PERSPECTIVES OF UNDERGRADUATE STUDENTS TOWARDS IBDP AND MONE HIGH SCHOOL EDUCATION

A MASTER'S THESIS

BY

SAMET TEKE

THE PROGRAM OF CURRICULUM AND INSTRUCTION
İHSAN DOĞRAMACI BİLKENT UNIVERSITY
ANKARA

APRIL 2015

To my very dear family

PERSPECTIVES OF UNDERGRADUATE STUDENTS TOWARDS IBDP AND MONE HIGH SCHOOL EDUCATION

The Graduate School of Education

of

İhsan Doğramacı Bilkent University

by

Samet Teke

In Partial Fulfilment of the Requirements for the Degree of

Master of Arts

in

Curriculum and Instruction

Ankara

April 2015

İHSAN DOĞRAMACI BİLKENT UNIVERSITY

GRADUATE SCHOOL OF EDUCATION

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April 2015

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Curriculum and Instruction.

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ABSTRACT

PERSPECTIVES OF UNDERGRADUATE STUDENTS TOWARDS IBDP AND MONE HIGH SCHOOL EDUCATION

Samet Teke

M.A., Program of Curriculum and Instruction

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April 2015

The study examined the perspectives of undergraduate students who had graduated from high school with both an International Baccalaureate Diploma Program (IBDP) and a Ministry of National Education Program (MoNEP), and those who graduated with MoNEP alone. The researcher conducted a 5-point Likert scale survey of 21 questions with 75 undergraduate students studying at a private university in Ankara. In addition, five undergraduate students were interviewed using a semi-structured interview. The survey results were analyzed with regard to five factors: university preparedness, benefits of the curriculum, overall satisfaction, stress and detriments of the curriculum. To differentiate between IBDP and MoNEP *t*-tests were conducted. ANOVA was used to differentiate between subject areas. Interview results were summarized for deeper insight of the factors. IBDP graduates had more positive results than MoNEP graduates in preparedness, benefits and satisfaction factors, whereas MoNEP graduates had more positive results in stress and detriment factors.

Keywords: IBDP, MoNE, Curriculum, Perspectives, Undergraduates

ÖZET

ÜNİVERSİTE ÖĞRENCİLERİNİN ULUSLARARASI BAKALORYA DİPLOMA PROGRAMI VE MEB LİSE PROGRAMLARINA İLİŞKİN BAKIŞ AÇILARI

Samet Teke

Yüksek Lisans, Eğitim Programları ve Öğretim

Tez Yöneticisi: Prof. Dr. Margaret K. Sands

Nisan 2015

Bu çalışmanın amacı Uluslararası Bakalorya Diploma Programı (UBDP) ve Milli Eğitim Bakanlığı (MEB) lise müfredatı uygulayan liselerden mezun olup, üniversite öğrenimine devam eden öğrencilerin aldıkları lise eğitimine bakış açılarını araştırmaktır. Bu amaçla Ankara'da özel bir üniversitede okuyan 75 UBDP ve MEB mezunu öğrenciye 21 soruluk 5'li Likert tipi ölçekli anket uygulanmış, 5 öğrenciyle de yarı yapılandırılmış mülakat gerçekleştirilmiştir. Anket sonuçları üniversiteye hazırlık, müfredatın getirileri, genel memnuniyet, stres ve müfredatın götürüleri olmak üzere 5 faktör altında önce UBDP ve MEB bazında *t*-test kullanılarak, sonra alan bazında ANOVA kullanılarak analiz edilmiş, yapılan mülakatlardaki görüşler anket sonuçlarını değerlendirirken nitel bir şekilde kullanılmıştır. Çalışma sonuçlarına göre UBDP mezunları üniversiteye hazırlık, müfredatın getirileri ve genel memnuniyet faktörlerinde MEB mezunlarına göre daha pozitif görüşlere sahip, MEB mezunlarının ise stres ve müfredat götürüleri bakımından UBDP ye göre daha pozitif görüşlere sahip olduğu bulunmuştur.

Anahtar kelimeler: Uluslararası Bakalorya, MEB, Eğitim programları, Görüş, Üniversite öğrencileri

ACKNOWLEDGEMENTS

I owe my gratitude to Asst. Prof. Dr. Necmi Akşit for teaching me the basics of academic research and all the techniques I have used.

I would like to thank Asst. Prof. Dr. Robin Martin for her skills in academic writing and literature knowledge. Surely she helped me how to read and write academic literature.

Asst. Prof. Dr. İlker Kalender who has challenged and enriched my knowledge about statistics deserves a special mention. I would like to thank him for his help.

I would like to thank Dr. Emily Wilson for her great help in the early stages of this research.

I will always be grateful to the Graduate School of Education at Bilkent University. There are many brilliant people there who are preparing the teachers of the future. Regrettably, I cannot acknowledge them all by name.

