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Lyudmila Fillipova

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28.06.2019

Date:

**The Relationship between Emotional Intelligence and Academic Achievement
among Undergraduate Students in Kazakhstan.
The Case of Two Universities.**

Lyudmila Phillipova

Submitted in partial fulfillment of the requirements for the degree of
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in
Educational Leadership

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Abstract

Academic achievement and performance of students in higher education settings is an integral part of learning process, however nowadays, the soft skills of future specialists are not of small importance as well. Although, the Emotional Intelligence had been recognized as an independent notion in the second part of twentieth century, still most experts in the spheres of psychology, education and management find this area rather ambiguous. There were several studies which had been focused on the relationship between emotional intelligence and academic achievement before. However, few research studies in this sphere had been conducted in Kazakhstan. Thus, there is a need for higher education institutions to identify the significance of EI elements for students' success during the learning process. The study focuses on the link between emotional intelligence and academic achievement among the Autonomous University and the Regional University undergraduate students. The results of the study would contribute to higher education system in Kazakhstan, as administrators, managers and faculty members may be provided with the current emotional intelligence level of undergraduate students from two institutions. Furthermore, other higher education institutions may use the findings of the current research study in order to facilitate students' emotional intelligence level inserting related activities in their curricula.

This study employs a cross-sectional correlational design (Field, 2009; Mujis 2004; Szafran, 2011). The purpose of the study was to identify the relationship between emotional intelligence and academic achievement among undergraduate students. To define the level of emotional intelligence, the ESAP (Emotional Skills Assessment Process) questionnaire was employed to collect data, so that the research study was focused on four main competencies: interpersonal, leadership, self-management and intrapersonal. To obtain the information about students' academic achievement, self-

reported percentage had been used. The data had been collected in two Kazakhstani universities. The sample consisted of 239 undergraduate students, 141 and 98 undergraduate from two universities (Regional and Autonomous) respectively. The sample was recruited on non-probability basis, due to voluntary participation in the research study. During the research study descriptive, inferential and correlational statistical analyses had been employed. The Statistical Package for the Social Sciences (SPSS) had been used to make the statistical analyses of the collected data. The study presents the information on the general emotional intelligence level of undergraduate students of two universities. Similarly, the research study demonstrates the three levels of academic achievement of students: high-, average- and lower-achieving and their correlation with emotional intelligence competencies. Furthermore, the study explores students' emotional intelligence level differentiated by their age and gender.

Аңдатпа

Қазақстандық бакалавриат студенттерінің эмоционалды зияты мен академиялық жетістіктері арасындағы байланыс. Екі университеттің жағдайы.

Жоғары оқу орындарындағы студенттердің академиялық жетістіктері мен академиялық үлгерімі оқу процесінің ажырамас бөлігі болып табылады, бірақ қазіргі кезде «икемді дағдылар» болашақ мамандар үшін де маңызды. Алайда ХХ ғасырдың екінші жартысында «Эмоциялық интеллект» деген тәуелсіз ұғым болып танылған, дегенмен психология, білім беру және басқару саласындағы сарапшылардың көбі осы саланы бірқалыпты деп санайды. Бұрындары эмоционалды интеллект пен академиялық көрсеткіштер арасындағы қарым-қатынас бойынша бірнеше зерттеулер жүргізілген. Алайда, Қазақстанда осы саладағы зерттеулер аз жүргізілді. Сол себепті, жоғары оқу орындары студенттердің оқу барысында жетістіктерге жетулері үшін эмоциялық интеллект элементтерінің маңызды екендігін ескеру керек. Бұл зерттеу автономдық және аймақтық жоғары оқу орындарындағы студенттер арасында эмоционалды интеллект пен академиялық жетістіктер арасындағы қарым-қатынасқа бағытталған. Зерттеудің нәтижелері Қазақстандағы жоғары білім жүйесіне ықпал етуі мүмкін, себебі әкімшіліктегілер, менеджерлер және мұғалімдер екі мекемедегі студенттердің эмоционалды зияткерлік деңгейін білуі мүмкін. Сонымен қатар, басқа жоғары оқу орындары осы зерттеудің нәтижелерін оқушылардың эмоциялық ақыл-ойының деңгейін арттыру мақсатында өздерінің оқу жоспарларында тиісті іс-әрекеттерді қоса пайдалана алады.

Бұл зерттеуде тоғыспалы корреляциялық дизайн қолданылады (Mujis 2004, Field, 2009, Szafran, 2011). Зерттеудің мақсаты - студенттер арасында эмоционалды интеллект пен оқу үлгерімі жағынан өзара байланысты анықтау. Эмоциялық интеллект деңгейін анықтау үшін ESAP (Эмоционалды дағдыларды бағалау

процесі) сауалнамасы арқылы деректер жинастырылды, сондықтан зерттеу төрт негізгі құзыреттілікті көздейді: тұлғааралыққа, көшбасшылыққа, өзін-өзі басқаруға және адаммен қарым-қатынасқа бағытталған. Студенттердің оқу үлгерімі туралы ақпарат алу үшін студенттердің оқу үлгерімінің шамамен пайыздық мөлшерлемесі пайдаланылды. Бұл деректер Қазақстанның екі жоғары оқу орындарында жиналды. Таңдау 239 студенттен тұрды, тиісінше, екі жоғары оқу орындарынан (аймақтық және автономды) 141 және 98 студенттен. Қатысушылар ерікті қатысудың детерминистік үлгісі негізінде таңдалған. Статистикалық пакет (SPSS) жиналған деректерді статистикалық талдау үшін пайдаланылды. Зерттеу барысында деректерді талдау сипаттаушы, дедуктивтік және корреляциялық статистикалық деректер арқылы орындалды. Зерттеуде екі университеттегі студенттердің эмоционалдық интеллекттерінің жалпы деңгейі туралы ақпарат береді. Сонымен қатар, зерттеу студенттердің жетістіктерінің үш деңгейін: жоғары, орташа және төменгі деңгейін көрсетеді және олардың эмоциялық интеллектің құзыреттілігіне қатысты екенін көрсетеді. Бұдан басқа, зерттеу жұмыстары қатысушылардың жас ерекшелігіне және жынысына қарай студенттердің эмоциялық зияткерлік деңгейінің әсерін зерттейді.

Аннотация

Взаимосвязь эмоционального интеллекта и академических достижений среди студентов бакалавриата в Казахстане. Случай двух университетов.

Академическая успеваемость и успеваемость студентов в высших учебных заведениях является неотъемлемой частью учебного процесса, однако в настоящее время “гибкие навыки” также важны для будущих специалистов. Хотя “Эмоциональный Интеллект” был признан независимым понятием во второй половине двадцатого века, тем не менее, большинство экспертов в области психологии, образования и управления считают эту область довольно неоднозначной. Ранее было проведено несколько исследований, посвященных взаимосвязи между эмоциональным интеллектом и академической успеваемостью. Однако мало исследований в этой области было проведено в Казахстане. Таким образом, вузам необходимо определить значимость элементов эмоционального интеллекта для успеха студентов в процессе обучения. Данное исследование сосредоточено на связи между эмоциональным интеллектом и академическими достижениями среди студентов автономного и регионального университетов. Результаты исследования могут внести вклад в систему высшего образования в Казахстане, поскольку администраторы, менеджеры и преподаватели могут быть осведомлены об уровне эмоционального интеллекта студентов из двух учреждений. Другие высшие учебные заведения могут использовать результаты данного исследования, чтобы повысить уровень эмоционального интеллекта студентов, включив в свои учебные программы, соответствующие мероприятия.

В этом исследовании используется перекрестный корреляционный дизайн (Field, 2009; Mujis 2004; Szafran, 2011). Целью исследования было выявить взаимосвязь между эмоциональным интеллектом и успеваемостью среди студентов.

Чтобы определить уровень эмоционального интеллекта, для сбора данных использовалась анкета ESAP (Процесс Оценки Эмоциональных Навыков), поэтому исследование было сосредоточено на четырех основных компетенциях: межличностные, лидерские, самоуправляющие и внутриличностные. Для получения информации об академической успеваемости студентов использовались примерные процентные баллы студентов. Данные были собраны в двух казахстанских университетах. Выборка участников состояла из 239 студентов, 141 и 98 студентов из двух университетов (регионального и автономного) соответственно. Участники исследования были отобраны на основе детерминированной выборки, по добровольному участию. Статистический пакет (SPSS) был использован для статистического анализа собранных данных. В ходе исследования, анализы данных были проведены с помощью описательной, дедуктивной и корреляционной статистики. В исследовании представлена информация об общем уровне эмоционального интеллекта студентов двух университетов. Аналогичным образом, исследование демонстрирует три уровня успеваемости учащихся: высокий, средний и более низкий и их взаимосвязь с компетенциями эмоционального интеллекта. Данное исследование также определяет влияние возраста и пола на уровень эмоционального интеллекта учащихся.

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The Relationship between Emotional Intelligence and Academic Achievement among Undergraduate Students in Kazakhstan. The Case of Two Universities.

Introduction

Academic achievement and performance of students in higher education settings is an integral part of the learning process; however, nowadays, the soft skills of future specialists are not of small importance as well. Back in 1995, intelligence quotient (IQ) was the preeminent indicator of a person's success in many spheres of life (Goleman, 1996, p.IX). Currently, the success of a person is not merely restricted to his or her cognitive abilities, but also such a notion as Emotional Intelligence or Emotional Quotient (EQ) has to be considered. Emotional intelligence (EI) abilities are of demand for companies. Frequently, "employers of new college graduates emphasize the importance of "soft skills," they are substantially less satisfied with graduates' interpersonal and emotional competencies than with their conceptual and analytical skills" (as cited in Landau & Meirovich, 2011, p.89). Similarly, recent studies in this field emphasize the fact that EI abilities and skills are considered to be learned and developed (Freshman & Rubino, 2002, p.2).

Emotional Intelligence notion has been popularized by Goleman (1995) in his book "Emotional Intelligence – Why it can matter more than IQ", though "Salovey and Mayer (1990) first used the expression "emotional intelligence" and described it in terms of four domains: knowing and handling one's own and other's emotions" (as cited by Boyatzis, Goleman, & Rhee, 2000, p. 2). Hence, only recently, this notion has been viewed within the educational sphere and particularly in connection with cognitive abilities and IQ (intelligence quotient). Furthermore, EI abilities and competencies may be significant for identifying specialists' leadership skills. For instance, Goleman suggests that graduated universities, future specialists have already got analytical and technical skills, whereas EI

abilities may predict who from well-educated experts are going to come on top positions (Cherniss, Extein, Goleman, & Weissberg, 2006, p. 242).

Academic achievement has been investigated in connection with emotional intelligence prior. Some of the studies have confirmed the relationship between the academic success of students and their EI level (Akintunde and Olujide, 2018; Goodwin, 2016; Holt, 2007; Iannucci and Mirabellais 2013; Shaikhina, 2017). However, there are studies which have not endorsed any correlations between those variables (Lawrence & Deepa, 2013; Landau & Meirovich, 2011). Researchers identified that such EI factors as self-control and well-being are positively correlated with students' academic performance (Shaikhina, 2017), as well as self-management, and interpersonal competencies may be predictors of high academic achievement (Nelson, Low, Vela, 2003, p.19). Therefore, improving students' emotional intelligence level facilitates their academic performance.

Problem statement

Generally, higher education institutions emphasize the importance of IQ mastering and pay less attention to other types of intelligences, including emotional intelligence. However, such components of emotional intelligence as interpersonal and intrapersonal competencies are considered to be more significant for life success than IQ (Tucker, Sojka, Barone, & Mccarthy, 2000, p.331). The same situation is happening in Kazakhstan, where a contemporary higher education system does not provide due attention to emotional intelligence development (Naurzalina et al., 2015 p.390). As a result, stress, lack of time management on academic and non-academic activities, assignments from various instructors, those are not a full list of issues which freshmen students of higher education institutions are experiencing. Among all of those struggles, the personal problems such as communication with friends and family, becoming independent, and mastering individual learning habits are the most frequent for students in that period of their life (Stough,

Saklofske, & Parker, 2010, p.243). Therefore, researchers claim that emotional intelligence components have to be incorporating into higher education institutions' curricula (Tucker, Sojka, Barone, & Mccarthy, 2000, p.331).

The current study has been conducted in two Kazakhstani higher education institutions: regional and autonomous universities. This fact allows the researcher to capture the diversity of students' emotional intelligence skills in connection with their academic achievement. These two universities differ from each other in the background, type, enrollment requirements, and teaching and learning practices. The Regional University is multidisciplinary university, whereas the Autonomous one is considered to be an international high-quality teaching and research institution. Even though there are extra-curricular activities which to some extent develop students' general psychological well-being, still emotional intelligence and its components are not included in any of compulsory or non-academic courses in both universities.

The topic of the relationship between emotional intelligence and academic achievement has not been explored thoroughly in both institutions. On the one hand, the probable reason for such a situation may be the fact that emotional intelligence notion is only developing and rather new for Kazakhstan. On the other hand, administration and educators of institutions have to pay more attention to students' learning issues, their future employment matters, resources, and material basis. Thus, this research study is focused on the relationship between emotional intelligence and students' academic performance, as to show that there is a need for HEIs to identify the significance of EI elements for students' success during the learning process.

Purpose of the Study

The purpose of this cross-sectional correlational study is to identify the relationship between emotional intelligence and academic achievement among undergraduate students in two Kazakhstani universities.

Research Questions

Q1. How do students at two Kazakhstani universities differ in their emotional intelligence level?

Q2: How does emotional intelligence level differ based on such background characteristics as gender and age?

Q3. To what extent does student emotional intelligence level correlate with academic achievement levels?

Q4. To what extent do age and gender influence the relationship between student academic achievement and emotional intelligence?

Significance of the Study

The results of the study would contribute to the higher education system in Kazakhstan, as administrators, managers, and faculty members may be provided with the current emotional intelligence level of undergraduate students from the two institutions. The fact that these two universities are located in two different cities of the country would demonstrate a bigger picture and more reliable results. Therefore, other higher education institutions may use the findings of the current research study in order to facilitate students' emotional intelligence level inserting related activities in their curricula. Additionally, the results of the research study can be of use for teachers and educators to analyze which non-academic factors may influence students' academic achievement positively or negatively.

Definitions of the Concepts

Emotional Intelligence – Salovey, and Mayer (1990) proposed such definition of emotional intelligence as “... the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions” (p.189). Based on Salovey and Mayer, in this research study, the definition of emotional intelligence is the capability of an individual to understand their own emotions and emotions of others, as to use this knowledge in maintaining their cognitive thinking and social actions.

Academic Achievement – “...defined as the level of actual accomplishment or proficiency one has achieved in an academic area, as opposed to one's potential in the educational goals measured by examinations” (Lawrence & Deepa, 2013, p. 103). In this research study, students' self-reported academic achievement percentage has been used.

Benefits of the Study

The research study aims at identifying emotional skills correlated with individuals' cognitive abilities; it would encourage universities' psychologists to work with students in order to increase specific EI skills and develop their academic achievement. This study would also be of importance for educators and lecturers of higher education institutions in order to analyze students' academic strengths and weaknesses through their particular EI competencies and skills. Alternatively, these research findings would be of interest for employers, so that they may be aware of future specialists' overall emotional intelligence level and its connection with their analytical skills.

