis and concluded that synthesis included three main topics: overview of theoretical frameworks, strategies of institutions to improve student retention, and pressures from public for accountability. Furthermore, ACT report (2017) investigated retention rates in terms of institution type and selectivity of institution. Moreover, Humboldt State University conducted a research related to retention rate trends for both transfer and university students in terms of some variables such as semester, gender, and race. The report showed that retention in the first year, retention of female students, and retention of overrepresented minority (Caucasian and Asian) seemed higher than that in the second and third year, that of male students, and that of underrepresented minority (Hispanic/Latino, African American, Pacific Islander, American Indian, etc.) for both transfer and university students. In conclusion, reports in US focused more on retention rates, ways to improve retention, and effects of demographics on retention.

The third classification is related to journal and articles. Seidman (2007) firstly edited "*The Journal of College Student Retention: Research, Theory & Practice (CSR)"* to exhibit complex side of attrition and retention in higher education in 2007. This journal has brought attrition and retention literature in many studies. To name a few, cornerstone studies of Tinto (2006), Bean and Eaton (2001), and Braxton (1999), which were significant in terms of research, theory, and practice were published in this journal. In addition to this journal, journals related to higher education also publish attrition and retention studies. Most of these searched the impact of race (Carter, 2006; Crede & Borrego, 2014; Heilig & Darling-Hammond, 2008; Ishitani, 2006; Seidman, 2005; Tekian, 1998), gender (Geisinger & Raman, 2013; Ishitani, 2006), family background (Ishitani, 2006) on the retention and attrition. There are also studies showing impacts of organizational factors on student retention such as organizational climate (Crede & Borrego, 2014; Geisinger & Raman, 2013), type of institution (Chaney & Farris, 1991; Ishitani, 2006), and program admission conditions (Newton & Moore, 2009). As a result, like reports and books, articles concentrated on demographics, especially on race or ethnicity. This condition is usual for US context because it includes many ethnicity as it is understood from the name which is “United” states.

Demetriou and Schmitz-Sciborski (2011) examined retention in US in terms of history of the studies related to retention, factors affecting retention, and motivational theories. The authors noted that literature of 1990s concentrated on the ways retention would be improved while literature of 2000s focused on collaboration of all stakeholder of higher education. In addition, they depicted the factors on retention as academic preparation and engagement, social engagement, financial issues, and demographics. Finally, authors declared that motivation theories of *“attribution, expectancy theory, goal setting theory, self-efficacy beliefs, academic self-concept, motivational orientations and optimism”* could be applied to retention to empower the perspective about student retention. To sum up, attrition and retention studies in US context focused on historical development, attrition rates, causes and consequences of attrition, ways to improve student retention, and demographics and in particular to race.

2.2.7.3 Eastern Context

In this section, eastern context includes Australia and two countries placed in Eastern Asia. The researcher of the current study did not come across studies in English from some popular Asian countries like Japan and China. To begin with, Australia has a special place in student attrition in last decades. Since 1994, Australian governments and universities have made many investments in student retention (Aljohani, 2016). Therefore, the researchers found opportunity to conduct a lot of studies related to student attrition and retention. Australian projects focused on the first year experiences of students in higher education institutions. Adams, Banks, Davis, and Dickson (2010) conducted “the Hobsons Retention Project” to overview Australian tertiary education in terms of student experience and engagement. In the report of this project, the authors shared finding of the other studies conducted in Australia about the reasons of attrition, strategies to improve retention, student demographics affecting retention, student satisfaction, and risk indicators. Furthermore, Adams et al. (2010) calculated attrition and retention rates which differentiated in terms of institution, student group, gender, and field by using secondary data sources. To illustrate, university ten had the highest attrition rate while university six had the lowest rate. For all universities, attrition rate of domestic students was higher than international students. In terms of gender, attrition rate of males was higher than that of females. By considering the field, the field which had the highest rate of international student attrition was Creative Arts while Information Technologies was the field having the highest rate of domestic student attrition. And finally, report summarized the costs of attrition such that total cost of attrition was 1367 million Dollars while average cost per Australian university was 36 million Dollars. Adams et al. (2010, p. 18) claimed that *"Every 1% drop in attrition would save Australia's public universities almost one billion dollars, or up to $2.6 million per university"*.

Long, Ferrier, and Heagney (2006) conducted a research project to investigate attrition from the first-year of undergraduate in 34 universities in Australia. Responses of 1197 non-completer students showed that the top three reasons among 10 reasons were need for a break, balance efforts school and work issues, and change in career goals. Furthermore, the students who were older, were from lower SES, had full-time work, and needed at least 90-minute travel to come to school were more likely to make a decision to dropout. Moreover, the authors recommended institutions to inform students about the courses before enrollment, to provide support services, to assure social environments, to give financial support, to consider feedback of students, and to monitor attrition and withdrawal. To summarize, reports of the projects showed that there is a concern to learn first-year experiences, to elaborate attrition reasons, and to recommend retention strategies in the Australian context.

In addition to institutional projects, Australian context have also many individual studies. Individual studies generally appear in the form of journal article. The literature has the studies focusing on conceptualization of attrition (Lodge, 2011), factors affecting timely completion (Jiranek, 2010), improvement of student retention and ways to decrease attrition rates (Crosling, Heagney, & Thomas, 2009; Maher & Macallister, 2013; Polesel & Rice, 2012; Scott, Shah, Grebennikov, & Singh, 2008), demographics (Roberts, McGill, & Hyland, 2012) trends in and factors affecting student attrition (Grebennikov & Shah, 2012; Krause, 2005; Taylor & Bedford, 2004). The findings of these study showed that student attrition in Australian context was influenced by a variety of factors including personal and institutional reasons. On the other hand, Australian offices and researchers give importance to measure attrition and retention through valid and reliable instrumentation. For this reason, Radloff, Coates, James, and Krause (2011) developed a survey for measuring quality of higher education in Australia and were supported financially by Australian government through University Student Experience Survey Project. The structure of survey was based on teaching and support, learner engagement, and educational development. The final version of the survey was claimed as reliable and valid instrumentation by the developers. Apart from Australian context, Fozdar and Kumar (2007) investigated the relationship between mobile learning and student retention in India context and found that mobile learning could be a beneficial method to improve student retention. Similarly, study by Baruah (2011) showed that usage of electronic devices and processes in class increased the retention rate for open and distance education. It can be summarized that Indian context have a concern to improve retention in open and distance education so that studies reflect this situation. On the other hand, Sittichai (2012) conducted a study in Thailand. The author investigated why dropouts were apparent in Thai and found that selected field, security concerns, lifestyle, time management problems, and relationship conditions were the reasons for dropout. For the study, security is interesting and quite different from the Australian context which focuses more on assessment of retention, first-year experience, reasons for attrition, and ways to improve retention. In addition, this shows the differentiation in eastern culture.

2.2.7.4 African and Middle East Context

This section presents the studies from South Africa in African context and the studies from Saudi Arabia in Middle East context. The studies in African and Middle East context differ from U.S., European, and Australian context such that contextual problems such as health, civil war, and safety are more apparent in African and Middle East context. By considering South African context, Herman (2011) investigated student attrition from the perspectives of both students and program leaders. According to program leaders, the reasons for student attrition were personal reasons, poor supervision, inflexible policy, students' lack of ability and motivation, financial problems, and faulty equipment. On the other hand, students declared that the reasons were mostly related to academic challenges, financial problems, work commitments, access problems, family obligations, supervision problems, and problems of South African context. Perceptions of students were coherent with the perceptions of program leaders in terms of academic, financial, and personal (or family) issues. However, both students and program leaders did not state a departmental reason but only students were aware of contextual problems such as crime and xenophobia. Another study, conducted by De Jager and Gbadamosi (2010), showed that service quality in higher education was related to students' intentions to leave. To summarize, contextual factors like health, crime, and quality policies and personal factors draw attention while institutional factors remain in the background in student attrition studies of South African context.

Saudi Arabia context is also valuable for the student attrition field. Aljohani (2016) conducted a research synthesis about student attrition in Saudi Higher Education. The author stated that although there was low rate of student retention, Saudi literature did not consider student attrition in a sufficient way. Aljohani (2016) identified 20 frequent factors on student attrition from rules and policies of institution to low level of academic advice. The author concluded that these factors could be summarized as personal, social, academic, and institutional factors. Moreover, the author emphasized that there was a need to examine gender differences due to sex-segregated higher education institutions in Saudi Arabia. However, this recommendation may not give healthy picture about the effects of gender because there may be lots of threat to internal validity. Therefore, investigation of gender differences in same place or condition is more accurate. By considering the results of the study by Aljohani (2016), it can be concluded that Saudi context focused more on institutional factors on student attrition and experienced the research gap related to gender differences. Overall, contextual situations of both South Africa and Saudi Arabia influence the approaches of the studies to student attrition. This condition may be reflection of religious, social, and cultural issues.

2.3 Organizational Climate

This section identifies organizational climate in terms of its definition, its significance, approaches related to organizational climate, and studies focusing on organizational climate.

2.3.1 Definition of Organizational Climate

In daily life, people frequently talk about the weather conditions and climate of that region. To name a few, rainy or sunny weather, warm or cold climate, and open or closed atmosphere are terminologies related to climate. This climate is also available for the organizations. In other words, organizational climate may be open or closed. The term of organizational climate is defined with different perspectives. Organizational climate can be defined as shared perceptions of individuals about working environment in the organization (Hoy & Miskel, 1991). Moreover, Lunenburg and Ornstein (2011) briefly defined organizational climate as quality of any environment. To summarize, these definitions show that organizational climate represents the perceptions of individuals about the environment.

In terms of the historical roots of organizational climate, this term was put forward by researchers in social sciences. Denison (1996) stated that organizational climate was originated from Lewin's studies (1951) about the social climate which was experimentally proved, studies of Litwin and Stringer (1968), and books written by Tagiuri and Litwin (1968). Tagiuri and Litwin (1968) explained the variety of organizational characteristics from objective settings to subjective interpretation in their book while Litwin and Stringer (1968) concentrated on consequences of employee perceptions of climate. Moreover, Forehand and Gilmer (1964) made an attempt to define organizational climate. The authors placed organizational climate on three characteristics: features that distinguish it from others, its permanence, and its impact on the individuals' behaviours (as cited in James & Jones, 1974, p. 1097) On the other hand, George Sterns recognized climate in organization in 1960's. George Sterns preferred to use the term of organizational climate when he had felt the relationship between individual and organization while he had been studying the higher education system. After that, this terminology became widespread especially in business organizations and schools (as cited in Varlack, 2008). Therefore, organizational climate has gained a sphere of influence.

In addition to definition of organizational climate, its measurement showed important historical developments. Hoy, Tarter, and Kottkamp (1991) emphasized that in spite of special place of organizational climate in industrial field, it was measured firstly in school context. Halpin and Croft (1963) assessed the climate of elementary schools by administering Organizational Climate Description Questionnaire (OCDQ). They determined four behaviors for teachers and four behaviors for principals. Behaviors of teachers were disengagement (reluctance of teachers about working together), hindrance (feeling of teachers about that they are burdened with unnecessary busy-work), esprit (moral of teachers), and intimacy (enjoyment of friendly relationships of teachers). Principal behaviors were aloofness (formal and impersonal characteristic of principal), production emphasis (directive and task-oriented supervision by principal), thrust (effort of principal to motivate teachers in addition to supervise them), and consideration (inclination of principal to create humanistic relation with others). In conclusion, this construct measured the variance in behaviors of school principals and teachers so that dimensions of organizational climate emerged in terms of organizational behavior.

By the 1980's, organizational climate began to make sensations for different type of organizations. Zohar (1980) examined safety climate in 20 industrial organizations by administering organizational climate scale including 40 items. The author found that safety climate was related to safety program effectiveness. Related to the climate in the supermarkets, Batlis (1980) conducted research which showed that organizational clarity was found as the most significant predictor of job related anxiety, job dissatisfaction, and propensity leave from job among 11 dimensions of organizational climate. The study by Welsch and LaVan (1981) showed participative climate in health-care institutions was positively linked to organizational commitment. Moran and Volkwein (1988) conducted a study in higher education institutions and found that sub-units of university had greater impact on organizational climate than the whole institution does. Roeser and Eccles (1998) conducted a research in the school in order to investigate school climate perceptions of adolescent students. The study showed that there was a negative relationship between positive teacher regard and depressive symptoms, anger, and school truancy. In another study, Davidson (2003) investigated the relation between organizational climate and performance at hotels and found positive relationship. In conclusion, organizational climate is both investigated in a variety of organizations and is associated with organizational behaviors like job satisfaction, performance, and commitment.

2.3.2 Significance of Organizational Climate

Organizational climate depicts the atmosphere in any organization like schools, hospitals, and factories. For all types of organizations, organizational climate is closely linked to organizational attitudes and behaviors which may result in positive organizational outcomes. Shanin, Naftchali, and Pool (2013) conducted a study and found that performance and organizational citizenship behaviors of individuals were influenced by positive organizational climate. Moreover, authors claimed that organizational climate was related to loyalty, spirit, and energy of individuals. In a study by Stetzer, Morgeson, and Anderson (1997), four types of climate for an effective organization were determined. They were supportive climate to promote quality, cooperative climate to provide group work, trusting climate to set a healthy relation between managers and workers, and climate valuing customer service. Furthermore, organizational climate was closely related to job satisfaction (Taylor & Tashakkori, 1995). The authors found that organizational climate which included leadership, collegiality, and discipline were strongly associated with job satisfaction. In conclusion, international studies mostly focused on organizational citizenship, job satisfaction and organizational effectiveness.

Researchers in Turkey investigate the organizational climate by considering organizational outcomes. Ertekin (1978) conducted a study in governmental organizations and found that organizational climate both motivated employees and increased organizational effectiveness. Study by Uysal (2013) showed that there was a positive relationship between organizational climate and organizational commitment. In another study, Baykal (2013) investigated the relationship between leadership and type of climate. The study showed that peaceful climate led to more tolerant and less authoritative leadership whereas crisis climate led to more rigid leadership. To summarize, older studies in Turkey focused on motivation and performance while more recent studies examined the relation between organizational climate and leadership and commitment.

The literature has also studies showing effects of factors on organizational climate. Forehand (1968; as cited in Halis & Uğurlu, 2008) explained three factors related to organizational climate as follows: environmental factors including economic conditions, unionization, and extent of organization; personal factors including traits, skills, and values of individuals; and outputs related to motivation, satisfaction, and productivity. On the other hand, Miller (1980) put forward an analogy describing organizational climate over weather systems. This analogy consisted of four requirements which were trade wings, temperature, ceiling level, and standard barometric pressure. Trade wings were related to purpose and direction of the organization. Temperature referred to moral of individuals. Ceiling level was related to loyalty organization. Lastly, standard barometric pressure corresponded to structure and standards of the organization. In this analogy, appropriateness of trade wings, temperature, ceiling level, and standard barometric pressure led to positive organizational climate in which morale, enthusiasm, and performance of the individuals increased. On the other hand, unmeaningful trade wings, unsuitable temperature, unnecessary ceiling level, and inadequate standard barometric pressure respectively caused wrong direction, dispiritedness, absenteeism, and unstructured organization, all of which were related to negative organizational climate.

Organizational climate has significance for educational settings. It is possible to divide educational settings into two groups which are school climate and organizational climate in higher education institutions. Mendal, Watson, and Macgregor (2002) investigated the relationship between leadership and school climate. Their study showed that collaborative school principals contributed more positively to school climate than other types of principals. Study by Peker (1993) depicted that student success increased when school climate became more positive. On the other hand, higher education institutions have more complex structure and process than schools in lower levels so that organizational climate in higher education institutions has more and different dimensions. Grobler and Grobler (2015) conceptualized organizational climate in higher education institutions providing open and distance learning. The authors found that dimensions of climate were “leadership, my manager, organizational citizenship, compensation, interpersonal relationships, and clients, capacity and values. Coso and Sekayi (2015) examined climate in graduate education institutions. Their study showed that institutional climate had a positive impact on doctoral students in terms of career planning and professional development. In another study, Musah et al. (2016) concluded that performance of academic staff in Malaysia was predicted by organizational climate. Organizational climate was found significant for the development of students’ creativity (Sokol, Gozdek, Figurska, & Blaskova, 2015). In conclusion, organizational climate in higher education institutions play a role on leadership, career planning, performance, and creativity.

2.3.3 Approaches to Organizational Climate

Organizational climate literature presents approaches including constructs. These approaches explain the climate in any organization with different perspectives. The next sections represent the most studied approaches.

2.3.3.1 Open and Closed Climates

Organizational climate was conceptualized in a continuum by Halpin and Croft (1963). In this continuum, there are six profiles describing a school, which are “open climate”, ”autonomous climate”, “controlled climate”, “familiar climate”, “paternal climate”, and “closed climate”. At the same time, this conceptualization formed a basis for the first assessment efforts of organizational climate although the term organizational climate was born in the industrial field (Hoy, Tarter, & Kottkamp, 1991). First of all, open climate corresponds to energetic, lively, and satisfying organization in which people achieve the goals. Autonomous climate refers to satisfying environment but there is a leader impact to control subordinates. Controlled climate is formed due to highly task-oriented works and impersonal relationship. In this profile, openness of climate begins to decrease. Familiar climate identifies inauthentic behavior because of control mechanism. Paternal climate is related to low satisfying environment. Finally, closed climate shows up in the organizations which dissatisfy everybody. On the other hand, Hoy and Miskel (1987) tried to make this conceptualization simple by remarking characteristics of a continuum. Open climate which is placed in one end refers to high level of trust, satisfaction, interaction, and performance whereas closed climate which is placed at the other end corresponds to low levels of these. Figure 2.2 depicts the six climates in continuum.

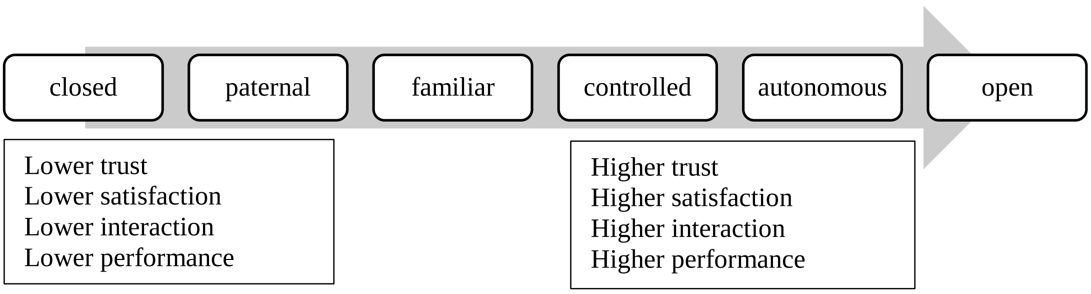


Figure 2.2 Six Climates

According to Hoy and Clover (1986), profiles between open and closed climates could not differentiate climates in a comprehensive way (as cited in Hoy, Tarter, & Kottkamp, 1991). As a result, the authors identified two additional climates which were engaged and disengaged climates. In the schools having engaged climate, teachers depict high performance and are in supportive relations with each other while the principals are authoritarian and load unnecessary work on teachers. On the other hand, teachers are lazy and are in weak relation with each other while the principals are highly supportive in the schools having disengaged climate. Figure 2.3 represents these climates.

		Principal Behavior	
		Open	Closed
Teacher Behavior	Open	Open Climate	Engaged Climate
	Closed	Disengaged Climate	Closed Climate

Figure 2.3 Typology of School Climates (Hoy, Tarter, & Kottkamp, 1991)

2.3.3.2 Organizational Health

In everyday language, health is a term indicating individual's well-being in terms of physical, psychosocial, and mental development. Similarly, organizational health is related to work of components of an organization in an effective way. According to Tsiu and Cheng (1999), researchers in educational field use organizational health term to represent school management and interaction of school stakeholders on the other hand, Aytaç (2003) divided organizational health into two groups which were based on medicine perspective and organizational behavior perspective. In terms of medicine perspective, researchers related organizational health to physical and psychological safety of individuals. Researchers with organizational behavior perspective supported that interaction between the subordinate and the superior determined organizational health.

Considering organizational health, Miles (1965) put forward organizational health as a separate research field (as cited in Ardıç & Polatçı, 2007). In order to improve organizational health, the author recommended organizations to support individuals, to value communication, to empower information channels, to form an open culture, and to provide expertise. Shoaf, Genaidy, Karwowski, and Huang (2007) developed a model based on organizational health, climate, and culture. As Figure 2.4 depicts, organizational culture includes both goals and values. In addition, goals have an impact on values. On the other hand, organizational culture shapes organizational climate consisting of daily routines like resources, written/verbal practices, and job/process demands. This relationship between culture and climate is an indicator for organizational health. Remarking outcomes of this model are effectiveness and quality of work.

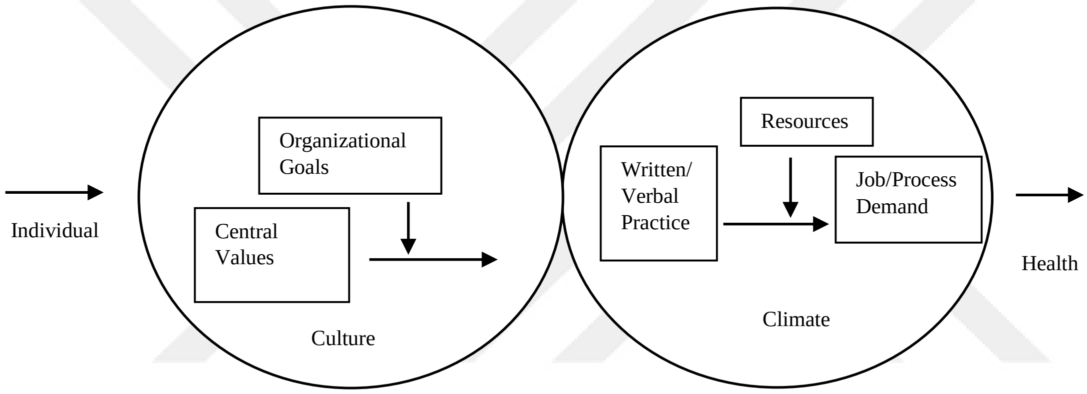


Figure 2.4 Organizational Health Work System Model (Shoaf *et al.*, 2007)

Considering health in the schools, Hoy and Tarter (1997) developed operational definition of healthy school by administering "Organizational Health Inventory" (as cited in Lunenburg & Ornstein, 2011, p.70). Organizational health is a metaphor to conceptualize climate. In this conceptualization, there are three levels which are the technical/teacher level, the managerial level, and the institutional level. The technical level concentrates on educational problems and learning environments. This level has two sub-dimensions which are "teacher affiliation" including togetherness and enthusiasm of teachers and "academic emphasis" on students' achievable academic goals. Secondly, managerial level is based on administrative processes in educational settings. This level has three sub-dimensions which are "principal influence" including ability to affect others, "collegial leadership" including friendly and supportive behaviors of principals, and “resource support” including instructional materials in adequate level. Lastly, institutional level sets a bridge between the school and the community. Its sub-dimension that is “institutional integrity” corresponds to school’s struggle with illogical demands coming from external world. As a result, all of the three levels balance school-related activities in a healthy school.

To summarize, openness and health of an organization include a variety of organizational dynamics like supportive administrators, enthusiastic teachers, and hardworking students. In addition, perceptions of experiences of individuals may change although they are available in the same organization. To illustrate, a hardworking student may perceive school academically positive other student may perceive school unnecessary. Or a student may attribute absenteeism to school administration while school principal may attribute it to characteristic of the student. Furthermore, demographics of individual and other organizational variables may shape openness or health of organization. The researchers are in pursuit of organizational processes and outputs to examine these relationships.

2.3.4 Studies about Organizational Climate

In the educational settings, frequently studied topics are school climate and organizational climate in higher education institutions. School climate includes the climate in lower levels such as primary, middle, and high schools while organizational climate in higher education institutions is related to climate in the upper levels like faculties and departments. The next two sections present the studies related to school climate and climate in higher education institutions.

2.3.4.1 School Climate

School climate studies in the literature are based on two issues. The first one is studies conducted by considering school stakeholders. The second issue is studies conducted in different levels of schooling. When considering studies related to perceptions of school stakeholders, it is possible to divide stakeholders into principals, teachers, students, and parents. Study by Pomroy (2005) showed that school principals thought positive school climate was mostly related to participatory decision making, team identity, and vision. Şentürk (2010) conducted research related to school climate and leadership and found that effective leadership style was closely related to positive school climate. Studies related to school climate perceptions of principals focus mostly on leadership styles and behaviors of school principals.

Teachers are one of the most important figures in the schools. Their perceptions of school climate are investigated in both national and international literature. Treputtharat and Tayiam (2014) found that school climate had an impact on teachers' job satisfaction in terms of performance, responsibility, solidarity, award, achievement, and leadership. Also, study by Yusof (2012) showed that teacher perceptions of school climate were related to organizational commitment. In the study of Collie, Shapka, and Perry (2011), the results depicted that professional, future professional, and organizational commitment of teachers were predicted by their perceptions of school climate. When considering national literature, studies focused mostly on the relationship between some demographics and school climate. To illustrate, Şahin (2004) investigated gender and school climate and found that female teachers evaluated school more positive than their male colleagues. Furthermore, experience of teacher was positively correlated with school effectiveness (Köksal, 1991). To summarize, international researchers study mostly relationship between school climate and organizational behaviors and attitudes of teachers like commitment and job satisfaction, studies in Turkey concentrate on the relationship between demographic variables and school climate.

Students consist of the greatest majority in school context so that investigating their perceptions has crucial importance. Generally, school climate is linked to academic achievement and productive and satisfied life conditions of the students (Cohen, Mccabe, Michelli, & Pickeral, 2009). Moreover, McEvoy and Welker (2000) concluded that students' perceptions of efficacy about learning, perceptions of safety, and perceptions of expectations for achievement were components of effective schools. Koth, Bradshaw, and Leaf (2008) examined school climate in individual, classroom, and school levels. The authors found that race and sex as individual level factors explained the largest proportion of variance in perceptions of school climate. Also, their study depicted that teacher characteristics, class size, and concentration of students with behavioral problems as classroom level factors and school size and faculty turnover as school level factors predicted school climate significantly. In conclusion, student perceptions of school climate are nearly related to their demographics and achievement.

Apart from principal, teacher, and student perceptions of school climate, school climate is studied with parents at least. Basically, Peterson (2010) stressed that school climate was in relation with parent and community involvement. Also, impersonal and bureaucratic school climate may form a threat for parent involvement (Cochran & Dean, 1991). The study by Seefeldt, Denton, Galper, and Younoszai (1998) depicted that parent involvement was predicted by parent perceptions of school climate. In Turkish context, Ertem and Gökalp (2017) investigated parent perceptions of school climate and found that parent perceptions of social climate, academic climate, and safety predicted significantly parent involvement with its sub-dimensions like parenting and decision-making. Therefore, it is clear that there is a relationship between school climate and parent involvement.

In terms of the school level-focused studies in school climate literature, relation of school climate with other topics is examined. When considering international literature, studies mostly focus on school climate in terms of gender and developmental stages. Roeser and Eccles (1998) investigated adolescents' perceptions of middle school climate. The authors found that teacher regard was negatively related to depressive symptoms, truancy over time, and danger. Moreover, their study depicted that boys showed higher self-esteem, higher anger, and lower value on education than girls. In addition, there was a decrease in academic processes while there was an increase in anger and self-esteem in adolescent period. Similar study was conducted by Kuperminc, Leadbeater, Emmons, and Blatt (1997) who stated that boys in middle school reported more externalizing discipline problems than girls in middle school did. On the other hand, Özdemir, Sezgin, Şirin, Karip, and Erkan (2010) conducted research in elementary schools in Turkey and found that girls perceived school more positively than boys did. Also, study by Akman (2010) depicted that perceptions of school climate changed in terms of grade level of student, gender of student, and education level of mother of student in the elementary schools. Moreover, Akgül (2013) emphasized that secondary school students considered teacher support at a minimum level. In summary, studies conducted in different school levels represent school climate in terms of gender roles and demographics and developmental characteristics of the students.

2.3.4.2 Climate in Higher Education Institutions

Higher education institutions are organizations in which interaction of students, faculty members, and other campus components both shape the climate and are affected by climate. Considering higher education institutions, there is a link between higher education dynamics and organizational climate. Some dimensions or determinants of organizational climate are more remarkable in higher education context. Study by Sokol, Gozdek, Figurska, and Blaskova (2015) showed that the most efficient determinants of organizational climate were intellectual stimulation, organizational integration, structure and process in higher education, and support of colleagues and teachers. Allen (2003) studied organizational climate in higher education institutions in terms of security and found that change management, predictability, openness, participation, nature of change, and type of usage of power were identified as the factors affecting insecure or secure climate. Similar topic that is safety was examined by Hofmann, Morgeson, and Gerras (2003) who found that safety climate moderated the relationship between Leader Member Exchange and subordinate citizenship. On the other hand, Schneider, Brief, and Guzzo (1996) studied relation between organizational change and organizational climate and culture. The authors stated that different organizational climates were beneficial for sustainable organizational change instead of single climate. To summarize, organizational climate has some organizational determinants like safety, change, and citizenship.

Diversity is a core value for higher education institutions because of internationalized structure and process in higher education system. Borkowski (1988) emphasized that university presidents must consider needs of minority students by behaving as leaders rather than institutional manager. Similar idea was underlined in the study by Evan-Harvey (1995). The author stated that formation of committees including people from all units, analyzing culture, knowing students, and promoting student diversity are some strategies in order to provide positive learning climate in higher education. More recent study about diversity was conducted by Lee (2003). The author stressed culture and institutional climate had interrelated impacts on diversity in higher education. On the other hand, Oregon State Board of Higher Education (1997) published a detailed report about campus climate that was based on valuing diversity of race and ethnicity. The results showed that racial diversity was valued positively by all groups of students. In addition, the campus had diversity-related courses and activities in which all students were enrolled. Also, most of the students declared that they felt welcome. And finally, racial or ethnic groups considered the amount and type of financial supports they received. As a result, climate in higher education institutions includes and values diversity.

Assessment of climate in higher education institutions is important such that researchers or institutions conduct studies to learn climate. In the previous century, Moran and Volkwein (1988) examined organizational climate in nine public universities. Overall, the authors found that scores on organizational climate varied among nine institutions. Also, it was revealed that administrator perceptions of climate were more positive than faculty perceptions of climate. Additionally, faculties had more positive organizational climate in terms of goal clarity and performance standards. The other study focusing on climate in higher education institutions was conducted by Duwve, Columbaro, and Poggiali (1992) and they found that three highest climate dimensions were respectively empowerment, available talent, and efficient creation and adoption of change. More recently, Tiwari (2014) was curious about academic staffs' perceptions of climate in higher education institutions. The author found that climate in the institutions were fairly good. Clear statement of goals, supportiveness of immediate officer, relationship between head and staff, and attitude towards work-related problems were the highest scores in terms of climate. Also, Professors' perceptions of climate were higher than Associate and Assistant Professors' perceptions of climate. In another study, Oliver, Tucker, Gupta, and Yeo (2008) aimed to develop a scale assessing student engagement and learning outcomes which were related to organizational climate in university. The pilot and main studies of the authors validated scale in three dimensions which were the ways how the students achieved the learning outcomes, level of motivation and engagement, and overall satisfaction. Generally, the results showed that students' perceptions were positive on these dimensions. Manuela, Cecilia, and Joao (2014) examined organizational climate in one higher education institution. Their study depicted that only satisfaction dimension of climate was significant for organic unit, career type, and qualifications while leadership dimension of climate was significant for only organic unit. In conclusion, organizational climate is investigated from the lens of different university components and focuses on a variety of dimensions.

In the national literature, organizational climate in higher education institutions have not been studied as much as school climate or that in international literature. Bucak (2012) conducted research related to academic staff perceptions of organizational climate in a public university. The authors found that faculty members perceived superior-subordinate relationship at a medium level and did not differentiate significantly in terms of gender and position. Kasırga and Özbek (2008) investigated organizational climate in the schools of physical education and sports in three public universities. According to the results of their study, the academicians in university A and university B perceived more positive quality of research, support from senior academicians than those in university C did. The academicians in university A and C had stronger social relationships with other academicians both in-campus and out-campus than those in university B did. The climate in the university A and C was described as warm while that in university B was identified as temperate. In another study, Yüceler (2009) examined the relationship between organizational commitment and organizational climate from the lenses of academicians in a public university. According to the author, organizational climate including organizational policies, administrator attitudes towards subordinates, physical working environment, and social relationships shaped organizational commitment. However, the results of the study showed that only physical environment had a positive impact on organizational commitment. Also, there were no significant differences in terms of gender, title, and academic positions. On the other hand, Yaman (2010) interviewed with the academicians who were exposed to mobbing. The qualitative design represented that reasons of mobbing were based on negative perceptions of organizational culture and climate including negative metaphors and stories, lack of heroes, lack of role-models, lower level of organizational commitment, formality-based ceremonies, morality problems, inadequacy in subordinates' unity, and loss of prestige. In conclusion, studies conducted in Turkey focus on academicians' perceptions of organizational climate in higher education institutions in terms of dimensions of climate and organizational commitment.

2.4 Summary of Literature Review

So far, the literature has been reviewed in terms of higher education, student attrition, and organizational climate. This section summarizes and discusses core points of the literature review of the current study by concentrating on hypotheses. In addition, models based on the hypotheses are described.

2.4.1 Hypotheses of This Study

Student attrition is a process in which students either leave their educational lives or do not persist on their education. This condition sometimes occurs when the student is not re-registered in the semester in spite of program enrollment. On the other hand, sometimes absenteeism of the student leads to student attrition. Furthermore, if the student does not persist on holding a degree, then this process may result in student attrition in the next semesters. Finally, intentions of the student to leave are a part of student attrition. The current study attributes a meaning to student attrition as an umbrella term which includes registering condition, persistence, absenteeism, and intentions to leave.

Despite the charm of graduate education like opportunity to get better career options and more income, serious number of graduate students are not persisting on completing their graduate degree (Litalien & Guay, 2015; Lovitts, 2001; Ünver, Bümen, & Başbay, 2010). Although student attrition is investigated frequently in international literature, studies in Turkey focus on more limited context like dropout problem in lower levels (Bülbül, 2012; Özbaş, 2010; Şimşek, 2011), unidimensional graduate education problems like attendance, infrastructure, scholarship, family responsibilities, and academician problems (Çoruk, Çağatay, & Öztürk, 2016; Nayır, 2001, Sevinç, 2011), and descriptive presentations like attrition rates (Ertem & Gökalp, 2016, Hurriyet, 2015). Student attrition problem in the context of Turkey has been investigated in a unidimensional, descriptive, and superficial way so that there is a need to study student attrition in a multidimensional way, to set relationships, and to examine student attrition in-depth.

The literature on student attrition shows that commitments and intentions to leave are two of the most significant determinants of the student attrition in higher education (Bean, 1982; Davidson, Beck, & Milligan, 2009; Litalien & Guay, 2015; Pascarella & Terenzini, 1980; Tinto, 1975). Institutional and goal commitment is the topic that is frequently studied as predictors of student attrition (Bennett, 2003; Mallette & Cabrera, 1991). Furthermore, there are studies investigating relations of "intention to leave" to other variables like motivation, satisfaction, and emotional exhaustion (Duque, 2014; Hunter & Devine, 2016; Litalien & Guay, 2015). Intention to leave is significant and antecedent to detect student attrition because the studies (Bentler & Speckart, 1981; Fishbein & Ajzen, 1974) proved empirically that there is a strong link between behavior and intentions. More specifically, intention behavior is significantly related to dropout behaviors (Bean, 1982; Cabrera, Nora, & Castaneda, 1993). By integrating commitment to "intentions to leave", Cabrera, Nora, and Castaneda (1993) conducted a study and found that institutional commitment was the strongest predictor of intention to persist. Also, study by Cooke, Sims, and Peyrefitte (1999) showed that university and goal commitment and "intent to remain" were predictors of attrition. To summarize, institutional and goal commitment, intentions to leave, and student attrition were shown to be interrelated to each other.

Student attrition has some causes which may be classified in two groups. The first group is the personal reasons including demographic variables, individual characteristics, and psychosocial features. To name a few, gender (Ferreira, 1993), marital status (Lott, Gardner, & Powers, 2009), age (Metzner & Bean, 1987), the first year experience (Long, Ferrier, Heagney, 2006), program level (Ertem & Gökalp, 2018), and past performance (Kahn & Nauta, 2001) are related to causes of student attrition. On the other hand, the second group consists of organizational factors. Organizational support (Ishitani, 2006), organizational climate (Valero, 2001), department or field (Araque, Roldan, & Salgueiro, 2009), and university type (Ishitani & DesJardins, 2002). To sum up, personal and organizational factors have a role on student attrition. By considering related studies in the literature, the current study put forward hypotheses as follows:

H1: Personal and organizational factors predict the persistence of students

H1a: Female students have more probability to become non-persistent student.

H1b: Probability of becoming non-persistent student is higher for married students.

H1c: Probability of becoming non-persistent student is higher for Master students.

H1d: Probability of becoming non-persistent student in non-technical university is higher than that in technical university.

H1e: Students not taking economic support have more probability to become non-persistent student than those taking economic support.

H1f: Students in the department of Humanities & Art have more probability to become non-persistent student than those in the other departments.

H2: Personal factors and organizational factors together with mediating role of institutional and goal commitment predict intentions to leave graduate education.

H2a: There is a relationship between personal factors and intentions to leave.

H2b: There is a relationship between organizational factors and intentions to leave.

H2c: Institutional and goal commitment is related to intentions to leave.

H2d: Institutional and goal commitment is related to personal factors.

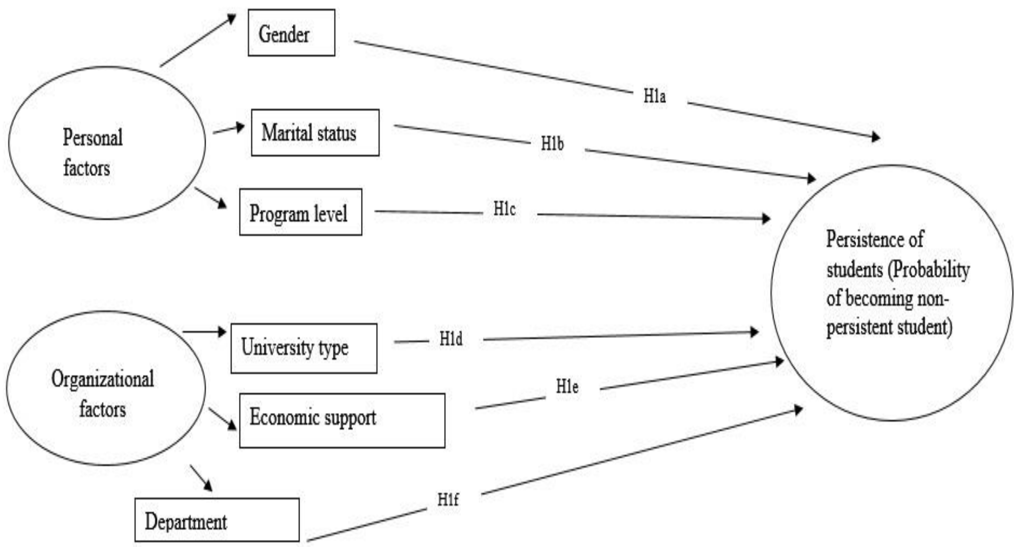
H2e: Institutional and goal commitment is related to organizational factors.

H2f: Institutional and goal commitment have a mediating role on the relationship between personal factors and intentions to leave.

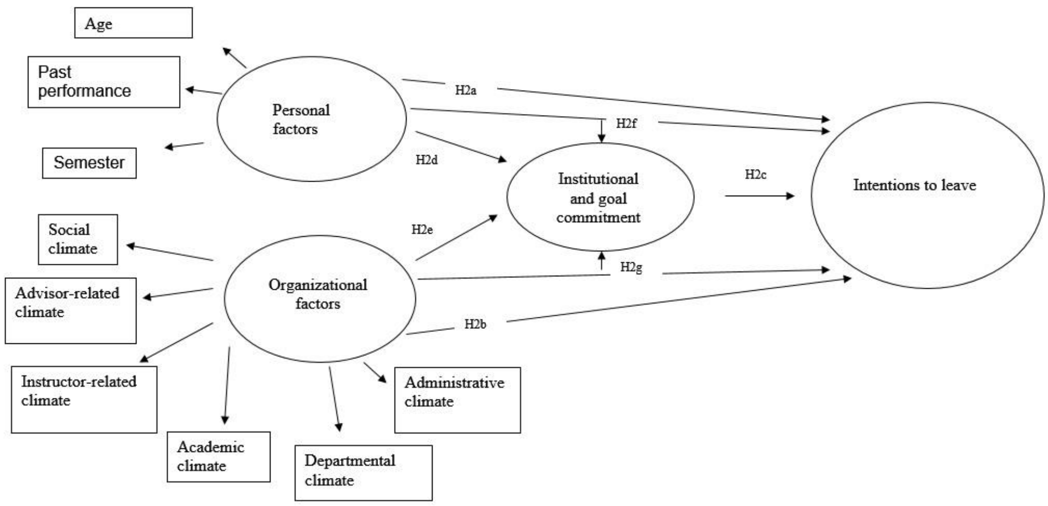
H2g: Institutional and goal commitment have a mediating role on the relationship between organizational factors and intentions to leave.

2.4.2 Model of This Study

The current study is based on graduate education in the research universities. HEC has a plan to classify universities as research, teaching, and regional development oriented universities. Saraç (2016), the head of HEC, stated that universities must become different in terms of their mission and they must be specialized in their fields such as research, teaching, and regional development. A year later, President of Republic of Turkey declared research universities in opening ceremony of higher education as following: Ankara University, Boğaziçi University, Erciyes University, Gazi University, Gebze Technical University, Hacettepe University, Istanbul University, Istanbul Technical University, Izmir Institute of Technology, and Middle East Technical University. The head of HEC stated that there were some criteria on the selection of research universities such as research culture, the quality of Ph.D. education, and training stronger researchers which are related to graduate education. In these respects, the current study aims to develop and test a model in order to determine the role of personal and organizational factors on student attrition from graduate education and to investigate graduate student attrition from the lenses of non-persistent students, persistent students, graduate school administrators, and advisors in the research universities. As a result, the current study focuses on the models as Figure 2.5 depicts.



a) Logistic Model



b) Structural Model

Figure 2.5 Models of the Current Study

CHAPTER 3

METHODOLOGY

Methodology section of the current study includes the subsections of "design of the study", "population and sample", "instrumentation", "empirical data and their collection", "data analyses", "limitations of the study", and "researcher bias".

3.1 Design of the Study

The design of the current study is mixed-model research. Mixed-model researches include not only mixed-method but also other stages of a study from problem statement to discussion of results (Teddlie & Tashakkori, 2003). Mixed designs consist of both quantitative and qualitative methods in a single study. Considering mixed-method, this design brings important advantages in order to achieve purposes of the current study (Creswell, 2012). Firstly, using both quantitative and qualitative data provides more comprehensive perspectives of research problem than one type of data. Therefore, strength of one type may offset the weakness of other type. Secondly, student attrition is a complex phenomenon such that either quantitative or qualitative method is not enough to examine the student attrition. Thirdly, mixed-method studies give an opportunity to provide alternative explanations in a study. Relationships of the variables are confirmed or cross-validated through comparison of quantitative and qualitative parts. Therefore, converging or diverging points of both parts may be examined and discussed.

Mixed-model or mixed-method research designs may be classified into types in terms of priority and sequence. Creswell (2012) listed basic designs as the convergent parallel desing, explanatory sequential design, the exploratory sequential design, and the embedded design. For the current study, the convergent parallel design was preferred because quantitative and qualitative part had equal priority. Also, both quantitative and qualitative data were collected simultaneously. By combining results of both quantitative and qualitative part, whether two parts converged upon a single comprehension or did not, was controlled.

3.1.1 Quantitative Part

For the current study, quantitative part is based on a correlational study. Gall, Gall, and Borg (2003) stated that the purpose of correlational study is to discover relationships among variables by using correlational statistics. It is useful to make prediction about a criterion variable over relationship between criterion (dependent) variable and predictor (independent) variable. A questionnaire including scales and descriptive questions were administered to test the hypotheses of the quantitative part of this study.

3.1.1.1 Predictor Variables

Predictor variable is the variable that is used to make a forecast about criterion or outcome variable (Creswell, 2012). Predictor variables of the current study may be grouped as personal variables, organizational variables, and mediator variable.

Personal variables are as follows:

Age: It is demographic variable in nominal level.

Gender: It is a demographic variable in nominal level.

Marital status: It is a demographic variable in nominal level.

Program level: It is a nominal variable.

Semester: It is an ordinal variable.

Past performance. It is a continuous variable in interval level.

Organizational variables are as follows:

University type: It is a categorical variable.

Economic support: It is a categorical variable.

Department: It is a categorical variable.

Organizational climate: It is the variable assessing students' perceptions of organizational climate in six dimensions which are academic climate, social climate, departmental climate, administrative climate, advisor-related climate, and instructor-related climate.

Mediator variable is the variable transmitting impact of predictor variable on criterion variable (Creswell, 2012). The mediator variable of the current study is as below:

Institutional and goal commitment: It is mediator variable for the relationship between personal factors and organizational factors and intentions to leave graduate education.

3.1.1.2 Criterion Variables

Criterion variable is the variable being predicted (Creswell, 2012). This study has two criterion variables which might be also named as dependent variables. "Persistence of students (becoming non-persistent or persistent student)" and "intentions to leave" are dependent variables of the current study.

Persistence of students: It is the outcome variable showing the studentship condition.

Intentions to leave: It is another outcome variable measuring the intentions of the students to quit graduate education.

3.1.2 Qualitative Part

Qualitative part of the current study consists of two designs. The first one is phenomenology in which a phenomenon based on essence of experiences is studied (Gall, Gall, & Borg, 2003). It includes both meaning and analysis of meaning. For the current study, the phenomenon is the student attrition from graduate education. In order to investigate perceptions and experiences of students and academicians, semi-structured interview forms were administered. The second design is document analysis. According to Şimşek and Yıldırım (2011), document analysis is based on analysis of some data sources like textbooks, curriculums, meeting minutes, and student records. Via document analysis, archival data coming from Council of Higher Education (CoHE) were used to calculate attrition rates in terms of program level and semester. Moreover, archival data of database of CoHE and URAP were used to describe the characteristics of the universities.

3.2 Population and Sample

Population of the current study consists of graduate students in research universities in Turkey. Ten research universities among 185 universities in Turkey were selected by considering some criteria like PhD education, researcher training, and research culture (Saraç, 2017, as declared in Hurriyet). These universities are Ankara University, Boğaziçi University, Erciyes University, Gazi University, Gebze Technical University, Hacettepe University, Istanbul University, Istanbul Technical University, Izmir Institute of Technology, and Middle East Technical University. Table 3.1 presents the characteristics of the research universities.