I am indebted to Prof. Dr. Ali Doğramacı who gave me the opportunity to have this remarkable education.

I would like to thank my wife Dilara, and my mother and father, for always being there for me and giving me their love and support.

Most of all, I would like to thank Prof. Dr. Margaret K. Sands for the help and guidance she has given me. This thesis would not have been possible without her.

"…and we must take the current when it serves / or lose our ventures."

(Julius Caesar, 4.3.223-224)

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVATIONS

ANOVA: Analysis of variances

AP: Advanced Placement

CAS: Creativity, Action, Service

EE: Extended Essay

GPA: Great Point Average

IB: International Baccalaureate

IBO International Baccalaureate Organisation

IBDP: International Baccalaureate Diploma Program

LYS: Undergraduate Placement Examination

MCQ: Multiple choice questions

MoNE: Ministry of National Education

MoNEP: Ministry of National Education Program

ÖSS: Student Selection Examination

ÖSYM: Student Selection and Placement Center

ToK: Theory of Knowledge

YGS: Transition to Higher Education Examination

YÖK: Higher Education Council

CHAPTER 1: INTRODUCTION

Introduction

This chapter gives background information to the study, together with a statement of the problem, the purpose of the research and the research questions, the significance of the study, the limitations and definition of key terms.

Background

Nearly all Turkish high schools in Turkey follow the Ministry of National Education (MoNE) high school program. The MoNE high school program consists of four or five (with prep classes) years of education (Teftiş Kurulu Başkanlığı, 2010).

There are different types of high schools which give different education in terms of variety of the courses. These include: general high schools, Anatolian high schools, Anatolian teacher training high schools, science high schools, social sciences high schools, fine arts and sports high schools, and private high schools, determined by MoNE (Teftiş Kurulu Başkanlığı, 2010).

At the start of the research in 2011 with participants who had graduated from high school on average two years earlier, there had been four subject areas in the high school curriculum, as determined by MoNE. Subject areas determined the courses that a student could take in the high school. For example, if a school were not specialized in one subject area (for example, science high schools specialize in science), then it provided four subject areas. These subject areas were known as: quantitative, equally-weighted, verbal, and foreign language.

The *quantitative* subject area provided mainly math and science courses, including mathematics, analytical geometry, physics, chemistry, biology and science laboratory classes.

The *equally-weighted* subject area provided two main courses in a balanced way: Turkish language and literature and mathematics. Students also took geography, history, geometry, psychology and two more selective courses, for example from arts or science subjects.

The *verbal* subject area included more social studies. History, language, literature and geography constructed the four main courses of the verbal subject area together with some mathematics. In depth, students took courses like the geography of Turkey and also the geography of other countries in a different course. No science or geometry courses were given.

Finally, the *foreign language* subject area concentrated on a foreign language such as English, French or German (Teftiş Kurulu Başkanlığı, 2010). Students took courses similar to the verbal subject area, with specific foreign language(s) to a higher level.

Students decided which subject areas they wanted to study by the end of grade 10. In grade 11, students began the year by taking the relevant courses of their subject areas. At the end of grade 12, they graduated from their high school with a MoNEP diploma.

At the time of writing (2014), students wishing to go to a university after graduating from high school, take the Transition to Higher Education Examination (YGS). Those who score between 140 and 179 in the YGS can apply for two-year and four-year programs at the Open Education Faculty and other two-year programs.

Students with a score of 180 and above from YGS can apply for those universities which accept students with a YGS score only, or they can take a second exam called Undergraduate Placement Examination (LYS) (ÖSYM, 2012).

The length of the exam changes from time to time but all the exam papers consist only of multiple choice questions, testing recall and some higher order thinking. Student Selection and Placement Centre (ÖSYM) tried once to ask open-ended questions (in 2013). It was a trial examination where the answers were later disseminated publicly (ÖSYM, 2013). There was a recent discussion on whether to put open-ended questions on the entrance examination by 2019, on tablets only: newspapers reported that it was a pilot study ÖSYM (Atılgan, 2014).

With their LYS scores, students can apply for four year university programs leading to a bachelor's degree.

Both YGS and LYS exams are conducted by the ÖSYM. They are high-stake exams, giving access to university programs. Every year more than 1.5 million high school graduates take the exam (2,086,087 in 2014 and 1,851,326 in 2013). Figures include those from previous years who are retaking the exam. Only about 400,000 of those who take the exam are able to enroll at a university (ÖSYM, 2014; Yıldırımoğlu, 2012). After taking the university entrance exam, students are given a period of time to finalize their list of university choices. These preferences are saved online in the ÖSYM's website. Later, students are placed in departments and universities according to their LYS score. They may therefore be placed in a program they do not want if entering any of the universities is their main aim.