This chapter provides an overview of the main constituents of the current research study. Such sections as problem statement, the purpose of the study, research questions, significance of the present study, main definitions of the concepts, as well as benefits have been outlined here.

Overall, the current thesis includes six chapters. The Literature Review chapter provides an overview of emotional intelligence term, its main models, and competencies along with previous studies on the relationship between emotional intelligence and academic achievement. The Methodology chapter reports the main research methods and procedures used in the current research study. That chapter contains main research questions, problem and purposes overview, research design, population and sample, instruments, data analysis, and ethical considerations. Similarly, the Methodology chapter provides details of such subsections as research design, data collection procedures, sampling strategy, and research site. The Findings chapter presents the primary statistical analyses of the research study: descriptive, inferential, and correlational. This chapter reports on the percentage dispersion of the sample population and indicates the fundamental differences and correlations among research variables. The Discussion chapter offers the interpretation of the results from the Findings chapter, its connection with previous studies as well as my probable assumptions on some remarkable patterns. Lastly, the Conclusion chapter provides the structural summary of the essential findings and informs about the main limitations and possible implications of further research.

Literature Review

This literature review focuses on the main definitions, theories of EI, and its models. The first section of my literature review reveals the appearance of the emotional intelligence term. The section starts with the theory of multiple intelligences. Such terms as social intelligence and mindfulness are examined in connection with emotional intelligence. The second section considers the basic models of emotional intelligence: EI ability-based model, EI competence model, and mixed models. The third section provides the readers with the Emotional Skills Assessment Process Approach, which was used as the framework for this research study. It also underlines the main EI competencies and provides information about previous studies in this sphere. The fourth section identifies how such background variables as gender and age influence the emotional intelligence level of individuals. The final paragraph of the literature review reports about the gap in the previous research studies.

Appearance of the Emotional Intelligence Term

The theory of multiple intelligences. Since, the emotional intelligence term includes the notion “intelligence”; it is worth to consider different types of intelligences. In 1983 Gardner introduced the theory of multiple intelligences, as the challenge to general intelligence, which was treated as the only entity (Achkovska-Leshkovska & Spaseva, 2016, p. 58; Chakrabarti & Chatterjea, 2017, p. 13). Taking into consideration neurological and cultural research, Gardner’s theory proposed seven intelligences: logical-mathematical, bodily-kinesthetic, linguistic, musical, spatial, intrapersonal, and interpersonal. Later, two more types of intelligences had been included: the eighth – naturalist intelligence and the ninth – existential intelligence. In general, this theory has several main points. The first is that each person has all those intelligences. However, they operate in ways which are unique to each person. The second comes to the fact that each of the intelligences may be

facilitated to a moderate level. The third point is that usually, intelligences operate together in a sophisticated way. The fourth peculiarity explains that there are many ways how to develop skills within each intelligence (Achkovska-Leshkovska & Spaseva, 2016, p.58). Thus, initially, there were nine main intelligences.

Social intelligence. In 1995 Goleman, in his book “Emotional Intelligence – Why it can matter more than IQ,” identifies social intelligence notion that was divided into interpersonal and intrapersonal intelligences. In his book, Goleman suggested the definitions of interpersonal and intrapersonal intelligences proposed by Gardner. Consequently, interpersonal intelligence is defined as the ability of individuals to understand others, how to interact with each other, and what motivates other people. In its’ turn, intrapersonal intelligence is an inner model of oneself, which is inward quality. Therefore, a person with intrapersonal intelligence skills can understand his or her own feelings and motives, which helps him or her in life organization. (Goleman, 1995, p. 39) Thus, this manifestation gave an impetus for the appearance and further development of the concept of emotional intelligence (Razzaq, 2016).

Emotional intelligence and “mindfulness”. In retrospect, the concept of emotional intelligence sprang from the notion – “mindfulness” that dates back to the Buddhist era and other eastern spiritual practices. Those practices included such expression as “conscious attention” (Bishop et al., 2004). In the article “Mindfulness: A proposed operational definition” (Bishop et al., 2004), it was mentioned that such notions as mindfulness and emotional distress are connected with self-awareness, practices focusing an individual’s attention on the moment here and now. Such practices as, for instance, meditation can broaden an individual’s mind and allow him or her to think what leads to facilitation of cognitive abilities. In this fashion, the notion mindfulness includes self-regulation of attention as well as switching focus. A person does not judge or suppress his

feelings or thoughts; he or she observes them and accepts them. He or she is open to the reality of the current moment. Such practice gives an individual an advantage to have emotional distress, as his or her negative thoughts have a less damaging influence on the mind and behavior (Bishop et al., 2004, p. 232). Therefore, the notion of mindfulness is connected with emotional intelligence in a way that it helps an individual to regulate his or her feelings and emotions.

Emotional intelligence term. The interest in Emotional Intelligence (EI) term as an independent notion in research had been raised in the second part of the 20th century. As it had been noted before, in 1995, Goleman proposed the term emotional intelligence in the bestselling book “Emotional Intelligence – Why it can matter more than IQ” which made this term broadly known (Kavya, 2016, p. 69). However, “Salovey and Mayer (1990) first used the expression “emotional intelligence” and described it in terms of four domains: knowing and handling one’s own and other’s emotions” (as cited by Boyatzis, Goleman, & Rhee, 2000, p. 2). Although, after the abovementioned book, the term became fashionable, still some earlier sources were referring to the term EI. For instance, for the first time, the concept EI was mentioned in a 1964 paper authored by Michael Beldoch. Later, Keith Beasley inserted the notion “Emotional Quotient” in the article for British Mensa magazine (Kavya, 2016).

Similarly, as Intelligence Quotient (IQ), Emotional Quotient (EQ) serves as a rubric for measuring emotional intelligence skill. Even though, after the abovementioned publication, the concept emotional intelligence has become popular; still, most people in the spheres of psychology, education, and management find this area somewhat ambiguous (Clarke, 2010, p.119). Thus, the Emotional Intelligence term comes along with such notions as social intelligence, which included intrapersonal and interpersonal intelligences, as well as the slightly older term “mindfulness.” Based on above-listed terms and concepts,

it can be deduced that emotional intelligence is rather multi-faceted. Consequently, in researching emotional intelligence and its significance, it is essential to take into consideration the main models of this notion.

Models of Emotional Intelligence

Turning to the basic models of emotional intelligence, some researchers identify general areas, such as emotional perception, regulation, understanding, and utilization (Ciarrochi, Chan and Caput, 2000). Based on those models, researchers may orient in the ways as to how to measure the emotional quotient of people. According to the following researchers: Salovey & Mayer (1990), Goleman, (1995) and Bar-On (2006), the models of EI are categorized according to certain aspects: ability or performance models by Salovey & Mayer (1990) competence or trait models by Goleman (1995), and mixed models (Clarke, 2010, p.119).

Emotional intelligence ability-based model. The ability-based model considers emotional intelligence from the view of four cognitive abilities, which explains how individuals operate emotional impulses: 1 accurately perceiving emotion in oneself and others, 2 using emotions to facilitate thinking, 3 understanding emotion, and 4 managing emotions in oneself and other people (Mayer et al., 2008). Empirical studies in this sphere have revealed that abilities, as mentioned above, are closely linked to the development of such significant skills as leadership (Leban & Zulauf, 2004; Kerr, Garvin, Heaton, & Boyle, 2006) and decision making and negotiation (Day & Carroll, 2004; Mueller & Curhan, 2006).

Regarding the measurement instruments, the ability model of EI assesses individuals' control of emotions through questionnaires such as MSCEIT (Mayer-Salovey-Caruso Emotional Intelligence Test) by Salovey and Mayer (1990). Furthermore, the ability-based model is also called a performance model that is considered as a form of

intelligence and mental ability (Hebert, 2011). Therefore, this model focuses on how well respondents can perform mental tasks and orient on correct or incorrect answers.

However, there is a limitation of the ability model, which comes to the fact that respondents may provide fake answers (Zeidner, Matthews, & Roberts, 2004).

Emotional intelligence competence model. The next model is called competence model. According to Goleman, this model includes five clusters. The first cluster is self-awareness, which comprises the following skills: self-assessment, emotional self-awareness, and self-confidence. The second is self-regulation cluster. This cluster encompasses self-control, trustworthiness, adaptability, conscientiousness, and innovation. The third cluster self-motivation cluster, which consists of commitment, achievement orientation, optimism, and initiative. The fourth Empathy Cluster is comprised of organizational awareness, empathy, developing others, service orientation, and leveraging diversity. The last cluster is social skills, which contains communication, leadership, influence, building bonds, conflict management, change catalyst, collaboration and cooperation, and team skills (Razzaq, 2016). This model is assessed with the help of multi-rater instruments.

Concerning emotional intelligence at the workplace, according to Daniel Goleman, it consists of five main aspects: managing emotions, empathy, self-motivation, self-awareness, and handling relationships. Those aspects are fallen under two competencies: personal and social. Personal competence incorporates such components as a) self-awareness (recognizing emotions of self and others and self-confidence in having confidence in one's abilities), b) self-regulation (self-control, conscientiousness, trustworthiness, innovativeness, and adaptability), and c) self-motivation (achievement drive, commitment, initiative, and optimism) (Goleman, 1995). Social competence

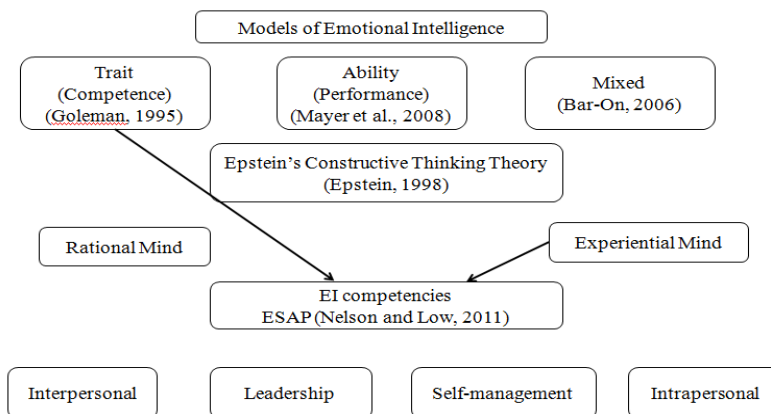
incorporates the following components a) social awareness, and b) social skills (Goleman, 1995).

Mixed models. Mixed models usually represent the combination of elements of two abovementioned models. For instance, Bar-On EQ (emotional quotient) mixed model (BarOn, 2006), which was initially elaborated for the clinical context. This model was created to develop specific personal skills in people, which led to “emotional well-being.” The author of this model is a clinical psychologist, who designed the structure of measurement instrument Bar-On EQ, based on his research experiments.

Competencies of Emotional intelligence

Epstein’s constructive thinking theory. The emotional competence model by Goleman (1995) has been taken as the basis for the next EI theory. Based on those competencies, Nelson and Low (2011) developed an education-based approach to emotional intelligence evaluation. This model encompasses four competencies: interpersonal, leadership, self-management, and intrapersonal. (Nelson and Low, 2011) This approach has been selected as the conceptual framework (figure. 1) of the current study on the reason that it emphasizes the importance of EI in the learning process. Some of EI competencies such as self-management and interpersonal had been endorsed to be predictors of high academic achievement of students (Nelson, Low and Vela, 2003, p.23).

Figure 1. Conceptual Framework



As Nelson and Low's approach of emotional intelligence assessment is the framework of the current study, it is rational to discuss the appearance of this approach and to examine its four main competencies. Apart from Goleman's competency model, Nelson and Low's approach was also based on Epstein's theory of constructive theory. To consider the significance of the emotional intelligence skills and its relation to one's academic abilities, and his or her academic achievement, such theory as "Constructive thinking" should be noted. Epstein (1998) in his book "Constructive thinking: The key to Emotional Intelligence" presented the notion constructive thinking as the ability of an individual to control his or her pessimistic thoughts, what purported to think constructively. As a consequence, he maintained the concept that every person possesses two minds: a rational conscious mind and automatic "experiential" mind. An individual's conscious rational mind is considered to be relatively unemotional as he or she can easily control it.

On the other hand, the automatic "experiential" mind is related to the preconscious level; therefore, people cannot control it, mainly because they are not aware of its functioning. This experiential mind is connected with past experiences as well as with emotions. As the solution to this issue, Epstein has proposed that a person can increase control over the experiential mind if he or she understands how it operates (Epstein, 1998). So, the abovementioned theory indicates the significance of preconscious sphere, which leads to the emotional intelligence concept.

Emotional skills assessment process. For EI evaluation, Nelson and Low developed measurement test, called Emotional Skills Assessment Process. The measurement inventory outlined the following scale items: 1) assertion; 2) empathy; 3) social awareness; 4) positive influence (leadership) 5) decision-making;; 6) drive strength (achieving goals); 7) time management; 8) commitment ethic (personal responsibility); 9)

self-esteem; and 10) stress management (emotional intelligence measures). This assessment instrument enables to identify the connection between students' emotional skills and their impact on academic capacity. Thus, have considered the main models of emotional intelligence, for the current research study, I have selected Nelson and Low's education-based approach to emotional intelligence.

Main emotional intelligence competencies. The abovementioned theories proposed by Epstein and Goleman had been taken as the basis to Nelson and Low's approach which include four emotional intelligence competencies: 1 interpersonal, 2 leadership, 3 self-management and 4 intrapersonal, which facilitate the process of academic achievement (Nelson & Low, 2011). According to the authors, each competency includes several abilities.

Interpersonal skills competency encompasses such abilities as an assertion, anger management, emotional skill, and anxiety management emotional skill (Nelson and Low, 2011). The assertion is defined as a person's capability to communicate their ideas in an appropriate friendly way so that they expose care and respect to others (Nelson, Low and Vela, 2003, p.17). The anger management emotional skill includes such emotion as anger, which interferes in the success of relationships between people. The third component in this competency is anxiety emotional skill, which, in its turn, considers the effect of fear on people's interpersonal relationship (Nelson and Low, 2011).

Leadership skills competency identifies the following EI abilities: social awareness, empathy, decision making, and positive influence. The first is social awareness, which is recognized as a person's capability to establish positive relationships with others selecting the pertinent social, emotional, and comfortable physical distance (Nelson and Low, 2011). The second leadership skill is empathy, which is considered as the ability of an individual to accurately recognize and adequately respond to the feelings and emotions of others.

“Accurate Empathy involves active listening in a patient, compassionate, and non-judgmental manner and communication back to the person to be viewed as caring, genuine, and trustworthy” (Nelson, Low and Vela, 2003, p. 17). The decision-making skill indicates a person’s capability to problem-solving and conflict-resolution practices and his or her attitude to planning, formulating, initiating, and implementing those practices (Nelson and Low, 2011). The next skill is positive influence or leadership, which is the ability to impact, influence, and persuade other people in a positive manner (Nelson and Low, 2011).