Table 3.1

Characteristics of the Research Universities

University	Number of Graduate Students	Number of Student per Faculty	Rate of Doctoral Student	Number of PhD Graduates
Ankara University	14062	29.47	0.11	414
Boğaziçi University	4457	32.76	0.09	71
Erciyes University	8013	33.63	0.04	118
Gazi University	16862	35.42	0.08	409
Gebze Technical University	4772	27.95	0.13	60
Hacettepe University	12380	25.73	0.09	317
Istanbul University	27382	33.27	0.08	441
Istanbul Technical University	14759	34.84	0.10	173
Izmir Institute of Technology	1713	24.38	0.10	21
Middle East Technical University	8251	33.11	0.12	245
Total	112651	310.56	-	2269
Average	11265.1	31.06	0.09	226.9

There are 549772 MS students and 95100 PhD students in graduate education according to 2017-2018 dataset of the Councl of Higher Education (CoHE). Herein, total number of graduate students is 644872 while research universities have totally 112651 graduate students. The sample was selected randomly from this population in three stages. For the first stage, list of graduate schools, graduate programs, and faculties were determined. However, differentiations in the structure and names of graduate schools were seen. Therefore, common fields which are available in most research universities were identified. The fields were educational sciences, social sciences, natural and applied sciences, medical sciences, fine arts, and engineering. On the other hand, the graduate students in the departments of medicine, dentistry, veterinary medicine, and pharmacy were excluded because these departments have different expertise education and graduate education structure. In these departments, graduate education is based on the results of examination for specialty for medicine, which is related to career education rather than M.S. and Ph.D. However, the rest of the departments were nursing and midwifery, nutrition and dietetics, physical therapy, health administration, and other interdisciplinary fields which were included in the current study.

For the second stage, the research universities were classified as general and technical universities. The technical universities including Gebze Technical University, Istanbul Technical University, Izmir Institute of Technology, and Middle East Technical University were thrown in a hat while the remaining general universities were thrown in another hat. By considering their stratification among ten universities, one technical and two general universities were selected in order to come up to ideal representative percentage of population which is 25%. Three universities corresponding to 30% of population were coded as U1, U2, and U3 by considering ethical concerns. These three universities had on average about 14500 graduate students. Also, rate of number of students to faculty was on average about 33.0. Rate of Doctoral students was on average about 0.08 while average number of PhD graduates was about 270. It can be stated that all of these values indicated a representation for the population.

For the third stage, graduate schools focusing on common fields selected in the first stage were randomly selected. Afterward, the courses from these fields or departments were chosen randomly to administer questionnaire to all graduate students in these courses. Table 3.2 depicts the demographic information about the participants.

Table 3.2

Frequencies for the Participants

Variable		Frequency	Percentage (%)
Gender	Female	377	57.7
	Male	276	42.3
	Total	653	100
Age Group	22 and below	10	1.5
	23-28	473	72.4
	29-34	137	21.0
	35+	30	4.6
	Total	650	99.5
Marital Status	Married	106	16.2
	Single	545	83.5
	Total	651	99.7
Having child	Yes	52	8
	No	599	91.8
	Total	651	99.8
Field	Educational sciences	153	23.4
	Social sciences	208	31.9
	Natural sciences	173	26.5
	Medical sciences	64	9.8
	Engineering sciences	39	6.0
	Fine arts	16	2.5
	Total	653	100
Program Level	Master of Science	503	77.0
	Doctorate	150	23.0
	Total	653	100
Studentship Condition	Persistent student	561	85.9
	Non-persistent student	92	14.1
	Total	653	100

In the quantitative part of the current study, volunteer 661 graduate students participated in the study but 8 of them did not provide healthy data for the purposes of the study. As a result, sample size of quantitative part was 653. Fifty-seven point seven percent (N=377) of the participants are female while 42.3% (N=276) are male. Also, age of 72.4% (N=473) of the students is in the range of 23-28 while there are 137 (21%) students in the range of 29-34, 30 (4.6%) parents above age of 35, and 10 (1.5%) parents below the age of 22. In the current study, there were 106 (16.2%) married students and 545 (83.5%) single students. The study had 52 (8%) students having a dependent child whereas 599 (91.8%) students who do not have a dependent child. Thirty-one point nine percent (N=208) of participants were from social sciences field while rates of those from natural sciences, educational sciences, medical sciences, engineering sciences, and fine arts were respectively 26.5% (N=173), 23.4% (N=153), 9.8% (N=64), 6% (N=39), and 2.5% (N=16). Seventy-seven percent (N=503) of the participants were student in Master of Science while 23% (N=150) of the students were in Doctor of Philosophy. Finally, there were 85.9% (N=561) persistent and 14.1% (N=92) non-persistent students.

The sample in qualitative part of the current study was selected through purposeful sampling. Confirming sampling, snowball sampling, criterion sampling, and maximal variation sampling as the types of purposeful sampling were conducted. The target for the usage of confirming sample was to confirm or to disconfirm findings coming from quantitative study. For this reason, the researcher took care of selection one non-persistent student, one persistent student, one graduate school administrator and one advisor from either same field or same department. The target for the usage of snowball sampling was to select people who know each other due to having experienced the same conditions. Thirdly, the researcher preferred to use criterion sampling since they were some criterions. To illustrate, non-persistent student was the student who is not registered, or is not re-registered, or is disenrolled in the present semester. Moreover, persistent students were asked whether they had non-persistent friends or did not. Also, at least one year of experience were seeked for graduate school administrators. Furthermore, the advisors who both graduated at least one student by advising a thesis and had at least one present student to guide. In other words, every convenient participant were not invited to the current study. Lastly, the aim of maximal variation sampling was to provide diversity in gender, university type, and field. Although some universities and some field were more dominant than others, inclusion of participants from all groups provided a diversity in terms of the characteristics of the participants as much as possible as the Table 3.3 depicts. Through the four types of sampling strategies, a sample consisting of 10 non-persistent students, 10 persistent students, 8 graduate school administrators, and 8 advisors were reached. Totally, 36 participants were included in the qualitative part of the current study.

Table 3.3

Characteristics of the Participants

Demographic	Characteristics	Frequency
Gender	Male	17
	Female	19
	Total	36
University	U1	10
	U2	3
	U3	2
	U4	2
	U5	9
	U6	7
	U7	3
	Total	36
Field	Educational sciences	16
	Natural sciences	7
	Engineering sciences	3
	Medical sciences	6
	Social sciences	3
	Fine arts	1
	Total	36

3.3 Instrumentation

The current study has mainly three instruments. The first one is questionnaire through which quantitative data were collected. Questionnaire has six parts. The first part is related to demographic of participants. Demographic variables are gender (male or female), age (22 and below, 23-28, 29-34, 35 and above), marital status (single or married), having child (yes or no), undergraduate education with university, department and GPA, graduate education including university, graduate school, department, program level (MS or PhD), year in program, and period (lecture, qualification, or thesis). The second part of the questionnaire is related to economic support including the research assistantship, project assistantship/scholarship/loans, teaching assistantship, public occupation, private occupation, part-time job, family support and other choice. The third part of the questionnaire collect data about studentship conditions to differentiate persistent and non-persistent students. In the fourth part, there are statements about challenging fields like relations with advisor, program structure, and cultural adaptation. The last two parts include three scales: graduate education part including scales of "intentions to leave" and "institutional and goal commitment" and graduate education institution part including scale of organizational climate, which are explained in the next sections.

The second one is semi-structured interviews including questions for non-persistent students, persistent students, graduate school administrators, and advisors. Four different interview forms had questions related to starting graduate education, structure and process in graduate education, attrition causes, graduate school procedures, student-advisor relationships, problems in graduate education, and change recommendations. The third one is university information forms to collect archival data on number of students.

The researcher of the current study conducted a pilot study in order to provide validity and reliability of the scales of organizational climate and intentions to leave. Moreover, pre-administration of semi-structured interview was done.

3.3.1 Pilot Study

In the pilot study, both quantitative and qualitative data was collected in order to check reliability and validity of the data collection tools. The researcher of the current study identified student attrition problem in Turkey while he was reading a newspaper. After the literature review, a gap in Turkish context for this topic was detected. The possible reasons for student attrition were searched and it was concluded that those reasons might be summarized under two headings: personal and organizational factors. After the list of these factors had been made, personal and organizational factors were decided as follows: age, gender, marital status, program level, academic performance, semester, university type, department, economic support, and organizational climate. On the other hand, scale for organizational climate and scale for intentions to leave were decided to be developed by the researcher. The reason for developing a new scale about organizational climate and intentions to leave was respectively lack of a scale assessing perceptions of organizational climate and intentions of students to leave school in graduate education.

In order to provide economy in terms of transportation, money, time, and energy, one research university was selected to conduct validity and reliability studies. Permission process with the attachment of approval of Human Subjects Ethics Committee of METU was begun in the beginning of September, 2017. However, the permission of three institutes was taken. Pilot study was conducted in the period of October-December, 2017. Sample size of pilot study was determined according to recommendations listed in MacCallum et al. (1999, p.84-85). Therefore, it was thought that stepping up on 300 would be suitable since organizational climate scale had 35 items. Finally, data were collected from 302 graduate students in Ankara. Table 3.4 depicts characteristics of the students in the pilot study.

Table 3.4

Characteristics of Graduate Students in the Pilot Study

Variable		Frequency	Percentage (%)
Gender	Female	195	64.6
	Male	106	35.1
	Other	1	.3
	Total	302	100
Age Group	22 and below	10	3.3
	23-28	210	69.8
	29-34	66	21.9
	35+	15	5.0
	Total	302	100
Marital Status	Married	67	22.2
	Single	235	77.8
	Total	302	100
Having child	Yes	30	9.9
	No	272	91.9
	Total	302	100
Undergraduate GPA	2.5 and below	11	3.6
	2.51-3.50	168	55,6
	3.51-4.00	123	40.8
	Total	302	100
Field	Administrative science	44	14.6
	Economics	44	14.6
	Educational sciences	94	31.1
	International relations	36	11.9
	Politics	43	14.2
	Psychology	37	12.3
	Other	4	1.3
	Total	302	100
Program Level	Master of Science	182	60.5
	Doctorate	120	39.5
	Total	302	100
Semester	1-2	148	49.2
	3-4	110	36.5
	5-6	27	9.0
	7+	17	5.3
	Total	302	100

3.3.1.1 Organizational Climate Scale

Development process, content and validity and reliability processes of organizational climate scale was described as follows.

3.3.1.1.1 Instrument development process

A scale to measure organizational climate in higher education institutions providing graduate education was developed by researcher. For the scale development, an item pool of 30 items was constructed by reviewing literature. After that, opinions of a group of graduate students were taken through a cognitive interview. Items were asked to them in order to check what they understand from each item. In addition to opinions of graduate students, opinions of 11 experts in this field were asked. For the content validity, content validity criteria of Veneziano and Hooper (1997) was used. For this criteria, content validity index determines whether item will be omitted or not. Also, this index changes according to number of expert. For example, opinions of 11 experts were taken in the current study so that items having an index below .59 must be omitted. This index is calculated as follows: number of expert giving positive feedback for that item is divided by total number of experts and 1 is deducted from this score. In the current study, formula was implemented for each item and two items having below .59 were omitted. In addition, seven items were added to questionnaire by considering recommendations of these experts. A questionnaire form was evaluated by two other experts to check clarity and face and content validity of scale. Useful changes were applied by considering their suggestions. After the questionnaire was formed through this process, approval of Human Subjects Ethics Committee of METU (Middle East Technical University) was got.

3.3.1.1.2 Content of organizational climate scale

This scale assesses students' perceptions of school climate. That scale was developed by the researcher. Before the pilot study, the scale had consisted of five dimensions., which were named as peer-group interaction, interactions with faculty and advisor, academic development, structure and process in graduate education, and administrative processes in higher education institutions. There were 35 items with

5-Likert scale ranging from “strongly disagree” to “strongly agree”. To name a few, “interaction with my friends is affecting affirmatively my academic development”, “interaction with faculty member affect my academic development positively”, “there is a communication gap between me and my adviser”, “my academic development is sufficient to graduate”, “resources left for graduate education in my department are inadequate”, and “university administration values opinions of university stakeholders in decision-making process” were some of the items.

3.3.1.1.3 Validity and reliability of organizational climate scale

In order to test validity and reliability of the scale, a factor analysis was performed on the data gathered through pilot study at the beginning of January, 2018. An Exploratory Factor Analysis was conducted to evaluate how 35 items developed by the researcher of the current study were consistent in the Graduate Schools of Turkey. The original scale of organizational climate has 35 items before pilot study. Pilot study was implemented in Graduate Schools in Ankara on December, 2017. Data gathered from the sample had 302 graduate students. This number is consistent with more than one recommendation in the literature. MacCallum, Widaman, Zhang, and Hong (1999) represented studies suggesting criteria for sample size in factor analysis. To name a few, Gorsuch (1983), Guilford (1954), and Cattell ((1978) recommended respectively minimum 100, 200, and 250 participants in factor analysis in terms of minimum number of participant. Furthermore, Comrey and Lee (1992) recommended a rating scale for sample size as follows: “100 = poor, 200 = fair, 300 = good, 500 = very good, 1,000 or more = excellent.”. On the other hand, there are sample size recommendations in terms of ratio of number of participant (N) to number of variables or items (p). Three to six (Cattell, 1978), at least five (Gorsuch, 1983), and at least 10 (Everitt, 1975) for the ratio of N/p are some examples to offerings of the authors (as cited in MacCallum et al., 1999, p.84-85). By considering 35 items and 302 participants in the pilot study, the ratio of N/p was 8.63. As a result, current study met the recommendations of the studies in terms of both minimum required sample size and minimum ratio of number of participants to number of variables.

According to Tabachnick and Fidell (2007), 5% or below of missing data can be handled in large sample sizes so that number of missing data was emerged in a statistical package. However, no item had missing data and this is useful to continue analyses. At the beginning of exploratory factor analysis, multivariate normality assumption was checked such that Mardia's test was found significant, $p<.05$. Because normality assumption was violated, principal axis factor was chosen as the extraction method. Direct oblimin was used as rotation to interpret factors because the factors of the scale were assumed as inter correlated with each other. Within these selections and requirements of some assumptions and criteria, Exploratory Factor Analysis was performed. The Kaiser Meyer Olkin (KMO) was .836 and this was an indicator of a great sample adequacy because it is higher than critical value .60 (Tabachnick & Fidell, 2007). Also, Bartlett's Test of Sphericity was significant, χ^2 (df =595) = 3994.70, p =.00.

Analysis showed that nine factors with eigenvalues exceeding 1 appeared. However, number of factors were much more than findings of other studies in literature which stated factors of organizational climate in schools can be summarized as academic climate, social climate, safety, and environmental and structural climate (Cohen, Mccabe., Michelli, & Pickeral, 2009). In addition, number of factors was higher than the predetermined number of factors based on literature review of the current study. On the other hand, eigenvalue criterion to decide on number of factors criticized because of overestimation of number of retained factors (Zwick & Velicer, 1986) and arbitrary decision in terms of differentiating 1.01 eigenvalue from the .99 eigenvalue (Ledesma & Valero-Mora, 2007). Moreover, Fabrigar, Wegener, MacCallum, and Strahan (1999) recommended as many as approaches to decide the number of factors. Furthermore, Tabachnick and Fidell (2007) offered to experiment with different number of factors till a satisfactory solution was reached. Therefore, scree test and percentage of variance were checked for decision on the number of factors. As Figure 3.1 demonstrated, there was an inflection after the sixth factor in scree plot so that six-factor could be emerged. However, scree test is subjective and based on judgment of the researchers (Gorsuch, 1983; Tabachnick & Fidell, 2007; Thomson, 2004; as cited in Williams, Brown, & Onsman, 2012, p.7) so that interpretation of scree test was not effective by itself. In terms of percentage of variance explained, Hair, Anderson, Tatham, and Black (2010) offered minimum %50-%60 variance for the humanities. By considering this recommendation, 51.34% of variance was chosen and this percentage came up to the sixth factor. As a result, six factor was retained for the factor structure.

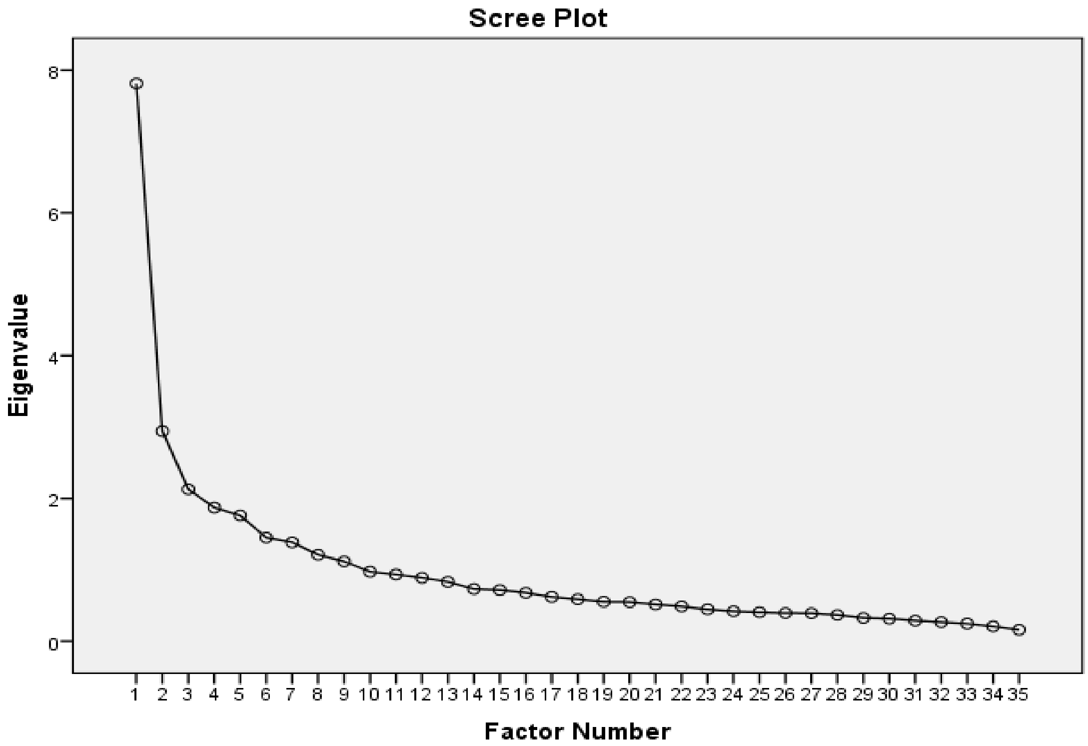


Figure 3.1. Scree Plot of Organizational Climate Scale

Items 13 and 28 were removed because their factor loadings were nearly same for two different factors. In other words, those items were not specific to only one factor. Also, items 8, 20, 22, 24, and 35 were removed because their loadings were below the critical factor loading that is 0.32 (Tabachnick & Fidell, 2007). Within these updates, Exploratory Factor Analysis was rerun with principle axis factor as rotation method and direct oblimin method for rotation technique by choosing six factors. Table 3.5 shows factor structure and loadings.

Table 3.5

Factor Structure and Loadings of Organizational Climate Scale

Dimension	*Item*	*Factor Loadings*					
		1	2	3	4	5	6
Departmental climate	i31	**,706**	,071	-,114	-,028	-,006	,149
	i26	**,652**	,025	-,011	-,156	-,092	,058
	i29	**,465**	,021	,100	,021	,096	-,031
	i30	**,427**	-,042	,040	-,027	,070	,026
	i25	**,396**	-,011	,161	,020	-,006	,038
Social climate	i3	,014	**,844**	,026	-,068	-,056	-,148
	i5	,029	**,692**	-,127	-,030	,100	-,026
	i2	-,009	**,665**	,070	-,015	-,004	,054
	i1	-,092	**,605**	,089	,039	-,077	,033
	i4	,095	**,576**	-,146	-,021	,179	-,049
	i6	-,054	**,441**	,063	,039	,009	,098
	i7	,111	**,374**	-,005	-,011	,057	,060
Administrative climate	i32	,068	-,021	**,732**	-,088	,108	-,137
	i34	,126	,026	**,618**	,029	,008	-,001
	i33	-,027	,052	**,591**	-,046	-,064	,109
Advisor-related climate	i15	-,069	,014	,063	**-,872**	,009	,069
	i14	,070	-,012	-,047	**-,863**	,018	-,068
	i16	-,101	,002	,082	**-,751**	,116	,101
	i17	,277	,029	,021	**-,466**	-,035	,032
Instructor-related climate	i9	-,008	,017	-,054	,056	**,780**	,105
	i11	-,058	,064	,086	-,073	**,666**	,083
	i10	-,062	,060	,058	-,178	**,609**	-,022
	i12	,227	,000	-,043	,014	**,545**	,009
Academic climate	i19	-,041	,015	,066	,028	,017	**,839**
	i18	,034	-,064	-,030	-,012	,135	**,669**
	i27	,216	,144	-,087	-,123	-,138	**,478**
	i21	,029	,018	,004	-,118	,046	**,461**
	i23	,184	,149	,021	,012	,184	**,330**

Six factors explained 57.39% of the common variance. The first factor was labeled as departmental climate and included items 25, 26, 29, 30, and 31. The second factor was labeled as social climate and included item 1, 2, 4, 5, 6, and 7. The third factor was labeled as administrative climate and included item 32, 33, 34. The fourth factor was labeled as advisor-related climate and included items 14, 15, 16, and 17. The fifth factor was labeled as instructor-related climate and included items 9, 10, 11, and 12. The last factor was labeled as academic climate and included items 18, 19, 21, 23, and 27.

Pilot study results were also used to represent reliability of the scale. Table 3.6 presents the Cronbach Alpha coefficients of dimensions and whole scale, factors of scale, and the number of items for each dimension. Five-factor structure had the reliability of .87 in Cronbach alpha so scale had preferable reliability (Nunnally, 1978). Factor of social climate, academic climate, administrative climate, departmental climate, advisor-related climate, and instructor-related climate had respectively internal consistency with .80, .77, .71,. 70, .85, .78 Cronbach Alpha. As a result, all factors in addition to whole scale had a Cronbach Alpha value above .70 so that scale reliability had an acceptable internal consistency (Field, 2009). In order to ensure six-factor structure, data collected in the main study (N=653) was analyzed through Confirmatory Factor Analysis (CFA). The results of CFA are provided in a detailed way in the results section of the study.

Table 3.6

Dimensions, Cronbach Alpha Values and Number of Items for Organizational Climate Scale

Factors of Organizational Climate	*Cronbach's Alpha*	*Number of Item*
Social climate	.80	7
Academic climate	.77	5
Administrative climate	.71	3
Departmental climate	.70	5
Advisor-related climate	.85	4
Instructor-related climate	.78	4
TOTAL	.87	28

3.3.1.2 Scale of Intention to Leave

Development process, content and validity and reliability processes of intentions to leave was described as below.

3.3.1.2.1 Instrument development process

A scale to measure intentions to leave graduate education was developed by researcher. For the scale development, the literature studying the relation between intention and behavior was reviewed. It was detected that intentions were generally assessed by two or three items in a factor structure. Therefore, five questions similar to each other were written. After that, opinions of a group of graduate students were taken through a cognitive interview. Items were asked to them in order to check what they understand from each item. In addition to opinions of graduate students, opinions of one experts in this field were asked. By considering recommendations of students and experts, useful changes were applied.

3.3.1.2.2 Content of scale of intention to leave

There are three statements to assess intentions to leave graduate school. “I am planning to quit my education in the next semester”, “I am planning to quit my education before getting a degree”, and “I am planning to get a degree from this department” are the items. It has 5-point Likert scale in which “1” refers to “strongly disagree” while “5” refers to “strongly agree”. The reason why intentions to leave was predicted instead of behavior was that the current study was not longitudinal because it was difficult to capture student attrition in a short time. In the current study, intention to leave was used as indicator for voluntary dropout behavior or student attrition.

3.3.1.2.3 Validity and reliability of scale of intention to leave

In order to test validity and reliability of the scale, data gathered through pilot study was performed in factor analysis at the beginning of January, 2018. An Exploratory Factor Analysis was conducted to evaluate how three items developed by the researcher of the current study were consistent in the Graduate Schools of Turkey.

Data gathered from the sample had 302 graduate students. This number is consistent with recommendations of MacCallum, Widaman, Zhang, and Hong (1999).

According to Tabachnick and Fidell (2007), 5% or below of missing data can be handled in large sample sizes so that number of missing data was emerged in a statistical package. However, no item had missing data and this is useful to continue analyses. At the beginning of exploratory factor analysis, multivariate normality assumption was checked such that Mardia's test was found significant, p <.05. Because normality assumption was violated, principal axis factor was chosen as the extraction method. However, selection a rotation method was not applicable since the scale had one factor. Within these selections and requirements of some assumptions and criteria, Exploratory Factor Analysis was performed. The Kaiser Meyer Olkin (KMO) was .731 and this was an indicator of an acceptable sample adequacy because it is higher than critical value .60 (Tabachnick & Fidell, 2007). Also, Bartlett's Test of Sphericity was significant, χ^2 (df = 3) = 532.02, p = .00. Analysis showed that one factor with eigenvalues exceeding 1 appeared. Furthermore, scree test and percentage of variance were checked for decision on the number of factors. As Figure 4.1 demonstrated, there was an inflection after the first factor in scree plot so that one-factor could be emerged. In terms of percentage of variance explained, one-factor structure explained 81.98% variance in intentions. Hair, Anderson, Tatham, and Black (2010) offered minimum %50-%60 variance for the humanities. As a result, one factor was retained for the factor structure.

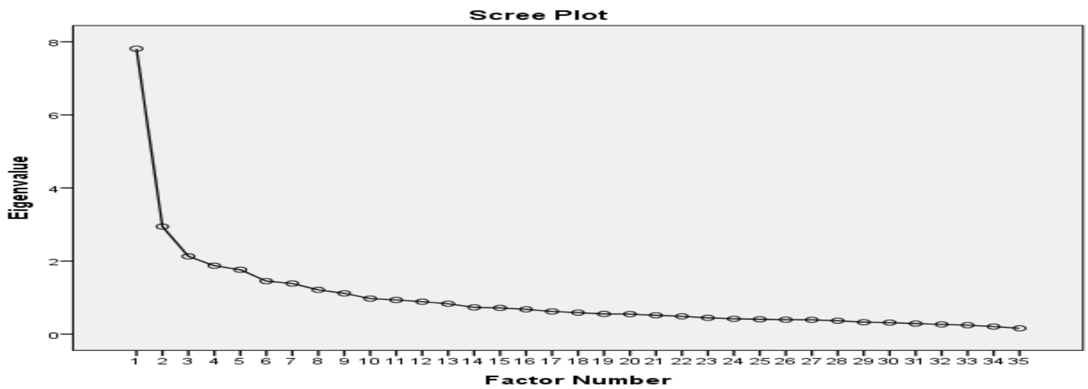


Figure 3.2. Scree Plot of Scale of Intention to Leave

Pilot study results were also used to represent reliability of the scale. Table 3.7 presents the Cronbach Alpha coefficients of items and whole scale. One-factor structure had the reliability of .89 in Cronbach alpha so scale had preferable reliability (Nunnally, 1978). Each item had respectively .84, .81, .89 Cronbach Alpha. As a result, items in addition to whole scale had a Cronbach Alpha value above .70 so that scale reliability had an acceptable internal consistency (Field, 2009). In order to ensure one-factor structure, data coming from main study (N = 653) was analyzed through Confirmatory Factor Analysis (CFA). The results of CFA are provided in detail in the results section of the study.

Table 3.7

Cronbach Alpha Values of Items for Scale of Intention to Leave

Item	*Cronbach's Alpha*
1	.84
2	.81
3	.89
TOTAL	.89

3.3.2 Pre-administration of Semi-structured Interview

Preparation of the forms, implementation of pre-administration, and final forms of the semi-structured interview were described below.

3.3.2.1 Preparation of the Forms

By considering items in the scales, ideas in the literature, and the structure and process in higher education system in Turkey, semi-structured interview forms were prepared for non-persistent students and graduate school administrators. There were two semi-structured interview forms. One of the interviews gathered information related to graduate education experiences, causes of attrition, decision to give up, and recommendations from the lenses of non-persistent students. Moreover, another semi-structured interview was formed to collect opinions and recommendations of university administrators. Opinions of one non-persistent student and one academician were considered in the preparation process.

3.3.2.2 Implementation of Pre-administration

A semi-structured interview form for students was administered to three non-persistent students and one vice-director of a graduate school. The first student was male and from art&humanity field in a non-research university. The second student was male and from engineering field in a non-research university. The third student was female and from educational science in a research university. Lastly, vice-director with three-year administration experience was male and from natural sciences in a non-research university. Voice of student interviewees were recorded providing that they had given their consents. However, one vice-director did not approve voice-recorder so that note-taking method was used. The interviews were conducted during December 2017 as a prestudy.

The researcher of the current study identified some codes, sub-themes and themes describing student attrition experiences of non-persistent students. The first theme was about the start of graduate education. Questions related to decision to start and feelings about graduate education were asked. The reasons to start in graduate education were different. Engineering student emphasized professional development and opportunity for group work. Education student stated a desire to be an academician. However, Art & Humanity student stated he began graduate education to delay military duty. The common point among three students were that all of them felt excitement and positive feelings at the beginning of graduate education. In terms of the theme of process and structure of graduate education, the frequently stated codes were motivation, relations with advisors, relations with peers, attitudes of administrators, attendance problem, course programs, economic support, and family. For the theme of reasons for student attrition, personal factors were dominant. The students of education and engineering departments attributed attrition decisions to themselves whereas student of Humanity & Art department attributed his attrition to the job. Although all of the participants emphasized the problem with their advisors, they accepted that they had not shown any effort to solve this problem. When the reason of this condition were asked, they responded that they did not struggle with this problem because their occupational responsibilities were more dominant. In other words, they became non-persistent student because they could not adjust the balance between their educational and occupational lives. Finally, the general recommendations of the participants may be summarized as reorganization of student-advisor relationships, positive attitudes of administrators towards graduate education, legal procedures for permissions to participate in graduate education activities, adjustments of course programs by considering the students working anywhere, and financial support for the students. All of the participants found the questions inclusive in terms of experiences of non-persistent students and process and structure in graduate education.

In order to get opinions of vice-director, questions related to attrition causes and change recommendations were posed. Delaying military, family conditions, and economic problems were emphasized. When the organizational causes of attrition were asked to vice-director, he explained the process in graduate school instead of talking about organizational causes. He also touched on student attendance problem. Finally, he recommended many policies from financial support to the responsibilities of departments. He criticized that departments' misconceptions produced problems for graduate schools.

3.3.2.3 Final Forms of Semi-structured Interview

After the analysis of result of pre-administration of interview forms, the researcher of the current study decided to conduct interviews for persistent students and advisors. Moreover, there were some updates on forms for non-persistent students and graduate school administrators. To name a few, order of main questions, content of alternate questions, and type of questions were changed by considering non-persistent students. In addition, questions related to consequences were added to graduate school administrator form. In these processes, again, experts opinions were taken into account. One expert has studies related to higher education field while the other expert is competent in qualitative research. As a result, updated semi-structured interview forms were constructed for non-persistent students, persistent students, graduate school administrators, and advisors. By comparing the responses of participants, it was checked differences in perceptions of students and academicians such that whether student attrition was attributed to organizational factors or personal factors.

The interview form for non-persistent student included questions like how you decided to start graduate education and why you did not persist on education. The interview form for persistent student included questions like what opportunities graduate education provided and what support you recommend. The interview form for the graduate school administrator included questions like what jobs you are doing in graduate schools and which consequences of student attrition are possible in the future. And finally, the interview form for advisor included questions like how is the relationship between you and your students and which problems you experience in graduate education. The Table 3.8 represents the initial themes for participants.

Table 3.8

Initial Themes for the Participant Groups

	Non-persistent students	Persistent students	Graduate school administrators	Advisors
Theme 1	Starting graduate education	Starting graduate education	Graduate school procedure	Student-advisor relationships
Theme 2	Process and structure in graduate education	Process and structure in graduate education	Problems observed in graduate schools	Problems observed in graduate education
Theme 3	Causes for attrition	Causes for attrition	Attrition causes	Attrition causes
Theme 4	Change recommendations	Change recommendations	Attrition consequences	Attrition consequences
Theme 5	X	X	Attrition solutions	Attrition solutions

3.3.3 Institutional and Goal Commitment Scale.

Scale of institutional and goal commitment was decided to be administered by taking permission from the developers of the scales. The reason why this scale was selected was the fact that this scale was proved as valid and reliable in the Turkish context. Institutional and goal commitment scale has seven-question and 5-likert scale in which “1” refers to “strongly disagree” while “5” refers to “strongly agree”. It is a sub-scale of Institutional Integration Scale. To name a few, “ Getting a degree is important for me”, “Getting higher grades are not important for me”, and “I am sure that I had a true decision by selecting this university” are some of the items. The scale was developed by Pascarella and Terenzini (1980) and was adapted to Turkish context by Tuna (2010). The author found internal consistency of this scale as .75 which was an indicator for acceptable reliability. This scale was not conducted in a pilot study.

3.3.4 University Information Form

A university information form was prepared by the researcher to get data related to studentship conditions. This form aims to collect information about the number of student in terms of spring semesters of 2015-2016, 2016-2017, and 2017-2018 education years in order to evaluate trend about whether there has been increase or decrease, and program level (M.S. and Ph.D.) in order to compare which one is higher rates by considering their registration status. Archival data related to number of students in terms of students’ registration status was used to calculate student attrition rates in graduate education. In this calculation, that number of non-registered or passive students was divided by number of total students.

3.3.5 Summary of Instrumentation

Within the results of pilot study of scales and pre-administration of semi-structured interviews, all instruments were ready for the main study. Table 3.9 summarizes characteristics of the scales, interview forms, and university information form. A, B, and C section of Appendices represents respectively questionnaire, interview forms, and university information form.

Table 3.9

Summary of Scales, Interview, and Document Analysis

Instrument		Dimension	Type of instrument	Number of item/question	Type of question
Scales			Questionnaire		
	Organizational climate	Academic climate		5	Closed and 5-Likert
		Social climate		7	Closed and 5-Likert
		Departmental climate		5	Closed and 5-Likert
		Administrative climate		3	Closed and 5-Likert
		Advisor-related climate		4	Closed and 5-Likert
		Instructor-related climate		4	Closed and 5-Likert
	Intention to leave			3	Closed and 5-Likert
	Institutional and goal commitment			7	Closed and 5-Likert
Interview forms		Interview schedule			
	Non-persistent student form			4	Open and semi-structured
	Persistent student form			5	Open and semi-structured
	Graduate school administrator form			5	Open and semi-structured
	Advisor form			5	Open and semi-structured
University information form		Document			

3.4 Empirical Data and Their Collection

Main study was conducted to achieve the purpose of the current study. Firstly, approval of Human Subjects Ethics Committee of METU was requested in the beginning of February, 2018. Along with approval of ethics committee, permission process for randomly selected graduate schools from research universities was begun in March, 2018. After permissions and archival data had been got, data of the main study were collected through March and May, 2018.

All questionnaires were administered to students through face-to-face interaction. Confidentiality of identities of the students were taken under guarantee. Furthermore, their willingness for participation in the study were received through consent forms. In order to encourage graduate students to participate in the study, gift drawing was conducted. This drawing was announced in both face-to-face administrations after they completed the questionnaire. For this reason, a space was left at the end of the questionnaire. To participate in the drawing, nicknames and communication informations of the students were requested via these spaces. To ensure confidentiality, participants were wanted to separate space by cutting it and giving it to researcher. There were mainly two kinds of gifts. Supermarket card included 150 TL to be spent and was distributed to five students by draw. Technology pack was distributed to 30 students by a draw and included 32 GB USB flash drive, powerbank, and earphones. Although capacity of the courses selected randomly consisted of 1500 students, some of them did not accept participation invitation. Additionally, some of the volunteer participants did not provide healthy dataset. Some of them left many questions blank while some of them circled more than one alternatives. As a result, sample size became 653 which were returned from the students to be analyzed in a healthy way. The number of the students in terms of university type and field are represented in Table 3.10.

Table 3.10

Number of Students in terms of University Type and Field

	Frequency
General	208
Technical	445
Total	653
Educational Sciences	153
Medical Sciences	64
Natural and Applied Sciences	173
Social Sciences	208
Fine Arts	16
Engineering	39
Total	653

In order to call non-persistent and persistent students for interview, a space was left at the end of questionnaire to learn who is willing to volunteer to participate in the interview. Moreover, it was announced that promotions would be given to students who participated in the interview. Ten non-persistent and ten persistent students were involved in the study. Stationery pack including pen and pencils, file folders, and paper was gifted to each participant. Furthermore, advisors and graduate school administrators were invited in their departments or institutes to conduct interview. Eight advisors and eight administrators accepted the request and participated in the study by giving responses to the interview questions. For the interviews, Tape recorder was used to record voices by taking the permissions of participants. Thirty-three interviews were conducted face-to-face while only three participants were interviewed by phone due to long distance between the researcher and participants. Clearness of the questions were checked by researcher. For this reason, researcher of the current study used the strategies such as prolonged engagement (setting a trusting relationship with participant), prevention of premature closure (collecting data until saturation), and repeatings. Table 3.11 depicts the number of participants.

Table 3.11

Number of Participant in Interviewing

	Frequency of Participants in Qualitative Part
Non-persistent student	10
Persistent student	10
Graduate school director	8
Advisor	8
Total	36

3.5 Data Analyses

Quantitative data were analyzed in statictical package programs. Data collected in pilot study were analyzed to explore factors by using EFA (Exploratory Factor Analysis). By considering critical factor loading values, KMO (Kaiser Meyer Olkin) values, extraction and rotation method, sphericity test, and scree plot of eigenvalue; factors were emerged and named as it was explained in the instrumentation part. In addition, Cronbach Alpha and correlation coefficients were calculated to check reliability of items in the scales. In terms of descriptive statistics, characteristics of participants, attrition rates, and challenging areas in graduate education were presented with tables and figures.

With the Confirmatory Factor Analysis, factor structures of the scales of “intentions to leave” and “institutional and goal commitment” were tested and compared to other studies to check whether the current study gave compatible results with studies of adapters of scales or did not. CFA was also performed in order to verify factor structure of scale of organizational climate. In order to prove construct validity of scales, some critical values such as RMSEA (Root Mean Square Error of Approximation), CFI (Comparative Fit Index), and NNFI (Non-Normed Fit Index) were considered.

Logistic Regression was performed in order to check whether individual characteristics (gender, marital status, and program level) and organizational factors (economic support, university type, and department) predicted studentship condition of becoming non-persistent or persistent student.

Structural Equation Modelling was performed in order to check whether personal factors and organizational factors together with mediating role of institutional and goal commitment predicted graduate students' intentions to leave from graduate education or did not. For this reason, Kline's (2015) four-step testing of model was followed. In the first step, model specification was implemented by hypothesizing a structural model. Figure 3.3 represents the Structural Equation Model

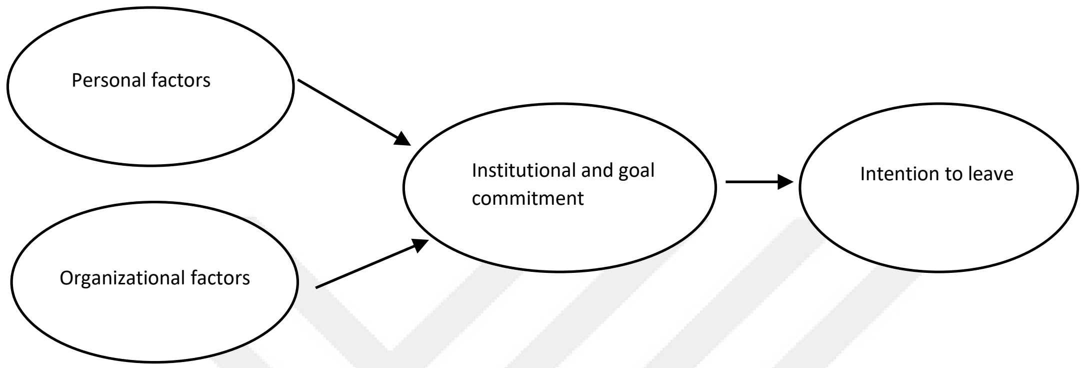


Figure 3.3. Structural Model

Secondly, model identification included that statistical program provided estimation for the parameters in the model. The third step which is model estimation was followed by comparing hypothesized model and observed model in statistical program. And finally, model evaluation was provided with assessment of model with some fit indices. For both Confirmatory Factor Analyses and Structural Equation Modelling, criteria of χ^2/df, RMSEA, NFI, NNFI, and CFI were considered. In addition, Hierarchical Multiple Regression Analysis was conducted to check mediation effect of institutional and goal commitment.

In order to analyze qualitative data gathered in interviews, transcriptions of recordings were completed by the researcher. The data were constructed as written text after transcription. Thus, content analysis which revealed four types of categorization was performed. Themes, sub-themes, codes, and sub-codes were used to investigate interview data.

In order to increase credibility, transferability, confirmability, and dependability of the data, researcher of the current study used some strategies like peer debriefing (asking to colleagues), member check (going to participant), and maintaining a journal (self-reflection). First of all, the researcher of the study used data triangulation, member check, and expert opinion to provide credibility. The interviewing was conducted with not only non-persistent students but also persistent students, graduate school administrators, and advisor so that data were triangulated. Moreover, the researcher sent transcribed texts to 10 participants who were randomly selected to confirm conversation. Six of them returned and approved what they said. Furthermore, the researcher took the advice of an expert in qualitative research methods from data collection procedure to the data analysis.

The second issue was to provide transferability which was implemented by thick description and participants and purposeful sampling. As section E of Appendices depicts, data were described in a detailed way. Four categories of theme, sub-theme, code, and sub-code provided detailed description. On the other hand, usage of four type purposeful sampling as it was explained in the section of population and sampling served to detailed description of participants.

The third issue was confirmability of the data. It was provided with maintaining a journal. In other words, the researcher of the current study evaluated himself step by step. This self-reflection was mostly implemented in coding process. Firstly, the researcher coded the data through content analysis. In this process, *general schema guided* was used, in which themes and some of sub-themes were initially constructed while rest of sub-themes, and all of codes and sub-codes were produced after content analysis (Yıldırım & Şimşek, 2016). Secondly, the second coding process was implemented one month later to confirm the initial coding. Within this process, a consistency between the first coding and the second coding was checked. However, some additions to codes and combinations of codes were done to increase meaning of the patterns.

Lastly, dependability was provided by peer debriefing and expert opinions. The researcher selected random passages from transcribed texts and sent them to 12 academician or scholars who are experts in qualitative research method. They coded the passages and sent them back. The researcher compared his codes and codes of the colleagues. Comparisons showed that there was at least 70% intercoder reliability. Furthermore, the researcher consulted an expert in order to accept feedback about the process from data analysis to writing report. While the researcher was writing results of qualitative data, he considered these feedbacks.

With document analysis, a basic calculation was made to describe attrition rates in terms of semester and program level. In this calculation, the number of non-registered students were divided by total number of students, which gave the attrition rate. By combining both quantitative and qualitative data, divergence and convergence of analysis results were discussed in discussion section.

3.6 Limitations of the Study

The current study had some limitations which were specific to research design and some delimitations which researcher put. The most important limitation was generalizability of the study. The results of the current study were limited to the research universities in Turkey. Therefore, results can not be representative for other universities in Turkey and so that the study lacked ecological generalizability. However, the study had external validity. Findings of the study may be generalized to research universities because sample were chosen randomly. Another limitation was willingness of participants and access to non-persistent students. Therefore, return rate was not as it was targeted. Moreover, participants' honesty and care had importance to gather healthy results. Delimitations of the study were participants, time, and instruments. Students with academic dismissals or students with frozen registration due to health problems were not evaluated as non-persistent students. The results of the current study were based on opinions of graduate students, advisors and graduate school administrators in a restricted time when study was conducted. Finally, data of this study were gathered via instruments including scales, interviews, and document analysis. As a result, the current study might give different results if different participants, time, and instruments were preferred.

There were risks of facing *"threats to internal validity"* that means meaningful inferences may not be drawn about covariation between independent variable and outcome variable because of any other unintended variables (Shadish, Cook, & Campbell, 2002, as cited in Creswell, 2012). Some of these threats were tried to be kept in a minimum level. Threat of data collector characteristics was eliminated by using one data collector who was the researcher of the current study. Another threat was data collector bias but it was controlled by making standard process through planned ignorance. In spite of efforts to eliminate or minimize threats to internal validity, the current study had some reasonable conditions which might not be under the control of the researcher and so that these conditions could affect results or put forward alternative hypothesis. One of them was subject characteristics. The subjects of this study were graduate students and academicians who might affect relationship between personal factors and organizational factors and attrition. For example, differences in socioeconomic status (SES) may bring alternative explanations such that the undergraduate GPA of student with high SES may not be related to intentions to leave as that of student with low SES may be related. Also, academicians may not give accurate answers to show that their universities are doing their job well. Moreover, the answers provided by the questionnaires are a kind of self-report technique. This technique might pose a threat as well. To illustrate, students could select a choice that did not reflect their real opinions due to tiredness, time deficiency, or desire to seem appealing. Another threat was location. Some of departments wanted everyone to fill questionnaire in lecture time. This condition might prevent comfortableness of students in a negative way. Moreover, history was another threat to internal validity of the current study. Student movements, protests or other activities might affect the response of the students. In addition, the time data were collected was the last week of academic calender in some universities. This condition might have affected the responses of the students. Moreover, some of the interviews with graduate school administrators and advisor were conducted before their formal meetings. This situation was also a history threat for the study. To summarize, the current study has some limitations, delimitations, and threats to internal validity. They should be considered while interpreting and evaluating the results of the study.

3.7 Researcher Bias

The current study was conducted by a researcher who was a graduate student in the department of Educational Sciences and OYP research assistant. Moreover, the researcher completed Master thesis and is studying on Doctoral thesis. In other words, researcher is a persistent graduate student. Furthermore, he conducted many research related to higher education. In brief, the researcher of the current study has been *in the loop*. Therefore, characteristics of the researcher might hava affected dissertation procedure. In other words, readers should keep researcher bias in the back of their minds. It is clear that like every researcher, the researcher of the current study may mislead the research unintentionally. Although the researcher tried to decrease effect of researcher bias by using right design and right tools, the current study was open to danger of unintentional interventions.

The researcher avoided to include some variables in the current study intentionally. Although gender was included in the current study, ethnicity and race and social class were excluded. Exclusion of these variables were based on the contextual factors. Political agenda in Turkey rejected the minorities for many years. This ignorance has reflected on opinions of society. Despite the emphasis on minorities in U.S., culture in Turkey did not permit to express differences in terms of ethnicity and race and social class. The reason for this difference between two countries may be related to physical appearance of citizens. While there is visible ethnic differences in U.S., people in Turkey can not be differentiated in terms of ethnicity. Further, constitutional law in Turkey claims to guarantee rights of all citizens and provide equality for all classes of society, the people do not want to touch much on social class inequalities. To illustrate, Google Scholar gave 1060 findings related to race and ethnicity and 3010 findings related to socioeconomic status in Turkish pages while there were 31000 findings related to gender. As a result, researcher of the current study thought that participants would not honest responses to questions related to ethnicity and race and social class so that sufficient number of participant for statistical analyses could not be reached. For the qualitative part of the current study, the researcher asked indirect questions related to exclusion and inequalities but participants either had not experienced any exclusion or had hidden real situation.

CHAPTER 4

RESULTS

This section of the study shows the results of the data analyses. The first part presents descriptive statistics including educational characteristics and descriptive findings of organizational climate, institutional and goal commitment, and intention to leave. The second part gives the findings of confirmatory factor analyses. The next parts are related to the findings of correlational analyses which are Logistic Regression, Structural Equation Modelling, and Multiple Hierarchical Regression Analysis. Towards the end, results of interviewing and results of document analysis including attrition rates are described in the last parts of the results section. And finally, the results section is closed with the summary of results.

4.1 Descriptive Statistics

Descriptive statistics was reported in terms of educational characteristics, and levels of perceptions of organizational climate, institutional and goal commitment and intentions to leave.