The validity of the Student Selection and Placement System (ÖSYS) has been queried as not all objectives covered in high school may be examined. The reliability

of the scores is also questioned: the four years of high school education is tested only by multiple choice questions, which test mainly recall, not other skills gained during high school education (Aydın, 2008; Berberoğlu, 2012). Some university candidates fail in the first or the second exam because of health, stress or even transport problems on the day of the exam. Later, because they are allocated to a university department on their score, or were not well oriented at school about the subject they want to study, many students complain (Aydın, 2008; Berberoğlu, 2012).

The International Baccalaureate Diploma Programme (IBDP) presents a different option for university preparation, and is a useful program for parents who want their children to have an international education which is accepted worldwide (Onur, 2011). In Turkey, however, to enter a university, a student must have the university entrance exam qualification, LYS, outlined above. An IB Diploma may assist university entrance in other countries, but does not give university entrance in Turkey.

The International Baccalaureate Organization (IBO) is a non-profit educational foundation established in 1967 in Geneva, Switzerland (IBO, 2012). It was established aiming to provide a common curriculum among countries around the globe, helping families with school-age children who work in different countries, and giving a qualification which is accepted worldwide.

IBO has four programs within itself. One of them is the International Baccalaureate Diploma Programme (IBDP), a two-year education given at ages of 17 and 18.

There are 32 IBDP schools according to IBO database in Turkey as of April 2015 and 2651 around the globe (IBO, 2015).

Students who are enrolled in IBDP take six courses. Depending on the students' abilities they take three standard level and three higher level courses; or two standard and four higher level courses. Other than taking courses, students have to write two papers which need to be unique to that student. They are the Extended Essay (EE) and Theory of Knowledge (ToK). In addition to these papers students also have to complete community service hours defined as Creativity, Action, Service (CAS) by IBO (IBO, 2015; Uçar, 2008).

It can be seen that the Turkish high school can be a confusing, complex and stressful place. How students perceive their time there is the subject of this study.

Problem

IBO states in its mission and strategy: "The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect" (IBO, 2013).

MoNE aims to enhance their curriculum and plans to prepare students for life and for an advanced education by developing their core skills, bearing in mind national and international values (MoNE, 2012).

The problem investigated in this research is how each program, the MoNE high school program and the IBDP, is perceived by students in terms of preparation for university studies. Do the MoNE high school program and the IBDP reach their aim of producing satisfied individuals?

Few studies in the field have investigated the MoNE high school program and the IBDP together. Gültekin (2006) investigated the university entrance exam scores of

graduates from both the MoNE high school program and the IBDP. She found that IBDP graduates obtained slightly higher scores in the university entrance exams (Gültekin, 2006). Ateşkan et al. (2014) considered the alignment between the curricula of IBDP and MoNEP as well as their effect on the later achievement and development of university students. They found that studying both curricula together gave added value and affected these progress and achievement at the university.

Purpose

The purpose of this study was to examine the perspectives of MoNE high school program and IBDP graduates, who have finished at least one semester in one of the private foundation universities in Ankara, with regard to their high school education. The researcher examined the perspectives under five factors: university preparedness, long-term benefits, overall satisfaction, stress and long-term detriments.

Research questions

The main research question of the study is:

What are the perspectives of undergraduate students toward the MoNEP and the IBDP with regard to their university studies?

Sub questions are as follows;

- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to *university preparedness*?
- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to the long-term *benefits* of the programs?

- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to their overall *satisfaction* with their program?
- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to *stress* caused by the programs?
- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to long-term *detriments* of the programs?

A second question was developed *post hoc*;

- Do different *subject areas* have different perspectives of each program with regard to their university studies?

Significance

In Turkey, there is current discussion on the possibility of recognizing the IB diploma for entrance to university. Gültekin (2006) compared student success between MoNEP and IBDP graduates. A more recent study by Ateşkan et al. (2014) used focus groups of IBDP and MoNEP graduates now studying at university to discuss four aspects of their understanding of what their high school had given them: the sense of belonging to university, critical thinking skills, academic preparation and time management. This study adds to the previous research by considering undergraduate perceptions of the preparedness, benefits and satisfaction given to them by their high school education, together with any stress or detriments they perceived.

Definition of key terms

CAS: Creativity, Action, Service. A range of activities outside classes where students can display initiatives, take actions and collaborate with others (IBO, 2015).

Dershane: A private tutoring institution where middle and high school students can take extra courses (Kılcı, 2003).

Perspective: Perspective can be simplified as “the state of one's ideas” (Perspective, 2013).

MoNEP: The high school program set by Ministry of National Education. It can be four years or five (with a prep year). It is for students between 14 - 18 years, grades 9 - 12 (Teftiş Kurulu Başkanlığı, 2010)

IB Diploma Programme: A two-year diploma program for the students between the ages of 16 and 19 years. It is an internationally accepted diploma program among universities around the globe (IBO, 2012).