Self-management skills are divided into more four EI abilities: drive strength, commitment ethic, time management, and change orientation. According to Gragg (2008) self-management is “... the application of the inner balance created through self-awareness that is projected outward for others to see (Gragg, 2008, p.246)” The first skill under this competency is drive strength which exposes “... the ability to effectively direct personal energy and motivation to achieve personal career, and life goals” (Nelson, Low and Vela, 2003, p. 18). Commitment ethic illustrates the ability of a person to be effective in tasks, assignments, projects completion independently, and under challenging circumstances. The third skill, time-management, belongs to an individuals’ ability to use their time effectively in accord with their schedule and accomplish tasks properly. The fourth skill under this competency is change orientation, which indicates a person’s openness to change in his or her personal or professional development (Nelson and Low, 2011).

In its turn, intrapersonal skills include self-esteem and stress management abilities (Nelson & Low, 2011). The first self-esteem skill is recognized as the ability to consider oneself as successful and competent in accomplishing his or her personal strivings (Nelson, Low and Vela, 2003, p. 19). Self-esteem can also be interconnected with the self-concept notion, which also includes one’s perceptions and beliefs about themselves. Self-concept is believed to be correlated with such areas as academic achievement, psychological well-

being, and emotional tendencies (Hagger, Biddle, & Wang, 2005, p.298). The second skill is stress-management, the ability of a person to select and practise healthy self-control and self-management encountering stressful circumstances (Nelson and Low, 2011).

Emotional intelligence competencies and academic achievement. Regarding the studies which generally have supported the link between EI and academic achievement, it has been deduced that there are relationships between emotional intelligence and online learning (Goodwin, 2016), emotional intelligence and school students' academic performance (Holt, 2007; Shaikhina, 2017). Other studies focus on emotional intelligence components and its influence on academic achievement (Akintunde and Olujide, 2018), emotional intelligence of secondary school principals and school performance (Ashworth, 2013) and emotional intelligence and academic success prediction (Iannucci and Mirabellais, 2013). However, there are studies which have not found any positive correlation between EI and academic achievement (Lawrence & Deepa, 2013; Landau & Meirovich, 2011).

The positive correlations between emotional intelligence competencies as measured with ESAP (emotional skills assessment process) and academic achievement had been indicated in two previous studies (Ashworth, 2013; Goodwin, 2016). Goodwin (2016) confirmed that the components of EI such as leadership, self-management, and intrapersonal and interpersonal competencies are related to students' success in online learning (Goodwin, 2016). The research study by Goodwin (2016) employed the correlation between EI competencies and student academic achievement (GPA). The results of that study showed that interpersonal competency had the highest level of association with students' GPA. The study was based on Kolb's learning styles, which help to identify students' natural abilities to concentrate on the learning material. Thus, during this study, it had been found out that interpersonal and leadership competencies of EI were

considered to be the main predictors of academic achievement in a business student sample. The research study included a non-probability sample of 198 undergraduate students enrolled in an online business program. The interpersonal and leadership competencies are connected with such skills as decision-making, leadership, empathy, assertion (interpersonal competency) and social awareness (leadership competency) (Goodwin, 2016).

Concerning the academic achievement sphere, there have been indicated the differences between high-, average-, and lower-achieving participants (Shaikhina, 2017), as well as underachieving high ability participants (Akintunde and Olujide, 2018). For instance, regarding the research studies in Kazakhstan, Shaikhina (2017), in her thesis, also underlined the significance of EI for students' academic success. This study with a sample of 152 participants employed the Trait Emotional Intelligence Questionnaire (TEIQue) and Strengths and Difficulties Questionnaire (SDQ) as data instruments. Overall, the study provides the information about students' level of social competence and emotional intelligence. Along with this information, the study indicated high, average, and low levels of NIS student performing in relation to social competence and emotional intelligence. The results of this study have shown that, in general, students with higher academic performing possess a high level of emotionality. Specifically, the high levels of EI components of students, such as well-being and self-control, were correlated with their high academic achievement. However, the results showed that such variables as age, gender, and medium of instruction do not impact considerably on the relationship between social competence, emotional intelligence, and student academic achievement (Shaikhina, 2017).

The recent study of 2018, which has been conducted by Akintunde and Olujide, examined the impact of emotional intelligence and locus of control on academic achievement of underachieving high ability students. The experiment took place in Ibadan,

Nigeria. As the instruments of data collection, the authors used the following kits: Rotter's Locus of Control Scale (RLCS), and Cognitive Ability Test, designed by Schutte (SEIS) Emotional Intelligence Scale and the school academic record (Akintunde and Olujide, 2018). The sample included 72 underachieving high ability students, who were purposively recruited from 12 schools in Ibadan, Nigeria. The results of this study indicated that generally, EI and LC of the participants were remarkably low. However, overall the experiment has shown that there has been a slightly higher influence of locus control ($r = .52$) than emotional intelligence ($r = .46$) in predicting student academic achievement (Akintunde and Olujide, 2018).

Similarly, the study by Ashworth (2013) has revealed the relationship between the emotional intelligence of secondary school principals and school performance. The study, which took place in Texas, comprised the non-probability sample of 105 participants: secondary public school participants. The study employed the following instrumentation: A two-part Emotional Skills Questionnaire (ESQ), which was designed by the researcher and the Emotional Skills Assessment Process (ESAP) inventory (Nelson & Low, 2011). This research study considered emotional intelligence in connection with leadership. There was a discrepancy between qualitative and quantitative analyses. The outcome revealed that even though according to quantitative analysis, the relationship between principals' emotional intelligence and school performance was not statistically significant, still the qualitative data showed the opposite view. According to qualitative analysis, interpersonal and intrapersonal skills and positive leadership were correlated with school performance. Overall, the results of the study have concluded that the awareness of an individual's own emotions and emotions of others facilitate the process of positive leadership and help the principals to build strong relationships (Ashworth, 2013).

A controversial view on the emotional intelligence sphere in an academic environment has been proposed by two studies (Lawrence & Deepa, 2013; Landau & Meirovich, 2011) which did not find any correlations between emotional intelligence of students and their academic success. The first study by Lawrence & Deepa (2013) explored the connection between emotional intelligence level of high school students and their academic achievement. A sample included 400 students of high and higher secondary schools. The emotional intelligence instrument incorporated following EI factors: Emotionality, Self-Control, Well Being, and Sociability. The authors of the study did not find any positive correlation between emotional intelligence and academic achievement factors. The researchers proposed the probable assumption of such outcome that overall the academic achievement of the high schools where the research took place was average what led to average EI level of participants (Lawrence & Deepa, 2013).

The second study by Landau & Meirovich (2011) investigated how emotional intelligence development may correlate with the participative environment of college students. That research study likewise did not identify any correlations between EI level of students and their GPA. The authors suggested that their study did not take into consideration any measurement of students' cognitive skills, which might impact the results.

The Influence of Age and Gender on Emotional Intelligence

Emotional intelligence and gender. Several studies confirmed that there was no significant difference between gender and emotional intelligence level of participants (Akintude and Olujide, 2018; Pope, Roper and Qualter, 2012; Shaikhina, 2017). However, there were some separate EI components which still might be differentiated by gender. For instance, the recent study by Akintude and Olujide (2018) indicated that male students exposed higher scores on overall EI level, whereas their female counterparts showed better

internal locus of control. The study (Pope, Roper and Qualter, 2012) which investigated the influence of four EI competencies: self-awareness, self-management, social awareness, and relationship management on academic achievement also did not report any impact of gender. However, the authors of that study identified the statistical effect of gender on social awareness.

Emotional intelligence and age. Some authors suggested that the overall emotional intelligence level and some of its components, such as self-control, may be improved with age (BarOn, 2006; Komlosi, 2014). For instance, the study by Komlosi (2014) reported that younger female participants exposed higher scores on well-being and sociability compared to older women. Similarly, the study of polytechnic lecturers by Kumar & Muniandy (2012) indicated that emotional intelligence could be developed until the age of 50 years. However, after people reach 50 years, their emotional intelligence level might be decreased (Kumar & Muniandy, 2012; Marembo & Chinyamurindi, 2018). Hence, some research studies select samples of participants with a small difference in the age, which also may impact that studies find no significant correlations in the age category.

Gap in the Literature

There have been studies in Kazakhstan which explored the emotional intelligence sphere in the context of education. Two studies had been investigated the emotional intelligence concept in connection with social intelligence and academic performance (Shaikhina, 2017), as well as the effect of emotional intelligence on the meaning-existential potential of students (Naurzalina et al., 2015). The first study (Shaikhina, 2017) had been conducted only in one NIS school in Aktobe so that it limited the research frames. The second study (Naurzalina et al., 2015) selected students from one state university named after K. Zhubanov in Aktobe, which also did not provide the researchers with a room for comparison. Furthermore, there was a theoretical study which examines

the relationship between emotional intelligence and teaching competencies in higher education context (Akhmetova, Kim, & Harnisch, 2014), it mainly was aimed at investigating the implementation of the competency-based approach in the educational system of Kazakhstan. Therefore, there had not been studies which explored the relationship between emotional intelligence and academic achievement in two higher education institutions with a different background.

Thus, in this chapter of my thesis, the historical background of the term emotional intelligence, along with its appearance and variations, have been discussed. In this chapter, I have analyzed the critical models of emotional intelligence in terms of their components and utilization. The instruments of data collection related to each model have been indicated inside the description. To distinguish the further areas of the current study, recent studies in this field have been analyzed. During the process of the literature review, Nelson and Low's approach to emotional intelligence assessment has been selected as the framework of the research study.

Methodology

The previous chapter was devoted to reviewing the literature related to the topic. Overall, the literature review chapter has been focused on the following sections: the appearance of EI term; term intelligence itself; the main models of EI, their advantages and limitations; the previous studies investigating the relationship between EI and academic achievement, as well as the impact of gender and age on this relationship. This chapter is devoted to the methods and procedures which were used in the study.

Research Questions

The purpose of this study was to identify the relationship between emotional intelligence and academic achievement among undergraduate students. To determine the level of emotional intelligence, the ESAP (Emotional Skills Assessment Process) questionnaire was employed, so that the research study was focused on four main competencies: interpersonal, leadership, self-management and intrapersonal. Self-reported academic achievement measurement was used to investigate student academic achievement. Similarly, other background indicators such as age, gender, year of study, and major were included in the questionnaire. Based on the abovementioned information, the following research questions have been deduced:

Q1. How do students at two Kazakhstani universities differ in their emotional intelligence level?

Q2: How does emotional intelligence level differ based on such background characteristics as gender and age?

Q3. To what extent does student emotional intelligence level correlate with academic achievement levels?

Q4. To what extent do age and gender impact the relationship between student academic achievement and emotional intelligence?

Based on the abovementioned research questions, the study was guided with some hypotheses. To understand how student EI level varies at the two universities, the subsequent null hypothesis was tested: Autonomous University students expose higher EI level compared to Regional University students. The second research question includes two sub-questions: Q2.1. How does emotional intelligence level differ based on gender? Q2.2. How does emotional intelligence level differ based on age? To identify how EI level of students differs based on their gender, the following hypothesis was tested: Female students possess higher EI level compared to male ones.

To indicate how EI level of students differs based on their age, the next null and alternative hypotheses were checked: H0: EI level does not differ based on age and hypothesis and H1: Older students have higher EI level compared to younger ones. The third research question focuses on how EI level of students correlate with their academic levels, including high-, average- and lower-achieving participants. The hypothesis for the abovementioned research question was that high-, average-, and lower-achieving students differ in their EI levels. The fourth research question indicated how age and gender influence the relationship between EI level and academic achievement of students. Consequently, the following hypotheses were tested: H0 Age and gender do not affect the relationship between student academic achievement and emotional intelligence; H1 EI can be used as a predictor of academic achievement.

Problem and Purposes Overview

Several studies have identified the positive influence of EI elements such as academic esteem, motivation, locus of control, and optimism on academic achievement (Holt, 2007). However, a contemporary higher education system does not provide due attention to emotional intelligence development (Naurzalina et al., 2015). Although, companies and enterprises demand employees who are not only qualified specialists in the

professional sphere but who also possess soft skills. Thus, there is a need for HEIs to identify the significance of EI elements for students' success during the learning process. The study focuses on the link between emotional intelligence and academic achievement among Autonomous University and Regional University undergraduate students. The results may contribute to the suggestion of incorporating EI elements into higher education institutions' curricula.

Research Design

Selecting between two research paradigms, qualitative and quantitative, I had decided to choose the quantitative approach. Qualitative research approach implies the inductive style of inquiry and individuals' understanding of social issues so that it involves the small sample of participants, sometimes multiple staging of data collection (Creswell, 2009). Even though, the qualitative approach provides some strengths compared to quantitative, such as in-depth investigation of a problem, adaptability and flexibility of questions during the process, data that based on human experience; still there are some limitations which cannot be appropriate for the current study. The qualitative research has the following drawbacks during the process: a vast amount of data, which is time-consuming, the presence of the researcher, what may be biased, the difficulty in assessing and presenting the collected data (Anderson, 2010). As the research study had been employed in two different cities, and there was a limited time allocated for data collection, the quantitative approach had been selected as a research paradigm.

Moreover, there are some more reasons for choosing the quantitative method over qualitative for my research study. The quantitative research is considered more as a way for "testing objective theories by examining the relationship among variables" (Creswell, 2009, p 4). The first reason is that the problem of the current study is to investigate the relationship between students' emotional intelligence and their academic achievement; it

also includes certain factors such as gender, age, year of study and major which may impact on this relationship. The quantitative method of research provides the range of different options such as measurements, comparisons, making forecasts, exploration, testing hypotheses, constructing concepts and theories, and making explanation (Walliman & Walliman, 2010). The second reason comes to the fact that the current study investigates the correlations between such variables as gender, age, year of study, and major and how they influence the link between EI and academic achievement. Consequently, the quantitative research method suits to this study better since “understanding the factors that explain or relate to an outcome helps investigator best understand and explain the problem” (Creswell, 2009, p 99).

More specifically, I selected a survey study for my research design. Such an approach to data collection as an online survey guarantees anonymity and brings comfort as it allows participants to be convenient sharing some personal information (Leavy, 2017). The online questionnaire survey was a more preferred type for this study due to several reasons. First of all, as the survey had to be implemented in two different cities, this method provided economizing time and seizing more available respondents. The second reason is that mobility and technology-based approach attracts students more than telephone or face-to-face questionnaires. The third reason is that the survey design of the study allowed the researcher to gain more reliable answers, easily compare groups of respondents and directly store answers in a database (Muijs, 2004). As an online survey tool, Qualtrics subscription software was used for collecting data. Using this service device, researchers may generate their own surveys with the help of templates, then posting the link on Web sites, or emailing a survey to participants.

Population and Sample

Research site. The data was collected from two Kazakhstani universities: Autonomous and Regional. There were several reasons for the choice of these two institutions. Firstly, I had been enrolled in Regional University on earning bachelor degree what facilitated the process of data collection and accessibility to the administration and students of these institutions. Secondly, there was an assumption to compare two institutions with different background and characteristics in order to capture the differences in students' EI skills in accord with their academic success. The investigation of participants from two different institutions allows me to see a bigger picture of the EI level of undergraduate students. The third reason is the different types of two universities. Autonomous University is considered to be an international high-quality teaching and research institution, which implies stricter demands to student enrollment, including higher grade average point, English language proficiency (IELTS, TOEFL), subject tests (including mathematics, physics, biology, etc.), which vary according to the departments. Regional university, in its turn, is a multidisciplinary institution, which embodies forty specialties of bachelor's degree, around thirty specialties of master's degree and five specialties of the doctoral degree. Those discrepancies in initial selection criteria may indicate in what ways student EI level and their academic success are interconnected and how the EI skills may be developed.