4.1.1 Educational Characteristics

The way the students gain maximal support was asked. Most of graduate students (N = 632) received financial support of some sort that covers all of their educational expenses whereas some of the student (N = 21) did not have any financial support. Twenty-two point four percent (N = 146) of the students had a private sector job while rates of those having family support, scholarship or loan, research assistantship, public job, part-time job, and instructorship were respectively 21.7% (N = 142), 14.2% (N = 93), 13.6% (N = 89), 13.6% (N = 89), 6.6% (N = 43), and

3.2% (N = 21). In addition, 11 students chose “other” section and declared these support types: tutoring (N = 5), orphan salary (N = 2), self-employed (N = 2), lawyer office (N = 1), and saving (N =1). Table 4.1 represents descriptive data related to economic support.

Table 4.1

Frequency for Economic Support

Variable	Frequency	Percentage (%)
Private sector	146	22.4
Family support	142	21.7
Scholarship or loan	93	14.2
Research assistantship	89	13.6
Public job	89	13.6
Part-time job	43	6.6
Instructorship	21	3.2
No support	21	3,2
Total	653	100

In addition to economic support, participants were asked challenging areas in graduate education. The areas the participants identified the most challenging were respectively balance between work and school (N = 249), structure of program (N = 230), and financial support (N = 220) whereas the areas the participants identified as the least challenging were respectively cultural adaptation (N = 26), family support (N = 28), and health problems (N = 31). The others were relations with peers (N = 56), relations with faculty (N = 74), relations with advisor (N = 63), departmental support (N = 126), harmony between personal targets and program aims (N = 183), academic development (N = 195), bureaucratic processes (N = 166), balance between family and school (N = 69), and distance between school and home (N = 139). On the other hand, 13 participants who selected the “other” option included these problems: time management, difficult courses, access to advisor, unfitting system, future anxiety, anxiety for finding job, course adaptation, full-time schooling, courses from unfamiliar fields, foreign language, administrative workloads, communication with department chair. Table 4.2 shows the challenging areas.

Table 4.2

Frequency for Challenging Areas

Variable	Frequency
Balance between work and school	249
Structure of program	230
Financial support	220
Academic development	195
Harmony between personal targets and program aims	183
Bureaucratic processes	166
Distance between school and home	139
Departmental support	126
Relations with faculty	74
Balance between family and school	69
Relations with advisor	63
Relations with peers	56
Health problems	31
Family support	28
Cultural adaptation	26
Other	13

Finally, graduate students' undergraduate grades and time they spend in graduate education were asked to the students. The grades of the students (*M* = 3.18, *SD* = .38) changed between 2.00 and 4.00. Also, the time in years (*M* = 2.32, *SD* = 1.78) varied from 1 to 13. Table 4.3 depicts the mean and standard deviations.

Table 4.3

Means and Standard Deviations of Grade and Time

Variables	M	SD
Grade	3.18	.38
Semester	2.32	1.78

4.1.2 Results of Organizational Climate

Table 4.4 shows descriptive statistics in terms of level of student perceptions of organizational climate (*M* = 4.05, *SD* = .46). The scale of perceptions of organizational climate has six sub-dimensions which are social climate, academic climate, departmental climate, administrative climate, advisor-realted climate, and instructor-related climate. Student perceptions of academic climate (*M* = 4.45, *SD* = .53) seem to be more positive than those of instructor-related climate (*M* = 4.21, *SD* = .64), advisor-related climate (*M* = 4.20, *SD* = .78), social climate (*M* = 4.08, *SD* = .60), departmental climate (*M* = 3.62, *SD* = .73), and administrative climate (*M* = 3.61, *SD* = .81). Average of overall perceptions of organizational climate (*M* = 4.02, *SD* = .46) is higher than perceptions of administrative climate and departmental climate whereas it is lower than other dimensions.

Female students (*M* = 4.12, *SD* = .42) appear to have more positive perceptions of organizational climate than male students (*M* = 3.96, *SD* = .49). Students whose age are below 22 (*M* = 4.17, *SD* = .35) seem to have more positive perceptions of organizational climate than those whose ages are in the range of 23-28 (*M* = 4.08, *SD* = .45), above 35 (*M* = 3.97, *SD* = .53), and in the range of 29-34 (*M* = 3.96, *SD* = .48). Single (*M* = 4.08, *SD* = .45) students seem to have more positive perceptions of organizational climate than married students (*M* = 3.91, *SD* = .51). The students who do not have a dependent child (*M* = 4.07, *SD* = .45) appear to have more positive perceptions of organizational climate than students having a dependent child (*M* = 3.85, *SD* = .57). Students from medical sciences field (*M* = 4.25, *SD* = .55) seem to have more positive perception of organizational climate than those from educational sciences (*M* = 4.15, *SD* = .43), engineering sciences (*M* = 4.13, *SD* = .48), fine arts (*M* = 4.07, *SD* = .43), social sciences (*M* = 4.02, *SD* = .46), and natural sciences (*M* = 3.91, *SD* = .40) fields. Master students (*M* = 4.07, *SD* = .46) appear to have more positive perceptions of organizational climate than Ph.D. students (*M* = 3.98, *SD* = .45). And finally, persistent students (*M* = 4.09, *SD* = .42) appear to have more positive perceptions of organizational climate than non-persistent students (*M* = 3.83, *SD* = .60).

Table 4.4

Means and Standard Deviations in terms of Organizational Climate

Variable		M	SD
Gender	Female	4.12	.42
	Male	3.96	.49
	Total	4.05	.46
Age Group	22 and below	4.17	.35
	23-28	4.08	.45
	29-34	3.96	.48
	35+	3.97	.53
	Total	4.05	.46
Marital Status	Married	3.91	.51
	Single	4.08	.45
	Total	4.05	.46
Having child	Yes	3.85	.57
	No	4.07	.45
	Total	4.05	.46
Field	Educational sciences	4.15	.43
	Social sciences	4.02	.46
	Natural sciences	3.91	.40
	Medical sciences	4.25	.55
	Engineering sciences	4.13	.48
	Fine arts	4.07	.43
	Total	4.05	.46
Program Level	Master of Science	4.07	.46
	Doctorate	3.98	.45
	Total	4.05	.46
Studentship Condition	Persistent student	4.09	.42
	Non-persistent student	3.83	.60
	Total	4.05	.46
Grand total		4.05	.46

4.1.3 Results of Institutional and Goal Commitment

Table 4.5 shows descriptive statistics in terms of student perceptions of institutional and goal commitment for demographic variables. Overall, student perceptions of commitment (*M* = 4.33, *SD* = .54) is at high level.

Table 4.5

Means and Standard Deviations in terms of Institutional and Goal Commitment

Variable		M	SD
Gender	Female	4.41	.48
	Male	4.22	.58
	Total	4.33	.54
Age Group	22 and below	4.53	.45
	23-28	4.32	.53
	29-34	4.31	.58
	35+	4.43	.50
	Total	4.33	.54
Marital Status	Married	4.35	.52
	Single	4.33	.54
	Total	4.33	.54
Having child	Yes	4.32	.55
	No	4.33	54
	Total	4.33	.54
Field	Educational sciences	4.46	.54
	Social sciences	4.37	.52
	Natural sciences	4.20	.52
	Medical sciences	4.26	.59
	Engineering sciences	4.18	.50
	Fine arts	4.38	.38
	Total	4.33	.54
Program Level	Master of Science	4.30	.54
	Doctorate	4.41	.52
	Total	4.33	.54
Studentship Condition	Persistent student	4.39	.48
	Non-persistent student	3.96	.68
	Total	4.33	.54
Grand total		4.33	.54

Female students (*M* = 4.41, *SD* = .48) appear to become more committed than male students (*M* = 4.22, *SD* = .58). Students whose age are below 22 (*M* = 4.53, *SD* = .45) seem to become more committed than those whose ages are above 35 (*M* = 4.43, *SD* = .50), in the range of 23-28 (*M* = 4.32, *SD* = .53), and in the range of 29-34 (*M* = 4.31, *SD* = .58). Married (*M* = 4.35, *SD* = .52) students seem to be more committed than single ones (*M* = 4.33, *SD* = .54). The students who do not have a dependent child (*M* = 4.33, *SD* = .54) appear to become a little bit more committed than students having a dependent child (*M* = 4.32, *SD* = .55). Students from educational sciences field (*M* = 4.46, *SD* = .54) seem to be more committed than those from fine arts (*M* = 4.38, *SD* = .38), social sciences (*M* = 4.37, *SD* = .52), medical sciences (*M* = 4.26, *SD* = .59), natural sciences (*M* = 4.20, *SD* = .52), and engineering sciences (*M* = 4.18, *SD* = .50) fields. Ph.D. students (*M* = 4.41, *SD* = .52) appear to become more committed than Master students (*M* = 4.30, *SD* = .54). And finally, persistent students (*M* = 4.39, *SD* = .48) appear to be more committed than non-persistent students (*M* = 3.96, *SD* = .68).

4.1.4 Results of Intention to Leave

Table 4.6 shows descriptive statistics in terms of student perceptions of intentions to leave graduate education for demographic variables. Overall, student intentions to leave (*M* = 1.48, *SD* = .69) is at a low level. Male students (*M* = 1.59, *SD* = .79) report a higher intention to leave than female students (*M* = 1.40, *SD* = .58). Students whose age are in the range of 23-28 (*M* = 1.50, *SD* = .69) report a higher intention to leave than those whose ages are in the range of 29-34 (*M* = 1.45, *SD* = .66), above 35 (*M* = 1.36, *SD* = .83), and below 22 (*M* = 1.20, *SD* = .36). Married (*M* = 1.52, *SD* = .80) students report a bit higher intention to leave than single ones (*M* = 1.47, *SD* = .66). The students having a dependent child (*M* = 1.57, *SD* = .89) report a higher intention to leave than students who do not have a dependent child (*M* = 1.47, *SD* = .67). Students from medical sciences field (*M* = 1.73, *SD* = .65) report a higher intention to leave than those from engineering sciences (*M* = 1.66, *SD* = .65), natural sciences (*M* = 1.54, *SD* = .67), fine arts (*M* = 1.46, *SD* = .53), educational sciences (*M* = 1.45, *SD* = .70), and social sciences (*M* = 1.34, *SD* = .70) fields. Master students (*M* = 1.52, *SD* = .69) report a higher intention to leave than Ph.D. students

(M = 1.35, SD = .65). And finally, non-persistent students (M = 1.99, SD = 1.03) report a higher intention to leave than persistent students (M = 1.40, SD = .57).

Table 4.6

Means and Standard Deviations in terms of Intention to Leave

Variable		M	SD
Gender	Female	1.40	.59
	Male	1.59	.79
	Total	1.48	.69
Age Group	22 and below	1.20	.36
	23-28	1.50	.69
	29-34	1.45	.66
	35+	1.36	.83
	Total	1.48	.69
Marital Status	Married	1.51	.80
	Single	1.47	.66
	Total	1.48	.69
Having child	Yes	1.57	.89
	No	1.47	.67
	Total	1.48	.69
Field	Educational sciences	1.45	.70
	Social sciences	1.34	.70
	Natural sciences	1.54	.67
	Medical sciences	1.73	.65
	Engineering sciences	1.66	.65
	Fine arts	1.46	.53
	Total	1.48	.69
Program Level	Master of Science	1.52	.69
	Doctorate	1.35	.65
	Total	1.48	.69
Studentship	Persistent student	1.40	.57
Condition	Non-persistent student	1.99	1.03
	Total	1.48	.69
Grand total		1.48	.69

4.2 Confirmatory Factor Analysis Results for Organizational Climate Scale

A Confirmatory Factor Analysis (CFA) was performed in order to verify the factor structure that emerged from Exploratory Factor Analysis. It was conducted with data gathered from 653 graduate students. The results of CFA showed that there was a significant chi-square value ($\chi 2= 1531.02$, $df = 301$, $p < .001$) with Root Mean Square Error of Approximation (RMSEA) value of .079, Normed Fit Index value of .92, Non-Normed Fit Index (NNFI) value of .93, and Comparative Fit Index (CFI) value of .93. These values were used to check fitness of the factor structure. RMSEA value below 0.08 was acceptable for goodness of fit. NFI, NNFI, and CFI values were acceptable because they are in the range between .90 and 1.00 (Hu & Bentler, 1999; Tabachnick & Fidell, 2007). However, χ^2/df was above 5.0 and so this value did not meet the recommendation of Wheaton, Muthen, Alwin, and Summers (1977). As a result, there was a need for modification.

A modification was implemented by removing item 11 and drawing error covariances between some items, new values met the criterions to fit the model. The results of CFA showed that there was a significant chi-square value ($\chi 2 = 1485.79$, $df = 330$, $p < .001$) with Root Mean Square Error of Approximation (RMSEA) value of .073, Normed Fit Index value of .95, Non-Normed Fit Index (NNFI) value of .96, and Comparative Fit Index (CFI) value of .96. NFI, NNFI, and CFI values greater than .95 indicated a good fit while RMSEA value of .073 and χ^2/df value of 4.50 showed an acceptable fit (Hu & Bentler, 1999; Tabachnick & Fidell, 2007, Wheaton et al. 1977). On the other hand, Chi-square had great value. The reasons why chi-square value was so great are related to high level of correlation between larger sample size and observed variables such that it is sensitive to larger sample size (Hooper, Coughlan, & Mullen, 2008; Muthen, 2001). In conclusion, construct validity of the scale was proven when χ^2/df, RMSEA, NFI, NNFI, and CFI values were considered. Table 4.7 depicts the values.

Table 4.7

Confirmatory Factor Analysis Results for Models of Organizational Climate Scale

Model	χ^2/df	*RMSEA*	*NFI*	*NNFI*	*CFI*
Basic Model	5,07	.079	.92	.93	.93
Modified Model	4.50	.073	.95	.96	.96

The six-factor CFA model of students' perceptions of organizational climate is depicted in figure 4.1. As it is represented in this figure, the values of standardized estimates changed between .28 and .90. Therefore, 27 final items in the scale loaded significantly on six dimensions.

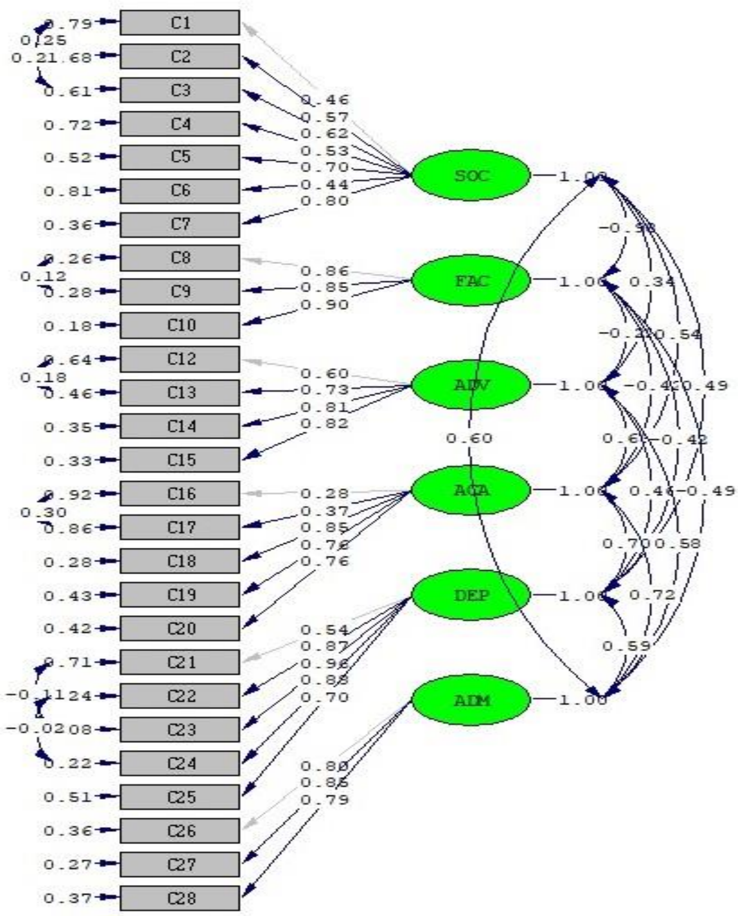


Figure 4.1 Six-factor CFA Model of Organizational Climate Scale

4.3 Confirmatory Factor Analysis Results for Institutional and Goal Commitment Scale

A Confirmatory Factor Analysis was applied in order to verify the factor structure of scale of institutional and goal commitment scale which was adapted to Turkish by Tuna (2010). A package program was used to confirm factors. Basic model of CFA did not fit in the factor structure. Therefore, error covariances between some items were drawn. As a result, CFA showed that there was a significant chi-square value ($\chi2$= 38.79, *df* = 9, *p* <.001) with Root Mean Square Error of Approximation (RMSEA) value of .071, and Normed Fit Index value of .95, Non-Normed Fit Index (NNFI) value of .96, and Comparative Fit Index (CFI) value of .98 These values were used to check fitness of the factor structure. χ^2/df value of 4.31 and RMSEA value of .071 was an indicator for acceptable goodness of fit (Hu & Bentler, 1999; Wheaton et al. 1977). Moreover, CFI and NNFI values showed high level goodness of fit since their values are greater than 0.95 (Tabachnick & Fidell, 2007). As it is seen in table 4.8, values met the criterions to fit the model. On the other hand, reliability of the scale was checked through internal consistency. Cronbach Alpha coefficient of the items were .86 which was a good indicator for reliability. To summarize, construct validity of commitment scale was proven.

Table 4.8

Confirmatory Factor Analysis Results for Model of Institutional and Goal Commitment Scale

Model	χ^2/df	*RMSEA*	*NFI*	*NNFI*	*CFI*
Modified Model	4.31	.071	.95	.96	.98

Considering results for modified model, the single-factor CFA model of institutional and goal commitment had goodness of fit at a moderate to high level. As it is represented in figure 4.2, the values of standardized estimates varied between .43 and .75. Therefore, all items of the scale loaded significantly on the single factor.

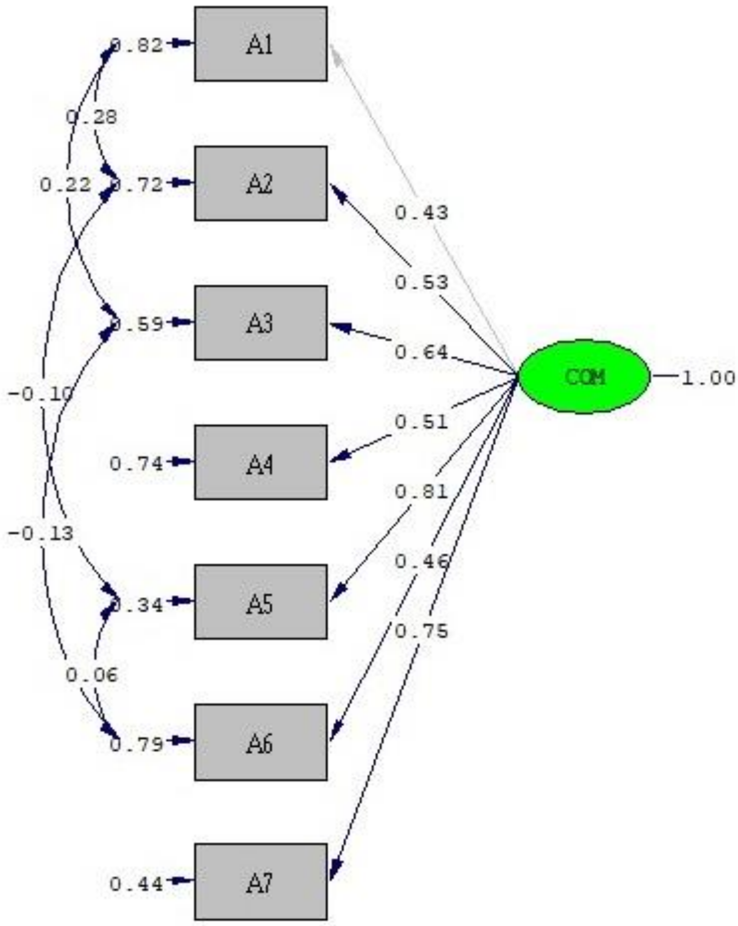


Figure 4.2 Single-factor CFA Model of Commitment Scale

4.4 Factor Analysis Results for Scale of Intention to Leave

A Confirmatory Factor Analysis was applied in order to verify the factor structure of scale of intentions to leave. When analysis was performed, CFA model showed that model was saturated and the fit is perfect. Therefore, error covariances between some items were drawn. As a result, CFA showed that there was a non-significant chi-square value ($\chi 2$= .00, p = 1.00). The single-factor CFA model of intentions to leave had a perfect goodness of fit. As Figure 4.4 depicts, standardized estimates values changed between .60 and .84.

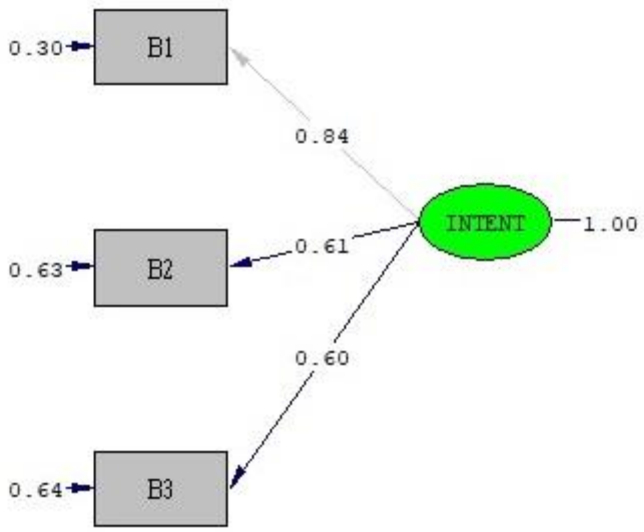


Figure 4.3 Single-factor CFA Model of Scale of Intentions to Leave

4.5 Logistic Regression

Binomial Logistic Regression was conducted to check how well gender, marital status, program level, economic support, university type, and field predict persistence of graduate students. The reasons why Binomial Logistic Regression were chosen are i) dependent variable of the study which is persistence versus non-persistence is discrete with two-level (0 and 1) ii) the researcher of the current study claims that predictors have absolutely equal contribution to criterion variable. In terms of types of the variables, there should be continuous variable or categorical variable with two levels in multiple regression analysis (Field, 2009) so that there was a need for dummy coding. However, statistical package forms dummy-coding itself. For this reason, those levels were set as base category in categorical covariate segment of Binary Logistic Regression: male, married, no economic support, Master of Science, technical university, and educational sciences. The dependent variable that is related to persistence of students was entered at dependent list while predictors were entered in covariate list in order to check their predictive effects on persistence of graduate students. Within dummy-coding, 16 predictors (male vs female, married vs single, Master of Science vs Doctorate, technical university vs general university, no support vs research assistantship, no support vs scholarship or loan, no support vs instructorship, no support vs public job, no support vs private sector, no support vs part-time job, no support vs family support, educational sciences vs social sciences, educational sciences vs natural sciences, educational sciences vs engineering sciences, educational sciences vs medical sciences, and educational sciences vs fine arts) all of which are categorical and nominal were produced. According to Tabachnick and Field (2009), assumptions of Logistic Regression are linearity in the logit, power and sample size, absence of multicollinearity, absence of outliers, and independent observation.

4.5.1 Assumptions of Logistic Regression

Before performing main analysis, assumptions were checked. Assumption of linearity in logit was not applicable for the current study because there was no continuous variable. Therefore, the first assumption was related to power and sample size. Multivariate criterion that is ratio of observation to predictor should be higher than 10 with minimum sample size of 100 (Tabachnick & Fidell, 2001) was acceptable since ratio of 653 observations to 16 predictors is 40.81 which is larger than 10. In addition, according to Tabachnick and Fidell (2009), no more than 20% of cells are less than five and all cell frequencies should be larger than one. By regarding cross tabulation of categorical variables which were gender, marital status, economic support, program level, university type, and field, all of cell frequencies were largen than one. By considering gender, marital status, program level, and university type, all cells provided assumptions while economic support and field had only one cell which were less than five. As a result, assumptions related to expected cell frequency was met.

The second assumption, absence of multicollinearity, was checked through Tolerance values, Variance Influence Factor (VIF) values, and correlation among predictors. Myers (1990; as cited in Field, 2009) recommended that VIF value must be lower than 10 while Tolerance values must be larger than .10. The values emerged in statistical package showed that Tolerance values changed between .79 and .98. while

VIF values changed between 1.03 and 1.24. Therefore, these values confirmed the absence of multicollinearity. In addition, Field (2009) stated that correlation coefficient between predictor variables must not be higher than .90. This criterion was also provided since there was no correlation greater than .90 between predictor variables. Overall, absence of multicollinearity was assumed.

The third assumption was absence of outliers. Outliers or influential observations were checked through Cook's distance, Leverage statistics, Mahalanobis Distance and DFbeta. Cook and Weisber (1982; as cited in Field, 2009) recommended that Cook's distance (measure of the influence of case) must be smaller than 1. Cook's distance in the current study had values generally changing between 0 and .98. However, the case 559 had a value larger than 1.0. Only one case exceeding 1.00 was negligible so that it was not evaluated as a concern. According to Stevens (2009), cut-off point for Leverage statistics is 3(k+1)/n. Here, n represents the number of observations while k is the number of predictor variables. Cut-off point for Leverage statistics of the current study was calculated as .08 by using the formula. On the other hand, the values of maximum Leverage statistics given by statistical package for case 446 and 385 were smaller than .08 so that these cases violated assumption. Thirdly, critical chi-squared value was found as 39.25 from the table of Chi-square distribution with α = .001 and *df* = 16 (number of predictors) and this value is cut-off for Mahalanobis distance. Maximum value of Mahalanobis distance was 16.18 statistical package so there is no value above 40.79. By considering Tabachnick and Fidell (2007) who stated that cases having a value in excess of critical chi-squared value are outliers, this assumption was confirmed. And finally, DFbetas were checked by considering recommendation of Tabachnick and Fidell (2007), DFbeta values should be smaller that 1.00. Outputs of statistical package showed that values for DFbeta for only case 263 and 559 were larger than 1.00 so that this criterion was not provided for participants 263 and 559. However, two cases were negligible among 653 cases. Totally, absence of outlier was assumed.

In order to check assumption of independence errors, The Durbin-Watson coefficient test which is provided by statistical package was conducted. According to Durbin and Watson (1951), this value must be between 1.00 and 3.00 for the errors to be unrelated. This study had a 2.04 value of Durbin-Watson so that independency of errors was assumed. In addition to Durbin-Watson coefficient, the researcher of the current study guaranteed that all observations were independent from each other since the researcher was ready in classes and prevented interaction among the students in data collection process.

4.5.2 Results of Logistic Regression

Logistic Regression was performed in order to seek an answer for research question that is how well gender, marital status, program level, economic support, university type, and field predict persistence of graduate students. Findings of a sixteen-predictor binomial logistic regression indicated that test of full model of binomial logistic versus null model including only constant was statistically significant, χ^2 (16, N = 653) = 53.68, p = .00. Moreover, explained variance in persistence of students was %8.10 in terms of R^2 of Cox and Snell while explained variance in probability of persistence of students was %14.50 in terms of R^2 of Nagelkerke.

The results of Logistic Regression were summarized in Table 4.9 which depicts regression coefficients, standard errors of beta, Wald statistics, df values, significance, and odds ratios. Wald statistics showed that economic support 1 (no support vs research assistantship) significantly predicted persistence of students, Wald's χ^2 = 7.51, p = .006. According to the model, log of odds of probability of persistence of student was positively related to economic support 1. Odds of becoming non-persistent student were 22.04 times more for student having no support than students having research assistantship as economic support. Therefore, the strongest predictor was economic support 1. Secondly, economic support 2 (no support versus scholarship or loan) significantly predicted persistence of the students, Wald's χ^2 = 4.00, p = .045. Log of odds of probability of persistence of student was positively related to economic support 2. Odds of becoming non-persistent student were 3.51 times more for student having no support than student having scholarship as economic support. Thirdly, program level significantly predicted persistence of students, Wald's χ^2 = 6.98, p = .008. According to the model, log of odds of probability of persistence of student was positively related to program level of the students. Odds of becoming non-persistent student were 3.16 times more for Master students than Doctoral students. Fourthly, gender significantly predicted persistence of students, Wald's χ^2 = 9.00, p = .003. According to the model, log of odds of probability of persistence of student was positively related to gender of the students. Odd of becoming non-persistent student were 2.09 times more for male students than female students. Therefore, the weakest predictor of persistence of the students was gender.

Table 4.9

Logistic Regression Analysis of Persistence of Students

Model	*β*	*SE of β*	*Wald*	*df*	*p*	*Odd ratio*
Constant	-.13	.67	.00	1	.998	.98
Gender (Male vs Female)	.74	.25	9.00	1	.003	2.09
Marital status	.13	.36	.13	1	.715	1.14
Program level	1.15	.44	6.98	1	.008	3.16
Economic support 1	3.09	1.13	7.51	1	.006	22.04
Economic support 2	1.26	.63	4.00	1	.045	3.51
Economic support 3	.70	.82	.73	1	.392	2.02
Economic support 4	.71	.60	1.41	1	.234	2.02
Economic support 5	.55	.55	.98	1	.322	1.72
Economic support 6	-.25	.61	.16	1	.685	.78
Economic support 7	.60	.55	1.18	1	.277	1.82
University type	.09	.40	.05	1	.817	1.10
Field 1	.56	.39	2.00	1	.157	1.74
Field 2	.62	.38	2.65	1	.103	1.86
Field 3	-.01	.57	.00	1	.986	.99
Field 4	.45	.47	.94	1	.332	1.57
Field 5	.45	.84	.28	1	.596	1.56

On the other hand, marital status (Wald's χ^2 = .13, p = .715), economic support 3 (no support vs instructorship; Wald's χ^2 = .73, p = .392), economic support 4 (no support vs public job; Wald's χ^2 = 1.41, p = .234), economic support 5 (no support vs private sector; Wald's χ^2 = .98, p = .322), economic support 6 (no support vs part-time job; Wald's χ^2 = .16, p = .685), economic support 7 (no support vs family; Wald's χ^2 = 1.18, p = .277), university type (Wald's χ^2 = .05, p = .817), field 1 (educational sciences vs social sciences; Wald's χ^2 = 2.00, p = .157), field 2 (educational sciences vs natural sciences; Wald's χ^2 = 2.65, p = .103), field 3 (educational sciences vs engineering; Wald's χ^2 = .00, p = .986), field 4 (educational sciences vs medical sciences; Wald's χ^2 = .94, p = .332), and field 5 (educational sciences vs fine arts; Wald's χ^2 = .28, p = .596) did not significantly predict persistence of the students.

It was expected that 92 participants were non-persistent students but observed frequency showed that two of them were non-persistent student. Therefore, specificity rate (percentage of non-occurrence) was 2.2%. Moreover, 552 participants were expected to be persistent students and observed frequency showed that all of them persistent student. Thus, sensitivity rate (percentage of occurrence) was 100%. As a result, 86.0% was the overall success rate for the full model as it was depicted in Table 4.10.

Table 4.10

Observed and Predicted Frequencies for Persistence of Students

Observed	Predicted		
	Non-persistent	Persistent	% Correct
Non-persistent	2	90	2.2
Persistent	0	552	100.0
Overall % Correct			86.0

The results of Logistic Regression showed that persistence of students was predicted by economic support, program level and gender. However, kinds of economic support differentiated in terms of significant contribution. While no support versus research assistantship and no support versus scholarship or loan significantly contributed to the persistence of the students, no support versus instructorship, no support versus public job, no support versus private sector, no support versus part-time job, and no support versus family support did not significantly predict persistence of the students. Probability of becoming non-persistent student increases more for students having no support than students having research assistantship support. Probability of becoming non-persistent student increases more for students having no support than students having scholarship or loan support. Probability of becoming non-persistent student increases more for Master students than Doctoral students. Probability of becoming non-persistent student increases more for male students than female students. On the other hand, marital status, university type, and field did not make significantly contribution to prediction of persistence. Among the predictors, the strongest predictor was found as economic support (no support vs research assistantship) whereas the weakest predictor was gender. By considering personal and organizational factors, two personal factors (program level and gender) and one organizational factor (economic support) significantly contributed to the persistence of students but the strongest predictor was related to organizational factor. As a result, H1c and H1d were confirmed. However, although relation in H1a was confirmed, the direction of the relation was found opposite of that in hypothesis. On the other hand, H1b, H1e, and H1f were not supported by the findings.

4.6 Structural Equation Modelling

In order to seek an answer for the research question that's how well personal factors and organizational factors together with mediating role of institutional and goal commitment predict intentions to leave graduate education, Structural Equation Modelling (SEM) was conducted. Personal factors included age, academic performance and semester in years while organizational factors included dimension of organizational climate, namely academic climate, social climate, departmental climate, administrative climate, advisor-related climate, and instructor-related climate. Before the main analysis, there was a need to check assumptions.

4.6.1 Assumptions of Structural Equation Modelling

For the correlational analyses, assumptions of normality, homoscedasticity, linearity, independence of errors, absence of multicollinearity, and influential observations in addition to sample size criterion were considered (Field, 2009). To begin with sample size adequacy, the current study had 653 participants which met the Kline's

(2015) recommendation in which there is a need for sample having more than 200 subjects to perform Structural Equation Modelling.

Assumption of normality was assumed by checking shapes of histogram, P-P plots, Kolmogorov-Smirnov and Shapiro-Wilk tests, and skewness and Kurtosis values. As it is shown in Figure 4.4, shapes of histogram and P-P plots demonstrated almost normal distribution.

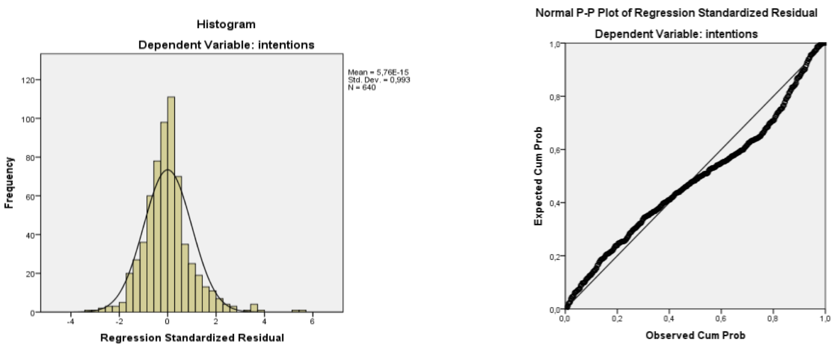


Figure 4.4 The histogram of standardized residuals and the normal probability plot

Results of Kolmogorov-Smirnov and Shapiro-Wilk tests should be non-significant for normality. Furthermore, skewness values should be close to zero and between -3 and +3 while Kurtosis values should rise to 10 to assume normality (Kline, 2011). For all items, Kolmogorov-Smirnov and Shapiro-Wilk tests gave significant result so that normality assumption is violated for this criterion. On the other hand, skewness values seemed around zero while Kurtosis values varied from -.18 to 5.27. as a result, univariate normality was assumed. To check multivariate normality, Mardia's test was run, $p < .05$. thus, multivariate normality was violated. Moreover, homoscedasticity was checked by considering scatter plot. However, most of dots are dispersed while some of them are conjunctive. Therefore, there is almost no pattern in the scatterplot that meant assumption was confirmed as it is seen in Figure 4.5. In addition, linearity was checked by considering partial regression plots and assumed.

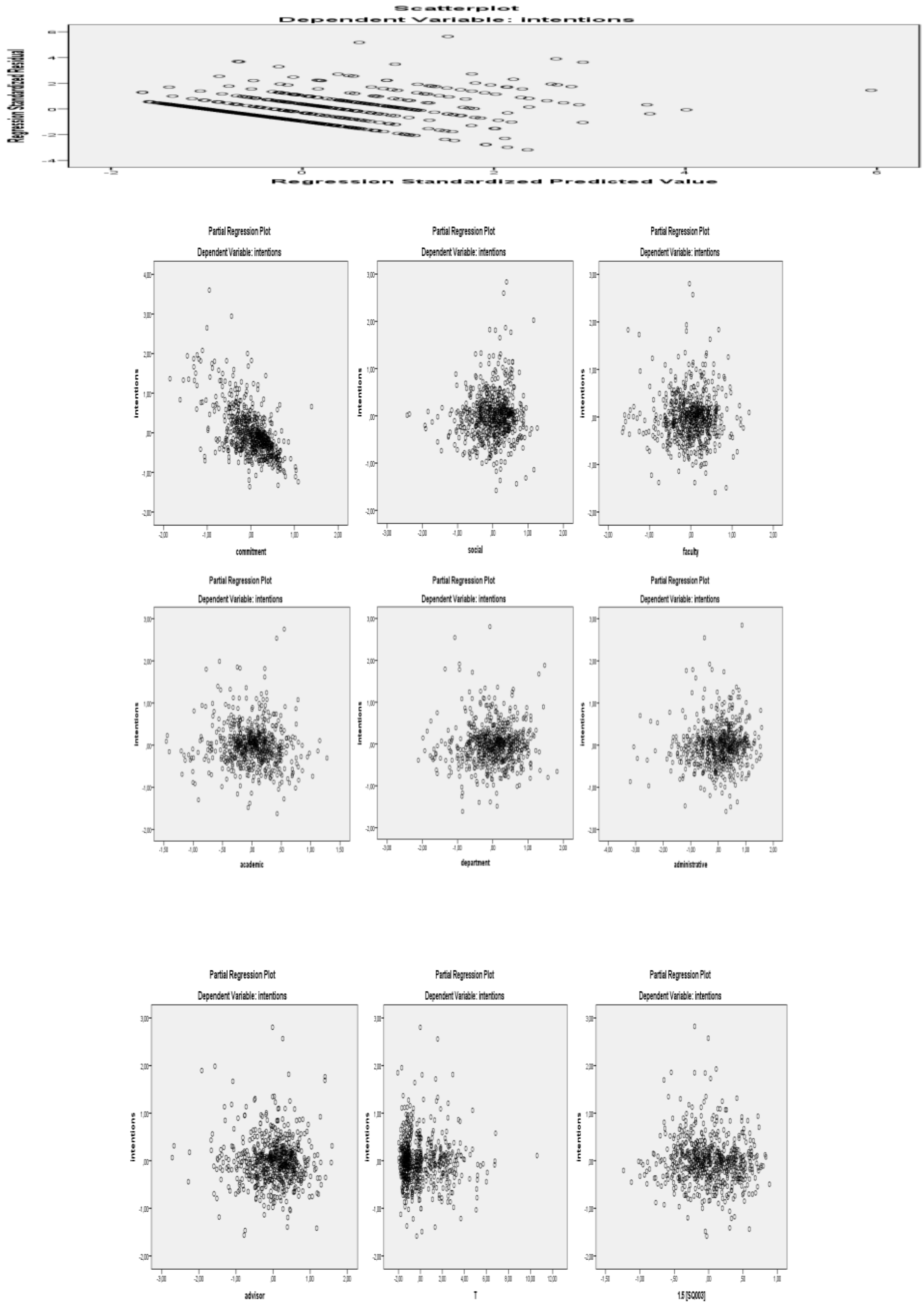


Figure 4.5 Scatter plot and partial regression plots

In order to check assumption of independence errors, The Durbin-Watson coefficient test was conducted. According to Durbin and Watson (1951), this value must be between 1.00 and 3.00 for the errors to be unrelated. This study had a 1.61 value of Durbin-Watson so that independency of errors was assumed. As the other assumption, influential observations were checked through Cook's distance, Leverage statistics, Mahalanobis Distance and DFbeta. Cook and Weisber (1982; as cited in Field, 2009) recommended that Cook's distance (measure of the influence of case) must be smaller than 1. Cook's distance in the current study had values changing between 0 and .09 so this criterion was confirmed. According to Stevens (2009), cut-off point for Leverage statistics is 3(k+1)/n (here, k is the number of predictor variable while n is the number of participant). Cut-off point for Leverage statistics of this study was calculated as .05 by hand and this value was greater than maximum Leverage statistics which was given by statistical package as .10. By considering this criterion, cases of 43, 357, 127, 256, and 259 were extreme points. Thirdly, critical chi-squared value was found as 27.87 by considering table of Chi-square distribution with $\alpha = .001$ and $df = 9$ (number of predictors) and this value is cut-off for Mahalanobis distance. Maximum value of Mahalanobis distance was 65.71 so there were 14 extreme points. Lastly, DFbetas were checked. According to Tabachnick and Fidell (2007), these values should be smaller that 1.00. Statistical package output showed that values for DFbeta are smaller than 1.00 so that this criterion was also provided. The researcher of the current study did not delete any outliers since two criteria gave pure values while two criteria showed a few outliers. Totally, it was accepted that there were no influential observation.

As the last assumption, absence of multicollinearity was checked through Tolerance values, Variance Influence Factor (VIF) values, and correlations of predictor variables, Myers (1990; as cited in Field, 2009) suggests that VIF value must be lower than 10 while Tolerance values must be larger than .10. The values from statistical package showed that while Tolerance values changed between .53 and .97., VIF values varied from 1.03 and 1.88. Therefore, these values confirmed the absence of multicollinearity. In addition, according to Field (2009), correlation coefficient between predictor variables must not be higher than .90. As Table 4.11 presents, there were no correlation coefficients higher than .90. overall, absence of multicollinearity was assumed.

Table 4.11

Means, Standard Deviations, and Correlation Matrix for Variables

Variables	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Intention	1.48	.68	1.00									
2. Commitment	4.32	.54	-.68	1.00								
3. Social climate	4.08	.60	-.12	.26	1.00							
4. Instructor-related climate	4.21	.64	-.29	.43	.45	1.00						
5. Advisor-related climate	4.21	.78	-.27	.38	.37	.54	1.00					
6. Academic climate	4.45	.53	.-37	.50	.43	.57	.46	1.00				
7. Departmental climate	3.62	.73	-.19	.34	.32	.36	.38	.31	1.00			
8.Administrative climate	3.61	.80	-.05	.17	.27	.23	.22	.18	.39	1.00		
9. Semester in years	2.31	1.78	-.05	.02	-.06	-.07	-.06	-.01	-.07	.00	1.00	
10. Academic performance	3.18	.38	-.15	.14	-.01	.07	-.04	.07	.09	.08	.13	1.00

4.6.2 Results of Structural Equation Analysis

In structural models, there are two types of approach on data analysis. The first one is one-step analysis approach in which both structural and measurement model were analyzed at the same time. The second one is two-step analysis approach which analyzes structural and measurement model separately (Loehlin, 2004). The researcher of the current study considered one-step analysis approach since both Confirmatory Factor Analyses of the scales were performed separately and Structural Equation Model already set the relations among latent variables.

In order to seek an answer for research questions, Structural Equation Modelling (SEM) was run in a package program. Due to violation of assumption of multivariate normality, estimation method of “Weighted Least Squares” with Asymptotic Covariance Matrix was used in structural model. Although structural model showed acceptable fit indices (*RMSEA* = .85, *NFI* = .90, *NNFI* = .90, *CFI* = .92), there were some updates on the model. After the removal of academic climate because of negative error variance and drawing error covariance between some of the items, updated structural model show moderate to high fit, (χ^2/df = 3.96, *RMSEA* = .068, *NFI* = .93, *NNFI* = .93, *CFI* = .95) as it is depicted in Figure 4.6.

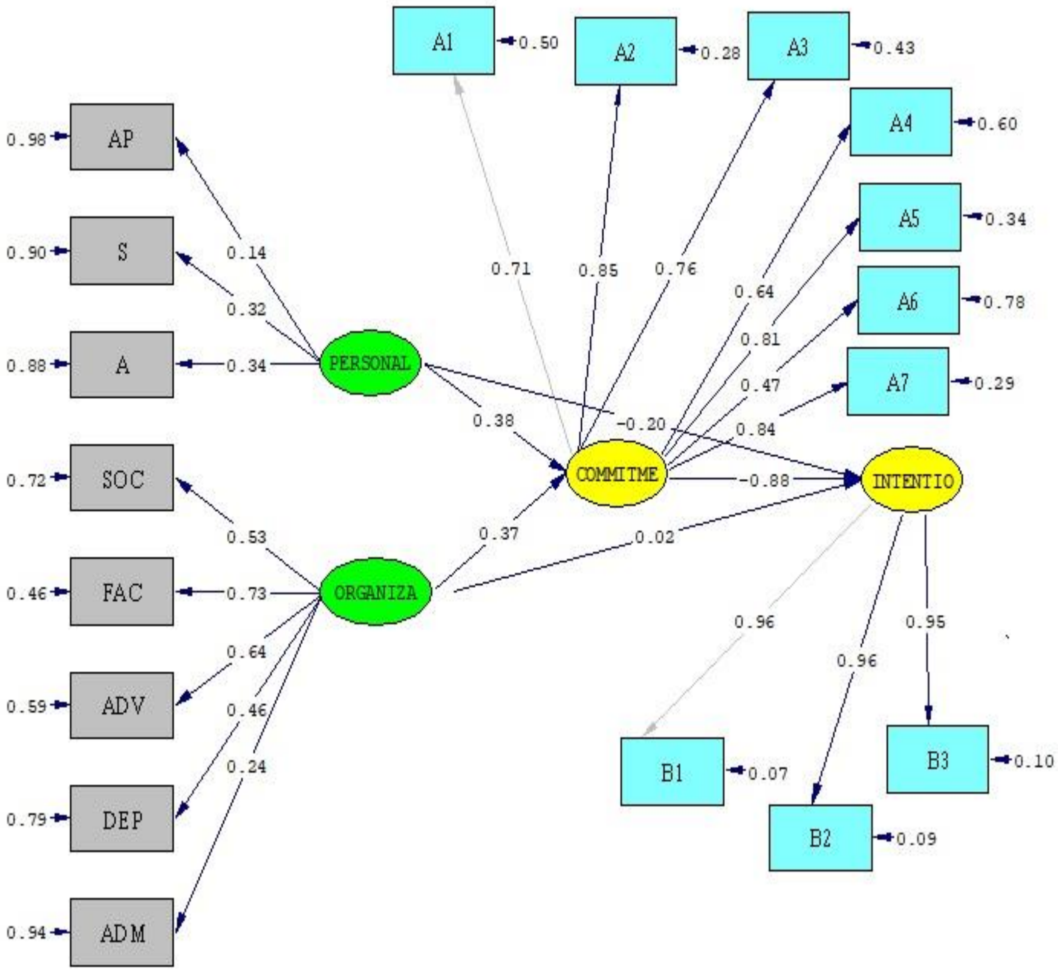


Figure 4.6 Structural Model with Its Standardized Weights and Error Variance

Structural model showed that intentions to leave was predicted significantly by personal factors and institutional and goal commitment whereas organizational factors did not cause significantly a change on intentions to leave. Furthermore, institutional and goal commitment was predicted significantly by both organizational factors and personal factors. As a result, H2a, H2c, H2d, and H2e were confirmed whereas H2b was rejected. Figure 4.8 represents these relationships.