Sampling strategy. The study participants were selected among undergraduate bachelor students from two Kazakhstani universities: Autonomous and Regional. The sample was recruited on a non-probability basis due to voluntary participation in the research study. The convenience sampling strategy was used to recruit participants, which is based on people's availability and desire to take part in the study. Initially, I planned that the sample would consist of around 300 participants with 150 and 150 students from each institution considerably. The exact size of the sample consisted of 239 participants, 98 and

141 undergraduate from two universities (autonomous and regional) respectively. To receive a planned number of responses, I emailed around 500 surveys. Therefore, the response rate was 47 %, since 239 participants out of 500 returned their surveys. The slight distraction from the planned amount of participants has occurred due to some differences in the contingents of bachelor degree specialties where around 2900 students in Autonomous University and about 6000 students in Regional University. Similarly, another reason for the difference in groups' population is a voluntary basis of participation.

To seize the diversity of experiences, the undergraduate students of first, second, third, and fourth years of study have been involved in the research project. In both cases, the number of female participants was bigger than male participants. This fact may be explained that according to statistics, Kazakhstani population parameters (Countrymeters.info) suggest that the amount of women (9,756,129) is larger than men (9,017,394). In general, the participants picked prewritten categories of answers, for instance, year of the study included: freshman, sophomore, junior and senior responses, specialty: humanities, natural sciences, technology and other. Since GPA varies in two institutions, I included the following range of percentage for respondents' convenience: 92-100, 84-91, 76-83, 68-75, 59-67, 51-58, 50 and lower. Thus, according to those divisions, the certain groups have been formed.

Data Collection Procedures

The first stage of data collection was obtaining the permission from the Nazarbayev University Institutional Research Ethics Committee reethics@nu.edu.kz, after which it was also necessary to receive an approval on collecting data from the administration of two universities. The data collection had started at the end of December and was fully completed at the beginning of March. The data collection was divided into two stages, as I had to distribute the survey to two universities separately. Even though the survey was

delivered via email, still it required my presence during such procedures as the meeting with the administration of universities, explaining the nature and main details of the research study.

According to the planned schedule, I had to visit Regional University on the first turn, as the institution is located in another city, to meet the heads of several departments and recruit participants. The heads of departments had been provided with hard copies of informed consent forms and the approved questionnaire, where they could see all the details of the research study. I had to meet each director of a department separately, as the departments were located in different buildings. Also, I encountered a challenge in distributing the survey, as there was no unified mailing system for all departments. Therefore, I had to approach group leaders of some departments to distribute the survey via email or social networks.

The second stage included the survey distribution among undergraduate students of Autonomous University. Before the procedure, I requested permission for the study from the director of the Department of Student Affairs, providing all necessary documents. The distribution of the survey had been done via a unified emailing system of the university. However, the availability of students was not sufficiently guaranteed during that period, since it was started in the middle of January when students usually are occupied with examinations and seminars.

The email letter with the survey link likewise included the informed consent forms with a full detailed description of the research study, so that participants were acknowledged with all benefits and possible minimal risks of the experiment.

Instruments

Emotional intelligence questionnaire. The online survey questionnaire was used as the data collection tool for the study. During the questionnaire construction, the pre-

existing survey framework was implemented. Emotional Skills Assessment Process (ESAP) developed by Nelson and Low (2011) was used to measure students' emotional skills. The original version incorporated 213 items, which is available on the official web site of Emotional Intelligence Learning Systems (2011). For the current study, I used 63 items ESAP version, that is embedded in the book "Emotional intelligence: Achieving academic and career excellence" by Nelson and Low (2011).

The Emotional Skills Assessment Process is purposefully modified questionnaire, which measures students' emotional capacity to react in certain situations, which also correlates with their academic skills. Initially, the measurement instrument divides 63 items under 10 emotional skills: 1) assertion (items 1-9); 2) social awareness (items 10-15); 3) empathy (items 16-21); (4) decision-making (items 22-27); 5) leadership\positive influence (items 28-33); 6) drive strength (items 34-39); 7) time management (items 40-45); 8) commitment ethic (items 46-51); 9) self-esteem (items 52-57); and 10) stress management (items 58-63) (Nelson & Low, 2011). The items have been reduced to 34 statements from the original ESAP questionnaire, and six questions were allocated for background information to make the survey more adaptive and flexible. Thus, the abovementioned 10 emotional skills have been divided in the following order: 1) assertion (items 7-11); 2) social awareness (items 12-16); 3) empathy (items 17-19); (4) decision-making (items 20-22); 5) leadership\positive influence (items 23-25); 6) drive strength (items 26-29); 7) time management (items 30-31); 8) commitment ethic (items 32-34); 9) self-esteem (items 35-37); and 10) stress management (items 38-40). The measurement instrument encompasses 4-point Likert scale, which varies from strongly disagree to strongly agree.

Based on the previous studies, the empirical validity of ESAP questionnaire is proved by doctoral research reported a considerable significance of the link between

emotional intelligence and academic achievement by Goodwin (2016). The two EI competencies, correlated with academic achievement the most, were interpersonal and leadership. Alternatively, the previous research with ESAP endorsed the significance of inserting the background information of participants into questionnaire such variables as gender, age, specialty, etc. Age and gender are considered as important factors which may affect participants' emotional intelligence skills (Nelson, Low, Vela, 2003). The more detailed explanation of the reliability and validity of the ESAP instrument in connection with the current study are mentioned in the "Findings" chapter.

Reliability of the instrument. The reliability analysis of the ESAP four competencies, estimated by Cronbach's Coefficient Alpha, ranged from .41 - .83 (see table1). The personal leadership competence was endorsed at .83 percent, followed by self-management, interpersonal communication, and intrapersonal development. The reliability coefficient of the intrapersonal competency (.41) appeared to be considerably lower compared to other competencies. However, it can be acceptable considering the previous research studies using the same questionnaire. For instance, in her doctoral dissertation, Ashworth (2013) reported the reliability coefficient of intrapersonal competence to be .53.

Additionally, it should be noted that as the responses for the questionnaire had been changed as well. The original questionnaire includes the Likert Scale with the following answers: 1 = most like you, 2 = sometimes like you, 3 = least like you. Hence, to make the current questionnaire more student-friendly, the four Likert Scale responses had been used: 1 strongly disagree, 2 disagree, 3 agree, and 4 strongly agree. The neutral response had been intentionally excluded from receiving more candid information. Overall, all statements of the questionnaire had been aligned with the Likert Scale responses, except the intrapersonal competence, where the three items out of six were initially negative. Therefore, to make reliable data analysis, I had to convert the three responses of the

intrapersonal competence into positive. Thus, the change of the original response scale and also reversion of the variables might influence lower reliability coefficient percent of the intrapersonal competence.

Table 1. Cronbach's Alpha Coefficient of Two Universities

Item	Number of items	Reliability coefficient	Mean	SD
Interpersonal communication	5	.60	2.51	2.29
Personal leadership	14	.83	2.75	5.93
Self-management	9	.78	2.73	4.05
Intrapersonal development	6	.41	2.71	2.34
Total	34	.83		

Academic achievement measurement. At the beginning of the questionnaire, such variables as age, gender, year of study, and major and self-reported academic achievement measurement had been included. Even though a grade average point is commonly used assessment tool, it may vary considerably from one university to another. Therefore, I indicated the following percentages for participants: 92-100, 84-91, 76-83, 68-75, 59-67, 51-58, 50 and lower, so they might select the most appropriate scale.

Data Analysis

As it was mentioned above, I used an online survey tool, Qualtrics subscription software, so that it helped to keep a track on participants' responses. After collecting process was completed, the data had been cleaned from errors and missing answers. Generally, the research study focused on the relationship between emotional skills of students and their academic success. Therefore, overall the following statistical analyses had been employed: descriptive, inferential and correlational. The Statistical Package for the Social Sciences (SPSS) had been used to make the statistical analysis of the collected data.

To demonstrate the percentage distribution of participants in different categories such as age, gender, year of study, and major, the descriptive statistics was employed. The proportion of students had been analyzed taking into consideration four EI competencies: intrapersonal, leadership, self-management and intrapersonal. Inferential analysis was used for exploring the relationship between variables. To compare the means of two groups, independent-samples and two sample t-tests were employed. Similarly, to show the difference in EI level of two universities, two sample t-test was run. One way ANOVA analysis was necessary for identifying the relationship among three and four groups of participants. The last step was employing a correlational design in order to evaluate the strength of the link among independent variables: interpersonal, intrapersonal, leadership and self-management competencies.

Ethical Considerations

Since the survey had been distributed via email, the invitation letter and informed consent form had been provided along with the link to the survey. Therefore, participants were acknowledged with necessary details about the study and contact information of the researcher prior to the study. As the voluntary agreement was only for entering the study, the participants had rights to decline to take part in the research and might withdraw from the experiment at any stage. The benefits from participation in the research study included students' general awareness of their emotional reactions on the certain real-life situations; likewise, they might identify their approximate EI level and be acknowledged how to control their emotions. All the details about possible benefits were clearly described in the informed consent form.

Identities and names of respondents were disclosed and remained confidential. The data on academic achievement percentage and other identifying information were kept in the password-protected file. Hard copy questionnaires were held in the researcher's room,

in a locked drawer. I as the researcher of the study and the supervisor had access to the data.

As participants of the study were undergraduate students over 18 years old, they could decide on their own about participation in the survey. In general, risks of the study were minimal and were not greater than those; students might face in their daily activities. The nuances that students might encounter during the survey were questions about their emotions since the study included the test on emotional intelligence level. In case of any inconvenience from the participants' side, they could withdraw from the study on any stage of the experiment voluntarily.

The participants had been asked to read the consent form thoroughly before the survey access. The survey included Kazakh and Russian languages. The names of participants were undetected in anonymity purpose.

Thus, the chapter presented the main sections of methodological procedures. The first section underlines the research questions and hypotheses along with problem and purposes overview. The research approach and its choice justification have been mentioned in the research design subsection. The choice of research site and sampling strategy were discussed in the Population and sample section. Furthermore, the chapter presents the data collection procedures and instrumentation used during the research study. The main analyses and data collection tools had been mentioned in the Data analysis subsection. The chapter is completed by discussing the possible risks and benefits of the research study.

Findings

The previous chapter had underlined the primary data collection procedures, including sampling strategy, data analysis procedures, and the research site description. The current chapter focuses on the results and findings obtained from the Emotional Skills Assessment Process (ESAP) questionnaire and self-report academic achievement measurement. The general purpose of the study was to identify the relationship between emotional intelligence and academic achievement among undergraduate students. Therefore, the data analysis process had been conducted according to the main research questions:

Q1. How do students at two Kazakhstani universities differ in their emotional intelligence level?

H0 Autonomous University students expose higher emotional intelligence level compared to Regional University students.

Q2: How does emotional intelligence level differ based on such background characteristics as gender and age?

Q2.1. How does emotional intelligence level differ based on gender?

H0 Female students possess higher emotional intelligence level compared to male ones.

Q2.2. How does emotional intelligence level differ based on age?

H0: EI level does not differ based on age

H1: Older students have higher EI level compared to younger ones.

Q3. To what extent does student emotional intelligence level correlate with academic achievement levels?

H0 High-, average-, and low-achieving students differ in their emotional intelligence levels.

Q4. To what extent do age and gender influence the relationship between student academic achievement and emotional intelligence?

H0 Age and gender do not influence the relationship between student academic achievement and emotional intelligence.

H1 EI can be used as a predictor of academic achievement.

The fourth chapter includes three main sections. The first section incorporates the information of the reliability of the Emotional Skills Assessment Process (ESAP), description of the sample including the groups' dispersion in percentage, as well as the descriptive analysis of emotional intelligence level of two universities and Pearson product-moment correlation between EI competencies and academic achievement. The descriptive analysis indicates the means of gender, age, year of study, and major differentiated by four EI competencies. Furthermore, Pearson product-moment correlation identifies how participants' EI competencies correlate with each other and with their academic achievement.

The second section demonstrates the difference of emotional intelligence level by two universities, gender, and age. To compare means of groups, an inferential analysis - Independent-samples t-test had been used. Overall, the section represents how four EI competencies differ across two universities and identify whether there are relationships between students' gender, age, and EI level.

The third section provides the answer to the research question as to what extent students' gender and age influence the relationship between emotional intelligence level and academic achievement. A one-way between groups ANOVA analysis had been conducted to identify the deference of high-, average-, and lower-achieving students in their emotional intelligence competencies. To predict the influence of gender, age, and

emotional intelligence level on students' academic achievement, a two-step hierarchical regression was performed.

Emotional Intelligence Level of Two Universities

As the first research question has been focused on the overall level of students' emotional intelligence differentiated by two universities, descriptive statistic analysis was employed to show the percentages of participants differentiated by universities, gender, age, year of study, academic achievement percentage and major. To display the differences among four emotional intelligence (EI) competencies, means and standard deviation had been used.

Description of the sample. The sample has been recruited on a non-probability basis due to voluntary participation in the research study. The convenience sampling strategy was used to recruit participants, which is based on people's availability and desire to take part in the study. The size of the sample consisted of 239 participants from two universities where 141 respondents from the first university, Semey city, 98 respondents from the second university, Nur-Sultan (previously Astana) city. Table 2 demonstrates frequencies and percentage of two universities and differentiated by gender, age, year of study, academic achievement measurement, and major. Alternatively, the table presents the information from two merged universities as well as data of each university separately.

The first group of respondents consisted of 141 undergraduate students of the Regional University. There were the following categories: gender, year of study, academic achievement measurement, and major. According to gender, the respondents were distributed as follows: male (36%) and female (64%) where the percentage of female students was somewhat higher. The year of study category was represented in the following proportion: freshman - 21%, sophomore - 39%, junior - 20% and senior - 20%. According to the academic achievement measurement, the participants were divided into

three groups: high-achieving (100-84), average-achieving (83-76), and lower-achieving (75-50). However, initially, the questionnaire included the following categories: 92-100, 84-91, 76-83, 68-75, 59-67, 51-58, 50 percentages, and lower. There were no respondents with 50 and smaller rate. The distribution of participants according to their major includes the following proportion: humanities - 30%, technology -35%, natural sciences - 6%, where the answer indicating category “other” was selected by 28% of respondents. The average age of the participants was 19, so as the youngest respondent was 18 years old and the oldest one - 29. Thus, a typical respondent was 19 years old, second-year student, majors in technology, and with the grade point average around 100-84%.