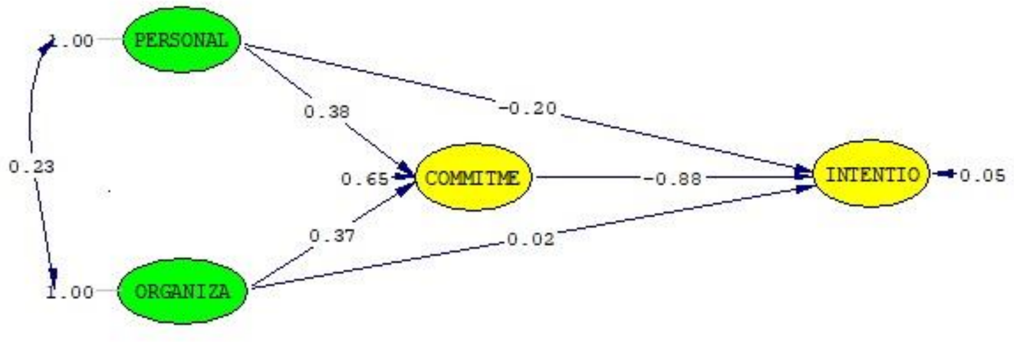


Figure 4.7 Structural Model

4.6.3 Results of Hierarchical Multiple Regression Analysis

The structural model showed that personal factors and organizational factors caused a significant change on intentions to leave by way of institutional and goal commitment. Therefore, requirements of mediation effect (Baron & Kenny, 1986) were performed whether institutional and goal commitment was a mediator variable or not. These were as follows: i) there must be an effect of independent variable on mediator variable, ii) there must be an effect of independent variable on dependent variable, and iii) there must be an effect of mediator variable on dependent variable while regression coefficient of independent variable on dependent variable decreases.

In order to check mediation effect, Hierarchical Regression Analysis was performed as its findings are presented in Table 4.12. In the first step, commitment was predicted significantly by organizational factors (β = .45, p < .05) and personal factors of semester (β = -.08, p < .05) and past performance (β = .12, p < .05) after controlling for gender (β = .05, p > .05) and marital status (β = -.11, p < .05). Therefore, requirement i) was confirmed. In the second step, intentions to leave was predicted significantly by organizational factors (β = -.26, p < .05) and personal factors of past performance (β = -.14, p < .05) after controlling for gender (β = -.03, p > .05) and marital status (β = .06, p > .05). Thus, requirement ii) was also provided. In the third step, mediator variable of commitment was added to the model that indicated that intentions to leave was predicted significantly by only commitment (β = -.70, p < .05). As a result, significance of both organizational factors and personal factors were lost so that institutional and goal commitment had a mediator effect on the relationship of organizational factors and personal factors with intentions to leave with the confirmation of requirement iii). Overall, H2f and H2g were confirmed.

Table 4.12

Results of Hierarchical Multiple Regression Analysis

Model	B	SE	β	t	p	R	R^2	ΔR^2	ΔF
Model 1					.00	.12	.014	.014	4.51
Gender	.06	.04	.05	1.32	.188				
Marital status	-.16	.06	-.11	-2.79	.005				
Organizational factor	.49	.04	.45	12.89	.000				
Past performance	.17	.05	.12	3.49	.001				
Semester	-.07	.03	-.08	-2.29	.022				
Age	.05	.03	.06	1.52	.13				
Model 2					.00	.49	.24	.23	46.880
Gender	-.04	.06	-.03	-.74	.459				
Marital status	.10	.07	.06	-1.44	.152				
Organizational factor	-.37	.05	-.26	-6.95	.000				
Past performance	-.25	.07	-.14	-3.62	.000				
Semester	.05	.04	.05	1.16	.247				
Age	-.08	.05	-.06	-1.59	.112				
Model 3					.00	.68	.47	.46	107.95
Gender	-.01	.06	.00	-.20	.838				
Marital status	.01	.04	.00	.22	.832				
Organizational factor	-.07	.05	-.05	-1.48	.140				
Past performance	-.09	.05	-.05	-1.79	.075				
Semester	.01	.03	.01	.39	.694				
Age	-.03	.04	-.03	-.81	.419				
Commitment	-.88	.04	-.70	-20.74	.000				

The results of Structural Equation Modelling and Hierarchical Multiple Regression showed important conclusion. First of all, personal factors predicted intention to leave whereas organizational factors did not predict intentions to leave. Institutional and goal commitment was both predicted by organizational factors and personal factors and predicted intentions to leave. More specifically, increase in perceptions of organizational climate causes increase in perceptions of commitment. Moreover, when perceptions of commitment increased, then intention to leave decreases. On the other hand, institutional and goal commitment was the mediator for the relation both between personal factors and intentions to leave and between organizational factors and intentions to leave. That means increase in personal factors and organizational factors causes increase in perceptions of commitment, increase in commitment decreases intentions to leave. Furthermore, increase in past performance decreases intentions to leave.

4.7 Results of Interviews

In terms of the qualitative part of the study, a phenomenological design was conducted to investigate attrition experiences of non-persistent students, persistent students, graduate school administrators, and advisors. A total of 36 participants were interviewed. For the interviews, four different interview forms were administered to participants. The interviews were conducted between 24 April 2018 and 10 July 2018. While most of them were face-to-face interviews, there were three phone interviews. Average duration of interviews was about 20 minutes. During the interview, both note-taking and recording were implemented at the same time. After recording was transcribed as text, content analysis was performed to reveal categories based on themes and codes.

In order to provide credibility, member check was conducted. Participants to whom transcribed texts were sent confirmed the conversations. In order to provide transferability, thick description of data was implemented. Codes and theme lists were presented in Appendix E. In order to provide confirmability, the researcher of the current study conducted coding two times by leaving one month between them. This confirmation gave about 100% consistency. However, second coding produced eight extra codes. In order to provide dependability, the researcher of the current study checked the codes coming from 12 experts in qualitative research. Intercoding results showed that there was about 95% intercoder reliability in the range of minimum 75% and maximum 100%. Additional codes emerged from intercoding procedure were put in code and theme list.

4.7.1 Results for Non-Persistent Students

Ten non-persistent students participated in the study. Table 4.13 depicts the characteristics of the students. Most of the students were female, at U1 university, and from educational sciences. Only one student was Ph.D. student. In addition, the researcher gave pseudonyms for each non-persistent students. These nicknames ranged from NP1 to NP10. Codes and theme lists were presented in E1 section of Appendix E.

Table 4.13

Characteristics of the Non-Persistent Students

Non-persistent students	Gender	University	Program level	Field
NP1	Female	U3	M.S.	Educational Sciences
NP2	Male	U1	M.S.	Educational Sciences
NP3	Female	U5	M.S.	Medical Sciences
NP4	Female	U1	M.S.	Educational Sciences
NP5	Female	U1	M.S.	Natural Sciences
NP6	Female	U2	Ph.D.	Educational Sciences
NP7	Female	U5	M.S	Natural Sciences
NP8	Female	U1	M.S.	Natural Sciences
NP9	Female	U1	M.S	Educational Sciences
NP10	Male	U4	M.S	Social Sciences

The interview included questions related to starting graduate education, process and structure in graduate education, causes for attrition, and change recommendations for graduate education. These questions also formed the initial themes of the study. Moreover, sub-questions consisted of some of the initial sub-themes. On the other hand, some of the sub-themes, all of the codes, and all of the sub-codes were emerged from the content analysis. Table in E1 section presents the themes, sub-themes, codes, and sub-codes for the non-persistent students.

4.7.1.1 Theme of Starting Graduate Education

Data coming from interviews showed that ten participants have a variety of experiences in starting graduate education. Some of these experiences diverges with each other whereas some of them differentiates from each other. Table 4.14 represents subthemes, frequent codes with their frequencies.

Table 4.14

Subthemes and Frequent Codes for Starting Graduate Education

Subthemes	Frequent Codes	Frequency
Reasons		17
	Desire to be academician	9
	Feeling of emptiness	3
Targets		14
	Completing Master	8
Feelings		26
	Happiness	8
	Excitement	9
Program Climate		3
	Lack of B.S. education	1
	Research	1
	Atmosphere of department	1
Similarities and Differences		13
	Academic	6
	Interaction	5

When considering why the students started graduate education, most of the participants started graduate education with a desire to be an academician. To illustrate, the student NP7 stated as follows:

> Firstly, like each university student, we were imitating our faculty members. In addition, we were hardworking students. Therefore, we wanted to take a research assistantship position and staying in the university. Our target was to advance academically. We began to pursue an academic career. For it, Master of Science was mandatory. Hopefully, we wanted to get a research assistantship but it was too difficult (NP7)

The second frequent reason was declared as emptiness feeling after graduation. The student NP4 pointed out that she fell dawn an emptiness after graduation and decided to begin to Master although she did not have a plan on graduate education. Similarly, the students underlined their psychological conditions after graduation. The student NP8 declared as follows:

> I did not appreciate any job since I did not do anything in biology. Also, I did not work in labs. I did not have a desire to advance in academy. This situation is a problem according to our family elders but each graduate experiences this feeling of emptiness after graduation. Even if we look at this situation from the eye of sector, the job had invective offers to each graduate so that graduates were right to reject these offers in spite of community pressure. Because of limited number of job, bosses were able to present these bad offers. As a result, I did not feel good about myself and decided that I could not endure these job offers and unemployment. My family supported me when I was unemployed for five or six months. While I was thinking what I could do, I recognized that I could motive myself to more technical field. For this reason, I started a master program which was different than my field. I supposed that it would be more beneficial (NP8)

As the reasons for starting graduate educations, participants gave also different responses. While NP3 emphasized the recommendations of her friends, NP6 started graduate education with the guidance of faculty members. Other reasons were effect of previous internship, curiosity on field, and role model of faculty.

Under the theme of starting graduate education, targets were asked to students. Although they had different responses, the most frequent response was seen as completing Master of Science. The other targets were staying at university, research which serves environment and humanities, improvement of foreign language, academic progress, research assistantship, and contribution on science.

The third sub-theme of theme of starting graduate education was related to feelings of the participants. The common point was positive feelings like happiness and excitement at the beginning of graduate education. Also, the participants were eager, diligent, enthusiastic, maturated, and satisfied about graduate education. The students NP3 expressed as follows:

> I was very happy since I was at the place I wanted. I learnt many things from the faculty members whom I followed from the media. Topics were talked in media and producing solutions for these topics were very good. Therefore, the courses were satisfying. I got everything in course period. Maybe, it was the reason why I did not go on education (NP3)

However, some participant experienced feeling fluctuations that means positive feelings converted into negative feelings like disgust, learned helplessness, desperation, and lonelyness. For example, the student NP4 stated that excitement at the beginning converted into disgust because of many repetitions in the classes. The other student, NP7, stressed that she had positive feelings at the beginning of the process but she experienced feelings of desperation and loneliness towards the end of the process.

For theme of starting graduate education, program climate manifested itself as a sub-theme in which participants concentrated on atmosphere of department, disadvantages of lack of B.S. education, and research. The student NP2 explained program climate in his department as follows:

> Yes, I thought that I could not improve myself here. The department affected negatively my development because the department did not have an undergraduate education for my field. Therefore, I could not keep myself inside the event. Because of lack of undergraduate education, I was always working on desk. This situation pushed me to work individually and influenced me negatively. There were many friends thinking like me. Many of us did not continue (NP2).

And finally, differences and similarities between undergraduate and graduate education drew attention. Only one participant, NP4, touched on similarities. She stated that the concepts and topics were similar. On the other hand, all participants talked about the differences in terms of interaction and academic perspectives. NP5 concentrated on academic perspectives and stated that graduate education has more reading, knowledge, research, and interpretation. The other participant NP7 concentrated on interaction between student and faculty member:

> Our faculty members were too difficult. I never forget that when I knocked at the door, I saw that he was resting and his legs were levitated. I said with huge respect that I have question if you have time. He slapped me down. However, my faculty members in graduate education did not behave in this way. They did not have a negative motivation (NP7).

To summarize, participants had lived some common and mostly different experiences in the start of graduate education. No doubt, these experiences in the first years of graduate education shaped their satisfaction in the subsequent years. In other words, the process and structure of the graduate education caused satisfaction or dissatisfaction of students.

4.7.1.2 Theme of Process and Structure in Graduate Education

Under the theme of process and structure in graduate education, the questions of satisfying and dissatisfying factors were asked to non-persistent students. Participants shared both positive and negative events in their graduate education lives. However, content analysis showed more negative issues than positive issues. The common positive points in graduate education were related to social adaptation, relations with peers, and familial support whereas common negative issues were visible in relation with advisor, relation with faculty, time, and finance. Courses content was common for both satisfying and dissatisfying aspects. Table 4.15 demonstrates subthemes and frequent codes.

Table 4.15

Subthemes and Frequent Codes for Process and Structure in Graduate Education

Subthemes	Frequent Codes	Frequency
Satisfying aspects		35
	Family support	10
	Social adaptation	5
	Relation with peers	5
	Course content	5
Dissatisfying aspects		44
	Relation with faculty	9

Table 4.15 (continued)

Subthemes	Frequent Codes	Frequency
	Relation with advisor	8
	Time	7
	Finance	7
	Course content	5

To begin with satisfying aspects, the most frequent area was the family support. All of the graduate students stated that they were supported by their families. The student NP8 explained to her family that she was unemployed so her family supported her. Similarly, NP9 stressed that her family was supportive especially in strained times. In addition, participants did not experience problem related to social adaptation. Each participant was satisfied with university, city, housemate, and city people. NP1 emphasized that she loved the university and the city. Moreover, graduate students had positive relations with their peers. To illustrate, NP2 underlined communication, conversation, and beautiful environment.

For dissatisfying aspects, common point for many participants was related to relation with faculty. To name a few, lack of expertise and interest, discrimination, and negative attitudes towards students dissatisfied the students. NP6 narrated as follows:

> The faculty members did not appreciate anything although they did not teach anything. I was upset. Not only I but also other friends were disappointed. They were not appreciating but they were not sure about what they wanted. They thought that if the student was in Master, then he or she had to know everything. It is okay but teach something to me because I came from undergraduate and I need to be guided. We were writing articles in the lecture but they did not appreciate them. When we asked where the problem is, they did not response. Moreover, they were ordering to write article once again. Therefore, I left (NP6)

Relation with advisor also influenced satisfaction of the students. Mismatch, lack of communication, lack of guidance and support, and inhormoniousness were the factors affecting the relationshipp between student and advisor negatively. NP2 explained his complaints about an advisor as follows:

> The relations with my advisor was good such that I am still meeting with him. However, I had different expectations from my advisor. My expectations were not met. I came from a different department so that I had a need about guidance

> in academic issues. I believed in guidance but my advisor expected that the students had to work individually. My advisor preferred to give advise at the end instead of advise at the beginning of process. Therefore, I had many difficulties in the first steps. I expected support from my advisor but I could not see it (NP2)

Finance and time were other common fields that caused dissatisfaction. Need for money or support and lack of affordability were visible in explanations of the participants. NP2 stated that he could not afford expenses so that he needed economic support. Similar trouble was mentioned by who NP5 declared that she wanted economic support through writing support but it did not become real. Time related problems mostly appeared as busyness and managing both job and school. To illustrate, NP1 told that managing teaching in a private school, family responsibilities, and school homework made her life difficult.

The interesting finding related to theme of process and structure in graduate education was that half of the participants had a negative experience with course content while other half of the participants were satisfied with course content. Participants who were dissatisfied generally mentioned number and integration issues like lack of offered courses, lack of connection among courses, and lack of integration of courses to field. On the other hand, participants who were satisfied with course content pointed out outcomes of course content such as expansion of horizon, development of perspective, and improvement of presentations.

NP2 was dissatisfied with course content. The participant stated connection problem as follows:

> Actually, content of the courses were very positive. I believed that they would be fruitful. However, when time passed, I saw that inner of course was too empty. I thought that I could not integrate myself into the field. I could not set a connection among the courses since they were independent from each other. In addition, there were not many offered courses such that I could not find an alternative elective courses for my development. The things related to these did not satisfy me (NP2)

On the other hand, NP7 was satisfied with course content stated. The participants explained as follows:

> The satisfying thing was the courses I got in different fields. Those courses expanded my horizon. I liked to learn new and different things while I was doing my job for social reality and reflection. I met with different faculty members who opened my vision. I had math and statistics courses. In addition, those in Masters improved my perspective. Also, these courses improved my homework and presentation skills.

In conclusion, graduate students were mostly satisfied with family support, peer relations, and social adaptation while they were generally dissatisfied with relation with advisor, relation with faculty, finance, and time related problems. They differentiated in terms of course content such that satisfaction rate was fifty-fifty. Dissatisfying aspects also produced a reason for student attrition.

4.7.1.3 Theme of Causes for Attrition

The third theme of the current study was causes for student attrition. The content analysis showed that organizational factors were more dominant than personal factors. Job, relation with advisor, relation with faculty, and department were organizational factors which were frequently stated. On the other hand, other possibilities and language skills were personal factors frequently stated by participants. Table 4.16 demonstrates subthemes and frequent codes.

Table 4.16

Subthemes and Frequent Codes for Causes of Attrition

Subthemes	Frequent Codes	Frequency
Organizational		20
	Job	6
	Relation with advisor	5
	Relation with faculty	4
	Department	3
Personal		24
	Other possibilities	8
	Language skills	3

To begin with, job has some negative impacts on graduate education. Issues related to permission were the most visible reason in this category. The student NP7 explained this permission process as follows:

> I am a teacher in primary school and am teaching five hour in a day. For DNA study, I had to go to lab at 9.00 and do experiment until 18.00. I would do this work each day. No institution would give permission for this experiment. As a result, I decided to leave school and continue my job since there were permission problems, divergence between institutions, cut of money, and lack of encouragement (NP7)

Relation with advisor was another cause for student attrition. The participants declared that they left due to unwelcome attitudes of advisor, expectations from advisor, lack of guidance, and lack of support. NP5 was also dissatisfied with her advisor. She expected the support of advisor but she was disappointed as follows:

> First of all, the dissatisfying thing for me was my advisor. To say clearly, my thesis advisor did not make a contribution to me. Also, my advisor did not bring me any recommendations. I accept that the student should make a contribution to yourself but I supposed more support for a Master student. Also, I expected scientific support and promotions from my advisor. I expected my advisor to teach and solve problems. However, I could not take any response to my questions. In addition, my advisor interrogated me about why I was here. Also, my advisor did not consider my desire to work and to earn money. I said that I needed money so that I should have written a project. Instead of supporting me, my advisor told me that you were married so that your husband might support you. This accusation decreased my desire on graduate education (NP5)

Relation with the faculty caused student attrition in graduate education. Lack of encouragement for projects, negative attitude, obsessed faculty, unmeaningful persistences, putting strict rules, and lack of guidance and feedback are some negative faculty behaviors. The student NP8 complained about that the academicians did not encourage students to write projects. The student NP9 criticized the attitudes of academician as follows:

> I am familiar with the abroad education so that I experienced that the faculty member in abroad consider your field and background while they are teaching by using current teaching methods. I want to clearly state that unmeaningful persistence of an academician on older teaching methods gives harm on successful young students. I experienced this negative attitude (NP9)

Department was also a determinant on student attrition. Lack of academic positions and promotions were the most frequent causes of student attrition. The student NP4 told that lack of academic positions pushed us to both work in another job and come to school. The student NP8 emphasized promotions as follows:

> Support, support, support. That is the greatest problem. I think that any graduate students do not have a smooth promotion or guidance. Maybe, the departments think that if the students are not guided, then they can achieve difficult aims, get proficiency, and obtain experience. This style can be evaluated as a teaching method. However, if you do not have any money and lack of promotion, you can say that why am here in this way. New generation may be more demanding, is changing many jobs, and is not loyal. New generation may be criticized in these ways. All of these may be true but if I saw academic support, I could go on education (NP8)

On the other hand, other possibilities and language skills were the most frequent personal factors on student attrition. According to the responses of participants, other possibilities included preparation of central exams, desire to work, and no possibility for PhD education. To illustrate, NP3 underlined that she preferred to study for the central exam for selection of public personel instead of graduate education. Moreover, the other student NP2 believed that the PhD education would not beneficial for him so that he left the department.

In conclusion, personal and organizational factors caused student attrition from graduate education. Issues related to job, relation with advisor, relation with faculty and job drew attention as organizational factors while other possibilities and lack of language skills were personal factors on student attrition. Taking into consideration these factors on student attrition and other problematic conditions in graduate education, change recommendations of participants are valuable.

4.7.1.4 Theme of Change Recommendations

And lastly, the theme of change recommendations had three sub-categorizations. Recommendations at macro-level, university-level, and individual-level were asked to non-persistent students in order to improve graduate education. Under macro-level recommendations, recommendations related to admission procedure, financial support, and foreign language education were emphasized. In terms of university-level recommendations, student-oriented processes and encouragement of students with projects were frequently requested. Lastly, professional development and commitment were frequently stated individual-level recommendations. Table 4.17 represents subthemes and frequent codes.

Table 4.17

Subthemes and Frequent Codes for Change Recommendations

Subthemes	Frequent Codes	Frequency
Macro-level		31
	Admission procedure	10
	Financial support	10
	Foreign language education	3
University-level		20
	Student-oriented processes	4
	Encouragement of students with project	3
Individual-level		25
	Professional development	3
	Commitment	2

Non-persistent students recommended to change admission procedure at macro-level. To name a few, balancing Master quota with academic position number, putting strict criteria, and flexible language conditions were recommended. Among these recommendations, holistic evaluation was the most frequent recommendation. The student NP6 recommended fair and holistic evaluation.

The second macro-level recommendation was financial support. All of the students touched on economic support in some. Scholarship, money, and tangible differences were some of the frequently declared phrases. The student NP5 told that both tangible support and more support should be provided for the graduate student. The other student NP6 pointed out that:

> If you do not have any money, you can not go on to Masters education. This is my opinion. Lack of money causes to attempt to do impossible. All of the work depend on money such as going to the library and doing research. You must spend money in every step. You spend money while you are taking something and are travelling from someplace to another. All of these are related to money (NP6)

The third macro-level recommendation was related to foreign language education. Some of the participants recommended English as teaching language. Apart from these frequently stated recommendations, each participant suggested original changes. NP10 recommended a SSCI publication must for entering thesis jury. Also, the student NP8 explained utopic campus life and removal of obstacles. Furthermore, the student NP6 pointed out importance of guidance and recommended guidance services. The student NP4 claimed that unemployment has a barrier for quality of graduate education and recommended to solve unemployment problem as follows:

> Undergraduate students think that they will be unemployed after graduation. In order not to say that I am unemployed, they prefer to start graduate education. In this apsect, increase in alternative employments may solve this problem. The serious problem of the country is related to unemployment such that recent graduates are unemployed after graduation. This employment rate is higher for educational field. If this problem is prevented, then rate of graduates will increase (NP4).

By considering university-level recommendations, non-persistent student focused on project supports and encouragement. Moreover, they recommended universities to follow student-oriented processes. The student NP5 explained the necessity of projects. Moreover, the student NP6 offered that university administrators and faculty member should follow student-oriented processes.

Lastly, the non-persistent students brought individual-level recommendations such that professional development and commitment were the most frequent ones. NP7 stated that commitment has crucial importance in natural sciences such that a person may work for hours in labs. On the other hand, NP2 underlined the importance of both professional development and commitment as follows:

> As a result, becoming academician includes also learning new things. Doing academic research should be learnt. I think more people should be integrated in learning process. In this way, commitment to program will increase. For example, this is a problem we faced. We kept ourselves far away from academic world so that our commitment decreased (NP2)

In addition to frequent recommendations, each participant presented unique and special recommendations. To illustrate, the student NP9 recommended more understanding from the academicians in order to retain students in the education. Also, the student NP3 stressed respect as follows:

> The matter is not only money. Responsibility, approaches, and respect were significant. These satisfy people for graduate education. In my opinion, the most important promotion is respect for knowledge. Tangible issues are of course real but it should come after respect. Firstly, we respect knowledge.

> Everyone from administrator to patient relative consider difference between Master graduate and other one (NP3).

To sum up, change recommendations showed that graduate education can be remedied and improved by macro-level, university-level, and individual-level interventions. Holistic evaluation in admission procedure, economic support for graduate students, and foreign language education were examples to macro-level recommendations. In order to increase student retention, universities should encourage students with more project and implement student-oriented processed. And finally, professional development and commitment were key factors for individuals in graduate education.

4.7.1.5 Summary

The interviews administered to 10 non-persistent students depicted that there was spiral in graduate education experiences of non-persistent student from enrollment to attrition behavior. Most of the students showed reason for graduate education as an emptiness after graduation. Their targets were to complete Master of Science, which can be evaluated as a short-term target. Mostly, they experienced feeling fluctuations from positive ones to negative ones. They complained individualistic atmosphere and lack of undergraduate education which were barriers to improvement. Differences between undergraduate and graduate concentrated on academic workloads and interaction patterns. Except course content, dissatisfaction areas including relation with advisor, relation with faculty, timewise problems, course content, and finance were different from satisfactions areas which consisted of social adaptation, relation with peers, course content, and family support. Organizational causes for student attrition appeared as relation with advisor, department, job, and relation with faculty which were parallel to dissatisfaction areas. Moreover, personal causes for student attrition were generally related to other possibilities like preparation for central exams and language skills. And finally, change recommendations of non-persistent students were linked to student attrition causes and dissatisfaction areas such that finance as a macro-level recommendation, project support as a university-level recommendation, and professional development as an individual-level recommendations were related to dissatisfaction or attrition cause respectively in terms of economic problems, lack of organizational support, and relation with faculty.

4.7.2 Results for Persistent Students

Ten persistent students participated in the study. Table 4.18 depicts the characteristics of the students. Most of the students were at U7 university. Also, there are seven students from educational sciences. On the other hand, number of males were equal to number of females. Similarly, number of M.S. students were equal to number of Ph.D. students. In addition, the researcher gave pseudonyms for each persistent students. These nicknames ranged from PE1 to PE10. Codes and theme lists were presented in E2 section of Appendix E.

Table 4.18

Characteristics of the Persistent Students

Persistent students	Gender	University	Program level	Field
PE1	Male	U5	Ph.D.	Educational Sciences
PE2	Female	U5	Ph.D.	Educational Sciences
PE3	Male	U3	Ph.D.	Educational Sciences
PE4	Male	U6	M.S.	Medical Sciences
PE5	Male	U6	M.S.	Natural Sciences
PE6	Female	U1	Ph.D.	Educational Sciences
PE7	Female	U1	Ph.D.	Educational Sciences
PE8	Female	U7	M.S.	Natural Sciences
PE9	Female	U7	M.S.	Educational Sciences
PE10	Male	U7	M.S.	Engineering Sciences

The interview included questions related to starting graduate education, process and structure in graduate education, causes for attrition, and change recommendations for graduate education. These questions also formed the initial themes of the study. Moreover, sub-questions consisted of some of the initial sub-themes. On the other hand, some of the sub-themes, all of the codes, and all of the sub-codes were emerged from the content analysis. Table in E2 section presents the themes, sub-themes, codes, and sub-codes for the persistent students.

4.7.2.1 Theme of Starting Graduate Education

Questions related to starting graduate education were asked to 10 persistent students. Subthemes were divided into reasons, targets, feelings, and similarities and difference. Table 4.19 demonstrates subthemes and frequent codes.

Table 4.19

Subthemes and Frequent Codes for Starting Graduate Education

Subthemes	Frequent Codes	Frequency
Reasons		27
	Desire to be academician	10
	Professional development	7
Targets		33
	Becoming academician	9
	Doing research	6
Feelings		20
	Positive	9
	Negative	11
Similarities and differences		10
	Academic	7

For reasons to start graduate education, two points drew attention. Firstly, the participants had a desire to be academicians. In this respect, PE1 stated that he started graduate education in order to become an academician. Similarly, PE7 emphasized teaching, desire to continue educational life, desire to become scientist, and production of science as the reasons for graduate education. Secondly, professional development was another reason to start graduate education. PE2 explained this desire as follows:

> I graduated from English Language Teaching. While I was graduating I recognized that I learnt teaching but I need to improve myself. I thought that I should have improved myself to become more qualified English Teacher. With this reason, I applied to Curriculum and Instruction and was accepted to the program. In the same year, I was appointed to a teaching position (PE2)

Considering targets in graduate education, most of the persistent students put a target of becoming academician by getting an academic title. PE5 declared that he had a desire to get academic title through Master and Doctoral education. The other common target was related to doing research. The student PE6 underlined that she wanted following of community due to quality researches. In addition to these common points, less frequent targets were also reflected by the students. To name a few, contribution to field, feeling good at job, and vision development were more specific targets.

Under the theme of starting graduate education, feelings of the students differentiated. Surprisingly, negative feelings were more than positive feelings. Furthermore, there were feeling fluctuations. This fluctuation was clearly detected in phrases of the students. To illustrate, the student PE7 explained this transformation from happiness to becoming bored. Moreover, the student PE9 declared that although she was very happy at the beginning, she became uneasy when courses began.

In terms of differences between undergraduate and graduate education, all of the students concentrated on academic issues. Persistent students evaluated undergraduate education as exam oriented, less reading activities, less research activities, and teacher-centered while they evaluated graduate education as project-oriented, more reading activities, more research activities, and student-centered.

To sum up, persistent students had lived some common and mostly different experiences in the start of graduate education. Reasons for and targets in graduate education seemed idealistic and this was an expected situation for persistent students. However, their feelings were in fluctuation. In addition, high number of negative feeling was surprising for persistent student. Rather than similarities, they focused on differences between undergraduate and graduate education in terms of academic activities. All of these experiences in the first times of graduate education shaped their experiences in the next periods.

4.7.2.2 Theme of Process and Structure in Graduate Education

Persistent students responded questions related to satisfying and dissatisfying areas in graduate education and opportunities and disadvantages of graduate education. Course content, relation with faculty, finance, and bureaucratic barriers were dissatisfying areas. On the other hand, relation with advisor, family support, and social adaptation were satisfying areas in graduate education. Participants listed academic development, perspective development, skill development, and psychological reflections as opportunities provided by graduate education. Each opportunity had some codes. To illustrate, academic development included learning new things and research methods while perspective development included analytic thinking and usage of multiple perspectives. In addition, skill development included learning how to use devices while psychological reflections are mostly related to resilience and stress management. On the other hand, procrastination, becoming older, time problems, tiredness, and stress were disadvantages of graduate education. Table 4.20 depicts subthemes and frequent codes.

Table 4.20

Subthemes and Frequent Codes for Process and Structure in Graduate Education

Subthemes	Frequent Codes	Frequency
Dissatisfying aspects		27
	Course content	7
	Relation with faculty	6
	Finance	5
	Bureaucratic barriers	2
Satisfying aspects		29
	Relation with advisor	8
	Family support	5
	Social adaptation	5
Opportunities		27
	Academic development	10
	Perspective development	8
	Skill development	5
	Psychological reflections	4
Disadvantages		26
	Procrastination	5

Table 4.20 (continued)

Subthemes	Frequent Codes	Frequency
	Stress	3
	Time problems	3
	Tiredness	3
	Becoming older	2

To begin with, serious amount of persistent students was not satisfied with course content. Lack of courses, lack of practice, theory-practice incompatibility, and much theory-based courses were the most frequent problems. In addition, older content, difficulties, and same circulations were some of specific problems. PE1 stated that he had concentration problem due to lack of courses related to his research field. Similarly, PE6 criticized low number of elective courses and courses with empty content.

By considering relations with faculty, persistent student pointed out that mobbing, ego war, lack of feedback, and discriminations were dissatisfiers in graduate education. In this aspect, PE2 told that she observed an ego war in academy, pressure on especially newly assigned research assistants.

In terms of finance, persistent students were dissatisfied with economic unfreedom, lack of scholarship, unemployment, lack of grants, economic problems, and part-time jobs. PE4 complained about economic problems such as part-time jobs and unemployment, PE5 emphasized that he had troubles in terms of affordance of some educational expenses.

The last dissatisfying area frequently stated by persistent students were bureaucratic barriers. Faculty Development program (FDP-ÖYP) procedure, unequal workload distribution, discriminations based on academic positions, injustice, proctor request, and bad conditions were barriers. PE2 explained extra workloads of a research assistant as exam proctor, correspondence, and course programs. Besides, PE3 described the permission problem as below:

> I met with some bureaucratic barriers. Especially, while I was conducting my thesis study, I experienced problem related to research permission. I strived to

> take a permission to collect data during five months. Therefore, this situation caused a time loss. I had no information about bureaucratic procedures (PE3)

In addition to these general dissatisfying areas, there were more specific dissatisfying areas. To illustrate, the student PE9 stated that she experienced troubles related to access to her advisor due to administrative duties and bureaucratic workloads of her advisor. The student PE4 experienced cultural adaptation problem due to being located with people from higher levels of socioeconomic status. Long distance between school and home, long working hours, and lack of English were other dissatisfiers mentioned by the persistent students.

On the other hand, persistent students had satisfaction about some issues. First of all, the students were satisfied with the relation with advisor. The common points were interest and devotion of advisor while guidance, research method, communication, philosophy of subject and education, agreement, regular meetings, feedback, working together, and selection of topic were more particular points. The student PE1 concentrated on guidance of his advisor while the student PE7 emphasized agreement with the advisor.

The other satisfying areas frequently stated by students were social adaptation and family support. The student PE6 underlined that she was adapted socially to new department because of attitudes of friends. On the other hand, PE9 expressed that her family supported her in many dimensions. In addition, these common satisfying areas, relation with faculty, relation with peer, and department environment drew attention.

The persistent students also talked about the opportunities and disadvantages of graduate education. In terms of opportunities, learning new things and research methods were emphasized under academic development while multiple perspective was underlined under perspective development. The student PE1 stated multiple perspective as the opportunities while the student PE8 declared learning new things as opportunities. Distinctly, the student PE4 focused on work experiences while the student PE2 concentrated on psychological reflections like resilience and stress management as opportunities of graduate education. Experiences of PE2 were below:

> I improved my perspectives in a more serious way. Experiences in this process increased my resilience. I had serious achievements on time and stress management. On the other hand, I am feeling well socially since we are here with similar people. In my opinion, scientific literacy is another acquisition.

On the other hand, procrastination, becoming older, time problem, tiredness, and stress were the most frequent disadvantages. The student PE1 stated that he had to postpone many things. Furthermore, student PE9 emphasized physical and psychological health problems as follows:

> Once, it took away many things related to physical health. Since you do not leave any time for yourself, you can not do sports. To illustrate, you are looking at computer screen and are reading many time so that your eyes are deteriorated. You are sitting continuously so that you have back pain. It is taking away many things from physical health. Also, it is taking away psychological things. You are exposed to many things which you never met until today. You are experiencing changes in social schema. All of these are serious psychological processes because your routines are changing (PE9)

To summarize, the persistent student generally experienced negative meanings in terms of relation with faculty, course content, finance, and bureaucratic barriers while they generally experienced positive meanings in terms of relation with advisor, social adaptation, and family support. On the other hand, the persistent students evaluated academic development, perspective development, skill development, and psychological reflections as opportunities provided by graduate education while they experienced some disadvantages of graduate education like procrastination, stress, and tiredness. Some of these dissatisfiers and disadvantages may be roots of causes of student attrition.

4.7.2.3 Theme of Causes for Attrition

Persistent students were requested to answer questions related to causes of attrition. Relation with advisor, relation with faculty and department were determined as organizational causes while familial issues, finance, desire to earn money, changes over time, delaying military, and perceiving graduate education as adisadvantage were evaluated as personal causes. Table 4.21 demonstrates subthemes and frequent codes.

Table 4.21

Subthemes and Frequent Codes for Causes of Attrition

Subthemes	Frequent Codes	Frequency
Organizational		17
	Relation with advisor	8
	Relation with faculty	5
	Department	2
Personal		35
	Familial issues	9
	Delaying military	7
	Economic conditions	4
	Changes over time	2
	Desire to earn money	2
	Graduate education perceptions	2

To begin with organizational factors, relation with advisor was seen as the most frequent cause on student attrition. Persistent students generally observed disagreement between advisor and process on topic selection. PE2 complained about unfreedom for thesis topic selection. The other participant, PE4, declared that she had a friend leaving school because disagreement with the advisor. Similarly, PE3 underlined the importance of student-advisor relations and told that his friend felt strange from department due to lack of help by advisor and faculty members.

The second organizational factor was relation with faculty. To name a few, egocentrism, communication problem, and negative attitudes were some of the attrition causes. In this respect, PE9 explained her impressions as follows:

> The second reason is egocentric attitudes of faculty members. They live in their world by disregarding everything. For example, let me explain a very simple event. My friend was student in the Masters program. He found another Masters program in another country and went there. My friends wrote most of the thesis in Turkey and were planning to come back to Turkey to defend. However, she has not defended her thesis for six months. The reason of this was that the faculty member did not want to read thesis in computer and wanted printed copy (PE9)

The third main organizational factor was the department. Especially, lack of academic positions caused student to leave graduate education. PE7 complained about lack of academic positions and temporary positions like 50/d research assistantship.

By considering personal factors, familial issues like marriage, having dependent child, and responsibilities were causes of student attrition. PE3 pointed out marriage and having dependent child as the personal factors. Furthermore, changes over time weas another factor affecting student attrition. PE1 summarized changes over time as follows:

> Namely, the most important factor related to leaving graduate education here is that students perceive graduate education as a mandatory activity after undergraduate. Therefore, the student is starting graduate education with this motivation. They think that they achieve criteria such as interview. Ultimately, this is a kind of satisfaction. They begin with this motivation and satisfaction. However, when they enter the process, they see more course, more research, more articles, more presentation, and thesis study. Students find all of these processes difficult and leave graduate education by stating that graduate education is not for me (PE1)

Another interesting point was related to military duty. Most of the persistent students thought that students were non-persistent since they began graduate education in order to delay their military duties. The participants PE10 and PE5 showed delaying military as a reason for absenteeism and student attrition. Perceiving graduate education as a disadvantage, desire to earn money, and finance which are close topics to each other were other popular response of students for the attrition causes. PE1 touched on negative perceptions of non-persistent students towards graduate education as follows:

> On the other hand, this process becomes meaningless after a while. The students think that what I will receive as an advantage when I completed Master. The ones especially working in our fields are aware of that there is no advantage of Masters or Doctoral education in terms of price and salary rise. As a result, they quit the education (PE1)

By considering economic conditions, PE9 stressed that although they registered as eight students, five of them left school because of the necessity to hold a job at the same time. PE6 underlined the importance of work as follows:

> I think that the greatest barrier for retention is business lives of the students. Their business life prevents them to go on education since they are experiencing economic and tangible problems. They must survive in some. Therefore, they give up education instead of job. As I said, economic conditions cause this situation (PE6)

In conclusion, both organizational factors and personal factors cause student attrition. Organizational factors were generally related to relation with advisor, relation with faculty, and department while personal factors included familial conditions, changes over time, delay of military duty, and economic and work conditions. The important finding was that personal factors were more dominant than organizational factors for the persistent student.

4.7.2.4 Theme of Change Recommendations

Questions related to change recommendations were asked to persistent students. These questions drew responses in three levels: macro-level, university-level, and individual-level. Macro-level recommendations focused on admission procedure, financial support, and abroad experience. On the other hand, university-level recommendations were based on course content. However, there was not a common tendency on individual-level recommendations. In other words, each participant recommended different solutions. Table 4.22 represents subthemes and frequent codes.

Table 4.22

Subthemes and Frequent Codes for Change Recommendations

Subthemes	Frequent Codes	Frequency
Macro-level		21
	Admission procedure	5
	Financial support	5
	Abroad experience	3
University-level		21
	Course content	7
Individual-level		13

Related to the admission procedure, there were many recommendations from accepting fewer number of students to the criterion of publication. PE1 recommended criteria change such as publication and experience in admission procedure. A different perspective was explained by PE9. She was against high number of students, programs, and universities. In this respect, she suggested fewer number of students in the graduate education.

In terms of financial support, assistantship and scholarship drew attention in a highly demanded way. PE8 suggested projects, grants, and assistantships for graduate students. PE5 recommended scholarships:

> The most beautiful ones are scholarships and project support. Maybe, increase in TUBİTAK supports will be beneficial for graduate students. The government may give scholarship. Okey, it is giving but most of the students are taking scholarship with repayment. These students also took scholarship with repayment in the undergraduate education. These two debts are accumulating and cause fatigue on students. Therefore, scholarship should be non-refundable (PE5)

In terms of abroad experience, opinions of PE9 were valuable. She showed the exemplary sides of abroad and wished that the younger academicians could go abroad and come back to teach what they learned.

At the university-level, most of the recommendations were based on course content. To illustrate, the student PE1 and PE6 concentrated on diversity of the courses by suggesting sub-field courses. Moreover, the student PE3 and PE7 recommended improvement of the courses statistics and research methods. Apart from these recommendations related to course content, there were also more particular suggestions. To name a few, increase in faculty quality, improvement of organizational culture, and changing work conditions were specific change recommendations. The student PE5 recommended change in work conditions since lab conditions were difficult and open to dangers due to chemical materials.

Finally, individual-level recommendations showed differentiation among participants. It can be stated that each student had specific and different recommendations. To name a few, moral support, ethics, peace of mind, prior knowledge about program, self-recognition, putting targets, retirement of older academicians were specific recommendations. The student PE1 summarized characteristics of a graduate students as eager, directed, and competent.

To sum up, the persistent students' recommendations generally resembled each other at macro-level and university-level while individual-level recommendations became different. Among macro-level recommendations, admission procedure including quota and criteria changes, financial support including assistantship and scholarship, and abroad experience drew attention. For university-level recommendations, changes in terms ot course content were based on improvement of courses of research methods and statistics and diversity in courses. Lastly, individual-level recommendations generally were for graduate students' situations.

4.7.2.5 Summary

The interviews administered to 10 persistent students depicted that themes of the current study were related to each other. Experiences for each theme from enrollment to attrition behavior and change recommendations could be evaluated as the bases of next themes. Most of the persistent students showed reason and target for graduate education as desire to be an academician. Therefore, reasons and targets were related to idealistic approach. Mostly, they experienced feeling fluctuations from positive ones to negative ones. Interesting point here was that negative feelings were more prominent than positive ones. Differences between undergraduate and graduate focused on academic issues. To illustrate, undergraduate education was seen as teacher-oriented and exam-oriented whereas graduate education was evaluated as student-oriented and project-oriented. Dissatisfaction areas including course content, relation with faculty, finance, and bureaucratic barriers were different from satisfactions areas which consisted of social adaptation, relation with advisor, and family support. In addition, opportunities provided by graduate education were summarized under academic development, perspective development, skill development, and psychological reflections while mostly stated disadvantages of graduate education were related to procrastination, passing time, tiredness, and stress. Organizational causes for student attrition appeared as relation with advisor, department, and relation with faculty which were parallel to dissatisfaction areas. Moreover, personal causes for student attrition were generally related to familial issues like marriage, changes over time like recognition of difficulties, delaying military, finance, desire to earn money, and perceiving graduate education as a disadvantage. And finally, change recommendations of non-persistent students were linked to student attrition causes and dissatisfaction areas such that financial support as a macro-level recommendation and course content as a university-level recommendation were related to dissatisfaction or attrition cause respectively in terms of economic problems and lack of courses. Furthermore, individual-level recommendations did not show a common pattern. From moral support to the ethics, each student mentioned suggestions to individuals who were either faculty member or student.

4.7.3 Results for Graduate School Administrators

Eight graduate school administrators participated in the current study. Table 4.23 depicts the characteristics of the administrators.

Table 4.23

Characteristics of the Graduate School Administrators

Administrators	Gender	University	Field
AD1	Male	U5	Medical Sciences
AD2	Female	U5	Medical Sciences
AD3	Male	U5	Educational Sciences
AD4	Male	U6	Natural Sciences
AD5	Male	U6	Fine Arts
AD6	Female	U2	Educational Sciences
AD7	Male	U2	Educational Sciences
AD8	Male	U1	Social Sciences

Most of the participants were male, at U5 University, and from educational sciences. In addition, the researcher gave pseudonyms for each administrator. These nicknames ranged from AD1 to AD8. Codes and theme lists were presented in E3 section of Appendix E.

The interview included questions related to procedure in graduate schools, problems observed in graduate education, causes for student attrition, consequences of student attrition, and solutions for the attrition problem. These questions also formed the initial themes of the study. Some of sub-themes were also initially available before content analysis. On the other hand, some of the sub-themes, all of the codes, and all of the sub-codes emerged from the content analysis. Table in E3 section presents the themes, sub-themes, codes, and sub-codes for the graduate school administrators.

4.7.3.1 Theme of Graduate School Procedure

The researcher of the current study asked questions to eight graduate school administrators about the procedure in graduate schools. Table 4.24 represents subthemes and frequent codes.

Table 4.24

Subthemes and Frequent Codes for Graduate School Procedure

Subthemes	Frequent Codes	Frequency
Admission		16
	Registration	8
	Announcements	6
Teaching		13
	Student affairs	8
Administration		20
	Implementation of laws	9
	Strategic planning	2
Graduation		3
	Graduates	2

By considering the responses of administrators, four dimensions which were admission, teaching, administration, and graduation appeared. For the admission subtheme, registrations and announcements were frequently stated works. Student affairs drew attention under the sub-theme of teaching. Administration subtheme a variety of duties from implementations of laws to strategic planning. Lastly, graduation sub-theme was based on graduates' expectations.

First of all, admission procedure was implemented by graduate schools. Admission procedure mostly consisted of announcement and registrations. In addition, graduate schools organized adaptation and orientation activities. AD4 summarized admission procedure as coordination between student and department, announcement of student admission, and pursuit of processes. Furthermore, AD1 explained some of these procedures as follows:

> Here, our basic purpose is to provide effective higher education system in Turkey. We try to adapt this purpose to faculty members in a participative environment. Moreover, we are implementing orientation activities for graduate students. We have an orientation program including registration process to the graduation process. It lasts about two days and also includes descriptions of the graduate regulations (AD1)

By considering teaching activities, student affairs were one of the most frequent jobs in graduate schools. In addition, feedbacks, following of thesis procedures, multi-discipliner workloads, academicians' rights, and workshops were other teaching activities. AD6 underlined distribution of roles. Another administrator, AD5, remarked digital documentation and following student responsibilities. AD2 stated that they were conducting workloads related to rights of academic staffing and multidisciplinary structure of graduate school.

In terms of administration, participants experienced many different jobs in the graduate schools. To name a few, job descriptions, staffing, bureaucracy, strategic planning, and implementations of laws are important administrative duties. The administrator AD3 expressed the importance of director, vice-director, secretary, and other staff for the procedure in graduate schools. The administrator AD1 pointed out laws and strategic planning based on following trends and improvements.

The last topic of graduate school procedures was graduation which is the last step of graduate education. The administrator AD3 stated approval of graduation while the administrator AD1 concentrated on effects of graduate school decisions on graduation of the students.

In conclusion, graduate school procedure included processes related to admission, teaching activities, administrative jobs, and graduation process. Admission procedure was implemented with announcements and registration while teaching activities were mostly based on student affairs. Although administrative duties differentiated, the most common duty appeared as implementation of laws. And lastly, graduation included graduates and some decisions.

4.7.3.2 Theme of Graduate School Problems

The question of problems observed in graduate education was asked to graduate school administrators. Amnesty laws, staffing, and bureaucracy were the most frequent problems in graduate education. Table 4.25 depicts frequent codes.

Table 4.25

Frequent Codes for Graduate School Problems

Frequent Codes	Frequency
Amnesty laws	7
Inadequate number of staffing	4
Bureaucracy	3
Total	25

Amnesty laws were emphasized by many graduate school administrators. AD8 declared that amnesty laws brought unlimited studentship so that workloads of faculty increased in addition to decrease in the quality of education. AD2 expressed that the students coming with amnesty laws did not attend courses so that their record would be deleted again soon after. The other administrator, AD6, explained negative reflections of amnesty laws as follows:

> I think amnesty law will produce problems for us. Workloads of advisors are currently too much. They can take 12 graduate student. In special cases, this number can rise to 18. Informally, there are advisors having 20-22 students. There will be also added students with amnesty laws. Therefore, they can not take new graduate student although they want to. This is an unbelievable chaos for graduate education (AD6).