The second group included 98 undergraduate students of the Autonomous University. Similarly, as in the first group, the questionnaire consisted of the following categories: gender, year of study, academic achievement measurement, and major; however, the distribution of them differed. The distribution of students according to gender: male 24% and female 76%, where the percentage of female respondents is considerably higher. The age range of participants varied: 18-19: 41% and 20-29: 59%. The youngest participant was 18, whereas the oldest one was 23 years old. Year of study category encompassed: freshman (26), sophomore (35%), junior (24%), and senior (15%). Freshman and junior participants disperse almost evenly, but sophomore respondents included a slightly more significant amount. The distribution of students according to academic achievement measurement indicated the following percentage: high-achieving (100-84) - 64%; average-achieving (83-76) - 26% and lower-achieving - 10%. The category of GPA “50% and lower” remained empty, so that there were no respondents with 50% and a lower percentage of academic achievement. The major of participants of the second group was distributed somewhat unevenly, 99% of students indicated their specialty as humanities, and only one participant had natural sciences as his\her major.

Therefore, the typical participant of the second group was a female, freshman, or sophomore student, 19 years old, majors in humanities, and with average grade point about 100-84%.

Table 2. Frequencies and Percentage of Participants

	Merged	Regional	Autonomous
Total	239	141	98
Gender			
Male	75 (31%)	51 (36%)	24 (24%)
Female	164 (69%)	90 (64%)	74 (76%)
Age			
18-19	127 (53%)	87 (62%)	40 (41%)
20-29	112 (47%)	54 (38%)	58 (59%)
Year of Study			
1 freshman	55 (23%)	30 (21%)	25 (26%)
2 sophomore	89 (37%)	55 (39%)	34 (35%)
3 junior	52 (22%)	28 (20%)	24 (24%)
4 senior	43 (18%)	28 (20%)	15 (15%)
Academic Achievement Measurement			
High achieving (100-84) ^{1,2}	184 (77%)	121 (86%)	63 (64%)
Average achieving (83-76) ³	39 (16%)	14 (10%)	25 (26%)
Low achieving (75-50) ^{4,5,6}	16 (7%)	6 (4%)	10 (10%)
Major			
1 Humanities	139 (58%)	42 (30%)	97 (99%)
2 Natural sciences	10 (4%)	9 (6%)	1 (1%)
3 Technology	50 (21%)	50 (35%)	
4 Other	40 (17%)	40 (28%)	

Descriptive analysis of student emotional intelligence level of two universities based on gender, age, year of study and academic achievement measurement. Table 3 indicates mean scores of four EI competencies of two universities differentiated by gender, academic achievement measurement, year of study, and age. The overall emotional intelligence scale of two universities is 2.71, based on four Likert scale responses: 1 strongly disagree, 2 disagree, 3 agree, and 4 strongly agree. The means of four EI competencies in two universities disperse in the following order: interpersonal competence $M=2.51$ ($SD=0.28$) personal leadership $M=2.75$ ($SD=0.41$) self-management $M=2.74$

($SD=0.43$) and intrapersonal competence $M=2.72$ ($SD=0.39$). Consequently, relatively higher EI scores belong to personal leadership $M=2.75$ ($SD=0.41$) self-management $M=2.74$ ($SD=0.43$) in two universities. The remarkable point here is that intrapersonal competence comes after two competencies mentioned above with the score of $M=2.72$ ($SD=0.39$), whereas the interpersonal competence had the lowest mean score compared to others. Therefore, undergraduate students of two universities have relatively higher EI level in personal leadership and self-management competencies.

Nevertheless, the dispersion of EI scores is slightly different if to consider two universities separately. According to mean scores, the participants of Regional University possess the highest EI level in personal leadership $M=2.82$ ($SD=0.42$) and self-management $M=2.81$ ($SD=0.44$), which coincides with the global score. However, the Autonomous University students scored the highest in intrapersonal competence $M=2.83$ ($SD=0.49$), and their personal leadership $M=2.66$ ($SD=0.37$) appeared to be on the second place according to mean score.

Taking into consideration the gender of participants, men scored moderately higher than women, with mean scores of $M=2.75$ and $M=2.68$, respectively. Although there is a general belief that women possess a higher level of emotionality. The striking feature is that male participants exposed high EI level in personal leadership $M=2.80$ ($SD=0.46$) and self-management $M=2.84$ ($SD=0.46$), whereas female participants showed higher scores in personal leadership $M=2.73$ ($SD=0.38$) and intrapersonal competence $M=2.71$ ($SD=0.39$). Consequently, both genders considered themselves to be good leaders, although young men tended to show higher level in self-management skills, while young women gained the highest score in personal leadership.

Initially, academic achievement scores included the following categories: 92-100, 84-91, 76-83, 68-75, 59-67, 51-58, 50, and lower. The above-mentioned categories of

responses had been inserted into the questionnaire, where participants could select the most appropriate response so that academic achievement points were self-reported. Initially, the data embodied five responses including 92-100, 84-91, 76-83, 68-75, 59-67 categories for the Regional university and six responses for the Autonomous university, also including the sixth category 51-58. However, no one from participants mentioned that they had 50 and lower academic achievement scores. To facilitate the data analysis process, those five and six categories of responses had been collapsed into three groups: high-achieving (92-100, 84-91), average-achieving (76-83) and lower-achieving (68-75, 59-67). General descriptive analysis of means showed that high-achieving students showed higher scores in personal leadership $M=2.79$ ($SD=0.38$) and self-management $M=2.79$ ($SD=0.41$) competencies. Average-achieving group exposed relatively more top results only in intrapersonal development with $M=2.75$ ($SD=0.45$) compared to other competencies. Remarkably, lower-achieving participants demonstrated considerably higher score in personal leadership $M=2.74$ ($SD=0.54$), where the score almost coincided with the high-achieving group. Overall, high-achieving students showed higher EI level ($M=2.74$; $SD=0.27$) compared to their average and lower-achieving counterparts.

Regarding the next category, students had to select their year of study, including such responses as freshman, sophomore, junior, and senior. There was an assumption that probably this information might correlate with students' EI level as well. Interestingly, the highest scores had been demonstrated by first and third years students in personal leadership competence with mean scores of $M=2.76$ ($SD=0.43$) and $M=2.80$ ($SD=0.43$) respectively. The second-year undergraduate students showed a higher level in personal leadership $M=2.73$ ($SD=0.38$) and self-management $M=2.74$ ($SD=0.46$). The fourth-year participants had a higher score in self-management $M=2.77$ ($SD=0.40$). Overall, the total

mean scores for personal leadership $M=2.75$ ($SD=0.41$) and self-management $M=2.74$ ($SD=0.43$) competencies prevailed.

The age category also had been collapsed into two groups to observe the dispersion of students' EI level based on their age. Consequently, there remained two groups: 18-19 and 20-29 years old undergraduate students. The second group included a rather diverse range of students. However, there were a more significant number of students in the age range from 20 till 22 or 23 years old and only two people who were 24 and 29 years old. Thus, the descriptive analysis of mean scores by age showed that the first group (18-19) of students had a high level of personal leadership $M=2.76$ ($SD=0.41$), whereas the second group possessed self-management competence $M=2.77$ ($SD=0.42$).

Table 3. Mean Scores of EI Competencies by Categories

Variable	Interpersonal Communication M (SD)	Personal leadership M (SD)	Self-management M (SD)	Intrapersonal development M (SD)	Total
Total	2.51 (0.28)	2.75 (0.41)	2.74 (0.43)	2.72 (0.39)	2.71(0.29)
Universities					
Regional	2.54 (0.27)	2.82 (0.42)	2.81 (0.44)	2.64 (0.28)	2.74(0.29)
Autonomous	2.48 (0.28)	2.66 (0.37)	2.63 (0.38)	2.83 (0.49)	2.65(0.27)
Gender					
Male	2.51 (0.26)	2.80 (0.46)	2.84 (0.46)	2.74 (0.39)	2.76(0.33)
Female	2.52 (0.28)	2.73 (0.38)	2.69 (0.40)	2.71 (0.39)	2.68(0.26)
Academic Achievement Measurement					
High achieving	2.52 (0.29)	2.79 (0.38)	2.79 (0.41)	2.72 (0.37)	2.74 (0.27)
Average achieving	2.47 (0.24)	2.58 (0.43)	2.59 (0.45)	2.75 (0.45)	2.60 (0.33)
Lower achieving	2.56 (0.23)	2.74 (0.54)	2.45 (0.40)	2.67 (0.40)	2.63 (0.32)
Total	2.51 (0.28)	2.75 (0.41)	2.74 (0.43)	2.72 (0.39)	2.71 (0.29)
Year of study					
Freshman	2.48 (0.27)	2.76 (0.43)	2.74 (0.41)	2.74 (0.40)	2.71 (0.28)
Sophomore	2.52 (0.26)	2.73 (0.38)	2.74 (0.46)	2.70 (0.39)	2.70 (0.28)
Junior	2.60 (0.31)	2.80 (0.43)	2.70 (0.42)	2.74 (0.37)	2.73 (0.30)
Senior	2.45 (0.26)	2.74 (0.41)	2.77 (0.40)	2.71 (0.42)	2.70 (0.31)
Total	2.51 (0.28)	2.75 (0.41)	2.74 (0.43)	2.72 (0.39)	2.71 (0.29)
Age					
18-19	2.51 (0.26)	2.76 (0.41)	2.71 (0.43)	2.69 (0.38)	2.70 (0.28)
20-29	2.52 (0.29)	2.74 (0.40)	2.77 (0.42)	2.75 (0.40)	2.72 (0.29)
Total	2.51 (0.28)	2.75 (0.41)	2.74 (0.43)	2.72 (0.39)	2.71 (0.29)

M = mean; SD = standard deviation

The relationship between emotional intelligence competencies and academic achievement. To identify how the aspects of EI correlate among each other and with academic achievement, a Pearson product-moment correlation was used. A Pearson product-moment correlation coefficient was computed to identify the relationship between student academic achievement and their emotional intelligence (as measured by four competencies). There was a modest negative correlation between academic achievement and personal leadership competence, $r = -0.123$, $n=239$, $p=0.057$; between academic achievement and self-management competence, $r=-0.251$, $n=0.239$, $p=0.000$ (See Table 4). These results show that there is about 12 % of probability that a high level of personal leadership may lead to lower academic achievement. Similarly, there was around 25 percent of the probability that a higher level of self-management may cause lower academic achievement. On the other hand, it can suggest that students with lower academic achievement scores still may demonstrate good leadership and self-management skills.

Remarkably, there was a strong correlation between personal leadership and self-management, $r = 0.568$, $n=239$, $p=0.000$. Since the p-value is less than .05, there is a statistically significant correlation between personal leadership and self-management. Therefore, the result indicates that the higher level of participants' self-management may lead to better leadership skills. Additionally, there is a moderate positive correlation between personal leadership and interpersonal communication, $r = 0.250$, $n=239$, $p=0.000$, as well as between personal leadership and intrapersonal development, $r = 0.212$, $n=239$, $p=0.001$. Therefore, the higher level of students' interpersonal and intrapersonal competencies may predict their personal leadership skills. Additionally, there is a modest positive correlation between self-management and interpersonal communication, $r = 0.172$,

$n=239$, $p=0.008$. Thus, participants' higher level of interpersonal communication likewise may predict their higher level of self-development.

Table 4. A Pearson Product-moment Correlations between Academic Achievement and EI competencies

#	Variable	1	2	3	4	5
1	Interpersonal communication	1	.250**	.172**	.043	-.009
2	Personal leadership	.250**	1	.568**	.212**	-.123
3	Self-management	.172**	.568**	1	.252**	-.251**
4	Intrapersonal development	.043	.212**	.252**	1	-.008
5	Academic Achievement	-.009	-.123	-.251**	-.008	1

** . Correlation is significant at the 0.01 level (2-tailed).

Inferential Analysis of Emotional Intelligence Level

Difference of emotional intelligence level across two universities. To identify how EI level differs between the two institutions, Independent-samples t-test had been used. The Table 5 demonstrates that the Regional University ($M=2.74$, $SD=0.29$) had higher overall EI level compared to the Autonomous one ($M=2.65$, $SD=0.27$) $t(237) = -2.42$, $p=0.016$. The remarkable point here is that the Regional University students obtained higher results in personal leadership ($M=2.82$, $SD=0.42$) and self-management ($M=2.81$, $SD=0.44$) compared to other competencies, whereas the Autonomous University participants exposed higher level in personal leadership ($M=2.66$, $SD=0.37$) as well and intrapersonal development ($M=2.83$, $SD=0.49$) (see Figure 2.). However, it should be noted that the p-value for all three competencies was less than .05, whereas it was greater than .05 for interpersonal competence $t(141.223) = 3.35$, $p=0.001$. Thus, there is a statistically significant difference between two universities according to three emotional intelligence competencies, except the interpersonal competence. Therefore, it can be stated that

undergraduate students of two universities differed according to personal leadership, self-management, and intrapersonal development, excluding interpersonal communication.

Table 5. Independent-Samples T-Test for EI Competencies Differentiated by Two

Universities

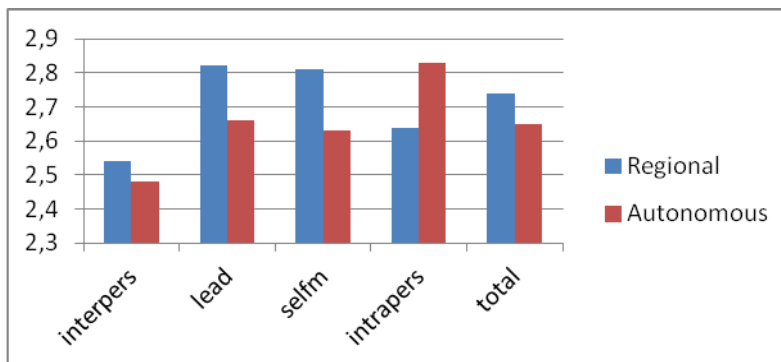
Variable	Regional University	Autonomous University	t (stat)	df	p (two tail)
Total	2,74 (0.29)	2,65 (0.27)	-2,42	237	0,016
Interpersonal communication	2,54 (0.27)	2,48 (0.28)	-1,45	237	0,147
Personal leadership	2,82 (0.42)	2,66 (0.37)	-3,14	237	0,002
Self-management	2,81 (0.44)	2,63 (0.38)	-3,24	237	0,001
Intrapersonal development	2,64 (0.28)	2,83 (0.49)	3,35	141.223	0,001

P<.05 for Personal leadership, Self-management, Intrapersonal development

P>.05 for Interpersonal communication

Figure 2. Independent-Samples T-Test for EI Competencies Differentiated by Two

Universities



Emotional intelligence level differentiated by gender. To identify the difference in the four emotional competencies (interpersonal communication, personal leadership, self-management, and intrapersonal development) scores between male and female undergraduate students, an independent samples t-test had been employed (see Table 6). Overall, the comparison of the EI global score between young men ($M=2.76$ $SD=0.33$) and young women ($M=2.68$ $SD=0.26$) showed there is no a statistically significant difference $t(237) = 1.87$, $p=0.633$. The outcome suggests that generally, the emotional intelligence

level, as measured by four competencies, was slightly higher for young male students than for young female students. However, despite the overall higher score of EI for male participants than for female participants, still, there was almost equal dispersion in separate EI competencies. For instance, the EI score for interpersonal communication was almost equal among both genders, even though female participants ($M=2.52$ $SD=0.28$) obtained a slightly bigger score than male ones ($M=2.51$ $SD=0.26$) $t(237)=0.20$, $p=0.841$. Similarly, young men ($M=2.74$ $SD=0.39$) demonstrated a higher level of intrapersonal development than young women ($M=2.71$ $SD=0.39$) $t(237)=0.56$. In their turn, young men ($M=2.80$ $SD=0.46$) exposed better leadership skills compared to young women ($M=2.73$ $SD=0.38$) $t(237)=1.22$, $p=0.225$. Also, male students ($M=2.84$ $SD=0.46$) obtained higher results in self-management competence than female ones ($M=2.69$ $SD=0.40$) $t(237)=2.68$, $p=0.008$. As the p-value was less than .05, there was a statistically significant difference between male and female students according to their self-management competency. According to the results, both genders exposed higher results on personal leadership compared to other competencies. However, young male students considered themselves to be better at self-management, whereas their female counterparts inclined more to intrapersonal development. Thus, the p-value was greater than .05, for three EI competencies; interpersonal, leadership, intrapersonal, except for self-management competency. The overall emotional intelligence level of the male and female students was not statistically significant except for self-management competency (see Figure 3.). Additionally, it can be concluded from results that young men had higher EI level than young women.

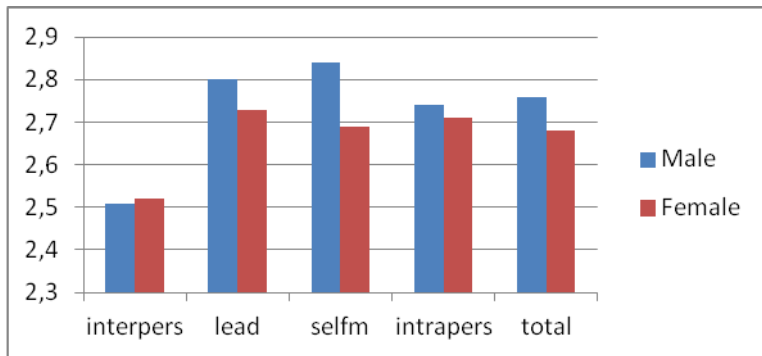
Table 6. Independent-Samples T-Test for EI Competencies Differentiated by Gender

Variable	Male M (SD)	Female M (SD)	t (stat)	df	p (two tailed)
Total	2.76 (0.33)	2.68 (0.26)	1.87	237	0.633
Interpersonal communication	2.51 (0.26)	2.52 (0.28)	0.20	237	0.841
Personal leadership	2.80 (0.46)	2.73 (0.38)	1.22	237	0.225

Self-management	2.84 (0.46)	2.69 (0.40)	2.68	237	0.008
Intrapersonal development	2.74 (0.39)	2.71 (0.39)	0.56	237	0.579

Interpersonal, leadership, intrapersonal $p > .05$; self-management $p < .05$

Figure 3. Independent-Samples T-Test for EI Competencies Differentiated by Gender



Emotional intelligence level differentiated by age. To check the presence of the relationship between students' age and their level of emotional intelligence, an Independent-samples t-test was conducted (Table 7). Generally, since the p-value was greater than .05, there was not a significant difference in scores among four EI competencies and students' age. The results showed that students of 18-19 years old possessed a moderately higher level of personal leadership ($M=2.76$; $SD=0.41$) compared to students of 20-29 years old ($M=2.74$; $SD=0.40$), $t(237) = 0.30$, $p=0.766$. Consequently, personal leadership appeared to be the prevailing competence of participants of the first age category (18-19). On the other hand, the respondents of the second age category (20-29) demonstrated higher scores in self-management ($M=2.77$; $SD=0.42$) in comparison to first group category (20-29) ($M=2.71$; $SD=0.43$), $t(237) = -1.03$, $p=0.302$. Therefore, students of 18-19 years old tended to demonstrate better leadership skills, whereas students of 20-29 years old exposed better self-management capabilities. Overall, the total score shows that participants in age category of 20-29 demonstrated slightly higher level of emotional intelligence ($M=2.72$; $SD=0.29$), than participants in age category of 18-19 ($M=2.70$; $SD=0.28$), $t(237) = -0.52$, $p=0.600$.

Table 7. Independent-Samples T-Test for EI Competencies Differentiated by Age

Variable	18-19 M (SD)	20-29 M (SD)	t (stat)	df	p (two tailed)
Total	2.70 (0.28)	2.72 (0.29)	-0.52	237	0.600
Interpersonal communication	2.51 (0.26)	2.52 (0.29)	-0.08	237	0.940
Personal leadership	2.76 (0.41)	2.74 (0.40)	0.30	237	0.766
Self-management	2.71 (0.43)	2.77 (0.42)	-1.03	237	0.302
Intrapersonal development	2.69 (0.38)	2.75 (0.40)	-1.15	237	0.251

$p > .05$

The Association between Academic Achievement and Emotional Intelligence

Competencies

A one-way between groups ANOVA was conducted to identify the effect of participants' academic achievement on their EI level. In other words, if there are differences in EI level of high-, average-, and lower-achieving undergraduate students. The results showed that there was no statistically significant difference between three groups (high-, average- and lower-achieving students) in connection with interpersonal communication ($F(2,236) = 0.878, p = 0.417$) and intrapersonal development ($F(2,236) = 0.295, p = 0.745$) at the $p > .05$ (see Table 8). However, the p-value is less than .05 for personal leadership and self-management competencies. There was a significant effect of students' academic achievement on their leadership at the $p < .05$ ($F(2,236) = 4.286, p = 0.015$). Post Hoc comparisons using Tukey HSD test identified that the mean score for the high-achieving group ($M = 2.79; SD = 0.38$) was significantly different than the average-achieving group ($M = 2.58; SD = 0.43$). Remarkably, the mean score for the lower-achieving group ($M = 2.74; SD = 0.54$) was only slightly different than one of the high-achieving group and higher than the average-achieving group.

Similarly, there was a significant effect of academic achievement of students on self-management competence at the $p < .05$ ($F(2,236) = 8.039, p = .000$). Post Hoc comparisons using Tukey HSD test indicated that the mean scores for high-achieving

($M=2.79$; $SD=0.41$) group were significantly different than average- ($M=2.59$; $SD=0.45$) and lower-achieving one ($M=2.45$; $SD=0.40$). Consequently, abovementioned results suggest that high academic achievement may affect personal leadership and self-management more than other competencies. Especially, high-achieving students more likely to expose leadership and self-management skills compared to average- and lower-achieving students. However, according to results, sometimes, academic achievement does not affect leadership skills, so that lower-achieving students may be good leaders as well.

Table 8. One-Way between Groups ANOVA for Emotional Intelligence by Academic Achievement Levels

Variable	F	df	P (sig)
Interpersonal communication	0.878	2.236	.417
Personal leadership	4.286	2.236	.015
Self-management	8.039	2.236	.000
Intrapersonal development	0.295	2.236	.745

Leadership, self-management $p<5$

The Impact of Gender, Age and Emotional Intelligence Level on Students' Academic Achievement

To explore the influence of gender and age on the relationship between students' academic achievement and their emotional intelligence, a two-step hierarchical regression was conducted (Table 9).

Table 9. Hierarchical Regressions of Academic Achievement onto EI, Age and Gender

	Academic Achievement	
	β	t
Step 1		
gender	-.223*	-2.765
age	-0.86	1.141
F (2.236)	4.647	
Adj. R ²	.030	
Step 2		
Interpersonal communication	.089	.659

Personal leadership	.040	.361
Self management	-.458*	-4.340
Intrapersonal development	.081	.844
F (6.232)	5.683	
Adj. R ²	.106	

On the first step, the influence of age and gender on academic achievement had been tested. With gender and age in the equation, $F(2,236) = 4.647$, $p = .010$, $\text{Adj. } R^2 = .030$, the p -value is greater than .001, therefore, gender and age may not be considered as statistically significant predictors of students' academic achievement. On the second step, the influence of four emotional intelligence competencies on students' academic achievement had been tested ($F(6,232) = 5.683$, $p = .000$, $\text{Adj. } R^2 = .106$). Since, the p -value is less than .001, these results indicated that emotional competencies can be statistically significant predictors of academic achievement. However, the EI competencies may predict academic achievement of students only on 12.8 %. The b values in the output show that the positive relationship between interpersonal communication, personal leadership and intrapersonal development and academic achievement measurement, and negative relationship between self-development and academic achievement. This may mean that overall, the improvement in interpersonal, leadership and intrapersonal competencies can predict an increase in students' academic achievement. However, the self-management competence cannot always be a predictor of high academic scores.

Overall, the chapter provides the results of the descriptive, inferential, and correlational analyses conducted during the study. The descriptive statistics, independent-samples t -tests, one-way between groups ANOVA, a Pearson product-moment correlation, and hierarchical regression analyses had been done to make the following conclusions:

1. The descriptive analysis of the two universities showed that the mean scores of personal leadership and self-management were prevailing. However, Regional University

students had higher scores in personal leadership, whereas the students of Autonomous University appeared to be better in intrapersonal development competence.

2. The results of the descriptive analysis indicated that male students had higher scores in self-management, while female participants considered themselves to be good leaders. The inferential analysis showed that there was no statistical difference in gender category, except for self-management competency. Therefore, according to results, male participants differed from female participants based on self-management competency.

3. The inferential analysis on comparing the difference between students' academic achievement and their EI level showed that self-management and personal leadership competencies correlated with academic achievement the most. One-way between groups ANOVA indicated there was a statistically significant difference of high-achieving group on their leadership and self-management competencies.

4. The results from an independent t-test showed that generally there was not a statistically significant difference between students' EI level and their age. However, participants in the age category of 20-29 years old had a slightly higher mean score compared to participants of 18-19 years old. Typically, students of 18-19 years old inclined to excellent leadership skills, whereas their 20-29 years old counterparts tended to expose better self-management capabilities.

5. The correlational analysis indicated that students with lower academic scores still may reveal good leadership and self-management skills. Likewise, the results proved that higher self-management competence might predict better personal leadership skills. The hierarchical regression analysis had been conducted to indicate the impact of gender, age, and EI competencies on students' academic achievement. The outcome did not endorse the effect of gender and age on students' academic scores. On the contrary, participants' EI level might be a statistically significant predictor of their academic achievement.

Specifically, the high level of three EI competencies: interpersonal, leadership, and intrapersonal may lead to higher academic scores. However, according to the results, a high level of self-management competence cannot always predict students' better academic achievement.

Discussion

The previous Findings chapter provided the major results of the research study collected with the help of ESAP (Emotional Skills Assessment Process) questionnaire. This chapter is devoted to the interpretation and explanation of the main findings in a more detailed way. The purpose of this research study was to identify the relationship between emotional intelligence and academic achievement among undergraduate students in two Kazakhstani universities. Therefore, the Discussion chapter is organized based on the main research questions:

Q1. How do students at two Kazakhstani universities differ in their emotional intelligence level?

H0 Autonomous University students expose higher emotional intelligence level compared to Regional University students.

Q2: How does emotional intelligence level differ based on such background characteristics as gender and age?

Q2.1. How does emotional intelligence level differ based on gender?

H0 Female students possess higher emotional intelligence level compared to male ones.

Q2.2. How does emotional intelligence level differ based on age?

H0: Emotional intelligence level does not differ based on age

H1: Older students have higher emotional intelligence level compared to younger ones.

Q3. To what extent does student emotional intelligence level correlate with academic achievement levels?

H0 High-, average-, and low-achieving students differ in their emotional intelligence levels.

Q4. To what extent do age and gender influence the relationship between student academic achievement and emotional intelligence?

H0 Age and gender do not influence the relationship between student academic achievement and emotional intelligence.

H1 Emotional intelligence can be used as a predictor of academic achievement.

This chapter is structured according to the results of the findings. The first subsection informs about the overall EI level of undergraduate students of two universities, as well as it shows the main differences between the two universities. The second subsection reports how students' EI level is differentiated by gender. The third subsection discusses how participants' EI competencies compared by age. The fourth subsection is devoted to the association between EI level of students and their academic achievement, considering three groups: high-, average-, and lower-achieving students. The last subsection outlines the possible influence of gender, age, and EI level on students' academic achievement.

Emotional Intelligence Level of Two Universities

The results of the current study have stated that there is a statistically significant association between emotional intelligence and academic achievement of undergraduate students. This finding is aligned with other previous studies which confirmed the link between emotional intelligence and academic achievement (Akbar et al., 2011; Goodwin, 2016; Holt, 2007; Shaikhina, 2017; Iannucci and Mirabellais 2013; Mohamad, Noordiana, & Hanafi, 2018). The mean score of overall emotional intelligence level as measured by four EI competencies was 2.71, with 2.74 for the Regional University sample and 2.65 for the Autonomous University sample, respectively. Therefore, this is an interesting finding, even though there is a slight difference between the two universities in mean scores. Generally, undergraduate students of the Regional university scored higher according to three EI competencies: interpersonal communication ($M=2.54$), personal leadership ($M=2.82$), and self-management ($M=2.81$), and compared to the Autonomous university.

Thus, the null hypothesis of the current study that the Autonomous University students expose higher EI level compared to the Regional University students was rejected (see Table 10).

On the other hand, the Autonomous university participants had higher scores on intrapersonal development ($M=2.83$) in comparison to their Regional university counterparts ($M=2.64$). Therefore, it should be mentioned that students of the Regional university had the highest score on personal leadership (social awareness, empathy, decision making, and positive influence), whereas students of the Autonomous university exposed better intrapersonal development (self-esteem and stress management). Furthermore, two universities differed statistically from each other according to three EI competencies (personal leadership, self-management, and intrapersonal development) except for interpersonal communication.

The assumption of such findings may be the different background of the two universities, which could influence students' EI skills. The Autonomous university admission committee indicates stricter enrollment requirements for students and emphasizes their high academic performance during the learning process. Frequently, undergraduate students are not able to be always involved in some extra-curriculum events and activities during the study. However, they have to develop their time management, academic learning strategies, as well as inner skills such as self-esteem and stress management. Furthermore, it should be noted that the average grade point and students' overall academic performance in the Regional University differs from the Autonomous one. Also, the Autonomous University has the English language as a medium of instruction, which triggers additional challenges for students. However, students of the Regional University may be engaged in some extra-curriculum activities as well as part-

time jobs, which may enhance their social awareness, empathy, decision making, and positive influence skills.

Another assumption of a statistical difference between two universities on their EI levels may be the data collection instrument. Although ESAP (Emotional Skills Assessment Process) questionnaire was developed in such way as to identify students' EI skills in relation with their academic abilities (Nelson and Low, 2011), still this questionnaire is a self-reported version. Therefore, answering the questions, participants relied only on their own feelings and emotions at that period of time. Sometimes respondents are willing to show their best qualities only, in spite of anonymous surveys. Thus, it should be noted that there is always room for bias.