On the other hand, AD1 complained about the ınadequate number of staffing while AD3 criticized bureaucracy due to red tape, limitations of regulations, and bureaupathology. In addition to common points, there were more special problems observed in graduate school. To name a few, fast changes, time loss, and energy loss were problematic conditions.

To sum up, graduate school administrators faced with problems in terms of number of staff, amnesty laws, and bureaucracy. Some of these problematic conditions may be related to or reflected on student attrition.

4.7.3.3 Theme of Perceptions of Attrition Causes

Researcher asked question to graduate school administrators about student attrition causes. Both organizational and personal causes emerged. Relation with the advisor and permission from job appeared as the most frequent organizational factors affecting graduate education. On the other hand, absenteeism, transfer to other universities, and familial conditions were remarked as personal causes. Table 4.26 demonstrates subthemes and frequent codes.

Table 4.26

Subthemes and Frequent Codes for Attrition Causes

Subthemes	Frequent Codes	Frequency
Organizational		21
	Relation with advisor	8
	Permission from job	8
Personal		24
	Absenteeism	7
	Transfer to other university	3
	Familial conditions	3

Organizational factors on student attrition showed themselves as relation with advisor, permission from job, relation with faculty, physical opportunities, reflections on state policies, fee, and undergraduate student attrition. For the subtheme relation with advisor, the most frequent causes were disagreement and no choice for topic selection. AD3 emphasized advisor selection and agreement between student and advisor for retention of the students in graduate education.

Permission from job was another reason for student attrition. The participants AD7 and AD3 pointed out this situation. They stated that many graduate students had problems related to taking permission from their jobs. In addition to these frequent responses, there were more particular organizational factors. To illustrate, reflections on state policies was one of them. AD7 underlined career steps and stated that if the students do not experience an advantage of completing Master or Doctorate like getting a career step, then they would give up the educational lives.

On the other hand, personal factors were closely related to causes of student attrition. Absenteeism, transfer to other universities, and familial conditions were the frequently stated causes of student attrition. AD3 indicated marriage, partner permission, and having dependent as familial factors on student attrition. Furthermore, AD4 listed personal causes as absenteeism, delaying military, supporting from studentship opportunities (lke cheaper transporation), and attrition in undergraduate education. Besides, AD5 showed transfer to other university as a reason for student attrition.

Some of the participants declared more specific causes. To name a few, geographical preference, financial support, lack of commitment, lack of proficiency, and long distance were examples to personal factors. The administrator AD6 touched on some of them as follows:

> The attrition is more for the ones coming from different city. I am sending emails to student to come to school and register for the semester. However, they do not consider me. Another reason is related to problems in their research proficiencies. They can not advance in their thesis study due to lack of proficiency. There is a need for teaching research methods again (AD6)

In conclusion, the causes of student attrition can be summarized under organizational factors and personal factors. Relation with advisor and permission from job were the most frequent organizational factors. On the other hand, frequently stated personal factors were absenteeism, familial conditions, and transfer to other universities.

According to observations and perceptions of the graduate school administrators, personal factors were more dominant on student attrition than organizational factors. These causes would also result in negative consequences. For this reason, examination of consequences of student attrition had a significance.

4.7.3.4 Theme of Perceptions of Attrition Consequences

Researcher asked question to graduate school administrators about student attrition consequences. Responses showed that consequences could be divided into social consequences and individual consequences. Waste of money, academic loss, economic loss, lack of experts, and qualified staffing problem drew attention as social consequences. Frequent individual consequences were time and energy loss while others were lack of diploma and negative effect on promotion. Table 4.27 presents subthemes and frequent codes.

Table 4.27

Subthemes and Frequent Codes for Attrition Consequences

Subthemes	Frequent Codes	Frequency
Social		10
Individual		20
	Time loss	8
	Energy loss	8

In terms of social consequences, there was not a common tendency. Each administrator emphasized a different dimension. AD4 showed qualified staffing problem, expertise training problem, and limitations on research as consequences. AD3 explained macro-level consequences as follows:

> If Graduate School of Educational Sciences has many graduates, then it becomes more powerful. On the contrary, we talk about weaker graduate school. On the other hand, other institutions have negative consequences. To illustrate, a school will lack an expert. This is also valid for the society. The rate of Master and PhD graduate in European Union is too high while this rate is too low in Turkey. If there is more expert and Doctor in our country, this is an advantage. Student attrition is a loss with all sides and gives harm to all stakeholders (AD3)

In terms of individual losses, energy loss and time loss were frequently stated consequences. In addition, lack of diploma, negative effect on promotion, barrier for organizational culture, loss of labour force, and academician and student frustration were other consequences. AD5 evaluated student attrition as an energy loss while AD3 perceived it as effort, time, and energy loss. On the other hand, AD6 stated negative effects of attrition on motivation of newly approved graduate students. AD8 pointed out that student attrition is a barrier for formation of organizational culture and might be resulted in loss of labour force and academician and student frustration.

To summarize, student attrition had some negative consequences in terms of social and individual aspects. Social costs were related to economic and academic consequences while individual costs were energy and time loss. To solve attrition causes and to deal with negative consequences, attrition solutions would have importance.

4.7.3.5 Theme of Perceptions of Attrition Solutions

Researcher asked question to graduate school administrators about recommendations to solve student attrition problem. Macro-level recommendations, university-level recommendations, and individual-level recommendations were considered. Financial support among macro-level recommendations drew attention. University-level recommendations were categorized as course content, faculty, and advisor. The least number of recommendations was related to individual-level ones. Table 4.28 depicts subthemes and frequent codes.

Table 4.28

Subthemes and Frequent Codes for Attrition Solutions

Subthemes	Frequent Codes	Frequency
Macro-level		24
	Financial support	9
University-level		10
	Faculty	5
	Course content	3
	Advisor	2
Individual-level		2

As a macro-level recommendation, financial support was recommended almost by each administrator. AD7 underlined the necessity of financial support and material support. In addition to financial support, administrators also recommended more specific solutions. AD8 recommended quality-control mechanism. AD6 recommended flexible permission process for students in order to conduct more effective research. AD3 offered lateral transfer between universities in order to deal with student attrition due to long distance between school and job. AD1 talked about autonomy. Because of originality and uniqueness, his words were valuable and significant as follows:

> I recommend actually that graduate schools should have administrative and financial autonomy under the umbrella of the university. In other words, research resources should be used over graduate schools. If some of the universities are announced as research universities, they should be rewarded with extra resources. In this way, Doctoral students will get more projects and faster results (AD1)

By considering university-level recommendations, responses differentiated such that each participant concentrated on a dimension. To illustrate, AD1 focused more o n physical opportunities provided by organizations and recommended research material for Doctoral students. Moreover, AD2 underlined the importance of communication between student and academy. AD3 pointed out necessity of diversity in graduate programs and interdisciplinary programs. AD4 recommended flexible course program and working hours. Furthermore, the participants AD5 and AD6 highlighted importance of cultural and social activities. To illustrate, AD5 explained that if the universities achieve a social and cultural activity like activities of ERASMUS in which each student describes cultural aspects of the original country, then commitments of the students increase so that they stay in the graduate education.

Lastly, responses of administrators were based on individual-level recommendations. There were two recommendations which were professional development and healthy communication.

In conclusion, most of the macro-level recommendations were based on financial issues. University-level recommendations had a variety in which the ones related to course content, faculty, and advisor were remarkable. Finally, individual-level recommendations were the weakest ones such that they included only professional development and healthy communication.

4.7.3.6 Summary

The interviews administered to eight graduate school administrators showed that themes of the current study were generally related to each other. Experiences of graduate school administrators for most of the themes from graduate school procedure to attrition solutions could be evaluated as the bases of next themes. For the graduate school procedure, implementation of laws was an important duty. On the other hand, there were problems related to laws such as amnesty laws in graduate schools. Therefore, there was a parallelism between procedure and problems. Organizational causes for student attrition appeared as relation with advisor and permission from job while personal causes were absenteeism, transfer to other universities, and family issues like marriage. These factors were also based on problems in the graduate schools. To illustrate, amnesty laws were problematic conditions producing student attrition. By considering consequences of attrition, social consequences including academic loss, waste of money, economic loss, lack of experts, and qualified staffing problem and individual consequences based on time loss and energy lost drew attention. On the other hand, attrition solutions of graduate school administrators were different from attrition causes and problems except from relation with advisor. They recommended financial support, changes in course content, changes in structures of faculty, and individual-level issues although they did not mention these factors in procedure, problems, and attrition causes.

4.7.4 Results for Advisor

Eight advisors participated in the study. Table 4.29 represents the characteristics of the advisors. Most of them were at U6 University. Also, number of males were equal to number of females while engineering, medical, and educational sciences had same number of participant. In addition, the researcher gave pseudonyms for each advisor.

These nicknames ranged from V1 to V8. Codes and theme lists were presented in E4 section of Appendix E. The interview included questions related to relations, graduate education problems, attrition causes, attrition consequences, and solutions. These questions also formed the initial themes of the study. Moreover, sub-questions consisted of some of the initial sub-themes. On the other hand, some of the sub-themes, all of the codes, and all of the sub-codes were emerged from the content analysis. Table in E4 section presents the themes, sub-themes, codes, and sub-codes for the advisors.

Table 4.29

Characteristics of the Advisors

Advisors	Gender	University	Field
V1	Female	U5	Medical Sciences
V2	Female	U5	Medical Sciences
V3	Male	U6	Natural Sciences
V4	Female	U6	Engineering Sciences
V5	Male	U6	Engineering Sciences
V6	Male	U1	Educational Sciences
V7	Male	U1	Educational Sciences
V8	Female	U4	Social Sciences

4.7.4.1 Theme of Relations

In terms of the relation between student and advisor, researcher asked questions to eight advisors. Social relations and academic relations were visible. Table 4.30 represents subthemes and frequent codes.

Table 4.30

Subthemes and Frequent Codes for Relations

Subthemes	Frequent Codes	Frequency
Social relations		15
Academic relations		21
	Meetings	6

Social relations between student and advisor had many kinds of positive aspects. To name a few, empathy, social connections, mutual relations, tolerated behavior, colleague approach, and togetherness were some examples. V2 emphasized empathy, good relations, and mutual relations. Furthermore, V4 declared that she approached her students as they were her colleagues. Besides, V6 stated social connections and peer relations within activity invitations.

On the other hand, there were few negative aspects which were negative humor and reluctance of the students. V3 emphasized disappointment about volunteering as follows:

> At the last ten years, advisorship process refers to a disordered structure. Especially, Master and Doctoral education is based on volunteering in fundamental sciences. If you are a graduate student in these fields, the only alternatives for getting a job are universities and some of public institutions. Since positions in those places have become narrower, the students come to these departments in order to delay military or support from appointment opportunity if it is possible. Therefore, this condition is a barrier for student-advisor relationships (V3)

Related to academic relations, the most frequent response was meetings between student and advisor. In addition, articles, assignment, thesis studies, seminar, and interim reports are more specific responses. The meetings of V1 were based on article critique, homework, and selection of thesis topic. On the other hand, V7 concentrated more on progress in thesis studies. As a result, meetings can be evaluated as an umbrella term in student-advisor academic relations.

In conclusion, it was possible to see relations between student and advisor in two respects. The first one was social relations such that generally positive conditions like empathy and rarely negative conditions like reluctance were available. Secondly, academic relations were more based on procedural jobs from the courses to thesis meetings. In these relations, problems would be observed in different dimensions.

4.7.4.2 Theme of Graduate Education Problems

Researcher asked the question of problems faced in graduate education. There was not any pattern or common problem they stated. In other words, experiences of advisors in terms of problems differentiated from each other. However, the researcher of the study categorized their responses under seven headings: familial problems, finance, policies, student responsibilities, student expectations, departmental issues, and access to advisor. Table 4.31 demonstrates subthemes.

Table 4.31

Subthemes and Frequent Codes for Graduate Education Problems

Subthemes	Frequency
Familial problems	2
Finance	1
Policies	1
Student responsibilities	1
Student expectations	1
Departmental issues	1
Access to advisor	1
Total	8

To begin with familial conditions, marriage and having dependent child of the students were problems in graduate education. V4 declared marriage and having dependent as the attendance problems observed in graduate education. Secondly, financial conditions of the students were an important problem. V2 concentrated on financial problems that come with becoming older while V7 pointed out role of their jobs on absenteeism.

The third problematic condition was related to macro-level policies. V3 explained lack of academic positions, delaying military, and appointment as follows:

> Here, students from physics department left PhD program. I know them very well. The reason they leave is related to the fact that they are aware of uselessness of a Ph.D. degree after graduation. Academic position is not given even to Ph.D. graduates. CoHE began to promote fundamental sciences at undergraduate level. I wish they organize similar promotions at the graduate level. Otherwise, graduate education in fundamental sciences will collapse (V3)

Next, student responsibilities were the other condition that causes problems. V5 criticized his students since his students had lack of focusing and in-depth thinking. Moreover, V4 complained about being late for thesis defence. Besides, V7 were dissatisfied with students' lack of research formation, tendency to use maximum duration, and selecting a topic to late.

The fifth problem was related to student expectations. According to V3, students get dissappointed since they thought that completion of Masters or Ph.D. were unfashionable. Moreover, V8 underlined the importance of expectations of students related to good advisorship but students were unsatisfied in some cases.

The sixth problem was based on departmental issues which were mostly related to permissions. V1 complained about troubles of her students. Her students firstly chose a topic which is specific to prison conditions. However, authorities did not permit the students to collect data. After that, the advisor and her student changed sampling. The prison administration did not give permission. Lastly, they did other changes and were able to collect data after the third attempt.

The last problematic condition belonged to advisors. V6 did self-criticism and remarked that he was busy due to bureaucratic workloads, administrative duties, family responsibilities, and associate professorship file.

To sum up, the advisors experienced problems in seven main areas. They were familial conditions like marriage, finance like job seeking, policies related to academic positions, student responsibilities, lack of meeting of student expectations, departmental issues like permission, and access to advisor. Therefore, there would be a question mark about which ones could be a cause for attrition.

4.7.4.3 Theme of Perceptions of Attrition Causes

In order to draw attention to attrition causes, researcher asked a question to eight advisors. The causes could be categorized under organizational and personal factors. Faculty drew attention for organizational cause while attendance problem, delaying military, family, and finance were remarkable for personal causes. Table 4.32 respresents subthemes and frequent codes.

Table 4.32

Subthemes and Frequent Codes for Attrition Causes

Subthemes	Frequent Codes	Frequency
Organizational		10
	Faculty	4
Personal		35
	Attendance problem	8
	Delaying military	5
	Family	4
	Finance	4

By considering organizational factors, faculty were criticized in terms of non-availability in courses and lack of guidance. V6 pointed out faculty and program and told that lack of program quality and lack of faculty guidance pushed the students to other institutions. In addition to faculty, permission from institution, thesis completion duration based on departments' expectations, economic support, and lack of adequate employment were causes stated by advisor.

Under the personal factors on student attrition, attendance problem, delaying military, family, and finance were emphasized by more than one advisors. Therefore, they were common factors. Almost all of the participants stressed that the students not attending lectures left the school. The participants V1, V2, V3, V4, and V6 showed delaying military as a personal cause on student attrition. The participants V1, V4, V6, and V7 underlined the importance of familial conditions like marriage and having dependent child for student attrition. Lastly, finance was a cause to student attrition. The participants V1, V2, V3, and V5 emphasized the role of finance on attrition. The advisor A5 pointed out finance as follows:

> On the other hand, students who are no coming to lecture were occupied with seeking a job outside. They have a desire to have a profession. For this reason, they are preparing for exams selecting public staff or exams selecting academic personnel. I think they are not available in graduate education since they are looking for job. It is relaed to economic conditions (V5)

In addition to common factors, there were the least frequent responses like health problems, living in another city, lack of focus and lack of effort, and long time between course and thesis period. V8 stated that if the student left long time between course period and thesis studies, then the person would experience distrust and incompetence. On the other hand, V7 remarked that false intentions and low commitments of students were personal causes on student attrition.

In conclusion, the causes to attrition could be divided into organizational and personal causes. The advisor declared more personal causes than organizational causes. Faculty drew attention as an organizational cause while attendance problem, delaying military, family, and finance were frequently stated personal causes. In addition to these causes, looking at consequences would be beneficial.

4.7.4.4 Theme of Perceptions of Attrition Consequences

Researcher asked questions about the consequences of student attrition to eight advisors. The answers had a variety from disruptions in education to barrier for eager students. Each advisor had different opinions and perceptions. Table 4.33 depicts frequent codes

Table 4.33

Frequent Codes for Attrition Consequences

Frequent Codes	Frequency
Effort loss	5
Time loss	5
Total	21

To begin with, losses and breaking desires were negative costs of student attrition. V6 emphasized effort and time loss, loss of public resources, and desire of eager students as follows:

> First, the time passes and is wasted. Loss of effort in student attrition is making me upset. Ultimately, public resource is wasting since the students were trained for a time. We do not have a rich country. We tried to develop. Therefore, public resource should be in more fruitful. When the student left the organization, public resource and time become lost. They block more eager students. There is injustice (V6)

On the other hand, V7 stressed consequences from the lenses of institution, student, and faculty. In terms of institution, failure would increase so that investments on the institution would decrease. In terms of student, the student could not benefit from the opportunities of graduate education like extra money or promotion. In terms of faculty, academicians would experience time and energy loss. In addition, lack of practical reflections on life was the other negative consequence according to V3.

To conclude, consequences of student attrition were based on losses in some dimensions such that effort loss, time loss, resource loss, and practice loss. Therefore, bringing solutions to student attrition would be valuable to get rid of negative costs and losses.

4.7.4.5 Theme of Perceptions of Attrition Solutions

Researcher asked the questions related to attrition solutions to eight advisors. Change recommendations related to attrition solutions were gathered under macro-level solutions, university-level solutions, and individual-level solutions. Firstly, macro-level solutions were classified as finance, student selection policy, admission policy, societal structure, and philosophy of education. Secondly, university-level solutions included projects and other specific recommendations like contacts and course content. Lastly, individual-level solutions did not have a pattern such that advisor had different responses from volunteering to abroad experience. Table 4.34 demonstrates subthemes and frequent codes.

Table 4.34

Subthemes and Frequent Codes for Attrition Solutions

Subthemes	Frequent Codes	Frequency
Macro-level		5
	Finance	1
	Student selection policy	1
	Admission policy	1
	Societal structure	1
	Philosophy of education	1

Table 4.34 (continued)

Subthemes	Frequent Codes	Frequency
University-level		10
	Projects	4
Individual-level		17

First of all, macro-level solutions were based on finance. Tangible rewards, wages policy, different kinds of support, scholarship, and research assistantship drew attention. To illustrate, V2 recommended regular financial support per month. Another advisor, V5, emphasized scholarships for students both studying in experimental fields and studying in social sciences. On the other hand, the advisor A6 underlined the value of research assistantship. He stated that research assistantship is a motivation resource so that use of these positions should be more flexible especially for research universities.

By considering student selection policy, V3 criticized central student selection system based on multiple choice test technique and recommended that at least research universities could select the students themselves. He also stated that the community should have been given up opinion of gettin a job shortly after university. Furthermore, he brought solutions related to philosophy of education. He recommended contact with marketing, computer-weighted education, daily life practices, technology integration, and updated programs. In terms of admission procedure, changes in authority on open program and in being selective were other solutions under macro-level according to V5.

Secondly, university-level solutions were mostly related to course content and projects. V5 recommended to increase quality of seminars and organize public access thesis defences. V4 suggested that courses and thesis topics should have been compatible with needs of marketing. And finally, V1 declared that opening Master of Science program without thesis might be solution for student attrition. On the other hand, V8 recommended projects. She declared that training researcher as a part of projects might increase quality in graduate education. Similarly, V7 recommended projects based on master-apprentice relationship. In addition to course content and projects, there were more particular solutions. V6 also recommended a contract between student and department or faculty. He added that both sides could remember each other's responsibilities and expectations in this way.

Lastly, individual-level solutions focused more on cooperation between students and academicians. V4 recommended academicians to publish articles and paper together with their students. V3 recommended academicians to update themselves by considering new perspectives and initiate the students for more reading and problem-based thinking. He also recommended students to work volunterly and with love in graduate education. Furthermore, V8 offered advisors to become competent, patient, quiet, and empathic. Moreover, V4 stated abroad experience for academicians as follows:

> Secondly, the academicians also improve themselves. Firstly, they should go abroad in order to see how this job is performed in a foreign country. This country may be undeveloped country. In this way, they motivate themselves by saying we can do better. Even if this country is developed country, they may try to transfer system of that country to this country. In my opinion, international vision will be good (V4)

In conclusion, the advisors brought macro-level, university-level, and individual-level solution ways for student attrition. While macro-level solutions were more extensive from student selection policies to financial conditions, university-level solutions were more limited within emphasis on course content and projects. Besides, individual-level solutions were more academician-oriented.

4.7.4.6 Summary

The interviews administered to eight advisors depicted that experiences of advisors on the bases of themes from relations between students and advisor to attrition solutions were related to each other. To illustrate, thesis studies under the academic relations appeared also under the problems observed in graduate education due to lateness. Organizational causes were attributed mostly to faculty while personal causes were related to attendance problem, transfer to other universities, finance, and family issues like marriage. These factors were also based on problems in the graduate education. To illustrate, finance problem and family problems in graduate education showed itself as personal causes to student attrition. Consequences of attrition had a variety of responses from losses to the barrier for eager students. Lastly, attrition solutions of advisor were based on macro-level recommendations, university-level recommendations, and individual-level recommendations. Financial support under macro-level solutions depicted parallelism with problems in graduate education and attrition causes. Problems related to access to advisor and faculty as an organizational cause to attrition were mentioned as solutions. As a result, responses of advisor showed that themes showed consistency in themselves and personal factors were more dominant than organizational factors.

4.7.5 Conclusion of Interviews

The main purpose in interviewing process was to check attrition attributions of students and faculty. Student side included persistent and non-persistent students while faculty side referred to the organization including advisors and graduate school administrators. In order to decide on attributions, a cross-check was implemented. Firstly, the direct question of who is responsible was asked to students. In order to check the responses, codes coming from participants were also considered. The results of two approaches were consistent with each other.

By considering student side, most of the non-persistent students (N = 8) attributed attrition to organizational causes. Number of students attributing to organizational factors (N = 10) were a little more than the number of student attributing to personal factors (N = 8). By considering organization side, most of the graduate school administrators (N = 5) attributed attrition to personal factors while all of the advisors (N = 8) attributed attrition to personal factors. Therefore, number of academicians attributing to personal factors (N = 13) were much more than the number of academicians attributing to organizational factors (N = 2). In addition, two persistent students and one graduate school administrator found responsible both organization and student equally. Totally, 21 participants attributed student attrition to personal factors while 12 participants attributed student attrition to organizational factors. Table 4.35 summarizes attrition attributions.

Table 4.35

Attirion Attributions

Participants	Individual	Both	Organization
Non-persistent student	2	-	8
Persistent students	6	2	2
Graduate school administrator	5	1	2
Advisor	8	-	-
TOTAL	21	3	12

Starting graduate education was a theme for both non-persistent and persistent students. Desire to become academician was a general reason on starting graduate education for both non-persistent and persistent students. However, non-persistent students also showed completing Master of Science as a reason, which can be linked to non-idealistic target. Therefore, non-idealistic targets could be base for student attrition behavior. Furthermore, both non-persistent and persistent students experienced feeling fluctuations. However, diversity in positive feelings of persistent students were more than that of non-persistent students. This situation could also be associated with retention of persistent students.

Process and structure in graduate education was the second theme for the students. In common pattern, relation with advisor was a satisfying aspect for persistent students while it was a dissatisfying aspect for non-persistent students. Finance and relation with faculty were dissatisfying aspects for both persistent and non-persistent students while family support was satisfying area for both.

The third theme was student attrition causes. Relation with advisor, relation with faculty, and department were organizational factors stated by both non-persistent and persistent students. Distinctly, non-persistent students emphasized the role of job on student attrition. In terms of personal factors, responses of non-persistent and persistent students differentiated completely. Non-persistent student focused on thinking other possibilities and language skills while persistent students listed many personal factors from changes over time to family.

The fourth theme for student side was change recommendations. Macro-level recommendations of non-persistent and persistent students were similar to each other such that they recommended changes in admission procedure, financial support, foreign language, and abroad experience. However, their university-level and individual-level recommendations were different from each other.

By considering organization side, graduate school administrators concentrated on admission, teaching, administration, and graduation in graduate school procedure. The advisors focused on social and academic relations in student-advisor relationships. Implementation of laws drew attention for graduate school procedure while meetings were remarkable in student-advisor relationships.

Administrators referred to more dispersed problems in graduate schools like inadequate number of staffing, amnesty laws, and bureaucracy while advisors pointed out tidier problems in student-advisor relationships from familial problems to problems related to student responsibilities.

One of the common themes for both administrators and advisors was attrition causes. Administrators showed advisor and permission from job as organizational causes whereas advisors stressed only faculty as organizational cause. However, most of the general personal causes which were absenteeism, family, and finance were personal causes for both administrators and advisors. Distinctly, transfer to other university was stated by administrators while delaying military was emphasized by advisors.

The other common theme for organization side was consequences of student attrition. Administrators approached on consequences with more extensive perspective from academic loss to economic loss while advisors explained more limited consequences. The common point was that both administrators and advisor depicted energy and time loss as negative costs.

Lastly, attrition solutions were another common theme for administrators and advisors. Both administrators and advisors offered many macro-level recommendations. Financial support was common for both groups. They also presented university-level recommendations in which course content was declared by both administrators and advisor. In addition, administrators focused more on faculty while advisors underlined the importance of projects. Finally, individual-level recommendations of administrators were too limited such that only professional approach and communication were available. On the other hand, advisors had many individual-level recommendations to academicians and students.

To summarize, there are some common points on student attrition causes. Figure 4.8 demonstrates student attrition causes from the eyes of participants.

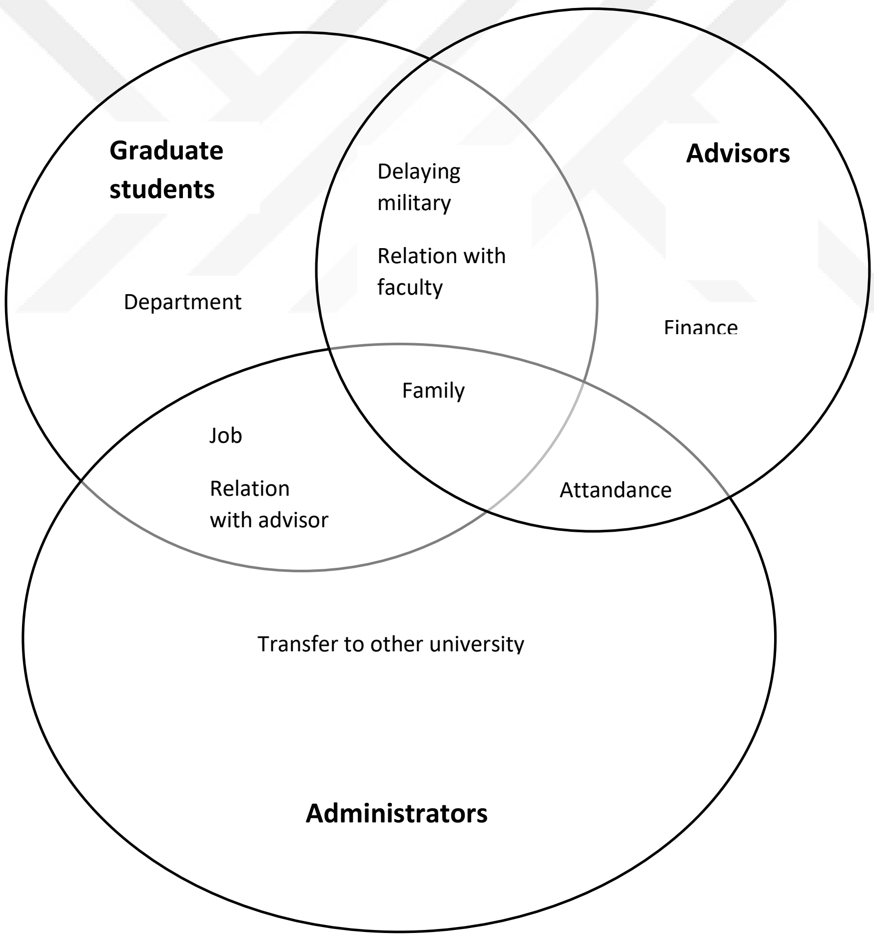


Figure 4.8 Common attrition causes

4.8 Student Attrition Rates

In the calculation of the student rates, dataset sent by Council of Higher Education was used. After HEC sent the data of research universities, the researcher calculated student attrition rates by dividing number of passive student to total number of students and multiplying it with one hundred. Dataset showed that student attrition rate for Master was 28.36% while that rate in PhD was 13.62% in 2015-2016. Student attrition rate for Master was 35.62% while that rate in Doctoral education was 17.90% in 2016-2017. Finally, student attrition rate was 30.28% while attrition rate in PhD was 14.55% in 2017-2018. Overall, attrition rates for both Master and Doctoral education were at an increase till 2016-2017 while there has been a decrease in 2017-2018. Moreover, attrition rate in Master education was greater than attrition in PhD for all semesters. Figure 4.9 depicted the attrition rates in terms of program level and semester.

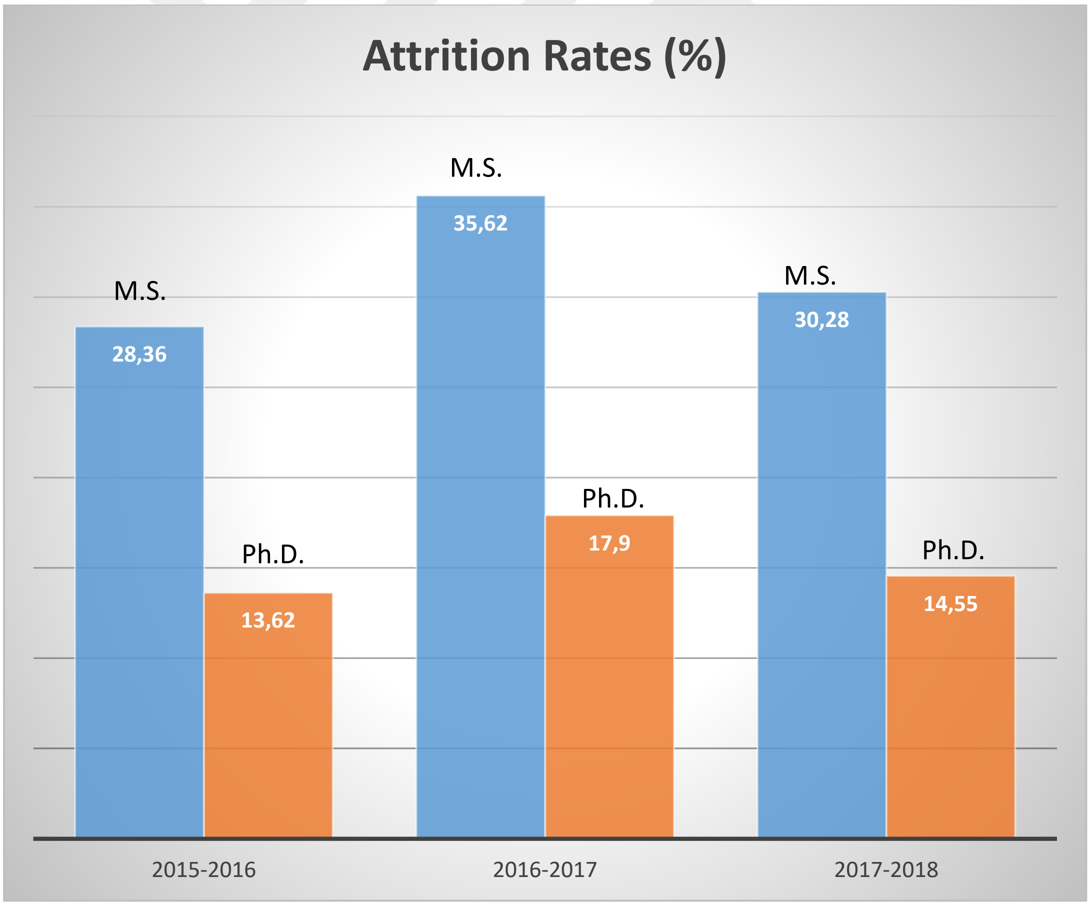


Figure 4.9 Attrition rates

By considering research universities separately for the 2017-2018 semester, the highest student attrition rate for Master was seen in U5 with the rate of 59.59% whereas the lowest rate for Master was in U1 with the rates of U8 with the rate of 0.84%. The highest student attrition rate for PhD was in again U5 with the rate of 36.26% whereas rate for PhD was in again U8 with the rate of 0.57%. Table 4.36 shows attrition rates of research universities in 2017-2018.

Table 4.36

Student Attrition Rates of the Research Universities in 2017-2018

University	Master of Science (%)	Philosophy of Doctorate (%)
U1	2.20	0.76
U2	16.33	5.22
U3	34.67	18.49
U4	17.66	3.74
U5	59.59	36.26
U6	42.12	11.22
U7	29.77	19.60
U8	0.84	0.57
U9	44.73	29.22
U10	34.89	22.20
Average	30.28	14.55

Even if the maximum and minimum attrition rates were left out, student attrition rate in Masters changed between 44.73% and 2.20% while student attrition rate in PhD changed between 0.76% and 29.22%. Research universities were selected by considering a variety of criteria so that it can be stated that these universities are among top universities of Turkey. In spite of this issue, these student attrition rates were too high for qualified universities. The researcher wonders what attrition rates mediocre universities had.

4.9 Summary of Results

The current study had three research questions. The first research question was related to investigation of relationship between student attrition and personal and organizational factors. Analyses showed that organizational factors and personal factors predicted persistence of students and their intention to leave school. However, personal factors were more dominant than organizational factors. Gender and program level drew attention as personal factors related to persistence while financial support was the statistically significant organizational factor related to persistence. On the other hand, personal factors and institutional and goal commitment predicted intention to leave whereas organizational factors did not predict intention to leave. In addition, institutional and goal commitment was found mediator variable for the both relationship between intention to leave and organizational factors and personal factors. The second research question focused on experiences of non-persistent students, persistent students, graduate school administrators, and advisors. Content analysis showed that there were both organizational and personal factors related to student attrition but personal factors appeared more active in student attrition. Further, although experiences of participants differentiated in terms of student attrition perceptions, most of personal factors like familial conditions and delaying military and relation with the advisor as an organizational factor were the common factors related to student attrition. Finally, the third research question examined the student attrition rates in terms of program level and semester. Student attrition rate in Masters was higher than attrition rate in Ph.D. as well as no trend among student attrition rates of the last three semesters was detected in spite of high attrition rates in all semesters. Student attrition rates changed between 0.84% and 59.59% for M.S. in 2017-2018 semester while it ranged from 0.57% to 36.26% for Ph.D. in 2017-2018 semester.

In order to seek a convergence or divergence between quantitative and qualitative procedures, the results were compared and contrasted. Correlational part of the current study showed that personal factors were more dominant than organizational factors in terms of the role on the student attrition. Through phenomenological part of the study, experiences of both student-side and organization-side showed that personal factors appeared more dominant than organizational factors in student attrition from the graduate education. Significant variables coming from correlational study like financial condition and gender emerged also in expressions of participants in phenomenological part. Therefore, two parts gave compatible results. In addition, document analysis showed that student attrition rate in Master were higher than rate in PhD. Further, in the correlational part of the current study, it was found that students in Master were more likely to become non-persistent. Therefore, results of document analysis and results of correlational study confirmed each other. Additionally, according to Lovitts (2001), if the student attrition rate is in an upward trend, then organization should be more responsible for the student attrition rather than the students or vice versa. Document analysis showed that there was not a trend so that organization appeared less responsible. In this point, a convergence emerged again. Like both correlational and phenomenological parts, document analysis showed that personal factors were more dominant. As a result, the current study gave coherent and consistent results by considering the findings coming from both quantitative and qualitative part.

CHAPTER 5

DISCUSSION

In the conclusion part, results of of the study were discussed by considering the context of the current research and other studies in the literature. Moreover, practical implications were provided by considering educational issues and higher education context. Lastly, recommendations were shared in order to both lead other studies and present solutions to problems in higher education.

5.1 Discussion of the Results

The current study which included both quantitative and qualitative methodologies showed that there are both personal and organizational factors influencing student attrition. In addition, personal factors appeared more dominant than organizational factors in student attrition from the graduate education. The process conducted through quantitative methodology showed that economic support as an organizational factor and gender and program level of the student as the personal factors predicted persistence of the students. Moreover, personal factors including age, semester, and past performance of the participants predicted intentions to leave while organizational factors including dimensions of the organizational climate did not predict intentions to leave. On the other hand, the procedure conducted through phenomenology depicted that non-persistent students, persistent students, graduate school administrators, and advisor had different experiences and perceptions related to student attrition. The non-persistent student and persistent student agreed on organizational factors such as relation with advisor, relation with faculty, and department while graduate school administrators and advisors gave similar responses on personal factors such as absenteeism, family, and finance. In addition, document analysis based on archival data showed that student attrition rate in Masters was higher than attrition rate in Ph.D. as well as increasing trend in student attrition rates was not observed despite high rates. By comparing and contrasting results of quantitative and qualitative methodologies, it can be stated that personal factors were more dominant than organizational factors on student attrition from graduate education.

5.1.1 Discussion of Scale Development Results

The current study conducted a pilot study to find out factor structure of the organizational climate scale. Exploratory Factor Analysis showed that the scale had six factors. After that, in order to verify factor structure of the scale and to test hypotheses of the study, data were collected through the main study. Confirmatory Factor Analysis proved six-factor structure of the organizational climate scale. Within this process, the researcher of the study developed organizational climate scale. The dimensions emerged with the factor analyses showed consistent results with the literature focusing on higher education. Borkowski (1988) investigated the role of university president on institutional climate and found that minority participation and institutional support were the key activities provided by university presidents. Moreover, Lee (2002) stressed the importance of influence of institutional climate on diversity and concluded that climate was essential in promoting degree attainment of diverse populations. By considering the current study, administrative climate as a dimension of organizational climate was represented with three items including democratic participation, supportive activities, and respect for minorities. Therefore, administrative climate of the scale matched up with the ideas in the literature.

Coso and Sekayi (2015) examined the relationship between institutional climate and academic career of engineering students. Their study showed that departmental culture was important in creating supportive climate in terms of teaching. Similar conceptualization was made by Duwve, Columbaro, and Poggiali (1992). They underlined the importance of empowerment in higher education. These findings related to departmental culture and empowerment were compatible with departmental climate arising in the current study.

Academic climate emerged in the current study was also consistent with the other studies. To illustrate, the concepts of "positive climate for learning" by Evans-Harvey (1995), "productive climate" by Duwve, Columbaro, and Poggiali (1992), "functions" by Manuela, Cecilia, and Joao (2014), "adequacy of performance focus" by Moran and Volkwein (1987), and "intellectual stimulation" by Sokol, Gozdek, Figurska, and Blaskova (2014) were equivalent to academic climate in the current study. The studies in the literature stated same ideas with different styles such that positive climate in higher education institution had an influence on academic development and performance of the students.

The current study found out three dimensions related to interactions as follows: social climate, advisor-related climate, and instructor-related climate. This finding gave both consistent and inconsistent results with the other studies in the literature. The studies in the literature generally combined relations with advisor, peers, and faculty member under interpersonal relationship so that the current study diverged from those studies. To illustrate, Manuela, Cecilia, and Joao (2014) fitted interpersonal relations on relations with colleagues, peers, departments, and directors. In addition, Musah et al. (2016) put forward "warmth" construct to describe department atmosphere including social relations. Therefore, the current study did not show a consistency with this type of studies in the literature. On the other hand, the literature had studied approaching social relations like the current study. Grobler and Grobler (2015) investigated organizational climate in higher education institutions offering open and distance learning education and found that interpersonal relationship based on peer relations was one of the six dimensions of organizational climate. Interpersonal relationship corresponded to social climate of the current study.

Study by Tiwari (2014) showed a dimension of superior-subordinate relations under organizational climate of higher education institutions. That dimension depicted a parallelism with the current study's dimension called as advisor-related climate and instructor-related climate. Before the pilot study, the researcher of the current study had claimed a five-factor structure combining relations with advisor and faculty members. However, dimensions of relation with advisor and relation with faculty member decomposed from each other after the factor analyses. The reason of this decomposition may be the context of Turkish graduate education. The graduate students in Turkey assign a different meaning on student-advisor relationships. Some of the students focused on the personal characteristics of the advisor (Seçkin, Aypay, & Apaydın, 2014) while some considered the informal relationships (Şahinoğlu, Karataş, & Saka, 2016). On the other hand, faculty members are generally evaluated as knowledge transmitters (Aydoğan, 2008; Gizir, 2005; Ürü Sanı, Çalışkan, Atan, & Yozgat, 2013). These different perceptions might separate interaction with advisor from the interaction with faculty members. As a result, dimensions of organizational climate scale were consistent with the findings of other studies in higher education literature.

5.1.2 Discussion of Results of Research Question 1

The results of the current study showed that economic support, gender, and program level predicted persistence of graduate students. While gender and program level were personal factors, economic support drew attention as an organizational factor. First of all, the studies in the literature focused generally on the relation between gender and student attrition. The current study found that male students have more probability of becoming non-persistent than female students. In this respect, this finding of the study was both inconsistent and consistent with the other studies in the literature. Castello, Pardo, Sala-Bubara, and Sune-Soler (2017) conducted a study to find out institutional and personal factors affecting university dropouts. The authors found that female were more likely to dropout than males. Similarly, study by Lott, Gardner, and Powers (2009) showed that females had more probability for student attrition than males. Therefore, the current study gave inconsistent results with the studies in the literature. On the other hand, Hassell, Seston, Eden, and Willis (2007) investigated the demographics of non-completers in the department of pharmacy. The researchers found that male students were more risky for dropping out than female students. Similar results were concluded in other studies showing that male students were less likely to graduate (Sauer, 1986; Williams, Harlow, & Gab, 1970). Moreover, Ertem and Gökalp (2016) conducted a document analysis by comparing student attrition rates of male and female students. The authors found that attrition rate of male students were higher than that of female students. As a result, finding of the current study was consistent with the other studies in the literature.

The reason why there are inconsistencies in student attrition in terms of gender may depend on the contextual factors. Characteristics of the higher education institutions may be one of these factors. To illustrate, Johnes and McNabb (2004) examined student attrition in United Kingdom and concluded that female students had less probability of voluntary dropouts from larger universities while the male students were more likely to dropout from universities including academically more qualified students. On the other hand, the reason of more probability of male students to become non-persistent student may be situational factors in Turkey. As the participants in the current study emphasized, laws in Turkey give a right to male graduates to postpone their military duties if they are registered in a graduate program. The studies in Turkey showed delaying military as either a graduate education problem or an expectation related to graduate education (Balcı, 2014; Çoruk, Çağatay, & Öztürk, 2015; Erkılıç, 2007). The other reason for this situation may be tendencies of female towards academic career. Study by Yirmibeşoğlu (2016) showed that average number of women academician in Turkey was higher than that in Europe. In conclusion, military duty and tendencies of female may be situational factors on why male students were more likely to quit education while female students were more likely to persist.

It is possible to examine gender differences on student attrition in terms of inequalities. Jakobs (1996) stated that women have disadvantages on access to higher education. For the current study, women were more likely to persist on graduate education. The reason women were more persistent than men may be related to link between access and persistence. Women facing difficult experiences in order to access to higher education may show more resistance or persistence to hold a degree.

Program level of the student predicted the persistence of the students. Those in Master of Science have less persistence than those in PhD education. This finding of the current study was parallel to findings of other studies. Study by Ertem and Gökalp (2018) showed that Master attrition rate of about 29% was higher than PhD attrition rate of about 15% for the universities in Turkey. The reason for this condition may be related to contextual factors in Turkey. Unemployment is a serious problem affecting all segments of society. By considering data of Turkish Statistical Institute (TUIK, 2016), there was 10.8% unemployment rate while this rate was 19.9% for the age group of 15-24. Therefore, the students may canalize themselves to graduate education to protect themselves from negative effects of unemployment. This undesired start may affect their persistence negatively in the first years of the graduate education. According to Stratton, O'Toole, and Wetzel (2007), decrease in the employment opportunities may be resulted in dropouts. In addition to employment, admission processes might be reasons for differentiation between Master and Doctoral education. First of all, application requirements for Master are easier and more flexible than those for PhD. In addition, quota left for Master is more than that for PhD. Moreover, regulations related to graduate education allow students to study in two Master programs at the same time. On the other side, differences between Master attrition rate and PhD attrition rate may be caused by differences of organizational behaviors in the first year of education. The literature has the studies finding more student attrition in the first years of the education (Bülbül, 2012; Golde, 1998; Lassibille & Gomez, 2008; Lott, Gardner, & Powers, 2009; Napoli & Wortman, 1998). The authors linked more attrition in the first years to either lack of academic and social integration or inadequate organizational commitment. To summarize, differences in persistence of Master and Doctoral students may be related to contextual factors and organizational behaviors like organizational commitment and academic and social integration.

Economic support as an organizational factor was related to persistence of the students. The current study showed that probability of becoming non-persistent student increases more for students having no support than students having research assistantship support while probability of becoming non-persistent student increases more for students having no support than students having scholarship or loan support. To summarize, support of research assistantship and support of scholarship or loan decreased the probability of becoming non-persistent student when compared to lack of support. This finding was compatible with the findings of other studies. Arifin (2018) studied the role of student support service on student persistence and attrition in open education context. The author found that financial problem was the third dominant factor on student attrition. Moreover, Metzner and Bean (1987) examined the undergraduate student attrition and found that finance had a negative effect on intentions to leave. In addition, the literature had studies showing that research assistantship and financial supports as scholarship and grants increased probability persistence of Doctoral Students (Holly & Caldwell, 2012; Wao & Onwuegbuzie, 2011; West, Gokalp, Pena, Fischer, & Gupton, 2011). As a result, findings of the current study related to research assistantship and scholarship mirrored the findings of international studies.

The reason why finance is so important for persistence of the students is related to educational expenses. Winston (1999) stressed that higher education is a place producing and selling educational services to the customers through business. According to Bair and Haworth (2004), problems related to economic and logistic opportunities are barriers to the progress of the students. In this respect, the students in higher education institutions need money and support from educational services to attain a degree. These educational services have a variety from tuition to the transportation. Especially, non-persistent students experience difficulties in affording their educational expenses and this process results in student attrition. Motlagh, Elhampour, and Shakurnia (2008) conducted a study in a medical university in Iran. Their study concluded that non-persistent students had to work more to afford life expenses. To sum up, affordability of life and educational expenses through financial supports has crucial importance for student persistence. Otherwise, non-affordability of educational expenses may be a cause for student attrition.

Socioeconomic status or inequalities in social class may be a determinant for financial conditions of the graduate students. Bakış, Levent, İnsal, and Polat (2009) found that one additional year onto father’s education increased 15% possibility of access to secondary education for boy students and 20% possibility of access to secondary education for girl students. In addition. According to Alon (2009), cycle of exclusion and adaptation linking hierarchy of social class to stratification in post secondary education escalates class inequalities. In this aspect, inequalities in the access to financial opportunities or resources may be other reason for persistence in graduate education.

The structural model depicted that personal factors including age, semester, and past performance of the student predicted intentions to leave while organizational factors including dimensions of the organizational climate did not predict intentions to leave. In addition, institutional commitment both predicted intentions to leave and was predicted by organizational factors and personal factors. Further, both personal and organizational factors predicted intentions to leave through institutional and goal commitment. All of these findings were consistent with the findings of the studies from the literature. By considering personal factors on intentions to leave, the current study had similarities with the other studies. To illustrate, age (Castello, Pardo, Sala-Bubare, & Sune-Soler, 2017; Fike & Fike, 2008; Lott, Gardner, & Powers, 2009), semester (Bank, Slavings, & Biddle, 1990; Ishitani, 2003), and past performance (Aulck, Velagapudi, Blumenstock, & West, 2016; Cabrera, Nora, & Castaneda, 1993; Ethnigton, 1990; Ishitani, 2006; Kahn & Nauta, 2001; Seidel & Kutieleh, 2017; Xu, 2014) are the personal factors which the studies in the literature linked to student attrition. This kind of studies in the literature showed that demographic variables such as age were studied less in recent years while individual characteristics like performance were the topics studied more in recent years. It can be stated that there has been a differentiation in research trend of the student attrition.

Institutional and goal commitment were key factor between personal and organizational factors and intentions to leave. It mediated the relationship between these factors and intentions to leave. Moreover, it was the strongest predictor of intentions to leave. In the literature, there are many studies showing institutional and goal commitment as the strongest variable for intentions to leave and intention behavior (Cabrera, Nora, & Castaneda, 1993; Mentzner & Bean, 1987). Therefore, the current study added more evidence on the relationship between institutional and goal commitment by presenting consistent findings with the literature. In conclusion, the literature on student attrition had a common idea such that increase in institutional and goal commitment increases intentions to persist and persistence of the students or vice versa.

The relationship between commitment and student attrition has been discussed since the mid-20th century. Tinto (1975) put forward a longitudinal model for student attrition, in which students enter the system with backgrounds and initial commitments and experience some events. Experiences of the students shape their institutional and goal commitments which results in either attrition or persistence. Pascarella and Chapman (1983) tried to validate Tinto's this model by developing and testing a model. Their study showed that institional and goal commitment which were the strongest predictors of voluntary withdrawal decisions had equal direct effects on persistence. On the other hand, study by Metzner and Bean (1987) concentrated on non-traditional student attrition. They found that dropout behavior was predicted by intent to leave whereas goal commitment predicted neither intent to leave nor dropout. These findings of the authors were contrary to the general idea in the literature.

Mallette and Cabrera (1991) did a classification among withdrawal behavior of non-persistent students as follows: transfers, stopouts, and dropouts. The authors conducted a study to discriminate the students in terms of these behaviors. The study depicted that institutional commitment differentiated persisters from dropouts while both institutional and goal commitment differentiated persisters from transfers. The other study was conducted by Napoli and Wartman (1998) to find out psychosocial factors related to early departure from higher education institutions. The authors concluded that institutional and goal commitment had an impact on persistence of the students. To sum up, there is a close link between commitments and persistence.

Institutional and goal commitment had a criterion role in addition to predictive role as the current study showed that personal and organizational factors predicted institutional and goal commitment. The present study gave consistent results with the literature. Cabrera, Nora, and Castaneda (1993) developed a model based on relationships persistence, intentions to persist, commitments, academic and social integration, GPA, financial attitudes, and support from family and friends. Considering personal-oriented factors, that model looked like the model of the current study. The study of the authors found that GPA and intent to persist predicted persistence while intent to persist was predicted by institutional and goal commitment. In addition, institutional commitment was predicted by academic integration, social integration, and support from family and friends while goal commitment was predicted academic integration and support from family and friends. Further, Strauss and Volkwein (2004) found that only mission as an organizational characteristics and personal characteristics such as age, marriage, and becoming member of an underrepresented population predicted institutional commitment. As a result, there were personal and organizational determinants of institutional and goal commitment in the literature.

More recent studies about student attrition are based on the new models investigating causal effects between endogenous and exogenous factors which derived from the previous models. Kerby (2015) proposed a new model on voluntary withdrawal decisions and found that institutional commitment predicted sense of place which also predicted voluntary dropout decision. Similarly, study by Davidson, Beck, and Milligan (2015) showed that institutional commitment and academic conscientiousness were related to college persistence. On the other hand, there are more contemporary studies concentrating on sense of belonging rather than institutional commitment. Tinto (2017) reproduced the term of sense of belonging by combining engagement and motivation. The author also emphasized that sense of belonging was linked to persistence of the students. Hausmann, Schofield, and Woods (2007) found that sense of belonging predicted both institutional commitment and intentions to persist. Further, intentions to persist were related to institutional commitment. Similar conceptualization was used by Dewberry and Jackson (2018) in order to develop a structural model on intentions to leave and actual dropout behavior. Their study showed that intentions to quit predicted actual dropout behavior whereas sense of belonging predicted neither intentions nor dropout behavior. In conclusion, studies in the literature showed that there was a close link between organizational commitment and goal commitment, intentions to leave, and attrition behavior.

5.1.3 Discussion of Results of Research Question 2

Student attrition had different meanings for non-persistent students, persistent students, graduate school administrators, and advisors. To begin with, non-persistent and persistent students showed desire to become an academician and professional development as the reason for starting graduate education. This finding was consistent with the other studies in the literature. Alabaş, Kamer, and Polat (2012) investigated graduate education reasons of teachers and found that desire to be an academician was the most frequent singular reason on starting graduate education. Kahraman and Tok (2016) conducted a research to learn opinions of graduate students and found that most of the students started graduate education due to academic career and professional development. Moreover, study by Aslan (2010) showed that purposes of the students in graduate education were professional development, scientific research, getting promotions, and following trends which were also emerged reasons or targets in the current study. The reason why non-persistent students left school although they had a desire to become academician may be related to recognition of many graduate students in the system. By comparing the number of graduate students and the number of newly opening academic positions, it can be stated that there is a huge gap. Therefore, the students may have been pessimist about academic positions as time passed by and made a decision to leave. On the other hand, the current study dissociated from other studies in a way. Non-persistent students showed completion of Master education as a reason. This reason was coherent with the nature of student non-persistence since it was a non-idealistic target and a remark to leave the education.

Non-persistent and persistent students declared many satisfying and dissatisfying areas related to graduate education. Considering common patterns, relation with advisor was a dissatisfying area for non-persistent students but it was satisfying for persistent students. Finance and relation with faculty were remarked as dissatisfying areas for both groups of students while family support was only common satisfying area for all students. Most of the dissatisfying aspects showed themselves as causes to student attrition. According to students, relation with advisor, relation with faculty, and department were organizational causes while thinking other possibilities, language skills, changes over time, and family were some of the personal causes. On the other hand, graduate school administrators stated advisors and permission from job as organizational causes on student attrition while advisors emphasized only faculty as organizational cause. In addition, absenteeism, family, finance, transfer to other university, and delaying military were personal causes declared by administrators and advisors. These findings were compatible with the results of other studies in the both international and national literature.

Smith, Maroney, Nelson, Abel, and Abel (2006) conducted a study in doctoral programs and found that lack of intellectual stimulation and communication in the relationship with supervisor was one of the most important motives for student attrition. In addition, study by Zeng, Webster, and Ginns (2013) showed that frequency and quality of meetings between advisors and students in addition to supportive departmental climate were linked to satisfaction levels and attrition rates. Allen and Dorry (2001) conducted research and found results related to thinking of other possibilities. They concluded that non-persistent student made their decisions intentionally to prioritize more pleasant aspects of their personal lives. Permission from job and balancing school and job were two important issues in student retention. In this respect, study by McAlpine, Paulson, Gonsalves, and Jazvac-Martek (2012) showed that personal life and academic life of the students were interweaving so that the students gave up education due to unbalancing personal life and academic life. Similarly, Castello, Pardo, Sala-Bubare, and Sune-Soler (2017) conducted research to examine personal and organizational factors on dropout from doctoral programs. Their study depicted that balance between work and doctoral studies was the most important motive for dropping out of doctoral studies. Moreover, study by Beer and Lawson (2017) concentrated on student attrition problem in higher education and pointed out that work, family, personal factors, academic support, and finance were respectively the first five of the most important reasons for student attrition. In conclusion, the current study served literature by presenting parallel results.

In addition to international studies, studies in Turkey concentrated on satisfaction levels and dropouts in higher education. Bülbül (2012) investigated dropout reasons and solutions in higher education institutions in Turkey. The author found that dropout students emphasized academic integration, social integration, financial problems, lack of commitment, and family as reasons for dropout while academicians stressed financial problems, family, and lack of commitment as the reasons. Moreover, Çoruk, Çağatay, and Öztürk (2016) showed delaying military as the reason for non-persistence. Additionally, they found that absenteeism was one of the most frequent problems affecting procedure in graduate schools. Özmen and Aydın Güç (2013) conducted a research to find out difficulties in Doctoral education. The authors found that the Doctoral students experienced the most serious difficulties in relation with advisor. Further, Aypay, Çekiç, and Boyacı (2012) examined student retention through a qualitative research in which they interviewed with both persistent and non-persistent students. The authors found the students had criticism about the relation with faculty. Additionally, the students declared that family support, social integration, and job opportunities had crucial significance in order to prevent student dropouts in higher education. Bozpolat (2016) focused on graduate education with some metaphorical perceptions and found that family was a metaphor describing improvement of students in graduate education. Başer, Narlı and Günhan (2005) investigated problems of teachers enrolling in graduate education and found that the teachers had problems related to work and graduate schools. Problems related to work included permission from job and unsuitable school timetable while problems related to graduate school included time and attitudes of faculty. In the literature, there are studies describing more particular dissatisfying areas or difficulties in graduate education. To name a few, problems in advisor selection, interest of advisor, guidance of advisor permission from school administrators, problems in research permissions, language skills, and course content were frequently studied topics (Alabaş, Kamer, & Polat, 2012; Sayan & Aksu, 2005;

Sezgin, Kavgacı, & Kılınç, 2011). To summarize, the current study was convergent with other studies in Turkish context.

The current study had an interesting finding related to advisors. Like the other studies in the literature, relation with the advisor drew attention as cause for student attrition in the study. Although non-persistent student, persistent students, and graduate school administrators emphasized importance of relation with advisor in student attrition, advisor did not mention this relation for student attrition. The reason for this may be workloads of advisor. Karakütük, Aydın, Abalı and Yıldırım (2008) conducted a study and concluded that number of thesis per advisor was a serious concern for graduate education. Similarly, Karakütük and Özdemir (2011) investigated Faculty Development Program (ÖYP) and found that number of academician was not adequate to implement graduate education activities. In conclusion, inadequate number of academician increased the number of student per advisor so that workloads of advisor increased.

Graduate school procedure showed up with processes like admission, teaching, and administration. Some problems were observed in the implementation of these procedures from laws and regulations to student affairs. This finding was also visible in other studies in the literature. Çoruk, Çağatay, and Öztürk (2016) investigated registration and attendance problem in graduate education and detected some problems observed in graduate schools. Problems in implementation of amnesty laws, confusion of documents in student registration, technical problems, and lack of staffing were some examples to problems. Similarly, Karakütük, Aydın, Abalı, and Yıldırım (2008) conducted a research in graduate schools in order to examine graduate education problems. The authors found that most of graduate school administrators complained about amnesty laws, budget of graduate schools, student quota, informing graduate school in terms of functionality of courses, student support services, authority of graduate schools, number of academician, and long distance to the city or district in which university is placed. Furthermore, Akbulut, Şahin, and Çepni (2013) investigated problems observed in Doctoral thesis procedure and found that the student had concerns about determination of thesis monitoring committee, guidance of committee, interim reports, effectiveness of interim reports, and contribution of reports on thesis.

The reason why graduate schools have problems may be related to bureaucracy and centralized structure in higher education. Sözer et al. (2002) conducted a research to evaluate a graduate schools and concluded that students were not satisfied with registration due to bureaucratic structure and access to thesis and documentation services. On the other hand, both negative aspects and positive aspects of centralized structure of Higher education system in Turkey were emphasized in many studies in the literature (Çelik & Gür, 2014; Mizikaci, 2003; Özer, Gür, & Talipcan, 2011). To sum up, graduate schools had specific procedures in which administrators faced with problems such as amnesty laws, student registration, and thesis monitoring in implementation process which were based on bureaucracy and centralized structure.

Relations between students and advisor indicated that advisors had a relation with their student both academically and socially. Moreover, advisors declared many problems from familial conditions to student responsibilities. They also underlined the importance of guidance and meetings. All of these conclusions were parallel to the conclusions of other studies in the literature. Seçkin, Aypay, and Apaydın (2014) conducted a study in order to learn opinions of graduate students about academic mentorship. The authors found that ideal mentorship consisted of guidance, relationship, honesty, relaxed personality, time allocation, and student recognition. Similar construct was emerged in the study by Sayan and Aksu (2005). They found that problems observed in relation between student and advisor were based on academic and social issues. Academic issues were lack of guidance, difficulties in determination of time of academic meetings, and lack of time allocation while social issues were communication problems, uncomfortable relation, and lack of help. In the other study, Çakıcı (2006) found that both advisors and students criticized each others in terms of their responsibilities such that student accused of advisor because of lack of research proficiency while advisors blamed students due to lack of research methods. In conclusion, student-advisor relationship was based on social and academic issues but these relationships included some problems.

The reason of problems in relationship between advisors and students may be related to ethical rules. Summak, Summak, and Balkar (2010) stated that guidelines and regulations may prevent conflicts between advisors and students. In this aspect, they recommended committees to determine and follow advisorship standards. Similarly, Demir and Ok (2001) remarked institution policy and standardization about academic advisorship. On the other hand, international literature focuses on advisor training. Lycke, Hoftvedt, and Holm (1998) investigated education supervision in Norway and found that training programs both motivated supervisors and improved the structure of teaching program. Kiley (2011) concentrated on research supervisor training in doctoral education. The study showed that seminars and workshops consisting of clear expectations, monitoring, roles and responsibilities of supervisors, candidates and institutions, and policies were beneficial for professional development of advisor and student achievement. Mannson and Myers (2012) investigated mentoring relationship between doctoral student and advisor. They concluded that behaviors of appreciation, tasks, protection, courtesy, humor, and goals were effective in mentoring relationships. In summary, putting rules or standards and advisor training may solve problems in relationship between students and advisors.

In addition to attrition causes and problems in graduate education, both graduate school administrators and advisors emphasized the negative consequences of student attrition. To name a few, energy and time loss, economic loss, waste of resources, decreases in research capacities were example to negative costs of student attrition. Consequences stated in the current study were similar to other studies in the literature. Wells (2007) concluded that consequences of attrition were visible as psychological effect of failure on student, lack of financial lost on institutions, and lack of expertise on profession. Moreover, O’Keeffe (2013) stated that consequences of student attrition for universities were based on lost of revenue and misappropriated usage of resources. In conclusion, student attrition had negative costs as it was declared in the literature.

By considering irregularities in starting graduate education, problems and dissatisfying areas observed in graduate education, all negative sides and causes of student attrition, and negative consequences of attrition, the participants stated recommendations and solutions in macro-level, university-level, and individual-level. To name a few, changes in admission process, orientation programs, financial support, foreign language, abroad experience, updates on course content, increase in projects, re-organization of faculty, support by advisor and faculty members, professional development, and communication were recommended. All of these recommendations were similar to recommendations of other studies in the literature. In the study of Bülbül (2013), participants suggested advisor support, faculty and administration support, and family support to solve dropout. Moreover, Özmen and Aydın Güç (2013) offered advisor support, financial support, and improvement of foreign language for graduate students. Sevinç (2001) suggested improvement of human capital in addition to financial aids. Aypay, Çekiç, and Boyacı (2012) recommended faculty members to use student-centered teaching methods and universities to organize orientation programs. Kahraman and Tok (2016) had recommendations related to course content such that students demanded courses based on practice rather than theory. Also, Bülbül (2003) conducted a research to examine opinions of academicians about admission procedure and found that the present system had negative conditions. The authors recommended decrease in the weighted score of central exam and increase in the weighted score of written and oral exams. To summarize, the current study was compatible with the literature in terms of recommendations.

5.1.4 Discussion of Results of Research Question 3

Document analysis part of the study revealed that attrition rates changed in terms of program level and the semester. Rates in Masters was higher than those in Ph.D. In recent semesters, student attrition for Masters and Ph.D. were respectively about 30% and 15.00%. Along with seriousness in student attrition, these rates stayed lower than rates in U.S. According to meta-synthesis study of Bair and Haworth (2004), doctoral dropout rates changed between 31.4% and 82%. In addition, there was not an increasing or decreasing trend in student attrition rates. However, there was a serious increase from 2015-2016 to 2016-2017. The reason of this increase may be related to macro-level policies. Recently, the government legislated an amnesty law with the number of 7543 in May 18, 2018. Previously, the amnesty laws with the numbers of 6559, 6353, 6111, 5806, and 5316 were implemented between 2005 and 2014. These laws stated that a student leaving graduate education for any reason except from terror have a chance to come back. Therefore, the students might think that even if they quit graduate education, they would come back later. The other macro-level policy was related to number of universities. Since 2005, there has been heavy increase in the number of universities. Each city has university while large districts have many universities in Turkey. Therefore, opportunity for student mobility among universities might play a role on increasing of student attrition rates.

5.1.5 Discussion of Theoretical Results

Experiences of non-persistent students, persistent students, graduate school administrators, and advisors were considered from starting of graduate education to completion of a degree or decision to give up. For the student-side, responses related reasons on starting graduate education, dissatisfying and satisfying areas, and change recommendations reflected the idea behind student attrition causes. For organization-side, graduate school procedure and problems, advisor relations with students and problems in these relations, consequences of attrition, and solutions also depended on the causes on student attrition. In addition to this logical coherence or sequence, the participants attributed student attrition to some factors.

According to Attribution Theory, the people bring some causal explanations for their failure of excuses. By considering student-side, student attrition was attributed to organizational factors. On the other hand, organization-side attributed attrition to personal factors. This conclusion was consistent with the conclusion of the other studies. Gardner (2009a) conducted a study including both faculty and students from six fields. The faculty attributed attrition mostly to lack of student ability, focus, and motivation while the students attributed to departmental conditions such as lack of advising and personal factors including marriage, children, and family responsibilities. Further, causes emerged under personal factors and organizational factors were similar to ones revealed in the current study. In addition, mismatch between values of students and missions of departments as a cause for student attrition was attributed to departmental culture by the students (Gardner, 2009b; Manathunga, 2005). As a result, student-side and organization-side might attribute attrition to different factors.

The current study showed that only non-persistent students attributed attrition to organizational factors. Persistent students, graduate school administrators, and advisors attributed to personal factors. This finding was similar to finding of Barelson (1960, as cited in Lovitts, 2001). Lovitts (1996) presented an evidence for responsibility for attrition from Barelson (1960) who found that graduate deans, faculty, and recent Doctoral recipients attributed responsibility of attrition to non-persistent students due to lack of ability, lack of motivation, and lack of stamina. Non-persistent student showed lack of finance and disappointment about graduate study as university's responsibility of attrition. This conclusion was also compatible with the Actor-Observer Model of Jones and Nisbett (1971). The authors stated that situation was featured by actors (non-persistent students for this study) while personal dispositions of actors were emphasized by observers (persistent students, administrators, and advisor for the current study).

There were two surprising findings in the current study. Firstly, two non-persistent students gave responsibility for attrition to themselves. This detail was similar to study of Herman (2011). The author examined barriers to success through attribution theory and found that attributions of Doctoral students were mostly based on personal obstacles such as family commitment, academic challenges, and financial limitations. Secondly, although faculty and personal factors were shared themes as student attrition causes by all groups, relation with advisor was emphasized by non-persistent students, persistent student, and graduate school administrators but advisors did not mention this issue. These surprising results may be related to "Person-blame" and "System-blame" ideology of Guimond, Begin, and Palmer (1989). This ideology was based on socialization process in which self-blame and system-blame causal attributions resulted in. Self-blaming of students and system-blaming of advisors may produce these surprising results in the current study.

When viewed through the lenses of Bio Ecological Theory, the findings of the current study were compatible with the idea behind the theory. Personal factors on student attrition like family referred to bio-side of the theory while organizational factors on student attrition like relation with advisor referred to ecological-side of the theory. By considering layers of the theory, the current study gave clues about the context the study was conducted. In the microsystem, the graduate students were in relation with family, faculty, advisors, and peers. These relations shaped their satisfaction levels and attrition decisions. In the mesosystem, interaction among elements around the graduate students affected development of graduate students. Interaction between peers and faculty and interaction between advisor and faculty determined student attrition. In the exosystem, societal conditions like policies and media influenced student attrition. Right to delay military, financial issues, and amnesty laws were some of the policies affecting student attrition. In the macrosystem, cultural and social interchanges were related to process and structure in graduate education. Organizational climate predicted intentions to leave through commitment as well as effect of departmental culture on student attrition. Finally, in the chronosystem, changes over time had an impact on student attrition. Increases and decreases in student attrition rate for the last three semesters and changes in decisions of the students were examples to change over time. Additionally, feeling fluctuations of graduate students may be an indicator for chronosystem. As a result, the findings of the current study presented coherent results with Bio-Ecological Theory.

5.2 Implications

Higher education system in Turkey has been experiencing many structural reforms in recent years. Graduate education has taken an important place in this change process. To name a few, PhD scholarship for prior fields, scholarship for students attending Scientific Research Projects, and classification of ten universities as research universities were useful attempts to improve quality of graduate education. However, reforms implemented in structural levels may not be a solution for the sustainable graduate education. Education has two main goals: i) to reduce disparities in access to education and ii) to reduce disparities in educational quality (Hanushek & Wösmann, 2007). The former is related to quantity of education while the latter focuses on quality of education. However, these are not sufficient in post-truth era of education. Quantity of education and quality of education look like two ends of a bridge. The road on the bridge is open to positive byways as well as negative byways. Therefore, keeping the people on the true path has gained more significance in post-truth era of educational research. In this aspect, researcher of the current study presents implications for research, theory, and practice by considering results of the study.

In terms of the research, the current study had an attempt to try to close a gap in literature by conducting a study related to student attrition in several aspects. First of all, the current study examined student attrition in the level of graduate education while the other studies mostly focused on school dropouts. Secondly, problems in graduate education were described in unidimensional ways such as infrastructure problems, inadequate number of academician, and lack of resources. However, the current study approached graduate education in a multidimensional way. Specifically, reasons on starting graduate education, process and structure in graduate education, causes and consequences of student attrition, procedures in graduate schools, and advisors workloads brought a multidimensional frame for graduate education. Thirdly, the current study examined student attrition or dropout by setting relationships between student attrition and personal and organizational factors. Rather than organizational factors, personal factors were found stronger in relation with student attrition. Fourthly, the current study brought in a scale assessing organizational climate in graduate education. The results showed that this scale was valid and reliable in the Turkish context. Therefore, the scholars in higher education field may administer this scale in their studies. Fifthly, both quantitative and qualitative research designs were used in the study so that there was a chance for cross check whether results converged and diverged. The mixed-model showed that results generally converged such that personal factors were found more dominant on student attrition than organizational factors. Finally, the current study gave an opportunity to investigate student attrition in wider range of perspectives. Therefore, not only non-persistent students but also persistent students, graduate school administrators, and advisors were invited to participate in the study. This diversity may provide a chance to analyze student attrition problem in a more realistic way. Moreover, it may play a catalyst role on bringing together higher education stakeholders on common mind. To summarize, the current study pointed out role of personal and organizational factors on student attrition from graduate education. In this aspect, all of these implications may provide a starting point on remedying the process and structure of graduate education.

With regard to theory, the current study showed that *Bioecological Theory* and *Attribution Theory* were beneficial to better examine student attrition in graduate education context. All layers of Bio Ecological theory were covered by personal and organizational factors on student attrition. The current study was the first attempt to classify attrition reasons as personal factors and organizational factors. Bio-side of theory corresponded to personal factors while ecology-side of the theory was based on organizational factors. Family support as a segment of microsystem, interaction between peers and faculty members as a segment of mesosystem, implementation of amnesty laws as a segment of exosystem, organizational climate and commitment as a segment of macrosystem, and increases and decreases in attrition rates as a segment of chronosystem coincided with the core idea of Bio Ecological Theory. On the other hand, the current study gave wealth results for Attribution Theory. The current study showed that student-side including non-persistent students and persistent students attributed student attrition to organizational factors whereas organization-side consisting of graduate school administrators and advisor attributed it to personal factors. Most of the personal factors and only one organizational factor (relation with faculty member) were attributed by all sides. In addition, relation with advisor was attributed by student-side and only graduate school administrators from organization-side. Advisors did not attribute student attrition to themselves. Further, none of advisors attributed to organizational factors while two of graduate school administrators attributed attrition to organization. All of these results may imply that advisors were unaware of specific reasons of student attrition. In this attribution continuum, non-persistent students were placed in one end while advisors were placed in other end. This condition has a question mark. In the middle of continuum, persistent students and graduate school administrators were placed. Graduate school administrators were closer to advisor such that this was a normal condition for organization-side. However, distance between non-persistent students and persistent students were remote. In other words, persistent students were closer to organization-side in terms of attributions on organizational factors. This discrepancy between non-persistent and persistent students may be implied as a poor understanding of student attrition causes.

With respect to practice, the current study had implications related to role of personal and organizational factors on student attrition. First of all, the current study revealed role of personal and organizational factors on student attrition. In this aspect, policy-makers having authority on administration and governance of higher education may consider these factors. To illustrate, persistence of students in graduate education may be provided with economic support. Also, the current study showed that organizational climate in graduate education had constructs of academic climate, social climate, administrative climate, departmental climate, advisor-related climate, and instructor-related climate. Administrators, faculty members, and advisors in higher education institutions may care about these issues if they form a positive climate in their department. In order to decrease student attrition rates especially in Master of Science, more sustainable strategies may be implemented. Further, these strategies may be organized by considering characteristics of the students such as gender, age, and semester. In addition, the current study showed past performance as an important indicator for intentions to leave. Therefore, GPA may continue to stay an important criterion in admission process. Institutional and goal commitment was found as a key factor in the current study. The higher education institutions may organize activities in order to keep commitments higher. The other important implication was related to academician training policies. According to the results of the current study, there was the problem of both quantity and quality of academician on the roots of student attrition. The Council of Higher Education (CoHE) and higher education institutions may take a required step to remedy this problem. For example, CoHE may improve 100/2000 PhD Scholarship by increasing priority fields and amount of scholarship. Also, CoHE may revitalize Faculty Development Program (ÖYP). Additionally, scholarships of Scientific Research Projects may be generalized by standardizing the process for each higher education institutions. Especially, qualitative part of the current study showed that family and attendance were important factors on student attrition. Higher education institutions may include families more in graduate education process since it can be both an advantage for persistence in terms of support and a disadvantage for persistence in terms of marriage and having dependents. Besides, departments may take precautions to increase course attendances. The other important implication was based on delaying military duty. This legal right has been misused such that some citizenships are starting graduate education to postpone military duty and becoming non-persistent student later. The higher education institutions and military authorities may come together to prevent this misuse. Lastly, the current study showed that relation with advisor had a crucial importance for persistence of students. Therefore, everyone from advisor to the president of university may approach to these relationships in a more rigorous way. Specifically, academicians may be trained in order to develop their advisement skills. In addition, contracts or memorandums between students and advisors may be implemented as a graduate education policy.

5.3 Limitations and Recommendations

Like each scientific research, the current study had some weaknesses as well as strengths. By considering these, the researcher of the current study has some recommendations which were intended to researchers and practitioners. To begin with the strengths of the study, mixed-model design was conducted. In this way, both quantitative and qualitative sides of the study offsetted weaknesses of each other. Moreover, student attrition was examined in a more comprehensive way through both types of data. Further, mix of two methodologies brought both alternate explanations and opportunity for crosscheck. Secondly, data triangulation provided reliable scores and valid inferences. To implement triangulation, phenomenological part of the study gathered information from non-persistent students, persistent students, graduate school administrators, and advisors. In addition to phenomenology, document analysis was conducted to calculate student attrition rates. The third strength of the current study was related to generalizability of results. Since the sample was selected randomly, the results of the current study can be generalized to the population. Therefore, the current study had external validity. In addition, maximum variation sampling as a type of purposeful sampling and thick description of data within many theme and code lists served as attempt to provide transferability of qualitative results.

The current study had weaknesses based on limitations as well. Firstly, the findings of the current study cannot be generalized to other settings since the study was conducted in three research universities. Therefore, the current study lacks ecological generalizability. Further studies should consider other contexts in graduate education and try to compare results. Secondly, the study had limitations based on participants. Willingness and honesty of participants were important for self-report techniques. Returning rate was lower than expected conditions such that expected number for quantitative part was 1500 participants while expected number for qualitative part was 40 participants. Samples with more participants are recommended to other researchers. Honesty limitation was tried to be overcome with usage of both questionnaires and interviews but it did not assure their willingness and honesty on responses. To deal with this limitations, focus group interviews are recommended to researchers so that participants may be more open to give sincere responses by affecting from others. Another important issue related to participants was characteristics of them. In quantitative part of the study, number of persistent student was much higher than number of non-persistent student. In qualitative part of the study, number of students from educational sciences was higher than number of students from other departments. Also, number of female non-persistent students was much more than number of male non-persistent student. These distributions in terms of participant characteristics was a limitation for participant homogeneity. Therefore, it was not possible to examine differences in terms of field and gender. The researchers should consider homogeneity in further studies to do some comparisons. The last limitation based on participants was exclusion of faculty members. Before the current study was conducted, the researcher had expected that faculty members did not have a role on student attrition as much as graduate school administrators and advisors. However, the study showed that faculty members were important figures for non-persistent students and other stakeholders. Therefore, it is recommended that further studies should focus on opinions on faculty members as well. Thirdly, the current study had limitations related to instrumentation and variables. Although organizational climate scale was found reliable and valid, some dimensions stayed less reliable. Administrative climate and departmental climate were the dimensions both having many deleted items after exploratory factor analysis and lower reliability coefficients. Therefore, there is a need for confirmation of reliability and validity of the scale by further studies. Moreover, scale for institutional and goal commitment and scale of intentions to leave were administered in the study. Studies in the future should use other scales based on different variables. Additionally, the current study used demographic variables as personal factors that no one can do anything about. Therefore, research in the future should concentrate on other personal factors apart from demographics. To illustrate, self-esteemand motivation may be a good variable to be examined after controlling for demographic variables. In this aspect, a different attrition picture may show up. Finally, current study had conceptual limitations. The most important one was related to conceptualization of student attrition. Student attrition term included absenteeism, intentions to leave, unregistration, and non-persistence. Moreover, intentions to leave was used as an indicator for student attrition. For this reason, actual student attrition or dropout behavior is recommended to researchers to investigate student attrition. The other limitation was related to theories. Macrosystem of Bio Ecological Theory stayed weaker when compared to other layers since organizational factors including organizational climate did not give statistically significant result directly on intentions to leave in structural model of quantitative part. Therefore, researchers in the future should take care of dynamics of macrosystem like culture, beliefs, and values. On the other hand, although the study gave compatible results with Attribution Theory, positions of persistent student and advisor were found noteworthy. The researchers should focus on positions of stakeholders. In addition, student attrition should be examined with other theories like Exit, Voice, Loyalty, and Neglect Theory from political economy.

The current study has recommendations to practitioners. They should consider not only organizational factors but also personal factors and expectations while they are making decisions and implementing strategies. Activities to make climate positive and to increase commitment should be organized. Diversity based on characteristics of the students from gender to marital status should be respected. Disadvantaged situation of one group should be compensated with affirmative action. In order to deal with inequalities, social and academic activities should be implemented. Connections between students, administrators, advisors, faculty member, and administrative staff were set for a positive campus life. On the other hand, there should be cooperation and coordination between higher education institutions and organizations out of university. And finally, apart from these structural and procedural recommendations, people's respecting and valuing each other is the key which is able to open all doors. In this way, improved and sustainable higher education institutions with smiling and happy people are not away.

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APPENDICES

A. QUESTIONNAIRES

Pilot Study

Değerli Lisansüstü Öğrenciler,

Lütfen ifadeleri dikkatle okuyup **görüşlerinizi en iyi yansıtacak** biçimde **tüm soruları içtenlikle ve tarafsızca yanıtlayınız.** Bu soruların hiçbir şekilde doğru ya da yanlış cevabı yoktur. Çalışma kapsamında **bilgileriniz gizli tutulacak** ve yanıtlarınız sadece araştırmacı tarafından değerlendirilecektir. Gönüllü katılımınız ve katkılarınız için çok teşekkür ederim.

Araş. Gör. Hasan Yücel ERTEM

BÖLÜM I: Lütfen kişisel bilgilerinizi doldurunuz.

Cinsiyet: ☐ Erkek ☐ Kadın ☐ Diğer
Yaş: ☐ 22 ve altı ☐ 23-28 ☐ 29-34 ☐ 35 ve üstü
Medeni durum: ☐ Evli ☐ Bekar
Ebeveynlik durumu: ☐ Çocuk sahibi ☐ Çocuk sahibi değil
Lisans notu: ☐ 2.5 ve altı ☐ 2.51-3.50 ☐ 3.51-4.00

Lisansüstü eğitim alınan;
Üniversite: ☐ Devlet ☐ Vakıf (özel)
Enstitü:____________________ Bölüm:____________
Program: ☐ Yüksek Lisans ☐ Doktora
Dönem: ☐ 1.-2. Dönem ☐ 3.-4. Dönem ☐ 5.-6. Dönem ☐ 7. ve üstü dönem

BÖLÜM II: Bu bölümde lisansüstü eğitim aldığınız kurumla ilgili algılarınız için 35 ifade, lisansüstü eğitimle ilgili gelecek planlarınız için 1 soru vardır. Lütfen her bir ifade için algılarınızı en iyi yansıtan tek bir katılım derecesini işaretleyiniz.

1 = Kesinlikle katılmıyorum; 2 = Katılmıyorum; 3 = Kararsızım; 4 = Katılıyorum; 5 = Kesinlikle katılıyorum

1. Üniversitemdeki diğer disiplinlerde çalışma yapan öğrencilerle yakın arkadaşlıklar kurarım.	1	2	3	4	5
2. Üniversitemdeki kendi disiplinimde çalışma yapan öğrencilerle yakın arkadaşlıklar kurarım.	1	2	3	4	5
3. Üniversitemdeki arkadaşlarımla neşeli vakit geçiririm.	1	2	3	4	5
4. Üniversitemdeki arkadaşlarımla olan etkileşimim akademik gelişimimi olumlu etkiler.	1	2	3	4	5
5. Üniversitemdeki arkadaşlarımla olan etkileşimim sosyal gelişimimi olumlu etkiler.	1	2	3	4	5
6. Üniversitedemki diğer disiplinlerde çalışma yapan öğrencilerle arkadaşlık kurmak bana **zor gelir.**	1	2	3	4	5
7. Üniversitemdeki kendi disiplinimde çalışma yapan öğrenciler **benden uzak dururlar.**	1	2	3	4	5
8. Üniversitemdeki arkadaşlarım **benden daha farklı tutuma** sahiptir.	1	2	3	4	5
9. Öğretim elemanlarıyla etkileşimim akademik gelişimimi olumlu etkiler.	1	2	3	4	5
10. Öğretim elemanlarıyla etkileşimim sosyal gelişimimi olumlu etkiler.	1	2	3	4	5
11. Öğretim elemanlarıyla etkileşimim kariyer planlarımı olumlu etkiler.	1	2	3	4	5
12. Öğretim elemanları akademik üretkenliğime **katkı sağlamaz.**	1	2	3	4	5
13. Öğretim elemanları akademik ihtiyaçlarıma **değer vermez.**	1	2	3	4	5
14. Danışmanım olan öğretim üyesi beni akademik olarak destekler.	1	2	3	4	5
15. Danışmanım olan öğretim üyesi ile iyi ilişkiler kurarım.	1	2	3	4	5
16. Danışmanım olan öğretim üyesi ile etkileşimim beni mutlu eder.	1	2	3	4	5
17. Danışmanım olan öğretim üyesi ile **iletişim kopukluğu sorunu** yaşarım.	1	2	3	4	5
18. Akademik deneyimim bana yeni bakış açıları kazandırır.	1	2	3	4	5
19. Akademik birikimim problem çözümünde bana fayda sağlar.	1	2	3	4	5
20. Akademik gelişimim mezun olmam için gereken düzeydedir.	1	2	3	4	5
21. Akademik etkinliklerde elimden gelenin en iyisini yapmaya çalışırım.	1	2	3	4	5
22. Akademik performansım ulaşmayı **beklediğim düzeyin altındadır.**	1	2	3	4	5
23. Akademik etkinlikler gelişimime **katkı sağlamaz.**	1	2	3	4	5
24. Bölümümdeki lisansüstü eğitim ile ilgili haklarımdan ve yasal düzenlemelerden haberdarım.	1	2	3	4	5
25. Bölümümdeki lisansüstü eğitime başvuru koşulları yeterlidir.	1	2	3	4	5
26. Bölümümdeki lisansüstü eğitime öğrenci seçiminde öğretim üyeleri adil davranır.	1	2	3	4	5
27. Bölümümdeki lisansüstü eğitimde tamamlamam gereken sorumluluklarımın farkındayım.	1	2	3	4	5
28. Bölümümdeki lisansüstü eğitimde öğretim üyeleri işbirlikçi çalışmayı teşvik eder.	1	2	3	4	5
29. Bölümümdeki lisansüstü eğitime ayrılan **kaynaklar yetersizdir**.	1	2	3	4	5
30. Bölümümdeki lisansüstü eğitimin işyükü **gereğinden fazladır.**	1	2	3	4	5
31. Bölümümdeki lisanüstü eğitim kapsamında ürettiğim çalışmalar **adil biçimde değerlendirilmez.**	1	2	3	4	5
32. Üniversite yönetimi karar alma sürecinde üniversite paydaşlarının fikirlerine değer verir.	1	2	3	4	5
33. Üniversite yönetimi spor, sanat ve kültür etkinlikleri düzenlemeye özen gösterir.	1	2	3	4	5
34. Üniversite yönetimi din, dil ve ırk gibi farklılıklara saygı duyulan bir ortam oluşmasına gayret eder.	1	2	3	4	5
35. Üniversite idari personeli yönetimsel süreçleri **yavaş yürütür.**	1	2	3	4	5
Lisansüstü eğitim hayatınızla ilgili geleceğiniz için ne düşünüyorsunuz?					
Önümüzdeki dönemde çalışmalarımı **bırakmayı** düşünüyorum.	1	2	3	4	5
Mezun olmadan önce çalışmalarımı **bırakmayı** düşünüyorum.	1	2	3	4	5
Bu bölümden mezun olmayı düşünüyorum.	1	2	3	4	5

Anket bitmiştir, ilginiz için teşekkür ederim ☺

Main Study

Değerli Lisansüstü Öğrenciler,

Lütfen ifadeleri dikkatle okuyup **görüşlerinizi en iyi yansıtacak** biçimde **tüm soruları içtenlikle ve tarafsızca yanıtlayınız**. Bu soruların hiçbir şekilde doğru ya da yanlış cevabı yoktur. Çalışma kapsamında **bilgileriniz gizli tutulacak** ve yanıtlarınız sadece araştırmacı tarafından değerlendirilecektir. Gönüllü katılımınız ve katkılarınız için çok teşekkür ederim.

Araş. Gör. Hasan Yücel ERTEM

BÖLÜM I: Lütfen kişisel bilgilerinizi doldurunuz.

Cinsiyet: ☐ Erkek ☐ Kadın ☐ Diğer

Yaş: ☐ 22 ve altı ☐ 23-28 ☐ 29-34 ☐ 35 ve üstü

Medeni durum: ☐ Evli ☐ Bekar

Ebeveynlik durumu: ☐ Çocuk sahibi ☐ Çocuk sahibi değil

Lisans eğitimi alınan;

Üniversite:____________________Bölüm: __________________Not ortalaması: _____/4.00 veya ___/100

Lisansüstü eğitim alınan;

Üniversite: ________________________ Enstitü: _____________________Bölüm:__________________

Program : ☐ Yüksek Lisans ☐ Doktora

Kaç yıldır bu programdasınız (Yüksek Lisans veya Doktora Programı)?:____

Dönem: ☐ Ders dönemi ☐ Yeterlik dönemi ☐ Tez dönemi

BÖLÜM II: Lütfen lisansüstü eğitim masraflarınızı karşılama yolunuzu (ekonomik destek türü) belirtiniz (eğer birden fazla seçenek size hitap ediyorsa lütfen sadece en fazla kazanım sağladığınız yolu seçiniz).

☐ Araştırma görevliliği ☐ Proje asistanlığı/burs/öğrenim kredisi ☐ Öğretim görevliliği

☐ Kamu çalışanı (öğretmen, mühendis, v.b.) ☐ Özel sektör çalışanı ☐ Yarı zamanlı iş ☐ Aile

☐ Diğer (lütfen belirtiniz):________________ ☐ Destek yok

BÖLÜM III: Lüften öğrencilik durumunuz ve hedeflerinizle ilgili sizi en iyi yansıtan seçenek ya da seçenekleri işaretleyiniz (Birden fazla seçenek işaretleyebilirsiniz).

☐ Dönem kaydım var ve derslere/tez çalışmalarına düzenli katılım sağlıyorum
☐ Dönem kaydım var ama derslere/tez çalışmalarına düzenli katılım sağlamıyorum
☐ Dönem kaydım yok/kaydımı yenilemedim
☐ Kaydımı kendi isteğimle sildirdim
☐ Kaydımı dondurdum/lisansüstü beklemedeyim
☐ Eğitime bu bölümde devam edeceğim
☐ Eğitime bu üniversitenin başka bölümünde devam edeceğim
☐ Eğitime başka bir üniversitede devam edeceğim
☐ Eğitime ara vereceğim
☐ Eğitime hiçbir şekilde devam etmeyeceğim

BÖLÜM IV:Lütfen lisansüstü eğitiminizde **en fazla zorlandığınızı düşündüğünüz alanları** işaretleyiniz (Birden fazla seçenek işaretleyebilirsiniz, zorlandığınız herhangi bir alan yoksa bu bölümü boş bırakabilirsiniz).

☐ Arkadaşlar ile ilişkiler
☐ Öğretim üyeleri ile ilişkiler
☐ Danışman ile ilişkiler
☐ Bölüm tarafından sağlanan örgütsel destek (seminer, uyum, oryantasyon, v.b.)
☐ Program yapısı ve işleyişi (ders içerikleri, beklentiler, v.b.)
☐ Kültürel uyum
☐ Kişisel hedefler ile bölüm amaçları arasındaki uyum
☐ Akademik gelişim (yayın, kongre katılımı, ödev ve sorumluluklar, v.b.)
☐ Bürokratik/idari süreçler
☐ Ekonomik destek/kaynak sağlama
☐ Aile desteği (teşvik, motivasyon, v.b.)
☐ Eğitim ve aile arasındaki denge (çocuk bakımı, ev işleri, v.b.)
☐ Eğitim ve iş arasındaki denge (uzun çalışma saatleri, iş stresi, derslere katılım için izin, v.b.)
☐ Üniversite ve ev arasındaki uzaklık
☐ Sağlık problemleri
☐ Diğer (lütfen belirtiniz:..)

Sayfa 1

Lütfen arka sayfadan devam ediniz...

BÖLÜM V: Aşağıdaki ifadeler için sizi en iyi yansıtan tanımlama derecesini işaretleyiniz (Toplam 10 ifade vardır, lütfen her bir ifade için sadece bir numarayı yuvarlak içine alınız)

1 = Kesinlikle katılmıyorum; 2 = Katılmıyorum; 3 = Kararsızım; 4 = Katılıyorum; 5 = Kesinlikle katılıyorum

1. Bu üniversiteyi seçmekle doğru bir karar verdiğimden eminim.	1	2	3	4	5
2. Gelecek yıl da bu üniversiteye devam edecek gibiyim.	1	2	3	4	5
3. Bu bölümde olmak istediğim konusunda **emin değilim.**	1	2	3	4	5
4. Üniversiteden mezun olmak benim için önemlidir.	1	2	3	4	5
5. Bu bölümden mezun olmak benim için **önemli değildir.**	1	2	3	4	5
6. İyi notlar almak benim için **önemli değildir.**	1	2	3	4	5
7. Girdiğim bölümden mezun olup olmamak konusunda **kararsızım.**	1	2	3	4	5
8. Önümüzdeki dönemde çalışmalarımı **bırakmayı** düşünüyorum.	1	2	3	4	5
9. Mezun olmadan önce çalışmalarımı **bırakmayı** düşünüyorum.	1	2	3	4	5
10. Girdiğim bölümden mezun olmayı düşünüyorum.	1	2	3	4	5

BÖLÜM VI: Lütfen, lisansüstü eğitim aldığınız kurum ile ilgili deneyim, fikir veya algılarınızı en iyi yansıtan katılım derecesini işaretleyiniz (Bu bölümde 28 soru vardır, her bir ifade için lütfen tek bir numarayı işaretleyiniz).

1 = Kesinlikle katılmıyorum; 2 = Katılmıyorum; 3 = Kararsızım; 4 = Katılıyorum; 5 = Kesinlikle katılıyorum

1. Üniversitemdeki diğer disiplinlerde çalışma yapan öğrencilerle yakın arkadaşlıklar kurarım.	1	2	3	4	5
2. Üniversitemdeki kendi disiplinimde çalışma yapan öğrencilerle yakın arkadaşlıklar kurarım.	1	2	3	4	5
3. Üniversitemdeki arkadaşlarımla neşeli vakit geçiririm.	1	2	3	4	5
4. Üniversitemdeki arkadaşlarımla olan etkileşimim akademik gelişimimi olumlu etkiler.	1	2	3	4	5
5. Üniversitemdeki arkadaşlarımla olan etkileşimim sosyal gelişimimi olumlu etkiler.	1	2	3	4	5
6. Üniversitemdeki diğer disiplinlerde çalışma yapan öğrencilerle arkadaşlık kurmak bana **zor gelir.**	1	2	3	4	5
7. Üniversitemdeki kendi disiplinimde çalışma yapan öğrenciler **benden uzak dururlar.**	1	2	3	4	5
8. Öğretim elemanlarıyla etkileşimim akademik gelişimimi olumlu etkiler.	1	2	3	4	5
9. Öğretim elemanlarıyla etkileşimim sosyal gelişimimi olumlu etkiler.	1	2	3	4	5
10. Öğretim elemanlarıyla etkileşimim kariyer planlarımı olumlu etkiler.	1	2	3	4	5
11. Öğretim elemanları akademik üretkenliğime **katkı sağlamaz.**	1	2	3	4	5
12. Danışmanım olan öğretim üyesi beni akademik olarak destekler.	1	2	3	4	5
13. Danışmanım olan öğretim üyesi ile iyi ilişkiler kurarım.	1	2	3	4	5
14. Danışmanım olan öğretim üyesi ile etkileşimim beni mutlu eder.	1	2	3	4	5
15. Danışmanım olan öğretim üyesi ile **iletişim kopukluğu sorunu** yaşarım.	1	2	3	4	5
16. Akademik deneyimim bana yeni bakış açıları kazandırır.	1	2	3	4	5
17. Akademik birikimim problem çözümünde bana fayda sağlar.	1	2	3	4	5
18. Akademik etkinliklerde elimden gelenin en iyisini yapmaya çalışırım.	1	2	3	4	5
19. Bölümümdeki lisansüstü eğitimde tamamlamam gereken sorumluluklarımın farkındayım.	1	2	3	4	5
20. Akademik etkinlikler gelişimime **katkı sağlamaz.**	1	2	3	4	5
21. Bölümümdeki lisansüstü eğitime öğrenci seçiminde öğretim üyeleri adil davranır.	1	2	3	4	5
22. Bölümümdeki lisansüstü eğitime başvuru koşulları yeterlidir.	1	2	3	4	5
23. Bölümümdeki lisansüstü eğitime ayrılan **kaynaklar yetersizdir.**	1	2	3	4	5
24. Bölümümdeki lisansüstü eğitimin işyükü **gereğinden fazladır.**	1	2	3	4	5
25. Bölümümdeki lisanüstü eğitim kapsamında ürettiğim çalışmalar **adil biçimde değerlendirilmez.**	1	2	3	4	5
26. Üniversite yönetimi karar alma sürecinde üniversite paydaşlarının fikirlerine değer verir.	1	2	3	4	5
27. Üniversite yönetimi spor, sanat ve kültür etkinlikleri düzenlemeye özen gösterir.	1	2	3	4	5
28. Üniversite yönetimi din, dil ve ırk gibi farklılıklara saygı duyulan bir ortam oluşmasına gayret eder.	1	2	3	4	5

Anket bitmiştir, ilginiz için teşekkür ederim☺

Çalışmaya katılım sağlayanlar arasında yapılacak hediye çekilişine katılmak istiyorsanız sayfanın en alt kısmındaki kutucuğun sol sütununa rumuz ve e-posta ya da telefon numaranızı yazınız. Bu çalışma kapsamında görüşmeye (mülakat) katılmak istiyorsanız sayfanın en altındaki kutucuğun sağ sütununa e-posta ya da telefon numaranızı yazınız.