Emotional Intelligence Level Differentiated by Gender

The previous studies in the field of emotional intelligence have indicated that there was no statistically significant difference according to gender. For instance, the study conducted in Nazarbayev Intellectual School's, Aktobe, by Shaikhina (2017) stated that the general level of emotional intelligence or its particular factors did not differ statistically according to gender. This finding has been explained by the fact that the school has specific requirements so that students are tested not only for intellectual abilities but also logical capabilities and giftedness. Another study by Akintude and Olujide (2018) revealed that there was not a statistically significant difference in emotional intelligence level according to gender. However, the experiment has shown that there is a difference between male and female students in their locus of control. According to the analysis, female participants expose a higher level of internal control compared to male ones.

Similarly, the results showed that overall, female high ability students possess lower emotional intelligence level compared to male students, but they expose better locus of control than their male counterparts (Akintude and Olujide, 2018). The similar research

study investigated the influence of EI competencies on academic achievement in 135 undergraduate psychology students in the UK likewise indicated there was no statistically significant difference in gender category (Pope, Roper and Qualter, 2012). The abovementioned study explored four EI competencies: self-awareness, self-management, social awareness, and relationship management with the help of the Emotional Competence Inventory-University Edition (ECI-U II). However, there was a statistical effect of gender on social awareness, where it had been found that female students scored considerably higher than males ones.

The outcomes of the current study are also aligned with the previous ones that generally, the emotional intelligence level did not differ statistically according to gender. However, it was remarkable that there was a statistically significant difference in self-management competency by gender. This outcome may imply that male students can differ from female ones based on self-management competency. Furthermore, the results also indicated that male undergraduate students were more self-managed than their female counterparts. Self-management competency includes such skills as drive strength, commitment ethic, and time management. Although, there was no statistically significant difference between two genders according to the other three competencies, still generally, male students scored higher than their female counterparts on overall EI level. Consequently, the null hypothesis that female students possess higher EI level compared to male ones was rejected (see Table 10).

However, the results showed that there was some remarkable score dispersion in EI competencies among male and female students. First, women scored higher on personal leadership ($M=2.73$), and intrapersonal development ($M=2.71$), whereas men had higher scores on self-management ($M=2.84$) and personal leadership ($M=2.80$). According to Nelson and Low (2011), personal leadership includes such EI skills as self-awareness,

empathy, decision-making, and positive influence. Intrapersonal development embodies self-esteem and stress-management skills. Therefore, it may be deduced that both male and female students reported higher scores on personal leadership compared to other three EI competencies, whereas female participants demonstrated better results in intrapersonal development, while their male counterparts exposed better self-management skills. Those results might not be fully congruent to stereotypically gender traits, where female traits include compassion, nurturance, communion, whereas male characteristics embody assertiveness, competitiveness, agency, etc. (Siegling et al., 2012).

Although, there is a controversial view about a gender impact on emotional intelligence, which indicated that there is a statistically significant difference between female and male participants. For instance, the research study by Akbar et al. (2011) with a sample of 200 students, 100 female, and 100 male students, reported that women scored higher on overall emotional intelligence level compared to men. The study employed Bar-On EQ-i (Emotional Quotient Inventory) as the mean to measure students' emotional intelligence level.

Thus, although, gender does not directly impact emotional intelligence level of students, it should be taken into consideration. Sometimes gender may be an essential factor in predicting specific emotional skills such as empathy, rapport, anger control, and problem-solving (Nelson, & Nelson, 2003 p. 6).

Emotional Intelligence Level Differentiated by Age

The previous research studies state that there are few (Komlosi, 2014) or no significant differences (Marembo & Chinyamurindi, 2018; Shaikhina, 2017) regarding the age in connection with emotional intelligence level. However, some research studies agree on the fact that emotional intelligence level increases with age (BarOn, 2006; Komlosi, 2014). Furthermore, there is evidence that some EI competencies such as self-control also

are maintained by people better with age (Komlosi, 2014 p. 1985). Notably, the study by Komlosi (2014) indicated that younger female participants exposed higher scores on sociability and well-being factors, whereas the older female participants scored higher on self-control factor level. On the contrary, another research study by Marembo & Chinyamurindi (2018 p. 7) with the sample of early career academics (age range in groups 20 - 30 years, 31 - 40 years, 41 – 50 years) indicated that older respondents were likely to score lower on emotional intelligence level compared with their younger counterparts. Those results are also congruent with findings on the study of polytechnic lecturers by Kumar & Muniandy (2012) likewise supported that emotional intelligence level may increase with age till 50 years; however, individuals may be less emotionally intelligent when they reach 50 years old.

The results of the current study displayed that there was no statistically significant difference between emotional intelligence competencies and participants' age. For that reason, the null hypothesis that the EI level does not differ based on age was validated (Table 10). However, the mean scores of two groups: the first group 18-19 years old and second group 20-29 years old undergraduate students showed that the second group exposed a slight higher EI level compared to the first group. Subsequently, the alternative hypothesis that older students have higher EI level compared to younger ones was validated as well (Table 10). Additionally, it had been indicated that 18-19 years old participants scored higher on personal leadership competency ($M=2.76$) among four other competencies, while their 20-29 years old counterparts exposed higher results on self-management. Though, it should be taken into consideration that firstly, there is a small difference in respondents' age of the current study. Indeed, there were a majority of students of 18 till 22 years old, four participants of 23 years old and only two people who were 24 and 29 years old. Probably that fact might impact the results of the current study,

that there was no significant difference between EI competencies and age. The results of the present study are allied with the study of NIS students by Shaikhina (2017), where there was only five years difference between participants: 12 – 17 years old. Similarly, no statistically significant difference was indicated in any emotional intelligence factors concerning the age variable.

The Association between Academic Achievement and Emotional Intelligence

Competencies

Several studies endorsed the impact of emotional intelligence and its separate components on academic achievement and success of students (Akintude and Olujide, 2018; Kumar & Muniandy, 2012; Pope, Roper, & Qualter, 2012; Shaikhina, 2017; Stough, Saklofske, & Parker, 2010). In particular, there have been identified the correlation between higher achieving students and higher EI scores (Nelson & Nelson, 2003; Nelson, Low, Vela, 2003; Shaikhina, 2017; Stough, Saklofske, & Parker, 2010). However, there were studies which did not find any correlations between EI components and academic achievement (Lawrence & Deepa, 2013; Landau & Meirovich, 2011). Although, emotional intelligence level does not always fully correlate with academic achievement of participants, however, some EI components could be predictors of their intellectual success. The authors explained that overall, the academic performance of the high school where the research took place was average what led to average EI level of participants (Lawrence & Deepa, 2013). Another study by Landau & Meirovich (2011) explored how emotional intelligence development may correlate with a participative environment of college students. The outcome of that study did not find any correlation between EI level and students' GPA; however, the authors did not use any cognitive abilities measurement.

Regarding the school students, Parker, Creque and et al. (2004) investigated the sample of 667 school children from 9 to 12 grades in American high school. Students were

questioned with the help of EQ-i: YV (Emotional Quotient Inventory: Youth Version) in the beginning and at the end of the academic year. The participants had been divided into three groups (successful, average, and less successful). The output of the study showed that successful group had higher scored on such EI components as adaptability, interpersonal, and stress management abilities compared with the average and less successful group. Those results are identical to another thesis research study by Shaikhina (2017), which showed that higher achieving students expose a high emotionality level. Additionally, it had been indicated that such EI factors as self-control and well-being were positively correlated with academic achievement (Shaikhina, 2017).

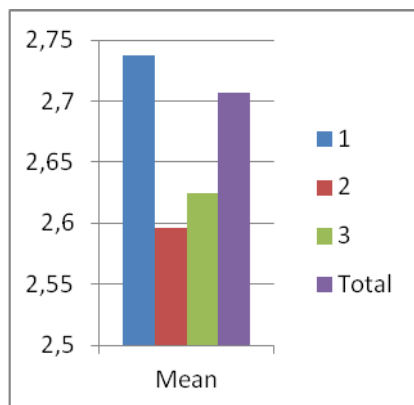
The current study's results likewise showed that higher-achieving students scored higher on four EI competencies (interpersonal communication, personal leadership, self-management, and intrapersonal development) compared to average and lower achieving students (see figure 4.). However, the interesting finding is that lower-achieving group had slightly higher scores on four EI competencies than average-achieving one. Primarily, high-achieving undergraduate students exposed higher results on personal leadership (social awareness, empathy, decision making, and positive influence) and self-management (drive strength, commitment ethic, time management, and change orientation) competencies. Average-achieving group had higher scores on intrapersonal development (self-esteem and stress management) whereas the lower-achieving group showed better results on personal leadership.

Those results are allied with the outcome of the study by Nelson, Low, Vela (2003) in the ESAP interpretation and intervention guide. Nelson, Low, Vela (2003) identified three profiles of students: high-achieving, academic at risk, and potential problem. They indicated that high-achieving profile of students exposed strong skills in such areas as time management, drive strength, and commitment ethic (self-management competency) and

assertion (interpersonal communication). On the other hand, the academic at-risk group showed low scores on self-management and interpersonal competencies, while potential problem profile of students might expose high scores in negative areas such as aggression, deference and change orientation (Nelson, Low, Vela, 2003 p.19). Alnabhan's (2010) study also proved that a higher level of emotional intelligence could predict leadership skills of high achieving students. That study investigated the correlation between emotional intelligence and components of leadership in the sample of high- and low-achieving students of 11th grade.

The results of the present study showed that there was a statistical significance in two EI competencies: leadership and self-management. So, the null hypothesis that high-, average-, and low-achieving students differ in their EI levels may be validated (Table 10). It had been concluded that generally such EI competencies as self-management and personal leadership had been indicated as predictors of high academic achievement. However, according to the results of the current study, it should be noted that lower-achievers likewise may demonstrate relatively higher scores on leadership competency compared to average. This finding may be explained that sometimes, students who do not perform high academically may still demonstrate good social awareness, interpersonal, and decision-making skills. I assume that if students do not expose high academic achievement at university, probably they cope with some other personal issues beyond the institution settings' so that they are to find some creative solutions and demonstrate their EI skills. On the contrary, the better students are self-managed, the higher is their EI level. Additionally, it should be stated here, that the shift from adolescence to young adulthood also emphasize individuals' self-development abilities and there come to the transition from external (physical) values to internal (inner) ones what impacts their family, work or study matters (Parker, Creque, et al.,2004, p 1328).

Figure 4. One-Way between Groups ANOVA for Emotional Intelligence and Academic Achievement Levels



1 – high-achieving group; 2 – average-achieving group; 3 – lower-achieving group.

The Impact of Gender, Age and Emotional Intelligence Level on Students' Academic Achievement

The results of the current study indicated that age and gender might not be statistically significant predictors of academic achievement. The null hypothesis that age and gender do not influence the relationship between student academic achievement and emotional intelligence was validated (see Table 10). The age of students did not influence academic achievement probably because of the small difference in age range along with unequal dispersion of ages in groups (first group 18-19; second group 20-29). Regarding gender, the number of female participants was considerably more prominent compared to male ones, 69%, and 31% respectively. Therefore, those facts may cause such results. The results of the current study are allied with a thesis research study by Shaikhina (2017), where there was also a small difference between the age range from 12 to 17 years. Although there was an equal amount of male and female students, still there was not any impact of gender on academic achievement. Nevertheless, gender should be considered while assessing the link between emotional intelligence and academic achievement (Nelson & Nelson, 2003), as the separate EI components may vary according to gender.

Alternatively, the results of the current research showed that four EI competencies (interpersonal, leadership, self-management, and intrapersonal) were statistically significant predictors of students' academic achievement. The alternative hypothesis that EI can be used as a predictor of academic achievement was partially validated (Table 10). Generally, it had been indicated that interpersonal, leadership and intrapersonal competencies might predict students' academic achievement on 12%. However, there was a negative correlation between self-management and academic achievement. It might mean that self-management does not always guarantee higher academic scores. The positive correlations between emotional intelligence and academic achievement have been found by Akintude and Olujide (2018) in the study with a sample of underachieving high ability students. Similar results have been demonstrated in the study of UK university students by Pope, Roper, & Qualter (2012) where EI competencies (conscientiousness, adaptability, empathy, organizational awareness, and building bonds) were significant predictors of APM (average percentage mark).

Table 10. Main Hypotheses

H0 Autonomous University students expose higher EI level compared to Regional University students.	Rejected
H0 Female students possess higher EI level compared to male ones.	Rejected
H0: EI level does not differ based on age	Validated
H1: Older students have higher EI level compared to younger ones.	Validated
H0 High-, average-, and low-achieving students differ in their EI levels.	Validated
H0 Age and gender do not influence the relationship between student academic achievement and emotional intelligence.	Validated
H1 EI can be used as a predictor of academic achievement.	Validated

This chapter aimed to discuss the results of the findings in more detail. During the discussion, several central points have been indicated:

1. There was a significant difference between two universities (Regional and Autonomous) according to three EI competencies: leadership, self-management and intrapersonal.

2. Regarding the gender of students, the results of this study showed no significant difference, except for self-management competency. Therefore, this finding means that there was no difference in gender, considering such EI skills as leadership, interpersonal, or intrapersonal competencies. However, overall, the outcome indicated that male participants were more self-managed compared to their female counterparts.

3. There was no statistically significant difference between EI competencies and students' age. However, the group with age range 20-29 scored slightly higher on the overall EI level compared to the group, including the age range 18-19. It should be noted that there were a small difference and unequal dispersion between groups.

4. The high-achieving group scored higher on four EI competencies compared to average-achieving and lower-achieving. The results indicated that self-management competency might be a predictor of high academic achievement. The remarkable finding was that lower-achieving group scored slightly higher than average achieving one.

5. The last finding stated that gender and age did not influence academic achievement and were not its predictors. Hence, EI competencies showed a positive correlation with academic achievement. However, it had been deduced that self-management competency might not be a reliable predictor of academic achievement.

Conclusion

The primary purpose of this study was to identify the relationship between emotional intelligence and academic achievement among undergraduate students in two Kazakhstani universities. This chapter summarizes the significant findings of the research study. It revises the main research questions and detailed results of the study. The chapter informs readers about the main limitations and implications of the current research as well as provides some recommendations for future research.

Summary of Main Findings

How do students at two Kazakhstani universities differ in their emotional intelligence level? The results of this research study have shown that two universities statistically differ from each other according to three emotional intelligence competencies: personal leadership, self-management, and interpersonal development. There was no significant difference in interpersonal competency between the two universities. Generally, the Regional University scored higher than the Autonomous one in overall EI level. Specifically, the Regional university students had higher scores in three EI competencies: interpersonal, leadership, and self-management, while the Autonomous University students showed higher results on only intrapersonal development. Those results could be explained by the fact that two universities have different backgrounds, discrepancies in grade average points, and overall requirements. Thus, it may be deduced that the EI level of students can vary according to the place of study.

How does emotional intelligence level differ based on gender? The outcomes of the current study have stated that generally, EI level of undergraduate students did not differ according to their gender. However, there was a statistically significant difference in self-management competency based on gender. So, male students can differ from female ones based on their self-management competency. Furthermore, it has been found that

male students are more self-managed than their female counterparts. Also, there was a discrepancy between females and males according to the scores of four EI competencies. Generally, young women scored higher on personal leadership, whereas young men showed higher results on self-management.