>>>

Eğer bu alanı doldurduysanız lütfen bu kısmı diğer sayfaya zarar vermeyecek şekilde yırtarak/keserek uygulayıcıya veriniz

Çekiliş için rumuz (____________________) ve iletişim (____________________)	Görüşmeye katılım için iletişim (____________________)

Sayfa 2

B. SEMI-STRUCTURED INTERVIEW FORMS

Kalıcı olmayan öğrenciler için yarı-yapılandırılmış görüşme sorularıdır:

1. Lisansüstü eğitime başlamaya nasıl karar verdiniz?

Neden lisansüstü eğitim

Hedefler

2. Lisansüstü eğitime başladığınızda ne hissettiniz?

Bir önceki eğitim hayatınızla kıyaslar mısınız?

3. Lisansüstü eğitimde memnun olduğunuz ve memnun olmadığınız şeyler nelerdi?

Ders içerikleri

Danışman ile ilişkiler

İş

Aile

Yönetimsel süreçler

Bürokrasi

Ekonomik destek

Sosyal ilişkiler

Kültürel uyum

4. Derslere devam etmemeye/kayıt yenilememeye neden olan etkenlerden bahseder misiniz?

Bunlarla başa çıkma stratejisi geliştirdiniz mi?

Bireysel faktörler mi yoksa örgütsel faktörler mi başı çekiyor?

5. Elinizde sihirli bir değnek olsa lisansüstü eğitimde hangi olumlu değişimleri yapardınız?

Bu değişimler sağlansa lisansüstü eğitime kaldığınız yerden devam eder miydiniz?

Kalıcı öğrenciler için yarı-yapılandırılmış görüşme sorularıdır:

1. Lisansüstü eğitime başlamaya nasıl karar verdiniz?

Neden lisansüstü eğitim?

Hedefler?

Hisler

Benzerlik farklılıklar

2. Lisansüstü eğitimde zorlandığınız alanlar oldu mu? (bunlarla nasıl başa çıktınız?)

Ders içerikleri

Aile

İş

Danışman ile ilişkiler

Yönetimsel süreçler

Bürokrasi

Ekonomik destek

Sosyal ilişkiler

Kültürel uyum

3. Lisansüstü eğitim size ne kattı ya da sizden ne götürdü?

Araştırma becerileri

Uzmanlık

4. Derslere devam etmeyen ya da kayıt yenilemeyen arkadaşlarınızla ilgili gözlemleriniz nelerdir?

Size göre onlar mı daha çok sorumlu yoksa bölüm mü?

5. Elinizde sihirli bir değnek olsa lisansüstü eğitimde hangi olumlu değişimleri yapardınız?

Bu değişimler sağlansa arkadaşlarınızın döneceğini/derslere devam edeceğini düşünür müsünüz?

Enstitü yöneticileri için görüşme sorularıdır:

1. Enstitüdeki lisansüstü eğitim sürecinden ve enstitü işleyişinden bahseder misiniz?

   İç süreçler

   Karar alma mekanizmaları

   Öğrenci durumları

2. Lisansüstü eğitimde en fazla karşılaştığınız sorunlar nelerdir?

   Öğrenciden kaynaklanan sorunlar nelerdir?

   Anabilim dallarından kaynaklanan sorunlar nelerdir?

   Politika ve yönetmelikten kaynaklanan sorunlar nelerdir?

   Lisansüstü eğitimde öğrenci kaybı hakkında ne düşünüyorsunuz?

   Öğrenci kaybı ile ilgili araştırmalarınız oldu mu?

   Hangi sonuçlara ulaştınız?

   Umduğunuz oran mı, umduğunuzdan fazla mı, umduğunuzdan az mı?

   Sizce bu oranlar bir sorun teşkil ediyor mu? Neden?

3. Öğrenci kaybının nedenleri hakkında ne düşünüyorsunuz?

   Kişisel nedenler hakkında ne düşünüyorsunuz?

   Örgütsel nedenler hakkında ne düşünüyorsunuz?

   Hangi tür nedenler sizce daha önemli?

4. Lisansüstü eğitimde öğrenci kaybının en önemli sonuçları ne olabilir?

   Kişisel sonuçlar?

   Örgütsel sonuçlar?

   Sosyal sonuçlar?

   Ekonomik sonuçlar?

5. Öğrenci kaybını en düşük seviyelere indirmek için neler yapılabilir?

   Politika önerileri

   Kurumsal öneriler

   Kişisel öneriler

<u>Danışmanlar</u> için görüşme sorularıdır:

1. Danışmanı olduğunuz öğrencilerle nasıl bir ilişkiniz var?

   Hangi alanda sıkıntı yaşıyorlar?

   Empati kuruyor musunuz?

   Siz hangi sıkıntıları yaşıyorsunuz?

2. Lisansüstü eğitimde genel olarak gözlenlediğiniz problemler nelerdir?

   Öğrenci kaybı ile ilgili bir gözleminiz oldu mu?

   Nasıl fark ettiniz?

   Bu durumun üstüne gittiniz mi?

3. Öğrenci kaybının nedenleri hakkında ne düşünüyorsunuz?

   Kişisel nedenler hakkında ne düşünüyorsunuz?

   Örgütsel nedenler hakkında ne düşünüyorsunuz?

   Hangi tür nedenler sizce daha önemli?

4. Lisansüstü eğitmde öğrenci kaybının en önemli sonuçları ne olabilir?

   Kişisel sonuçlar?

   Örgütsel sonuçlar?

   Sosyal sonuçlar?

   Ekonomik sonuçlar?

5. Öğrenci kaybını en düşük seviyelere indirmek için neler yapılabilir?

   Politika önerileri

   Kurumsal öneriler

   Kişisel öneriler

C. UNIVERSITY INFORMATION FORM

Lisansüstü eğitim düzeyindeki öğrencilik durumlarını gösterir üniversite bilgi formu

Üniversite adı:						
Dönem	2014-2015 Bahar dönemi		2015-2016 Bahar dönemi		2016-2017 Bahar dönemi	
Program	Yüksek Lisans	Doktora	Yüksek Lisans	Doktora	Yüksek Lisans	Doktora
Kayıtlı öğrenci sayısı						
Kaydını yenilemeyen öğrenci sayısı						
Kayıtsız öğrenci sayısı						
Kendi isteği ile kayıt sildiren öğrenci sayısı						
Lisansüstü beklemede olan öğrenci sayısı						
Toplam öğrenci sayısı						

Açıklama: Öğrenci durumlarını sınıflama yönteminiz bu şablondan farklı ise (örneğin aktif-pasif öğrenci gibi) lütfen kendi sisteminizdeki sınıflamaya uygun bir şekilde kayıt durumlarına göre öğrenci sayılarını gösterir bilgi formunu gönderiniz.

D. PERMISSIONS

INFORMED CONSENT FORM
GÖNÜLLÜ KATILIM FORMU (NİCEL)

Bu çalışma Araş. Gör. Hasan Yücel Ertem tarafından Doktora tez çalışması kapsamında yürütülmekte olup lisansüstü eğitimde öğrenci kaybı ile ilişkili örgütsel ve kişisel etkenleri ortaya çıkarmayı amaçlamaktadır. Çalışmanın sonuçları Doktora mezun sayısı, akademisyen yetiştirme ve lisansüstü eğitimin kalitesi gibi son yıllarda sıkça dile getirilen yüksek öğretim reformlarına yönelik politikalara ışık tutacaktır. Çalışmaya katılım tamamiyle gönüllülük esasına dayalıdır. Ankette, sizden kimliğinizi ortaya çıkaracak hiçbir bilgi istenmemektedir. Cevaplarınız tamamiyle gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Elde edilecek bilgiler Doktora tezinde kullanılacaktır. Anket, altı bölümden oluşmaktadır. Birinci bölümde kişisel bilgileriniz istenmektedir. İkinci bölümde lisansüstü eğitim masraflarını karşılama yolunuz sorulmaktadır. Üçüncü bölümde öğrencilik durumunuzla ilgili seçenekler vardır. Dördüncü bölümde sizi lisansüstü eğitimde en fazla zorlayan alanları doldurmanız istenmektedir. Beşinci bölümde lisansüstü eğitiminizle ilgili ifadeler vardır. Son bölümde ise eğitim aldığını kurumla ilgili algılarınızı öğrenmeye yönelik ifadeler mevcuttur.Anketi doldurmanız ortalama 10-15 dakika sürmektedir.

Anket, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz anketi tamamlamamakta özgürsünüz. Böyle bir durumda anketi uygulayan kişiye, anketi tamamlamak istemediğinizi söylemeniz yeterli olacaktır. Anket sonunda, bu çalışmayla ilgili sorularınız cevaplanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için Eğitim Bilimleri Bölümü Öğretim Üyelerinden Yrd. Doç. Dr. Gökçe GÖKALP (Oda: EF321; Tel: 210 40 33; E-posta: ggokalp@metu.edu.tr) ya da Araş. Gör. Hasan Yücel ERTEM (Oda: 309; Tel: 210 40 46; E-posta: hertem@metu.edu.tr) ile iletişim kurabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

Ad Soyad Tarih ----/----/----- İmza

INFORMED CONSENT FORM
GÖNÜLLÜ KATILIM FORMU (NİTEL)

Bu çalışma Araş. Gör. Hasan Yücel Ertem tarafından Doktora tez çalışması kapsamında yürütülmekte olup lisansüstü eğitimde öğrenci kaybı ile ilişkili örgütsel ve kişisel etkenleri ortaya çıkarmayı amaçlamaktadır. Çalışmanın sonuçları Doktora mezun sayısı, akademisyen yetiştirme ve lisansüstü eğitimin kalitesi gibi son yıllarda sıkça dile getirilen yüksek öğretim reformlarına yönelik politikalara ışık tutacaktır. Çalışmaya katılım tamamiyle gönüllülük esasına dayalıdır. Görüşmede sizden kimliğinizi ortaya çıkaracak hiçbir bilgi istenmemektedir. Cevaplarınız tamamiyle gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Elde edilecek bilgiler Doktora tezinde kullanılacaktır. Görüşmenin tamamlanması ortalama 15-20 dakika sürmektedir.

Görüşme formu, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz görüşmeyi tamamlamamakta özgürsünüz. Böyle bir durumda görüşmeyi uygulayan kişiye, görüşmeyi tamamlamak istemediğinizi söylemeniz yeterli olacaktır. Görüşme sonunda, bu çalışmayla ilgili sorularınız cevaplanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için Eğitim Bilimleri Bölümü Öğretim Üyelerinden Yrd. Doç. Dr. Gökçe GÖKALP (Oda: EF321; Tel: 210 40 33; E-posta: ggokalp@metu.edu.tr) ya da Araş. Gör. Hasan Yücel ERTEM (Oda: 309; Tel: 210 40 46; E-posta: hertem@metu.edu.tr) ile iletişim kurabilirsiniz.

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Ad Soyad Tarih İmza

----/----/-----

APPROVAL OF RESEARCHERSTO USE QUESTIONNAIRE

Konu: Ynt: Ölçek Kullanım İzni
Gönderen: "Mana Ece Tuna" <mana.tuna@tedu.edu.tr>
Tarih: 15 Haziran 2017, Perşembe, 4:26 pm
Alıcı: "hertem@metu.edu.tr" <hertem@metu.edu.tr>
Öncelik: Normal
Seçenekler: Tüm Başlıkları Göster | Yazdırılabilir Şekilde Göster | Bunu dosya olarak indir | HTML olarak göster

Hasan Hocam Merhaba,

Ekte ölçeği, açıklamaları, geçerlik-güvenirlik kanıtlarını bulabilirsiniz. Ölçeği kullanmak için ayrıca Pascarella ve Terenzini'den izin istemenize gerek yok çünkü onlar da bana yönlendiriyorlar.

Bir sorunuz olursa yine bana sorabilirsiniz. Başarılar diliyorum.

İyi çalışmalar.

Mana Ece Tuna

Gönderen: hertem@metu.edu.tr <hertem@metu.edu.tr>
Gönderildi: 15 Haziran 2017 Perşembe 14:27:26
Kime: Mana Ece Tuna
Konu: Ölçek Kullanım İzni

Merhabalar Sayın Mana Ece Hocam,
Pascarella ve Terenzini'nin geliştirdiği ve sizin geçerlik-güvenirlik çalışması yaptığınız Kurumsal Bütünleşme Ölçekleri'ni Lisansüstü Eğitim^de Öğrenci Kaybı'nı konu alan Doktora tez çalışmamda kullanmayı planlıyorum. Bunun için hem ölçeğe hem de sizin gerekli izin ve onaylarınıza ihtiyacım var. Ölçeği kullanmamı uygun gördüğünüz takdirde bana bir örneğini gönderebilir misiniz? Ayrıca ölçeği Türkiye'de kullanmam konusunda Pasceralla ve Terenzini'nin de iznini almam gerekiyorsa nereyle/kimle iletişime geçeceğim konusunda beni bilgilendirirseniz sevinirim.
Çok teşekkür eder, kolaylıklar dilerim...

--
Hasan Yücel ERTEM
Araş. Gör.(Research Assistant)
Eğitim Bilimleri (Educational Sciences)
ODTÜ(METU)

UYARI: Bu e-posta ve ekleri sadece gönderilen adres sahiplerine aittir. Bu mesajın yanlışlıkla tarafınıza ulaşmış olması halinde, lütfen göndericiye derhal bilgi veriniz ve mesajı sisteminizden siliniz. TED Üniversitesi bu mesajın içeriği, ekleri ve zamanında, güvenli ve hatasız gönderimi ile ilgili olarak hukuksal hiçbir sorumluluk kabul etmez.

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APPROVAL OF ETHICS COMMITEE

PILOT STUDY

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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Sayı: 28620816 / 433

09 AĞUSTOS 2017

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Yrd. Doç. Dr. Gökçe GÖKALP ;

Danışmanlığını yaptığınız Hasan Yücel ERTEM' in ***"Kişisel ve Örgütsel Faktörlerin Lisansüstü Eğitim'de Öğrenci Kaybı Üzerindeki Rolü: Tamam mı, Devam mı?"*** başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2017-EGT-146** protokol numarası ile **02.10.2017 – 30.12.2017** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan V

Prof. Dr. Ayhan SOL
Üye

Prof. Dr. Ayhan Gürbüz DEMİR
Üye

Doç. Dr. Yaşar KONDAKÇI
Üye

Doç. Dr. Zana ÇITAK
Üye

Yrd. Doç. Dr. Pınar KAYGAN
Üye

Yrd. Doç. Dr. Emre SELÇUK
Üye

APPROVAL OF ETHICS COMMITTEE
MAIN STUDY

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

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Sayı: 28620816 / 147

27 ŞUBAT 2018

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Yrd. Doç. Dr. Gökçe GÖKALP ;

Danışmanlığını yaptığınız doktora öğrencisi Hasan Yücel ERTEM' in ***"Kişisel ve Örgütsel Faktörlerin Lisansüstü Eğitim'de Öğrenci Kaybı Üzerindeki Rolü: Tamam mı, Devam mı? "*** başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2018-EGT-025** protokol numarası ile **12.03.2018 - 30.07.2019** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan V

Prof. Dr. Ayhan SOL
Üye

Prof. Dr. Ayhan Gürbüz DEMİR
Üye

Doç. Dr. Yaşar KONDAKÇI
Üye

Doç. Dr. Zana ÇITAK
Üye

Yrd. Doç. Dr. Pınar KAYGAN
Üye

Yrd. Doç. Dr. Emre SELÇUK
Üye

E. CODES AND THEMES

E1. Codes and Themes for Non-Persistent Students

Themes	Sub-themes	Codes	Sub-codes
Starting graduate education	Reasons	**Desire to become academician**	
		Friends	
		Previous internship	
		Emptiness feeling after graduation	
		Curiosity on field	
		Job disapproval	
		Field change	
		Opinion of faculty	
		Guidance of faculty	
		Role model of faculty	
		Academic career	
		Desire on reading and learning	
	Targets	Staying at university	
		Research for environment and humanities	
		Improvement of foreing language	
		Academic progress	
		Research assistantship	
		Completing Master of Science	
		Contribution on science	
	Feelings	Positive	Eager **Excited** Diligent Enthusiastic Maturated

			Happy Satisfied
		Negative	Disgust Learned helplessness Desperate Lonely blind
	Program climate	Individualistic atmosphere	Not improving yourself
		Lack of BS	Not keeping in action Solo-study Desk job Less number of studies
		Canalizing to research topic	
	Differences (Undergraduate vs graduate)	Formal vs sincere	
		Coercive vs comfortable	
		Classical approach vs interpretative approach	
		Less heavy vs more heavy	
		Less research vs more research	
		Less reading vs more reading	
		Strict rules vs self-discipline	
		More difficult faculty vs less difficult faculty	
		Difficult access to faculty vs easy access to faculty	
	Similarities	Concepts	
		Lack of support	
		Lack of contribution	
		Lack of encouragement	
Process and Structure in graduate education	Dissatisfying aspects	**Relation with advisor**	Mismatch Lack of communication Inharmoniousness
		Relation with faculty	Lack of expertise Lack of interest

	Discrimination Perceiving students lazy Disappointment Negative attitudes Idle classes Low motivation Perceiving student helper Teaching style Not catching frequency Memorizing
Familial conditions	Moving house
Spatial problems	
Time-wise problems	Busyness Sparing time Managing many things Both studentship and job
Course content	Uninterested courses Memorizing Lack of integration of courses into field Lack of connection among courses Less number of offered courses Lack of updated articles Homework Lecture method Irrelevant content Hollow content Technical courses
Decrease in concentration	
Physical opportunities	Lab conditions Small places
Bureaucracy	Staffing Lower Postponing
Finance	Need for support **Lack of affordability** **Need for money** Unemployment

	Lack of organizational support	
	Lack of English languae	
	Less course more time	
Satisfying aspects	Chance for group-working	
	One-to-one interaction with faculty members	
	Social adaptation	Love for city Love for university Housemate Love for people
	Relations with peers	Working with friends Beautiful friendship Positive attitudes from others Conversation
	Finance	Affording expenses Economic support
	Relation with advisor	Comfortable advisor Setting communication Freedom in selection
	Course content	Diversity in courses Expansion of horizon Development of perspective Math and statistics presentations
	Interest in sports	
	Department	Opinion about field Lab work Beautiful atmosphere Departmental support Opportunity for

			practice Opportunity for observation
		Relation with faculty	Opening vision
		Freedom	
		Familial support	
		Volunteer jobs	
		Understanding school administration	
Causes for non-persistence	Organizational	**Relation with advisor**	Unwelcome Lack of advisor support No preference for topic Not meeting of expectations related to advisor Lack of guidance Wanting easy students
		Course content	Repeating Forgetting English Formula
		Department	**No academic staff position** Bureaucratic conditions Mismatch between program and targets Disappointment on expectations from program Complex structure Rejection of applications No preference for advisor selection Need for job **Not promotive** Expectations Unsatisfaction in terms of science
		Job	**No permission** Money cut **Rejection by manager**

		Tiredness
	Relation with faculty	Obsessed faculty Memory-oriented faculty Strict rules Blaming with laziness Negative attitudes Lack of feedback Lack of guidance Disappointing Discrimination Displeasure **Lack of encouragement for projects** Persistence Demode methods Exclusion Prejudice
	Mismatch between job and school	
Personal	Familial conditions	Moving house Adaptation efforts Stress of family patronage Bored family
	Personal fault	
	Mental alienation	
	Pullback (Not challenging)	
	Thinking possibilities	Preparation for central exam Desire to work No possibilities for healthy PhD education
	Spending effort and time	
	Making personal decision	
	Deficiencies in documents	
	Lack of target	
	Lack of belonging	
	Statistics anxiety	
	Balancing school, job, and	

		social life	
		Perceiving diploma unncessary	
		Health problems	
		Language skills	**Lack of English proficiency**
Change recommendations	Macro-level	Societal structure	Perceptions about job after BS Perceiving MS lux
		Admission procedure	Balance between academic positions and MS quota Strict criteria Flexible language criteria **Holistic evaluation**
		Financial support	More academic position Scholarship Money Tangible difference Promotion Support for master students Increase in opportunities
		Coordination between HEC and university	
		Supervision	
		Solving unemployment	
		Foreign language education	**English as teaching language**
		Job descriptions	
		Guidance service	
		Utopic campus life	Interaction Communication Mutual satisfaction
		Removing obstacles	Scientific limitations

		Attitude of faculty Financial impossibility Promotion problems
University-level	Planning process	
	Encouraging organization	
	Putting stages	
	Orienting	
	Guidance	
	Technical support	
	Access to equipment	
	Departmental commitment	
	Organization of advisor-student relations	
	Including people in academic processes	
	Diversity in the courses	
	Encourage students for projects	
	More guidance for Master students	
	Student-oriented process	
	Interrogating project budgets	
Individual-level	More eager people	
	Updated programs	
	Respect for knowledge	
	Teacher as advisor	
	Knowledge interchange	
	Differences in responsibilities	
	Differences in approach	
	Working hard (Professors)	
	More understanding faculty	

		Positive faculty attitude	
		Professional development for faculty members	
		Expanding alternatives (students)	
		Valuing students (Professors)	
		No discrimination	
		Changing perceptions about Professors	
		Promotive advisor	
		Supportive advisor	
		Understanding from academicians	
		Selection of good academician	
		Commitment	
		Long work hours	
		Compatibleness between field and job	

E2. Codes and Themes for Persistent Students

Themes	Sub-themes	Codes	Sub-codes
Starting graduate education	Reasons	**Desire to be academician**	
		Attractiveness	
		Professional development	
		Dream	
		High grade average	
		Emptiness after graduation	
		Not thinking to be teacher	
		Academic career	
		Liking teaching	
		Role model of faculty	
		Desire to continue to educational life	

	Satisfying department	
Targets	Career planning	
	Becoming academician	**Getting academic title** Becoming Professor Continue to academia
	Contribution to field	
	Groundwork	
	Feeling good at job	
	Master diploma	
	Inquiry	
	Making dreams real	
	Becoming good teacher	
	Vision development	
	Harmonizing theory with practice	
	Becoming instructional leader	
	Learning and teaching	
	Continue to PhD	
	Doing research	
	Popularity	
	Getting followers	
	Leaving a mark	
	Abroad experience	
	Professional development	
Feelings	Positive	Proud **Fruitful** **Comfortable** Joyous **Good** **Happy** Excited Adapted Idealistic

		Negative	Depressed Deficient Novice Strange **Tired** Unhappy Having anxiety Complicated **Uneasy** Boring Teetered
	Differences (Undergraduate vs Graduate)	More intense courses vs less intense courses **Exam oriented vs project oriented** **Less reading vs more reading** **Less research vs more research** Learning based on passing exam vs permanent learning Theory vs practice Strict vs soft More people vs less people Practical vs theoretical courses **Teacher-centered vs student centered**	
Process and Structure in graduate education	Dissatisfying aspects	**Course content**	Multiple course content **Lack of courses** **Lack of practice** Lack of lessons Same circulations **Theory-practice incompatibility** Difficult courses Routine Tiredness due to irrelevant courses **Much theory-based** Lack or research Many work-load Older content

Relation with faculty	Mobbing Ego war Method critique Lack of feedback Negative attitude Much expectation Discrimination
Relation with advisor	Access to advisor Administrative duties Bureaucratic workloads
Social relations	Competitive Insincere Division of conversation Individualistic
Department	Secretary Document preparation Advising students Correspondence Course program preparation Proctor Focusing on field Workloads Course program Discrimination
Finance	Economic unfreedom Lack of scholarship Unemployment Part-time job Economic problems Lack of grants
Societal perceptions	Unnecessary graduate education Time loss Misconceptions related to military Socio economic status

		Cultural adaptation
	Long distance	
	Bureaucratic barriers	OYP procedure Not equal workload Discrimination on academic positions Injustice Proctor request Bad conditions Permission for data collection
	Long working hours	
	Lack of English skills	Lack of speking skills
Satisfying aspects	Course content	Learning new things Full content
	Relation with advisor	Guidance of advisor Research method Philosophy of subject Philosophy of education Selection Communication **Interested** Agreement **Devotion** Working together Detailed feedback Regular meetings Selection of thesis topic
	Relation with faculty	Faculty quality Positive attitude Teaching method Attitude towards attendance Student-centered Helpful Listener Colleague

		perception Interaction
	Relation with peers	Comfort Good relations Adaptation Love
	Tolerance of school principals	
	Help for thesis correction	
	Department	Democracy Freedom Love
	Social relations	**Social adaptation** Cultural wealth Information exchange Social wealth Cultural adaptation
	Finance	Economic support Salary **Assistantship**
	Family support	Promotion by family
	Reputation of being research assistant	
	Flexible working hours	
	In-depth research	
Opportunities	**Academic development**	Dr. title Scientific literacy **Learning new things** Production of thesis **Research methods** Statistical analysis Clear the way Accommodation of knowledge Philosophy of field Learn to search Learn to teach Basic

		knowledge Thesis production Working alone
	Perspective development	Analytic thinking **Multiple perspective** Critical perspective Horizon
	Skill development	Certificate Interest Work experience Work search Learning how to use devices Communication Social relations
	Psychological reflections	Effort Resilience Stress management Time management Enhancing environment Learning patience Self-control Human management
Disadvantages	Administrative duties	
	Procrastination	Putting off holiday Thesis delaying
	No time for hobbies	
	Not enjoying life	
	Older	
	Mind busyness	
	Time problem	
	Tiredness	
	Extra loads	
	Confusion	

		Stress	
		No time for family	
		Energy on work-load	
		Physical health	Eye problem Back pain
		Psychologcail health	Incurring Socialization scheme Routine change
Causes for non-persistence	Organizational	**Relations with advisor**	Access Communication **Topic choice Disagreement** Not wanting students Time deficiency No help
		Relations with faculty	Workloads Ego No help Negative attitudes No learning from faculty Communication problem Egocentric Usage of permissions
		Job	Permission from work Interaction with principals Work life
		Department	**Lack of academic position** Competitive environment Anti-democratic environment Lack of extra payment 50/d position
		No advantage of graduate education	
	Personal	**Familial issues**	**Marriage** Having dependent child

	Responsibilities
Changes over time	Decrease in personal satisfaction **Motivation loss** Decrease in motivation Becoming meaningless **Recognition of difficulties** Recognition of mismatch Recognition of disadvantages Overestimation **Disappointment**
Delaying military	
Desire to earn money	
Perceiving graduate education as a disadvantage	
Perceiving program difficult	
Failure	
Antipathy towards faculty	
Time limitation	Lack of time management Not sparing time
Finance	Economic problems Unemployment Financial trouble Work obligation Economic concerns
Adaptation problems	
Managing both job and school	
Perceiving graduate education compulsory	
No prior knowledge	
No focusing on courses	

Change recommendations	Macro-level	Societal structure	Valuing graduate education Breaking abroad perceptions Changing perceptions Differentiating MS and PhD graduates from others No hierarchy between student and faculty
		Admission procedure	Less number of students Less number of program Difficult criteria Changing interviews Criterion of experience Criterion of publication Change on application conditions Quality
		Financial support	Promoted salaries Opportunities Scholarship instead of loans **Scholarship** Help Economic supports Part-time jobs Increasing job opportunities Student assistantship **Research assistantship**
		Setting system for abroad experience	
		Job description of research assistants	
		Decision within democracy	
		Supervision mechanism	
		Academician training	

	Autonomy	
	Consistency among programs	
	Decrease in numbers	University Master programs Master students
University-level	**Course content**	Courses for sub-fields Considering student expectations **Developing research and statistics** More practice Increasing number of courses Research-based courses **Diversity**
	Faculty quality	
	Increasing organizational commitment	
	Improving organizational culture	
	Changing perspectives of faculty	
	Adjusting potential of advisor	
	Seeking ways to increase student desire	
	Changing working conditions	
	Fairness	
	Preparing students for graduate	
	Easy transition to graduate	
	Equal distribution of research assistant	
	Project support	
	Funding students	
	Increase in promotion opportunities	

	Individual-level	Student desire to graduate education	
		Moral support	
		Retire of older academician	
		Ethics	
		Putting targets	
		Peace of mind	
		Self-recognition	
		Putitng target	
		Project writing	
		Not decrease in motivation	
		Dealing with commercial presses	
		Prior knowledge about program	Knowing faculty Knowing courses Knowing fields
		Abroad experience	

E3. Codes and Themes for Graduate School Administrators

Themes	Sub-themes	Codes	Sub-codes
Procedure in graduate schools	Admission	**Announcements** Orientation Adaptation **Registrations**	
	Teaching	Feedback	Advisory Course on time Course content Evaluation questionnaire Share Recovery
		Following	Thesis Thesis Monitoring Committee
		Student affairs	Student files Software integration Digital documentation Distribution of roles Petition

			Special student Exemption
		Multi-discipliner	
		Academician rights	
		Workshops	
	Administration	Transparency	
		Job descriptions	
		Staffing	
		Secretary	
		Bureaucracy	
		Coordination	
		Discipline	
		Student opinion	
		Finance	
		Strategic planning	Increasing commitment Touching on students Problem solving via phone Follow of new developments Follow of international trends
		Implementation of laws	Strict legislation Strict regulations Strict directives
	Graduation	**Graduates**	
		Decisions	
Problems observed in graduate education		**Inadequate number of staff**	
		Technical problems	
		Amnesty laws	
		Disconnection	
		Problematic regulations	
		Loads of advisors	
		Cancel of registration	
		Permission from schools	
		Research permission	
		Fast changes in legislations	
		Time loss	

		Energy loss	
		Bureaucracy	Bureau pathology Red tape Documentation Complexity
		Limiter legislation	
Causes for non-persistence	Organizational	Faculty	Debate Negative attitudes Attitudes of contrary staffs Not following improvements Weaker science Remove of pedagogic formation opportunity Not meeting of expectations by faculty Lack of subfield
		Advisor	Disagreement No choice for selection
		Physical opportunities	Lack of research material Inadequate physical environment Lack of lab necessities
		Reflections on state policies	Lack of assistantship position Lack of attractiveness Career stesp
		Fee	
		Permission from job	
		Student attrition in undergraduate	
	Personal	**Absenteeism**	
		Transfer to other universities	
		Familial conditions	Marriage Partner permission Having dependent Preferring place of family
		Geographical preference	Metropolitan city Sea Social life Larger city

		Financial support	Economic condition Economic cause **Job search**
		Lack of commitment	
		Freezing registration	
		Delaying military	
		Lack of adaptation	
		Perceiving graduate education useless	
		Professional life	Personal decision Working at a job Life necessities Appointment
		High expectations related to graduate education	
		Not meeting of expectations	
		Long distance	
		Lack of proficiency	
Consequences	Social	Waste of money	Waste of heat Waste of light Waste of cleaning Waste of security
		Academic loss	Limited research Lack of academic expertise Weak graduate schools Occupying faculty Occupying physical environment Low quantity Low quality
		Economic loss	
		Labour force loss	
		Decrease in standards	
		False role-model	
		Lack of experts	
		Qualified staffing problem	
		Barrier for organizational	

		culture	
	Individual	**Time loss** **Energy loss** Lack of diploma Negative effect on promotion Academician frustration Student frustration	
Solution ways	Macro-level	**Financial support**	**Increasing scholarship opportunities** Employment Economic support Promotions
		Priority in public jobs	
		Changing perception of state	
		Making easy to open graduate programs	
		Increasing the number of academicians	
		Credit transfer	
		Lateral transfer	
		Cooperation	
		Not intervention on organizational culture	
		Flexible policy	
		Quality-control mechanism	
		Permission for teachers	
		Title	
		Easy bureaucratic process	
		Increase in supported fields	
		Autonomy	
	University-level	Course content	Flexible course program Interdisciplinary Diversity

	Faculty		Flexible working conditions Abolishing strict rules Organizing activities increasing consciousness Helper personnel Removal of barriers Increasing commitment Serious orientation program Cultural introduction activities Coming together students and academicians Project support Ceremonies Social activities Communication Freedom Consistent behavior Peripheral service for students Supervisory
	Advisor		Selection by students Job descriptions Not reflection of conflicts
Individual-level	Professional approach Healthy communication		

E4. Codes and Themes for Advisors

Themes	Sub-themes	Codes	Sub-codes
Student-advisor relations	Social relations	Empathy	
		Good relations	
		Mutual relations	
		Controlling	
		Hobby	
		Social connections	
		Colleague approach	
		Tolerated behavior	
		Togetherness	

	Special interest	
	Overcoming obstacles	
	Reluctant students	
	Negative humor	
	Peer support	
	Socialization	
Academic	Joint study	
	Article	
	Assignments	
	Thesis	
	Planning	
	Guidance	
	Flexibility	
	Regular works	
	Invitation to activities	
	Article critique	
	Handbook reading	
	Meetings	
	Self-evaluation	
	Seminar	
	Interim reports	
	Comfortable course environment	
Problems observed in graduate education	Familial problems	Marriage Having dependent child
	Finance	Job seeking Financial problems No possibility for assistantship
	Policies	Escaping from military Amnesty laws Appointment

		Lack of academic positions Temporary positions OYP recall
	Student responsibilities	Lateness on thesis completion Close students Delaying Postponing Focusing problem Problem of thinking deeply Come short of studies Hand-over Lack of concentration Lack of research formation Usage of maximum duration Late topic selection
	Student expectations	Not meeting Perceiving graduate education disadvantaged Perceiving graduate as earning money Good advisorship
	Departmental issues	Waiting for acceptance of projects Relations with other institutions Research permission Plan B Permission Much time in labs
	Access to advisor	Busyness Not available in office

			Timelessness Administrative duty Family Preparation for associate professorship Extro worloads
Causes for non-persistence	Organizational	Permission from institution	
		Thesis completion duration	
		Faculty	Not available in lecture No guidance **Transfer to other universities**
		Economic support	
		Lack of adequate employment	
		Poor quality program	
		Permission from job	
	Personal	**Attendance problem**	
		Delaying military	
		Not sparing time	
		Finding money	
		Lack of focus	
		Lack of effort	
		Lack of commitment	
		False intention	
		Dispensation	
		Intrust feeling	
		Writing skills	
		Incompetence feeling	
		Living another city	
		Health problem	
		Family	Pregnancy Having dependent Birth

		Finance	Seeking job Finding money Economic condition Preparation for exams
		Perceptions about lack of demand	
		Perspective about graduate education	
Consequences		Disruptions in education	
		Deficient skills in students	
		Loosening in graduate education	
		Lack of practical reflections on life	
		Effort loss	
		Time loss	
		Increase in failure rates	
		Decrease in investments	
		Loss of advantages	
		Reflections on ecosystem	
		Injustice	
		Loss of public resources	
		Barrier for eager students	
Solution ways	Macro-level	Finance	Tangible rewards Wages policy Support Financial support Scholarship Tangible support Research assistantship Increase in research budgets Software and hardware support

	Student selection policy	Removing testing Student selection by research universities Removing central exam system Reorganizing high school system
	Societal structure	Giving up thought of public job after graduation
	Philosophy of education	Contact with marketing Considering needs of marketing Computer-weighted education University for not everyone Daily life practices Technology integration Updating programs Increase in number of academician Training support
	Admission procedure	Not giving authority of opening program to each institution Being selective
University-level	Course content	Seminar quality Practice oriented thesis Thesis compatible with marketing Thesis defense open to public Courses suitable for marketing

			MS without thesis Increase in elective courses
		Projects	Output Master-apprentice relationship
		Changing student profile	
		Professional development for faculty	
		Decrease in faculty workloads	
		Contract between student and department	
		Permission from institutions	
	Individual-level	Volunteer	
		Love	
		Compliment for academician	
		Researching new methods (Professor)	
		Update of academicians	
		Competent academician	
		Emphatic academician	
		Patient academician	
		Quiete academician	
		Shake-out of academician	
		Initiating student reading	
		Encouraging problem-based thinking	
		Intellectual structure	
		Paper writing with students	
		Article writing with students	
		Abroad experience	
		Contract between student and faculty	

F. CURRICULUM VITAE

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EDUCATION

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Ph.D.
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B.Sc. (M.Sc. without thesis)
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WORK EXPERİENCE

2013 June-ongoing	YÖK-ÖYP Research Assistant Middle East Technical University Faculty of Education Department of Educational Sciences
2013 February-2013 June	YÖK-ÖYP Research Assistant Bülent Ecevit University Ereğli Faculty of Education Department of Educational Sciences
2012 September-2013 February	Vice-Principal Van Başkale İMKB High School
2011 October-2012 August	Physics Teacher Van Başkale İMKB High School

PUBLICATIONS

Articles in International Journals (ESCI)

Ertem, H. Y., & Gökalp, G. (2018). Velilerin okul iklimi ve veli katılımı algılarının velilerin eğitim durumu ve çocuklarının öğrenim kademesine göre incelenmesi. *Hacettepe University Journal of Education.* DOI: 10.16986/HUJE.2018040670

Articles in National Journals

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Ertem, H. Y. & Gökalp, G. (2017). *Velilerin egitim düzeyleri ile çocuklarının ögrenim kademesinin velilerin okul iklimi ve veli katılımı algısına etkisi*. Paper presented at 12th International Congress on Educational Administration, Ankara.

Ertem, H. Y., Engin-Demir, C., & Gökalp, G. (2017). *Ögretmen adaylarının kariyer planlaması: bir ihtiyaç analizi çalısması.* Paper presented at 12th International Congress on Educational Administration, Ankara.

Ertem, H. Y., Engin-Demir, C., & Gökalp, G. (2017). *Bölgesel esitsizliklerin ekonomik temelleri: egitime yansımalar*. Paper presented at 12th International Congress on Educational Administration, Ankara.

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Ertem, H. Y. (2013). *Fizik öğretmenlerinin yapılandırmacı öğretim programını uygulama yeterlilikleri üzerine bir durum çalışması*. Paper presented at 1. Ulusal Fizik Eğitimi Kongresi, Ankara.

PROJECTS

Projet Title: Kişisel ve Örgütsel Faktörlerin Lisansüstü Eğitimden Öğrenci Kaybı Üzerindeki Rolü: Tamam mı Devam mı?
Position: Researcher (May 2018-ongoing)
Project Coordinator: Assist. Prof. Dr. Gökçe Gökalp
Project Number: METU-BAP-502-2018-2762

Projet Title: Türkiye'de Uluslararası Öğrenci Hareketliliği: Uluslararası Öğrencilerin Yaşam Doyumları ve Yükseköğrenim için Türkiye'yi Tercih Sebeplerinin Modellenmesi
Position: Scholar (May 2015-January 2017):
Project Coordinator: Assoc. Prof. Dr. Yaşar Kondakçı
Project Number: TÜBİTAK 1001 Project; 114K721

G. TURKISH SUMMARY / TÜRKÇE ÖZET

Giriş

Türk toplumunda belirli alanlar diğer alanlara göre daha değerli bulunmaktadır. Bu değer, toplumun deyimlerinde ortaya çıkmaktadır. "Her şeyin başı sağlık" ve "eğitim şart" bunlara örnek olarak gösterilebilir. Eğitim toplumsal kurumlar arasında özel bir yere sahiptir. Eğitim insanların tüm hayatlarını etkileyen bir süreçtir çünkü insanlar okul öncesi eğitimden yükseköğretime kadar hayatlarının büyük bir bölümünü eğitimle ilgili etkinliklerde geçirmektedir. Yükseköğretim, bu eğitim süreçlerinin arasında özel ve anlamlı bir yere sahiptir. İnsanlar bu dönemde kendilerini daha bağımsız hissederler. Ayrıca, geleceklerini şekillendirebilecekleri ortamı bulurlar. Bu durum bazen eş bulma bazen de mesleki kariyere karar verme şeklinde kendini gösterir. Daha resmi ifade ile yükseköğretim kurumları bireylerin akademik ve sosyal yönlerini geliştiren, onlara bir kariyer çizen ve çeşitli becerilerini geliştirebilecekleri imkânlar sunan eğitim-öğretim kurumlarıdır.

Türkiye'de yükseköğretimin amacı üçlü sacayağı üzerine oturtulmuştur. Öğrencileri birçok boyutta geliştirmek, devlete katkı sağlamak ve bilimsel çalışmalar yürütmek amaçlanmaktadır. Yükseköğretim sistemi yapısal olarak incelendiğinde 2 yıllık Meslek Yüksek Okulları, 4, 5 ya da 6 yıllık Fakülteler yükseköğretimin genel çerçevesini oluşturmaktadır. En az 4 yıllık lisans eğitimi sonrası ise lisansüstü eğitim verilmektedir. Lisansüstü eğitim genel olarak Yüksek Lisans ve Doktora eğitimini içermektedir.

Yükseköğretim Kurulu Başkanlığı'nın verilerine göre 2016-2017 eğitim-öğretim yıllarında 600.000'e yakın kayıtlı lisansüstü öğrenci bulunmaktadır. Maalesef, bu öğrencilerin önemli bir kısmı ya kaydını yenilememekte ya da derslerine katılım sağlamamaktadır. Ertem ve Gökalp (2016) yaptıkları çalışmada ciddi sayıda pasif öğrencisi olan üniversiteler tespit etmiştir. Sonuç olarak, eğitimlerine devam etmeyen bu tip öğrenciler herhangi bir derece alamamakta ve kalıcı olmayan öğrenci olarak tanımlanmaktadır (Berger, Ramiraz, & Lyon, 2012; Davidson, Beck, & Milligan, 2009; Litalien & Guay, 2015; Spaulding & Rockinson-Szapkiw, 2012; Xu, 2014).

Öğrenci kaybı uluslararası alan yazında önemli bir yer tutmakta iken Türkiye alan yazınında kapsamlı bir araştırmaya rastlanmamıştır. Türkiye'deki çalışmalar daha çok alt okul düzeylerindeki okul terkine (Bülbül, 2012; Özbaş, 2010; Şimşek, 2011), devamsızlık, altyapı problemi, burs sorunları, akademisyen yetersizliği ve aile sorumlulukları gibi lisansüstü eğitimdeki tek boyutlu problemlere yoğunlaşmıştır (Çoruk, Çağatay, & Öztürk, 2016; Nayır, 2001, Sevinç, 2011). Diğer taraftan, lisansüstü eğitimdeki pasif öğrenciler 2015 yılı itibariyle dikkat çekmeye başlamıştır. Dönemin Gazi Üniversitesi Rektörü Fen Bilimleri Enstitüsü'ndeki pasif öğrencilerin oranının %55 olduğunu demeç vermiştir (Hurriyet, 2015). Ertem ve Gökalp (2016) ise üç büyük devlet üniversitesindeki pasif öğrenci oranlarını %42, %26 ve %1 olarak bulmuştur. Bu çalışmaların hepsi öğrenci kaybı ile ilgili değerli sonuçlar verse de tek boyutludur ve betimleyici olmaktan öteye gidememiştir. Dolayısıyla Türkiye bağlamında, lisansüstü eğitimde öğrenci kaybını çok boyutlu, derinlemesine ve nedensel ilişkiler çerçevesinde inceleyecek çalışmalara ihtiyaç vardır.

Öğrenci kaybını araştıran çalışmalar genellikle bunun nedenlerine eğilmektedir. Bu nedenleri örgütsel ve kişisel nedenler altında toplamak mümkündür. Lovitts (2011) kişisel karakterlerden üniversitelerin yapısal niteliğine kadar birçok etkenden söz etmektedir. Örgütsel iklimin açık ya da kapalı olması (Moran & Volkwein, 1988; Manuela, Cecila, & Joao, 2014; Sokol, Gozdek, Figurska, & Blaskova, 2015), üniversitenin devlet ya da vakıf üniversitesi olması (Chaney & Farris, 1991) ve kurumun destek sağlaması ya da sağlamaması (DesJardins, Ahlburg, & McCall, 2002) örgütsel etkenlere örnek olarak gösterilebilir. Diğer taraftan, yaş, cinsiyet, ırk ve sosyoekonomik konum gibi demografik değişkenler (Bean & Metzner, 1985; Braxton, Brier, & Hossler, 1988; Ferreira, 2003; Hossler & Vesper, 1993; Litalien & Guay, 2015; Lott, Gardner, & Powers, 2009; Pascarella & Chapman, 1983; Stage, 1988; Stage and Hosler, 1989; Terenzini & Pascarella, 1978) ve geçmiş performans, akademik başarı ve entelektüel gelişim gibi bireysel nitelikler (Chaney & Farris, 1991, Kahn & Nauta, 2001; Kruzicevic, Barisic, Banozic, Esteban, Sapunar, & Puljak, 2012) kişisel etkenlere örnek verilebilir.

Bu çalışma, lisansüstü eğitimde öğrenci kaybı üzerinde kişisel ve örgütsel etkenlerin rolünü araştırmaya yönelik bir model geliştirmeyi ve test etmeyi ve kalıcı olmayan öğrenci, kalıcı öğrenci, enstitü yöneticisi ve danışman gözünden öğrenci kaybını incelemeyi amaçlamaktadır. Bu bağlamda çalışmanın araştırma soruları aşağıdaki gibidir:

1. Öğrenci kaybı kişisel ve örgütsel etkenlerle ne şekilde ilişkilidir?
    a. Cinsiyet, medeni durum ve program düzeyini içeren kişisel etkenler ile üniversite türü, ekonomik destek ve alanı içeren örgütsel etkenler öğrencilerin kalıcılığını ne derece yordamaktadır?
    b. Yaş, dönem ve geçmiş performansı içeren kişisel etkenler ile örgüt ikliminin boyutlarını içeren örgütsel faktörler, kurumsal ve amaçsal bağlılık aracılığında ayrılma niyetlerini ne derece yordamaktadır?
2. Öğrenci kaybı öğrenciler ve öğretim üyeleri tarafından nasıl algılanmaktadır?
    a. Kalıcı olmayan öğrenciler program kaydından bugüne ne deneyimlemiştir?
    b. Kalıcı öğrenciler öğrenci kaybı hakkında ne düşünmektedir?
    c. Enstitü yöneticilerinin öğrenci kaybı konusunda algıları nasıldır?
    d. Danışmanların öğrenci kaybı konusundaki algıları nasıldır?
3. Öğrenci kayıp oranları program (Yüksek Lisans veya Doktora) ve dönemlere (2015-2016, 2016-2017 ve 2017-2018) göre hangi düzeydedir?

Bu amaçlar çerçevesinde, çalışmanın araştırmaya, uygulamaya ve kurama belirli katkıları olacaktır. Araştırma boyutunda, çalışma alan yazındaki önemli bir boşluğu doldurma konusunda bir adım atacaktır. Öğrenci kaybının lisansüstü düzeyde derinlemesine, çok boyutlu ve nedensel ilişkiler kurarak incelenmesi alan yazına önemli katkı sunacaktır. Uygulama boyutunda lisansüstü eğitimde kalitenin ve sürekliliğin sağlanması hususunda üretilecek strateji ve politikalara ışık tutacaktır.

Kuramsal olarak ise, Biyo-Ekolojik Kuram ile Yükleme (Atfetme) Kuramı bireysel ve örgütsel etkenlerin farklı bakış açılarına göre yükseköğretim bağlamında incelenmesi ile kuramsal zemin tartışmalarına olanak tanıyacaktır.

Biyoekolojik kuram ile Yükleme Kuramı bu çalışmanın kuramsal çerçevesini oluşturmaktadır. Bronfenbrenner (1977, 1986) Biyoekolojik Kuram'da birey ile çevresi arasındaki etkileşime dikkat çekmektedir. Bu etkileşim beş katmanda kendini göstermektedir: mikrosistem, mezosistem, ekzosistem, makrosistem ve kronosistem. Bu çalışma için kuramın biyo kısmı kişisel etkenlere karşılık gelmekteyken ekolojik kısmı ise örgütsel kısımlara denk gelmektedir. Diğer taraftan Yükleme Kuramı ise bireysel istemedikleri sonuçlarla karşılaştıklarında bunları değişik etkenlere atfetmesini konu almaktadır (Weiner, 1972). Bu çalışma için öğrenci grubu ile örgüt (danışman ve enstitü yöneticisi) grubunun öğrenci kaybını hangi etkenlere atfettiği incelenmektedir.

Alanyazın

Türkiye'de Yükseköğretim Sistemi

Türkiye'de yükseköğretim lise eğitiminin (orta öğretim) sona ermesiyle başlar ve iki yıllık Meslek Yüksek Okulundan dört yıllık Doktora eğitimine kadar geçen süreyi ifade eder. Yükseköğretimin işleyişi 2547 sayılı kanun ile sağlanmaktadır. Bu kanunun dördüncü maddesine göre yükseköğretimin amacı öğrencileri beceri, değer ve kültür ekseninde geliştirmek, devleti ekonomik, sosyal ve kültürel yönlerden ileriye götürmek ve bilim ve araştırma faaliyetlerini desteklemektir.

Türkiye'de yükseköğretimin tarihçesi çok eskiye dayanmaktadır. Erdem'e (2004) göre Selçuklu Devleti zamanında 1068 yılında yılında Bağdat'ta kurulan Nizamiye Medreseleri bir tür yükseköğretim kurumudur. Osmanlı İmparatorluğu zamanında ise medreseler yükseköğretim kurumu işlevi görmekte olup buralar bilimden ziyade din ile ilgili öğretilerin yapıldığı yerlerdir (Tekeli, 2010). Türkiye Cumhuriyeti'nin kuruluş zamanlarında da yükseköğretime ayrı bir değer verilmiştir. Medreselerin kaldırılarak Tevhid-i Tedrisat kanununun ilan edilmesi, yabancı uyruklu bilim adamlarının ülkeye davet edilmesi önemli gelişmelerdir. Gürüz, Şuhubi, Şengör, Türker ve Yurtsever (1994) 1933'te ilan edilen ve içinde Darülfünun yerine İstanbul Üniversitesi'ni kurulmasını öngören madde olan 2253 sayılı kanunu Türkiye'deki modern yükseköğretim anlayışının ilk adımı olarak görmektedir. Namal (2012) ise İkinci Dünya Savaşı sırasında Almanya'dan gelen bilim adamlarının Türk yükseköğretimine yaptığı katkıyı vurgulamaktadır. 1973 yılında ilk Yükseköğretim Kurulu'nun kurulup 1975'te kapatılıp (Gür & Çelik, 2011) 1982 Anayasa'sı ile tekrar kurulan ve günümüzde işlevine devam eden Yükseköğretim Kurulu Başkanlığı (Erdem, 2004) yükseköğretim ile ilişkili diğer tarihsel gelişmelerdir.

Yükseköğretim sadece insanların hayatlarını şekillendirmekle kalmaz, devletin sosyal ve ekonomik yapılarını teşvik eder ve bilimsel çalışmalara katkı sunar. Ishitani (2006) yükseköğretimin ekonomik kazanımlarına ve kariyer imkânlarına dikkat çekmektedir. OECD (2015) raporuna göre yüksek düzey eğitime sahip olanlar olmayanlara göre daha iyi iş koşullarına sahipken yine aynı kurumun 2017 raporuna göre ise yüksek öğretim mezunları için iş bulma oranı %85 ve üst ortaöğretim mezunları içinse %60'tır. Gölpek (2011) ise yükseköğretimin sosyal faydalarını çocuklara daha fazla bakım, daha düşük suç oranları ve kadınların eğitimine ve çalışmasına daha fazla vurgu olarak göstermektedir. Diğer taraftan, üniversitenin bilime ve girişimciliğe katkısı alan yazında sıkça tartışılmaktadır (Odabaşı, 2006; Özer, 2011; Öztemel, 2013; Şen, 2012). Sonuç olarak, yükseköğretimin kazançları toplumdan devlete her kurumu ve bireyi ilgilendirmektedir. Bologna süreci, reform teşebbüsleri, akademisyenlerin özlük haklarındaki tırpanlamalar, yeni üniversiteler için paradigmalar, akademisyen yetersizliği ve vakıf üniversitelerinin durumu yükseköğretimde sıkça çalışılmaktadır (Altınsoy 2011; Arap 2010; Kondakçı, 2003; Şenses, 2007; Şimşek and Adıgüzel 2012).

Yükseköğretimin yönetimi ve yönetişimi belli kanunlar çerçevesinde yapılmakta olup Türkiye'deki yönetim sisteminden etkilenmektedir. Türkiye'de katı bir merkeziyetçi yapı vardır ve bunun negatif etkileri yükseköğretim araştırmacılarına konu olmuştur. Çelik ve Gür (2014) yükseköğretimin son zamanlarda etkileyici bir şekilde geliştiğini ama merkeziyetçi yapının bu gelişimi tatmin etmediğini ifade etmiştir. Özer (2012) ise okullaşma oranlarındaki artış, yükseköğretimdeki yeni aktörler ve üniversite sayısındaki artıştan dolayı mevcut yapının yeni yükseköğretimi taşıyamadığını dolayısıyla Kalite Güvence Sistemi'ne ihtiyaç duyulduğunu belirtmiştir. Türkiye'de yükseköğretim iki düzeydeki kurumlar tarafından yönetilmektedir. İlk düzeyde Yükseköğretim Kurulu Başkanlığı, Üniversitelerarası Kurul ve Yükseköğretim Denetleme Kurulu bulunmaktadır. İkinci düzeyde ise üniversite rektörleri gelmektedir. Her iki düzeyde de ekonomi büyük dikkat çekmektedir (Aypay, 2003; Gürüz, 2001; Hauptman, 2007; Nerlove, 1975; Şimşek, 1999).

Yükseköğretimin önemli bir düzeyi olan lisansüstü eğitim son yıllarda oldukça çekici hale gelmiştir. Akademisyen olma imkânı (Ergün, 2001), mesleki gelişim imkânı (Başer, Narlı, & Günhan, 2005) ve kişisel gelişim (Erkılıç, 2007) lisansüstü cazibe nedenlerinden bazılarıdır. Diğer taraftan kurumlar da lisansüstü eğitimden fayda sağlamaktadır. Araştırma sayısı fazla olan üniversiteler sıralamalarda daha önlerde yer almaktadır. URAP (2015) üniversiteleri beş yıllık performanslarına göre sıralarken makale sayısı, Doktora öğrencisi sayısı ve Doktora öğrenci oranı gibi dokuz adet kriteri göz önüne almıştır. TÜBİTAK (2017) verilerine göre 2002 yılında desteklenen proje sayısı 1242 iken bu sayı 2016 yılında 4198'e yükselmiştir. Dolayısıyla lisansüstü eğitime yatırım yapan üniversiteler daha çok araştırma imkânı ile karşılaşmış, bu da onlara yatırım ve ekonomik destek olarak geri dönmüştür.

Lisansüstü eğitim sunduğu fırsatların yanında belirli problemlerle de karşılaşmaktadır. Sporn (2007) rekabet, özelleştirme ve liberalleşme gibi küreselleşme etkinliklerinin yükseköğretimi istenmedik şekilde etkilediğini savunmuştur. Karaman ve Bakırcı (2010) geçici akademik kadro pozisyonlarının araştırma görevliliğine olan ilgiyi azalttığını bulmuştur. Bozan (2012) ise lisansüstü eğitimdeki kaliteyi eleştirmiştir. Yazara göre, 1980'li yıllardan sonra akademik yayınlar sayı olarak artmasına rağmen bu yükseliş yayın kalitelerinde ve etki faktörlerinde gözlemlenmemiştir. Nayır (2011) lisansüstü eğitim alan okul müdürlerinin, müfettişlerin ve öğretmenlerin yeterince esnek olmayan lisansüstü eğitim yönetmeliklerinden şikâyetçi olduklarını bulmuştur. Diğer taraftan, mobbing (yıldırma), kurumsal destek eksikliği ve demokratik olmayan uygulamalar lisansüstü eğitimde karşılaşılabilecek diğer sorunlardır (Celep & Konaklı, 2013; Değirmencioğlu, 2008; Karakütük, Aydın, Abalı, & Yıldırım, 2008). Sonuç olarak lisansüstü eğitimde belli problemler göze çarpmaktadır.

Öğrenci Kaybı

Öğrenci kaybı eğitimin tüm düzeylerinde görülmekle birlikte kısaca bireylerin öğrenciliğinin değişik nedenlerle sona ermesi olarak tanımlanabilir. Yükseköğretim bağlamındaki öğrenci kaybı değişik modeller tarafından incelenmiştir. Spady (1970), Tinto (1975), Bean (1980) ve Pascarella (1980) geliştirdikleri modellerde Durkheim'ın (1961) intihar girişim modelini örnek almışlardır. Buna göre üniversite hayatına uyum sağlayamayan bireyler okulu terk etmektedir. Spady (1970) terk olayına sosyolojik açıdan yaklaşmış ve öğrencinin çevresi ile etkileşiminden hareket eden bir model ortaya koymuştur. Tinto (1975) öğrenci kaybının boylamsal bir süreçte olduğundan hareketle sırasıyla öğrencinin geçmiş nitelikleri, ilk bağlılıklar, akademik ve sosyal sistem deneyimleri, akademik ve sosyal uyum, son bağlılıklar ve terk kararı ile modelini oturtmuştur. Bean (1980) ise okul terkini iş bırakma ile ilişkilendirerek memnuniyetin bırakma niyetlerini ve davranışını etkilediğini bulmuştur. Son olarak Pascarella (1980) öğrenci ile bölüm arasındaki gayri-resmi ilişkilerin rolüne dikkat çekmiş, sınıf dışı etkileşimlerin okulu bırakma ihtimalini düşüreceğini savunmuştur.

Öğrenci kaybı sürecinde kurumsal ve amaçsal bağlılık ile ayrılma niyetlerinin önemi çok büyüktür. Alan yazındaki birçok çalışma öğrenci kaybının en kuvvetli öncüllerinin kurumsal ve amaçsal bağlılık ile ayrılma niyetleri olduğunu göstermiştir (Bean, 1982; Davidson, Beck, & Milligan, 2009; Litalien & Guay, 2015; Pascarella & Terenzini, 1980; Tinto, 1975). Cabrera, Nora ve Castaneda (1993) öğrenci kalıcılığı ile ilgili yaptığı çalışmada yapısal eşitlik modellemesi kullanmış ve bu modelde kalıcılığı en fazla yordayan değişkenin kalıcılık niyetleri; kalıcılık niyetlerini de en fazla yordayan değişkenin bağlılık değişkeni olduğunu bulmuştur. Hunter ve Devine'in (2016) Doktora öğrencileriyle yürüttüğü çalışma bölüm ve danışman tarafından sağlanan desteğin öğrencilerin bırakma niyetlerini düşürdüğünü göstermiştir. Litalien ve Guay (2015) de benzer şekilde desteğin okul terki niyetini düşürdüğünü bulmuştur.

Öğrenci kaybının nedenleri ve sonuçları da alan yazında sıklıklar tartışılmaktadır. Ferreira (2003) çalışmasında öğrenci kaybının kadınlarda erkeklere göre daha yüksek olduğunu bulurken Hassell, Seston, Eden ve Willis (2007) ise kadınların okulu bitirme ihtimallerinin daha fazla olduğunu bulmuştur. Kahn ve Nauta (2001) ise geçmiş performans ile öğrenci kalıcılığı arasındaki ilişkiyi incelemiş ve geçmiş başarının anlamlı bir yordayıcı olduğunu bulmuştur. Golde (2000) üç kalıcı olmayan öğrenci ile görüşmeler yapmış ve öğrenci kaybı nedenlerinin danışmanla ilişkiler, öğrencilerle ilişkiler ve terk sebeplerini başkalarına anlatma olduğunu bulmuştur. Martinez, Sher, Krull ve Wood (2009) tarafından yürütülen çalışma burs, kredi ve tam zamanlı iş gibi ekonomik desteklerin öğrenci kaybını yordadığını göstermiştir. Elgar (2003) ise öğrenci kaybının bölümlere göre değişip değişmediğini araştırmış ve güzel sanatlar ile sosyal bilimlerde öğrenci kayıp oranlarının daha yüksek, fen bilimlerinde ise bu oranın daha düşük olduğunu bulmuştur. Diğer taraftan, Lovitts (2001) öğrenci kayıplarının duygusal ve psikolojik içerikli olumsuz kişisel sonuçları olduğunu vurgularken Xu (2014) ise öğrenci kaybının olumsuz duygusal, sosyal ve ekonomik sonuçlar doğuracağını belirtmiştir. Bu olumsuz sonuçlardan kurtulmak ve öğrenci kaybını düşürmek için belli yöntemler tavsiye edilmektedir. Danışmanlık, uyum ve sosyalleşme eğitimleri, destek ve akademik yardımlar bunlardan bazılardır. (Bowman, Mazerolle, Pidney, Dodge, & Hertel,2015; Chaney & Farris, 1991; Gardner, 2008).

Örgüt İklimi

Günlük hayatta insanlar sürekli hava durumundan ve yaşadıkları bölgenin ikliminden bahsederler. İklim, aynı zamanda örgütler için de geçerli bir kavram olup açık iklim olumlu ilişkilerin olduğu kurumları, kapalı iklim ise olumlu ilişkilerin bulunmadığı kurumları temsil etmektedir. Hoy ve Miskel (1991) örgüt iklimini bir kurumda çalışanların iş yerleri ile ilgili paylaştıkları algı olarak tanımlamaktadır. Lunenburg ve Ornstein'e (2011) göre ise örgüt iklimi kısa çalışma ortamının kalitesi ile ilişkilidir.

Örgüt ikliminin tarihsel gelişimi incelendiğinde ölçme çabaları dikkat çekmektedir. Örgüt iklimi endüstriyel alanlar için önemli olmasına rağmen örgüt iklimini ölçmeye yönelik ilk adımlar eğitim bilimleri alanında atılmıştır (Hoy, Tarter, & Kottkamp, 1991). Halpin ve Crof (1963) ilköğretim okullarında örgüt iklimini "Örgüt İklimi Betimleme Ölçeği" ile ölçmüş ve öğretmenler için dört, okul müdürleri için dört olmak üzere toplam sekiz davranış ortaya çıkarmıştır. Ayrıca bir kurum için altı tip örgüt iklimi türü önermekle birlikte bunlar açık iklimden kapalı iklime doğru süreklilik içindedir. Açık iklim enerji ve yaşam dolu, tatmin edici ve insanların amaçlarını başarabildikleri kurumlarda görünürken kapalı iklim ise düşük güven ortamı ve kimsenin tatmin olmadığı kurumlarda ortaya çıkmaktadır. 1980'li yıllar itibariyle de değişik türdeki örgütler, kurumlarının iklimini ölçmeye ağırlık vermişlerdir. Örneğin Welsch ve LaVan (1981) sağlık kurumlarındaki iklimi ölçmeye yönelik çalışma yürütmüşken Moran ve Volkwein (1988) ise yükseköğretim kurumlarındaki iklimi ölçmeyi denemiştir.

Örgüt iklimi kavramı birtakım örgütsel davranış ve tutumlarla yakından ilgilidir. Shanin, Naftchali ve Pool (2013) yaptıkları araştırmada performansın ve örgütsel vatandaşlığın olumlu örgüt ikliminden etkilendiğini bulmuştur. Taylor ve Tashakkori'nin (1995) çalışmasına göre ise örgüt iklimi iş tatmini ile ilişkilidir. Mendal, Watson ve Macgregor'un (2002) çalışması işbirlikçi liderlik stili gösteren okul müdürlerinin okullarının olumlu iklimine diğer tür liderlik stili gösteren okul yöneticilerine göre daha fazla katkı verdiklerini göstermiştir. Coso ve Sekayi (2015) lisansüstü eğitim veren kurumlarda örgüt iklimini araştırmış ve Doktora öğrencilerinin kariyer planlamaları ile profesyonel gelişimlerinin örgüt ikliminden etkilendiğini bulmuştur. Schneider, Brief ve Guzzo (1996) örgüt iklimini değişim süreciyle ilişkilendirmiş ve tek bir iklim yerine birden fazla tür iklim barındıran kurumlarda sürdürülebilir değişimin daha kolay gerçekleşebileceğine işaret etmişlerdir. Yüceler (2009) Türkiye'deki yükseköğretim kurumlarındaki örgüt iklimini incelemiş ve örgüt ikliminin örgütsel politikaları, yönetici tutumlarını, fiziksel çalışma ortamını ve sosyal ilişkileri içerdiğini ve aynı zamanda örgütsel bağlılığı şekillendirdiğini bulmuştur.

Alanyazının Tartışması ve Özeti

Kurumsal ve amaçsal bağlılık (Bennett, 2003; Mallette & Cabrera, 1991); cinsiyet, yaş, medeni durum, program düzeyi, dönem ve geçmiş performans gibi kişisel faktörlerin (Ferreira, 1993; Kahn & Nauta, 2001; Long, Ferrier, Heagney, 2006); ekonomik destek, üniversite türü, alan ve örgüt iklimi gibi örgütsel faktörlerin (Araque, Roldan, & Salguaero, 2009; Ishitani, 2006; Ishitani & DesJardins, 2002; Valore, 2001) öğrenci kaybı, ayrılma niyetleri ve öğrenci kalıcılığı gibi değişkenlerle ilişkileri alan yazında sıkça çalışılmıştır. Bu bağlamda, çalışmanın hipotezleri aşağıda sıralanmıştır.

H1: Kişisel ve örgütsel faktörler öğrencilerin kalıcılığını yordamaktadır.

H1a: Kadın öğrencilerin kalıcı olmamaktaki ihtimalleri erkeklere göre daha fazladır.

H1b: Evli öğrencilerin kalıcı olmamaktaki ihtimalleri bekarlara göre daha fazladır.

H1c: Yüksek Lisans öğrencilerinin kalıcı olmamaktaki ihtimalleri Doktora'dakilere göre daha fazladır.

H1d: Teknik olmayan üniversitedeki öğrencilerin kalıcı olmamaktaki ihtimalleri teknik üniversitelerdekilere göre daha fazladır.

H1e: Örgütsel ekonomik destek almayan öğrencilerin kalıcı olmamaktaki ihtimalleri örgütsel bir ekonomik destek alanlara göre daha fazladır.

H1f: İnsani ve edebi bilimlerdeki öğrencilerin kalıcı olmamaktaki ihtimalleri diğer bölümlerdekilere göre daha fazladır.

H2: Kişisel ve örgütsel faktörler kurumsal ve amaçsal bağlılığın aracılık etkisi ile lisansüstü eğitimden ayrılma niyetlerini yordamaktadır.

H2a: Kişisel faktörler ile ayrılma niyetleri arasında bir ilişki vardır.

H2b: Örgütsel faktörler ile ayrılma niyetleri arasında bir ilişki vardır.

H2c: Kurumsal ve amaçsal bağlılık ile ayrılma niyetleri arasında bir ilişki vardır.

H2d: Kurumsal ve amaçsal bağlılık ile kişisel faktörler arasında bir ilişki vardır.

H2e: Kurumsal ve amaçsal bağlılık ile örgütsel faktörler arasında bir ilişki vardır.

H2f: Kurumsal ve amaçsal bağlılık; kişisel faktörler ve ayrılma niyetleri arasındaki ilişkide aracılık rolü üstlenmektedir.

H2g: Kurumsal ve amaçsal bağlılık; örgütsel faktörler ve ayrılma niyetleri arasındaki ilişkide aracılık rolü üstlenmektedir.

Yöntem

Desen

Bu çalışmanın deseni karma model araştırmasıdır. Karma model araştırmaları sadece yöntemi değil problem ifadesinden tartışmaya kadar diğer tüm kısımları karmalar (Teddlie & Tashakkori, 2003). Çalışmanın nicel boyutu ilişkisel araştırmaya dayalı iken nitel boyutta hem olgu-bilim hem de belge incelemesi vardır. İlişkisel araştırmaya konu olan bağımsız değişkenler; kişisel faktörler (yaş, cinsiyet, medeni durum, geçmiş performans, program düzeyi ve dönem) ve örgütsel faktörler (ekonomik destek, üniversite türü, alan ve örgüt iklimi boyutları) olarak sınıflanabilir. Ayrıca aracı değişken kurumsal ve amaçsal bağlılıktır. Son olarak bağımlı değişkenler ise öğrenci kalıcılığı ve ayrılma niyetleridir.

Evren ve Örneklem

Bu çalışmanın evrenini araştırma üniversitelerindeki lisansüstü öğrenciler oluşturmaktadır. İlişkisel araştırma için örneklem bu evrenden kümeleme ile rastgele seçilmişken olgu-bilim araştırması içinse amaçlı örneklem yöntemi kullanılmıştır. Sonuç olarak nicel kısım için 653 nitel kısım içinse 36 kişi çalışmaya katılım sağlamıştır.

Veri Toplama Araçları

Bu çalışma temel olarak üç tane ölçme aracına sahiptir. İlk ölçme aracı içinde betimleyici sorular ile üç tane ölçek olan bir ankettir. İkinci ölçme aracı kalıcı olmayan öğrenciler, kalıcı öğrenciler, enstitü yöneticileri ve danışmanlar için ayrı ayrı hazırlanmış dört görüşme formudur. Son ölçme aracı ise araştırma üniversitelerindeki öğrencilerin kayıt durumlarına göre sayıları öğrenmeye yönelik üniversite bilgi formudur.

Anketin ilk kısımları katılımcıların demografik bilgileri ile öğrencilik durumları, destek türleri ve yaşanılan zorlukları öğrenmek için hazırlanan betimleyici sorulardan ibarettir. Diğer kısımları ise sırasıyla kurumsal ve amaçsal bağlılık, ayrılma niyetleri ve örgüt iklimi ölçekleridir. Kurumsal ve amaçsal bağlılık ölçeği Pascarella ve Terenzini (1980) tarafından geliştirilen, Türkçe'ye uyumu Tuna (2010) tarafından yapılan ve Türkiye koşullarında geçerli ve güvenilir olduğu kanıtlanan bir ölçektir. Ölçek tek boyutta yedi maddeye sahip olup 5'li Likert düzenindedir. Ayrılma niyetleri ve örgüt iklimi ölçekleri araştırması tarafından geliştirilmiştir. Test geliştirme süreçlerinin tamamlanmasıyla her iki ölçek de pilot çalışmaya tabi tutulmuştur. Pilot çalışmanın sonunda ayrılma niyetleri ölçeğinde herhangi bir güncelleme yapılmamıştır. Ölçek tek boyutta, üç maddeli ve 5'li Likert düzeninde olup geçerli ve güvenilirdir. Diğer taraftan, Açımlayıcı Faktör Analizi bulguları dikkate alındığında örgüt iklimi ölçeğinde şu bulgulara rastlanmıştır:

- Yedi tane madde eşik faktör yüklerini karşılamamış ve çıkarılmıştır.
- Ölçek 6 boyutta 57.39% varyans açıklamış ve boyutlar "akademik iklim", "sosyal iklim", bölüm iklimi", "yönetimsel iklim", "öğretim üyeleriyle ilişkilere dayalı iklim" ve "danışmanla ilişkilere dayalı iklim" olarak ortaya çıkmıştır.
- Ölçek güvenirliği .87 olmakla birlikte boyutların güvenirliği .70 ile .85 arasında değişmektedir.

Görüşme formları dört değişik grup için hazırlanmış olup her gruba ait değişik sorular içermektedir. Genel temalar; lisansüstü eğitime başlama, lisansüstü eğitimde yapı ve süreç, lisansüstü eğitimi bırakma nedenleri, lisansüstü eğitimi bırakmanın sonuçları, değişim önerileri, enstitü işleyişi ve danışmanların öğrencileriyle ilişkileri olarak sıralanabilir. Ayrıca üniversitelerin öğrenci kayıp oranlarını hesaplamak için üniversite bilgi formu hazırlanmıştır. Bu formda kayıtlı öğrenci sayısı, kaydını sildirmiş öğrenci sayısı ve kaydını yenilemeyen öğrenci sayısı gibi arşiv verisi istenmektedir.

Görgül Veri Toplama Süreci

2017 yılı sonunda bir devlet üniversitesinde gerçekleşen pilot çalışma sonunda anket ve görüşme formlarında güncellemeler meydana gelmiş ve Etik Kurul izinleri ile kurumsal izin süreçleri ana çalışma için tekrar başlatılmıştır. 2018 yılı mart ayı ile mayıs ayı arasında nicel veri, aynı yılın mayıs ayı ile temmuz ayları arasında ise nitel veri toplanmıştır. Çalışmaya gönüllü olarak katılanların kişisel bilgileri araştırmacı tarafından garanti altına alınmıştır.

Veri Analizi Süreci

Pilot çalışmada açımlayıcı faktör analizi için ve istatistiksel program kullanılmıştır. Ana çalışmada doğrulayıcı faktör analizi, yapısal eşitlik modellemesi, lojistik regresyon ve hiyerarşik regresyon için çok değişkenli analizleri yapan iki farklı istatistiksel paket analiz programları kullanılmıştır. Ana çalışmada betimsel sorulara verilen yanıtlar frekans veya ortalama ve standart sapma değerleri ile tablolaştırılarak ya da şekilleştirilerek sunulmuştur. Ardından çalışmanın hipotezlerini test etmek için çıkarımsal istatistikten faydalanılmıştır. Lojistik regresyon, yapısal eşitlik modeli ve hiyerarşik çoklu regresyon analizi yapılmıştır. Bu testler için normallik, bağımsız gözlem ve homojenlik gibi birçok varsayım incelenmiş, alfa değeri .05 olarak alınmıştır. Nitel boyutta ise, içerik analizi ile alt kod, kod ve alt temalar ortaya çıkarılmıştır.

Araştırmanın Sınırlılıkları

Çalışmanın en önemli sınırlığı ekolojik genelllenebilirlikle ilgilidir. Çalışma araştırma üniversitelerinde yapıldığı için Türkiye'deki daha büyük bir kısmı kapsayan, araştırma üniversitesi olmayan diğer üniversitelere bu çalışmanın sonuçları genellenemez. Diğer taraftan katılımcı niteliği, zaman ve beklenmedik olaylar gibi çalışmanın iç geçerliğini tehdit eden unsurlar çalışma için aynı zamanda bir sınırlık oluşturmaktadır.

Bulgular

Betimleyici İstatistik

- Lisansüstü öğrencilerin eğitim masraflarını karşılama yollarında en fazla karşılaşılan ekonomik destek türü özel sektörlerde çalışma (N = 146) ve aile desteğidir (N = 142). Yirmi bir kişi hiçbir desteği olmadığını belirtmiştir.
- Lisansüstü öğrencilerin en fazla zorlukla karşılaştığı alanlar sırasıyla iş ve okul arasındaki denge (N = 249), programın yapısı (N = 230) ve ekonomik destektir (N = 220). En az zorlukla karşılaşılan alanlar ise kültürel uyum (N = 23), aile desteği (N = 26) ve sağlık problemleridir (N = 31).
- Lisansüstü öğrencilerin örgüt iklimi algısı (O = 4.05, SS = .46) kurumsal ve amaçsal bağlılık algısından (O = 4.33, SS = .54) daha düşük görünmektedir.
- Lisansüstü öğrencilerin okuldan ayrılma niyetleri (O = 1.48, SS = .69) düşük düzeyde görünmektedir.

Doğrulayıcı Faktör Analizi

- Analiz için $\chi 2/df$, RMSEA, NFI, NNFI ve CFI kritik değerler olarak ele alınmıştır.
- Örgüt iklimi ölçeğinin altı faktörlü yapısı kabul edilebilir düzeyde uyum sağlamış ve ölçeğin güvenirlik ve geçerliği kanıtlanmıştır, $\chi 2/df = 4.50$, *RMSEA* = .073, *NFI* = .95, *NNFI* = .96, *CFI* = .96,
- Kurumsal ve amaçsal bağlılık ölçeğinin tek faktörlü yapısı kabul edilebilir düzeyde fit etmiş ve ölçeğin güvenirlik ve geçerliği sağlanmıştır, $\chi 2/df = 4.31$, *RMSEA* = .071, *NFI* = .95, *NNFI* = .96, *CFI* = .98,
- Ayrılma niyetleri ölçeğinin tek faktörlü yapısı mükemmel düzeyde uyum sağlamıştır, $\chi 2 = .00$, $p = 1.00$.

Lojistik Regresyon Sonuçları

- Ekonomik destek öğrenci kalıcılığını en kuvvetli yordayan değişkendir. Destek almayan öğrencilerin araştırma görevliliği desteği olanlara göre kalıcı olmama ihtimalleri daha fazladır, Wald's $\chi 2 = 7.51$, $p = .006$. Yine aynı şekilde destek almayan öğrencilerin burs desteği alan öğrencilere göre kalıcı olmama ihtimalleri daha fazladır, Wald's $\chi 2 = 4.00$, $p = .045$. H1e doğrulanmıştır.

- Öğrencilerin cinsiyeti öğrenci kalıcılığını yordamıştır. Erkek öğrencilerin kadın öğrencilere oranla kalıcı olmama ihtimali daha fazladır, Wald's $\chi 2 = 9.00$, $p = .003$. H1a yön olarak doğrulanmamıştır.
- Öğrencilerin program düzeyi öğrenci kalıcılığını yordamıştır. Yüksek Lisans öğrencilerinin Doktora öğrencilerine göre kalıcı olmama ihtimali daha yüksektir, Wald's $\chi 2 = 6.98$, $p = .008$. H1c doğrulanmıştır.
- Sonuç olarak H1b, H1d, H1f ve H1g hiçbir şekilde doğrulanmamışken H1a ilişki olarak doğrulanmış ama ilişkinin yönü itibariyle doğrulanmamıştır. H1c ve H1e ise doğrulanmıştır.

Yapısal Eşitlik Modellemesi Sonuçları

- Yapısal model kabul edilebilir uyum indislerine sahip olup model kabul edilebilir düzeyde uyum sağlamıştır, $\chi 2/df = 3.96$, $RMSEA = .068$, $NFI = .93$, $NNFI = .93$, $CFI = .95$.
- Ayrılma niyetleri kişisel faktörler tarafından anlamlı olarak yordanırken örgütsel faktörler tarafından anlamlı olarak yordanmamıştır.
- Kurumsal ve amaçsal bağlılık ayrılma niyetlerini anlamlı olarak yordamıştır.
- Hem kişisel hem örgütsel faktörler kurumsal ve amaçsal bağlılığı yordamıştır.
- Sonuç olarak H2a, H2c, H2d ve H2e doğrulanırken H2b ise reddedilmiştir.

Hiyerarşik Regresyon Sonuçları

- Kurumsal ve amaçsal bağlılık; örgütsel faktörler ($\beta = .45$, $p < .05$) ve geçmiş performans ($\beta = .12$, $p < .05$) ile dönemi ($\beta = -.08$, $p < .05$) içeren kişisel faktörler tarafından yordanmıştır.
- Ayrılma niyetleri; örgütsel faktörler ($\beta = -.26$, $p < .05$) ve geçmiş performansı ($\beta = -.14$, $p < .05$) içeren kişisel faktörler tarafından yordanmıştır.
- Ayrılma niyetleri; kurumsal ve amaçsal bağlılık ($\beta = -.70$, p $< .05$) tarafından yordanmıştır.

- Sonuç olarak kurumsal ve amaçsal bağlılığın kişisel faktörler ve örgütsel faktörlerin ayrılma niyetleriyle arasındaki ilişkide aracılık rolü üstlendiği ortaya çıkmış ve H2f ve H2g doğrulanmıştır.

Görüşme Sonuçları

- Kalıcı olmayan ve kalıcı olan öğrenciler danışman ile ilişkileri, öğretim üyeleri ile ilişkileri, bölüm ve işle ilgili sorunları öğrenci kaybına etki eden örgütsel nedenler olarak gösterirken kişisel nedenler diğer ihtimallerin düşünülmesi, ailevi sorumluluklar, zaman içinde meydana gelen değişimler ve yabancı dil becerileri olarak sıralanmıştır.
- Enstitü yöneticileri ve danışmanlara göre öğrenci kaybına neden olan örgütsel faktörler; danışman ile ilişkiler, öğretim üyesi ile ilişkiler ve çalışılan kurumdan izin alamama iken kişisel faktörler devamsızlık, aile, ekonomik durum, askerliği erteleme ve diğer üniversitelere geçiş yapma isteğidir.
- Öğrenci tarafının yarısı öğrenci kaybını örgütsel nedenlere (N = 10) atfederken öğrenci kaybını kişisel nedenlere (N = 8) atfedenlerin sayısı azımsanmayacak kadardır.
- Örgüt tarafının büyük çoğunluğu öğrenci kaybını kişisel etkenlere (N = 15) atfetmektedir.
- Sonuç olarak öğrenci kaybını kişisel etkenlere atfeden katılımcı sayısı (N = 21) örgütsel nedenlere atfeden katılımcı sayısından (N = 12) fazladır. Üç katılımcı örgütsel ve kişisel faktörleri eş değerde sorumlu tutmuştur.

Öğrenci Kayıp Oranları

- Öğrenci kayıp oranları yüksek olmasına rağmen bir artış ya da azalış eğilimi içinde değildir.
- Öğrenci kayıp oranları son üç yıl için de Yüksek Lisans'ta Doktora'ya göre daha fazladır.

Sonuç

Tartışma

Çalışmanın hem nicel kısmı hem de nitel kısmı kişisel etkenlerin örgütsel etkenlere göre öğrenci kaybında daha etkili olduğunu göstermiştir. İlişkisel tarama araştırmasında kişisel faktörlerden cinsiyet ve program düzeyinin anlamlı olarak öğrenci kalıcılığını yordadığı; geçmiş başarı, dönem ve yaşı içeren kişisel faktörlerin de ayrılma niyetlerini yordadığı bulunmuştur. Ayrıca öğrenci kalıcılığının örgütsel faktör olan ekonomik destek tarafından yordanırken örgütsel faktörlerin ayrılma niyetlerini anlamlı olarak yordamadığı ortaya çıkmıştır. Kurumsal ve amaçsal bağlılığın kişisel faktörler ve örgütsel faktörlerin ayrılma niyetleri ile ilişkisinde aracılık rolü olduğu ortaya çıkmıştır. Olgu-bilim araştırmasında ise öğrenci tarafının öğrenci kaybını örgütsel nedenlere atfettiği, örgüt tarafının da öğrenci kaybını kişisel nedenlere yüklediği sonucuna ulaşılmıştır. Her iki tarafın sonuçları birleştirildiğinde kişisel faktörlerin daha baskın çıktığı görülmüştür.

Pilot çalışma süreciyle geliştirilmeye başlanan örgüt iklimi ölçeği ile ilgili bulgular alanyazınla uyumlu haldedir. Barkowski (1988) kurumsal iklim oluşturmada üniversite rektörlerinin rolünü araştırmış ve rektörlerin azınlık katılımı ile kurumsal desteğe olan etkisini bulmuştur. Bu çalışmadaki yönetimsel iklim boyutundaki demokratik katılım, çeşitlilik ve destek ile ilgili maddeler yazarın bulgusu ile örtüşmektedir. Bu çalışmada ortaya çıkan bir diğer boyut olan bölüm iklimi ile ilgili sonuçlar da Coso ve Sekayi'nin (2015) çalışması ile uyumludur. Onların çalışması da bölüm kültürünün destekleyici kurum iklimindeki olumlu etkisini göstermiştir. Akademik iklim de alanyazındaki diğer çalışmalar tarafından önemsenen bir boyuttur. Evans-Harvey'in (1995) öğrenme için olumlu iklimi; Duwve, Columbaro ve Poggiali'nin (1992) üretim odaklı iklimi ve Sokol, Gozdek, Figurska ve Blaskova'nın (2014) entellektüel dürtüsü bu çalışmadaki akademik iklime denk gelmektedir. Diğer taraftan bu çalışmada ortaya çıkan etkileşim ile ilgili olan üç boyut (sosyal iklim, öğretim üyeleriyle etkileşime dayalı iklim, danışmanla etkileşime dayalı iklim) da alan yazın ile paralellik göstermektedir (Grobler & Grobler, 2015; Manuela, Cecilia, & Joao, 2014; Musah et al., 2016; Tiwari, 2014).

Çalışmanın sonucunda cinsiyetin, ekonomik desteğin ve program düzeyinin öğrenci kalıcılığını yordadığı bulunmuştur. Bu sonuçlar genel olarak alan yazınla örtüşmesine rağmen alan yazından ayrılan noktalar da barındırmaktadır. Örneğin bu çalışma kadınların erkeklere göre daha fazla kalıcı olmama ihtimaline sahip olduğunu iddia etmesine rağmen bulgular tam tersi bir sonuç ortaya koymuş ve hipotez çürütülmüştür. Çalışma bu sonuçla Hassell, Seston, Eden ve Willis'in (2007) çalışmasıyla parallellik gösterirken Castello, Pardo, Sala-Bubara ve Sune-Soler'in (2017) çalışmasıyla ise tezatlık göstermektedir. Cinsiyetle ilgili bu farklı sonuçların nedeni araştırmanın yapıldığı bağlamlardaki farklılıklarla açıklanabilir. Örneğin, Johnes ve McNabb (2004) büyük üniversitelerdeki kadın öğrencilerin daha fazla okul terki ihtimaline sahip olduklarını bulmuşken akademik olarak çok sayıda kaliteli öğrencilerin bulunduğu üniversitelerde ise erkek öğrencilerin okul terki ihtimallerinin daha fazla olduğunu bulmuştur. Türkiye bağlamında, erkek öğrencilerin kalıcılık ihtimallerinin daha düşük çıkması ise askerlikle ilgili olabilir. Bu çalışma gibi alanyazındaki birçok çalışma da (Balcı, 2014; Çoruk, Çağatay, & Öztürk, 2015; Erkılıç, 2007) öğrencilerin askerliği ertelemek için lisansüstü eğitime başladıklarını bulmuştur. Diğer taraftan örgütsel ekonomik desteğin kalıcı olmama ihtimalini düşürdüğü sonucu (Holly & Caldwell, 2012; Wao & Onwuegbuzie, 2011; West, Gokalp, Pena, Fischer, & Gupton, 2011) ile Yüksek Lisans'ta kalıcı olmama ihtimalinin yüksekliğinin lisansüstü eğitimde ilk dönemlerde kalıcı olmama ihtimalinin yüksekliği ile ilişkili olması (Bülbül, 2012; Golde, 1998; Lassibille & Gomez, 2008; Lott, Gardner, & Powers, 2009; Napoli & Wortman, 1998) alan yazınla uyumlu haldedir.

Çalışmanın yapısal modeli yaş, dönem ve geçmiş performansı içeren kişisel faktörlerin ayrılma niyetlerini yordadığını göstermiştir. Çalışmanın bu sonucu alanyazındaki diğer çalışmalarla benzerlik göstermektedir. Yaş (Castello, Pardo, Sala-Bubare, & Sune-Soler, 2017; Fike & Fike, 2008; Lott, Gardner, & Powers, 2009), dönem (Bank, Slavings, & Biddle, 1990; Ishitani, 2003) ve geçmiş performans (Aulck, Velagapudi, Blumenstock, & West, 2016; Cabrera, Nora, & Castaneda, 1993; Ethnigton, 1990; Ishitani, 2006; Kahn & Nauta, 2001; Seidel &

Kutieleh, 2017; Xu, 2014) alan yazında öğrenci kaybı ile ilişkilendirilen bireysel niteliklerdir.

Çalışmanın diğer bir önemli sonucuna göre ise kurumsal ve amaçsal bağlılık; kişisel faktörler ve örgütsel faktörlerin ayrılma niyetleri ile ilişkilerinde aracı değişkendir. Diğer bir ifade ile örgütsel ve bireysel faktörlerdeki değişim kurumsal ve amaçsal bağlılığı etkilemekte, kurumsal ve amaçsal bağlılıktaki bu değişim de ayrılma niyetlerini etkilemektedir. Çalışmanın bu sonucu alan yazınla uyumlu haldedir. Alan yazındaki çalışmalar genellikle okul terki davranışının en kuvvetli yordayıcılarının ayrılma niyetleri ile kurumsal ve amaçsal bağlılık olduğunu bulmuşlardır (Bean & Mentzner, 1987; Mallette & Cabrera, 1991; Napoli & Wartman, 1998). Diğer taraftan bu çalışmada örgütsel faktörler ile kişisel faktörlerin kurumsal ve amaçsal bağlılığı yordadığı bulunmuştur. Bu sonuç da alan yazın ile benzerlik taşımaktadır. Örneğin, Cabrera, Nora ve Castaneda (1993) bağlılığın akademik ve sosyal uyum ile arkadaş ve aileden gelen destek tarafından yordandığını; Strauss ve Volkwein (2004) ise bağlılığın yaş, medeni durum ve bir azınlık mensubiyeti olma durumundan yordandığını bulmuştur.

Çalışmanın nitel kısmında ise öğrenci kaybının çoğunlukla kişisel etkenlere atfedildiği görülmüştür. Bu sonuç alan yazındaki diğer çalışmalarla benzerdir (Gardner, 2009a; Herman, 2011; Lovitts, 1996). Ayrıca, danışman ile ilişkiler, öğretim üyesi ile ilişkiler, bölüm ve işle ilgili sorunlar örgütsel faktörler olarak dikkat çekerken askerliği erteleme, devamsızlık, ailevi sorumluluklar, diğer alternatiflere yönelme ve başka üniversitelere geçiş kişisel etkenler olarak göze çarpmaktadır. Bu sonuçlar alanyazın ile uyumludur. Danışman ile ilişkiler (Zeng, Webster, & Ginns, 2013), iş ve okul arasındaki denge (Castello, Pardo, Sala-Bubare, & Sune-Sole, 2017), diğer seçenekleri değerlendirme (Allen & Dorry, 2001), ailevi sorumluluklar (Beer & Lawson, 2017), askerlik erteleme (Çoruk, Çağatay, & Öztürk, 2016), öğretim üyesi ile ilişkiler (Aypay, Çekiç, & Boyacı, 2012) alan yazında öğrenci kaybı ile ilişkilendirilen bazı değişkenlere örnek olarak gösterilebilir. Doküman analizinde ise öğrenci kaybının son üç yılda içinde yüksek oranlarda olduğu, artış ya da azalış eğilimi taşımadığı ve her defasında Yüksek Lisans için daha yüksek olduğu bulunmuştur. Bu yüksek oranlar makro düzeydeki politikalarla açıklanabilir. Örneğin son 10 yılda 6559, 6353, 6111, 5806 ve 5316 numaralı af kanunları çıkmıştır. Bu kanunlar okulu bırakan öğrencilere geri dönüş hakkı vermekte olup bu hak öğrencilerin eğitime devamı için bir engel olarak değerlendirilebilir. Benzer olarak, sürekli yeni üniversiteler açılması, üniversiteler ve bölümler arası geçişlerin kolaylığı bu yüksek oranlarda etkili olabilir.

Çıkarım

Bu çalışmanın sonuçları ile ilgili olarak araştırma, kuram ve uygulama boyutunda belirli çıkarımlar getirilebilir. Araştırma boyutu ile ilgili olarak bu çalışma lisansüstü eğitimde öğrenci kaybında rolü olan kişisel ve örgütsel etkenleri ortaya çıkararak alan yazındaki önemli bir boşluğu doldurma hususunda bir girişimde bulunmuştur. Bu bağlamda çalışmanın öğrenci kaybına çok boyutlu yaklaşması, nedensel ilişkiler kurması, örgüt iklimi ile ilgili geçerli ve güvenilir bir ölçek geliştirmesi, nicel ve nitel araştırma desenlerini bir arada kullanması ve birçok paydaşın görüşüne başvurarak olaya geniş bakış açısıyla bakabilme imkanı sunması nedenleri ile alanyazına araştırma boyutunda katkılar sunmuştur. Kuram boyutu ile ilgili olarak da örgütsel ve kişisel faktörlerin Biyoekolojik Kuram'ın beş katmanı ile ilişkilendirilerek incelenmesi ve farklı paydaş görüşlerinin Yükleme Kuramı bağlamında değerlendirilmesi kuramsal tartışmalara katkı sağlamıştır. Son olarak, uygulama boyutunda tüm paydaşların görüşlerinin alınması ve öğrenci kaybında rolü olan kişisel ve örgütsel faktörlerin ortaya çıkarılması kaliteli ve sürdürülebilir bir lisansüstü eğitimin sağlanması hususunda politika yapıcı ve uygulayıcılarına ışık tutacaktır.

Sınırlılıklar ve Öneriler

Bu çalışmanın sonuçları göz önüne alındığında araştırmacılara ve uygulayıcılar belirli öneriler getirilebilir. Araştırmacılara yapılan en önemli öneri ekolojik geçerliğin sağlanmasına yönelik olarak benzer çalışmaların daha farklı türdeki üniversiteleri de içine alarak yapılmasıdır. Ayrıca, belli noktalarda katılımcı çeşitliliği sağlanamamıştır. Bu sınırlılığı ortadan kaldıracak şekilde daha farklı alanlardan, üniversitelerden, meslek gruplarından, yaş gruplarından ve benzeri değişik gruplardan katılımcıların olduğu çalışmalar ortaya koyulmalıdır. Diğer taraftan her ne kadar çalışma sonuçları ölçme araçlarının güvenilir ve geçerli sonuçlar verdiğini gösterse de benzer çalışmalar farklı ölçek ve ölçme yöntemleriyle yapılabilir. Araştırmacılara son öneri ise kavramlarla ilgilidir. Bu çalışma genel olarak ayrılma niyetlerini konu almıştır. Gelecekteki çalışmaların bizzat ayrılma davranışını gösteren öğrencilerin odağa konularak yapılması önerilmektedir. Uygulayıcılara yapılacak en önemi öneri ise karar verme ve uygulama süreçlerinde kişisel ve örgütsel faktörleri bir arada düşünerek buna göre strateji belirlemeleridir. Ayrıca kurumlararası işbirliği ve uyumlu çalışma da birçok sorunu çözebilme potansiyeline sahiptir. Son olarak unutulmamalıdır ki karşılıklı saygı ve değer verme tüm kapıları açacaktır. Yüzleri gülen ve mutlu insanlar barındıran, gelişmiş ve sürdürülebilir bir yükseköğretim uzakta değil.

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