How does emotional intelligence level differ based on age? This research study has indicated that there was no statistically significant difference in EI level of undergraduate students according to their age. Hence, the group with age range 20-29 years showed a slightly higher overall EI level compared to the group with age range 18-19 years. Interestingly, 18-19 years old undergraduate students demonstrated higher scores on personal leadership competency, while their 20-29 years old counterparts scored higher in self-management. However, such fact as a small difference between participants age range should be taken into consideration. Generally, the age of the undergraduate student was 18 - 23 years old, except the two people who were 24 and 29 years old.

To what extent does student emotional intelligence level correlate with academic achievement levels? It had been deduced from the results that higher achieving participants exposed higher EI level in comparison to average and lower-achievers. However, there was a remarkable finding that lower-achieving students scored slightly higher on four EI competencies than average-achieving individuals. Overall, high-achievers exposed better personal leadership and self-management competencies. Average-achieving respondents in their turn demonstrated higher scores on intrapersonal development, while lower-achievers demonstrated better personal leadership skills. The previous studies stated that personal leadership and interpersonal competencies could be predictors of high academic achievement (Nelson, Low, Vela, 2003). However, the current research has shown that academically lower-achieving students still may demonstrate

leadership skills. The assumption here may be that students, who tend to score less academically have to be more creative and astute in their personal lives.

To what extent do age and gender influence the relationship between student academic achievement and emotional intelligence? Overall, it has been indicated that gender and age do not have a significant effect on students' EI level. The study did not report any impact of the age category on their EI level, probably because there was a small difference between participants' age, around six years. The gender category also did not show any impact on EI level of respondents, except self-management competency, which had been discussed before. However, such factor as an unequal quantity of male and female students should be considered. An amount of female participants was bigger than male ones, 69%, and 31% respectively.

The results of the current study indicated that overall, four EI competencies, including interpersonal, leadership, self-management, and intrapersonal, may be statistically significant predictors of academic achievement. However, a two-step hierarchical regression analysis showed that interpersonal, leadership and intrapersonal competencies could predict academic achievement only on 12 %. Remarkably, there was a negative correlation between self-management and academic achievement. This finding might mean that high scores on self-management may not always indicate the high academic performance of respondents.

Limitations

The current study has some limitations which should be considered. Such limitation as the difference in age should be taken into account. The difference in participants' age was not large enough in order to indicate any changes between older and younger students. The study engaged only the bachelor degree students with age range from 18 to 23 years, though two students were 24 and 29 years old. Therefore, approximately six years of

difference in age did not show any statistical effect on participants' emotional intelligence level.

The next limitation is academic achievement measurement, which was self-reported and probably was not so accurate. Since two universities have a different grading system, the research had to use the approximate percentage instead of GPAs to make it clear for students of both universities.

The last limitation of the current study was questionable reliability percentage in one of the emotional intelligence instrument section. I used ESAP (Emotional Skills Assessment Process) by Nelson and Low (2011), which initially included 63 items. However, to make it shorter and more manageable for students to complete the survey, I had to remove some statements from the initial questionnaire. The shortened version of the EI instrument questionnaire caused a slightly lower reliability percentage of one section within it.

Implications of the Study

It had been indicated that there was a statistically significant correlation between emotional intelligence competencies and academic achievement of students. The types of universities, as well as their characteristics, also affect students' particular competencies. For instance, it was found out during the research study that Regional University students scored higher on personal leadership, whereas Autonomous University respondents exposed higher results in intrapersonal development. Those findings may enable higher education institution managers to facilitate the individual skills of students via corresponding curricular or extra-curricular activities. However, it should be noted here that before teaching and implementing emotional intelligence to students, there should be some workshops on this topic for universities members as well (Holt, 2007).

Another finding concerning the link between students' EI level and their academic achievement was a statistically significant relationship between high-achieving students and their leadership and self-management EI competencies. Therefore, those competencies may be predictors of high academic achievement. This finding also may be of help for higher education institution members as well as psychologists. For instance, indicating EI level of students, managers, educators, and faculty members can be aware of some reasons for their academic weaknesses. In their turn, psychologists of universities may use special EI questionnaire to monitor students' EI level and raise their awareness in this sphere. Similarly, employers would be interested in the abovementioned results to identify not only the analytical and technical skills of future specialists but likewise be informed about their EI capabilities.

This study did not find any statistically significant effect of students' age and gender on their EI level. However, there was a statistical difference between male and females in self-management competence. This finding means that generally, there is no need for particular EI practices differentiated by age and gender.

Recommendations for Further Research

Sample characteristics. Even though the sample included an adequate number of participants from two universities, still there were not an equal number of students according to their major. For instance, an amount of the autonomous university students dispersed unevenly between humanities and natural sciences, 99% and 1% respectively, with no participants from technology and other categories. The equal amount of participants from different majors may bring additional information.

This study was limited to two universities, undergraduate students. Also, due to voluntary participation, the unequal amount of male and female participants had been involved in the research. The recommendation for future research may be engaging an

almost equal number of male and female respondents and use several higher educational institutions to capture the diversity of the sample.

Academic achievement measurement. The current study employed a self-reported academic achievement percentage due to the difference in the grading systems of two universities. It may be recommended to use an official GPA for further research in order to get more accurate results.

Emotional intelligence questionnaire. ESAP (Emotional Skills Assessment Process) was used as an instrument for indicating the EI level of students. However, some statements of the instrument had been omitted what caused lower reliability percentage of one of the section. To receive more reliable answers and indicate wider seize of EI areas, researchers may employ a full version of the ESAP instrument.

Final Reflection

Writing the thesis study on the relationship between emotional intelligence and academic achievement had been valuable and challenging experience for me. I had started exploring the notion of emotional intelligence before the enrollment to this university. However, that investigation of the topic was rather amateur. Similarly, I was passionate about the link between emotional intelligence and intelligence quotient what had become popular domain recently.

Conducting the thesis study on emotional intelligence with connection to academic achievement I could reveal the significance of that relationship in the education context. Although the emotional intelligence concept has become popular, still many people do not recognize it correctly. Frequently, even specialists from unrelated spheres do not consider emotional intelligence as a broad term. Hence, employers demand from their future experts to obtain specific soft skills such as interpersonal, leadership, communication, intrapersonal which were not taught in the universities as separate or additional courses.

Have conducted statistical analyses on the relationship between emotional intelligence and academic achievement I could indicate that these two variables are interconnected and interrelated with each other. Higher education institutions may use that fact to improve students' academic achievement and learning strategies. Students of higher education institutions are future specialists in different spheres, who have to be familiar with soft skills and in particular emotional competencies. Therefore, I believe that this study will contribute to the contemporary higher education and indicate the need for further development of emotional intelligence in the academic sphere.

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Appendices

Appendix A: Informed consent

Introduction. You are invited to participate in the research study entitled “The relationship between emotional intelligence and academic achievement among undergraduate students in Kazakhstan”. This survey will take approximately 15 minutes of your time. The survey is translated into two languages: **Kazakh and Russian.**

Procedures: The purpose of the research study is to identify the relationship between emotional intelligence and academic achievement among undergraduate students. Participants of the survey are being asked to indicate such personal details as age, gender, academic classification, and GPA.

Requirements for taking this survey: BACHELOR 1-4 YEARS students

Confidentiality & Privacy. Any information that is collected during the study will be kept confidential to full extent as it is possible. The results of the study will be collected on Qualtrics site, which is password protected. There will be no identifying information which may reveal personalities of respondents.

Voluntary Nature of the Study. Participation in this study is strictly voluntary, and if agreement to participation is given, it can be withdrawn at any time without prejudice.

Contact Information. If any questions, comments, concerns arise regarding this study, it may be addressed to the Nazarbayev University Institutional Research Ethics Committee, resethics@nu.edu.kz or to my personal email address: lyudmila.fillipova@nu.edu.kz.

Statement of Consent.

By clicking “I agree” below you indicate that you are at least 18 years old, have read and understood this consent form and agree to participate in this part of the research study.

The informed consents in two languages are attached to the email.

The link to the survey:

https://nukz.qualtrics.com/jfe/form/SV_2t6hFxvsvSfmpO5

Thank you for your time and attention!

Форма информационного согласия

Введение. Вас приглашают принять участие в исследовании, посвященном теме «Взаимосвязь между эмоциональным интеллектом и академическими достижениями среди студентов бакалавриата в Казахстане». Данный опрос займет приблизительно 15 минут вашего времени. Опрос переведен на два языка: **русский и казахский**.

Процедуры: Целью исследования является выявление взаимосвязи между эмоциональным интеллектом и академическими достижениями среди студентов. Вам предлагается указать такие личные данные, как возраст, пол, академическая классификация и средний балл успеваемости.

Критерии участия в данном опросе: БАКАЛАВРИАТ студенты 1-4 КУРС

Конфиденциальность и конфиденциальность. Любая информация, которая собрана во время исследования, будет храниться конфиденциально. Результаты исследования будут собраны на сайте Qualtrics, который защищен паролем. Не будет идентифицирующей информации, которая может выявить личности респондентов.

Добровольная основа исследования. Участие в этом исследовании носит строго добровольный характер, и если дано согласие на участие, оно может быть отозвано в любое время без ущерба.

Контакты: Вопросы или комментарии относительно этого проекта Вы можете отправить на мою электронную почту lyudmila.fillipova@nu.edu.kz. Любые другие вопросы могут быть адресованы Комитету по этике научных исследований Назарбаев университета, по электронной почте resethics@nu.edu.kz.

Заявление о согласии.

Нажимая «Я согласен» ниже, Вы указываете, что Вам исполнилось 18 лет, Вы прочитали и поняли эту форму согласия и согласились принять участие в этой части исследования.

Полные формы согласия на русском и казахском языках прикреплены к данному письму.

Ссылка к опросу:

https://nukz.qualtrics.com/jfe/form/SV_2t6hFxxvsSfmpO5

Спасибо за Ваше время и внимание!

Пішін және ақпараттық келісім

Кіріспе. Сізді «Қазақстандағы бакалавриат студенттері арасында эмоциялық интеллект пен академиялық жетістіктер арасындағы байланыс» тақырыбы бойынша зерттеуге қатысуға шақырамыз.

Рәсімдер: Зерттеудің мақсаты студенттер арасында эмоциялық интеллект пен академиялық жетістіктер арасындағы қарым-қатынасты анықтау болып табылады. Сізден жас, жыныс, академиялық сыныптау және орташа үлгерім секілді дербес деректеріңізді көрсетуіңіз сұралады.

Құпиялылық. Зерттеу кезінде жиналған кез-келген ақпарат, мүмкіндігінше құпия түрде сақталады. Зерттеу нәтижелері құпия сөзбен қорғалған, Qualtrics сайтында жинақталады. Сауалнамаға жауап берушілердің жеке басын анықтауға мүмкіндік беретін анықтамалық ақпараттар болмайды.

Зерттеуге қатысу еріктілігі. Ұсынылған зерттеуге қатысу ерікті болып табылады, қатысуға келісім берілгеннен кейін, кез-келген уақытта, ешқандай зарарсыз, келісімді кері шақыруға болады.

Кері байланыс: Ұсынылған жоба бойынша кез-келген сауал немесе сын-пікірлеріңізді менің жеке электронды lyudmila.fillipova@nu.edu.kz поштама жіберулеріңізге болады. Кез-келген басқа сұрақтарды Назарбаев Университетінің Ғылыми зерттеулер этикасы бойынша комитетінің resethics@nu.edu.kz электронды поштасына жіберулеріңізге болады.

Келісім туралы өтініш:

Төменде «Мен келісемін» ұяшығын басу арқылы, Сіз 18 жасқа толғаныңызды, ұсынылған келісім нысанын оқығандығыңызды және түсінгеніңізді растайсыз және зерттеудің осы бөлімінде қатысуға келісім бергеніңізді қабылдайсыз.

Сауалнамаға сілтеме:

https://nukz.qualtrics.com/jfe/form/SV_2t6hFxvsvSfmpO5

Бөлген уақытыңыз бен көңіліңізге рахмет!

Appendix B: EMOTIONAL SKILLS ASSESSMENT PROCESS (ESAP)

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You will be completing an honest assessment of current emotional abilities and skills in 4 separate and related sections. Helpful hints: Your first response is your best response. Let your feelings decide the best response for you. Think of each statement as it relates to you in the setting you feel needs most improvement, for example, your study, family, relationships, etc. Be totally honest. Respond to each statement and mark your response.

Likert scale

1. Strongly disagree
2. Disagree
3. Agree
4. Strongly agree

PART 1: DEMOGRAPHIC INFORMATION

1. What is your age in years? _____

2. What is your gender? _____

3. What is your academic classification?

Freshman

Sophomore

Junior

Senior

4. What is your specialty?

Humanities

Natural sciences

Technology

Other _____

5. What is your grade point average approximately? _____

6. What is the percentage of your academic achievement? (Approximately)

92-100

84-91

76-83

68-75

59-67

51-58

lower than 50

PART 2

SECTION I: INTERPERSONAL COMMUNICATION UNDER STRESS**Situation: When I am really angry at someone...**

1. I usually feel some tension, but comfortable in expressing exactly what is on my mind.

2. I usually behave by expressing what is bothering me, and working to achieve a constructive resolution.

Situation: When someone is really angry at me...

3. I usually feel tension and the right to understand the person's anger by responding directly.

4. I usually behave by asking for a further explanation of the anger and dealing with the feelings in a straightforward manner.

Situation: When I communicate to an "Authority" person...

5. I usually feel comfortable and straightforward in my approach to the person.

SECTION II: PERSONAL LEADERSHIP

6. I am confident in my ability to be comfortable and effective in communicating with other people.

7. I am comfortable with all kinds of people.

8. My relationships with others are smooth and comfortable.

9. My voice is variable and clear, and I am easily heard by others.

10. I know when it is okay for me to put my hand on another person's shoulders.

11. I listen to and really understand another person's feelings.

12. My friends tell me that I am an understanding person.

13. I understand and am patient with someone who is experiencing a lot of emotions.

14. I am a good decision maker.

15. When faced with an important decision, I am not overly anxious about making a wrong choice.

16. My friends and group mates ask me for help in making important decisions.

17. I have a good ability to help others solve problems.

18. When a group that I am in needs a spokesperson, I am usually elected.

19. When I really feel strongly about something, I am influential in gaining agreement in a group.

SECTION III: SELF MANAGEMENT IN LIFE AND STUDY

20. I set priorities and meet objectives effectively.

21. When I begin a difficult task, I am motivated more by the thought of success than by the thought of failure.

22. I have more than enough energy to get me through the day.

23. I set daily goals for myself.

24. I plan and complete my work on schedule.

25. I waste very little time.

26. Even when I encounter personal difficulties, I complete assignments and obligations.

27. In almost any area that I go into, I really do well.

28. I have a solid feeling of confidence in my ability to create a good life for myself.

SECTION IV: INTRAPERSONAL DEVELOPMENT

29. I feel in control of my life.
30. I am an open, honest, and spontaneous person.
31. I like myself, and I feel very comfortable with the way I am as a person.
32. Even when I try to enjoy myself and relax, I feel a lot of pressure.
33. My friends often say that I look worried, tense or uptight.
34. I often feel that I have little control over what I think, feel and do.