YGS: The exam generally conducted in March each year by ÖSYM as the first part of the university entrance exam. Success in the exam means that a student may continue to the LYS examination (ÖSYM, 2012).

LYS: Second exam generally conducted in June by ÖSYM in order to enroll for four or more-year universities (ÖSYM, 2012).

ÖSYM: Student Selection and Placement Center. It was founded in 1973. ÖSYM is responsible for conducting university entrance exams and other large-scale examinations in Turkey (ÖSYM, 2015).

CHAPTER 2: REVIEW OF THE LITERATURE

The chapter starts with brief background information about the education system in Turkey. It then reviews the relevant literature under both the positive and negative aspects of the MoNE and the IB Diploma programs. Lastly, the chapter gives the theoretical framework that contributes to the study.

Introduction

In Turkey students need to graduate from formal or non-formal education programs in order to apply for university entrance (Teftiş Kurulu Başkanlığı, 2010). Formal education comprises regular high schools which give four or five years of education. Non-formal education includes educational services like Open Learning High Schools (Teftiş Kurulu Başkanlığı, 2010). In order to apply for university entrance, students take YGS (Transition to Higher Education Examination) and LYS (Undergraduate Placement Examination) conducted by the Student Selection and Placement Center (ÖSYM).

The university entrance exam has changed over the years. The system in 2015 is a two-stage examination system where students firstly take YGS, and then LYS. Some students with only LYS may apply for two-year and some for four-year university diplomas, but almost all of the four-or-more-year universities ask for LYS scores (Koçak, 2012).

Meanwhile, as the system changes, becoming sometimes more complex, sometimes simpler than previous years, some schools provide additional or alternative and advanced programs for their students. Examples are International General Certificate

of Secondary Education (IGCSE), International Baccalaureate Diploma Program (IBDP), and Advanced Placement (AP) examinations. AP and IBDP are usually taught in grades 11 and 12 of high school, IGCSE in grades 9 and 10. IGCSE is offered in 24 private schools in Turkey (CIE, 2015). IBDP is offered in 32 schools in Turkey (IBO, 2015), and AP in only 8 schools (CollegeBoard, 2015). Both AP and IBDP are offered at the same time as the MoNE Diploma because students who wish to enter Turkish universities *must* possess a MoNE Diploma.

For many reasons, some students prefer to take the IBDP alongside their MoNE curriculum. There are - of course - family influences behind the reasons for choosing IBDP, but basically the IB Diploma has worldwide acceptance as a university entrance exam. Mobile parents who work internationally prefer a program which can be found in many countries, and the IB Diploma is well thought of as a program which provides students with a good education (Onur, 2011).

This study investigates perspectives of undergraduate students towards their respective curricula. The next section gives the positive and negative aspects of studying both the MoNE program and IB Diploma program together as contrasted with studying the MoNE program alone, as revealed in the literature.

Positive aspects of the curricula

In Turkey, when thinking about preparation for university, people immediately think about the university entrance exam (Köse, 1999; Berberoğlu, 2012). It is a high stakes exam, with large numbers of students taking it and considerably fewer places available. Only around 400,000 students enroll to four-year universities per year and around 300,000 of them enroll for two-year universities, whereas more than two million students enter the university entrance exam (ÖSYM, 2014). Students whose

families can afford it take private courses, or go to private institutions called *dershanes*, of which there are many, during evenings, weekends and other free time. There they deal with all kinds of multiple-choice questions in preparation for the university entrance exam (Baştürk & Doğan, 2010).

According to high school teachers, *dershanes* exist for commercial reasons (Baştürk & Doğan, 2010). If a *dershane* achieves great success in the university entrance exams, the *dershane* teachers boast about it, which makes high school teachers uncomfortable (Baştürk & Doğan, 2010).

The *dershane* system has interested researchers for a long time. According to Gök (2005) the university entrance exam is a tool for order which might be seen as an innocent tool or it may cause dysfunction in the education system. Şirin (2000), investigating *dershanes* fifteen years ago refers to parents and students as "educational customers" who respect *dershanes* if they provide their needs, which are to enable their son or daughter to succeed in the university stakes. Şirin continues by describing the considerable discussion on whether or not to shut down *dershanes*. A new law in Turkey, for implementation in 2015, rules that they can either be shut down or change to become a private school applying the MoNEP curricula (Arabacı & Namlı, 2014).

Researchers wonder if there is a solution to the education system in Turkey. Arabacı and Namlı (2014) write about *dershanes* when they become preparatory schools:

> During this period, students think that they will be the victims of the upcoming education system. There are also some other results such as removing the reason why preparatory schools exist, rearranging the education system, increasing the prestige and status of teachers, making some changes in teacher training system, relieving the preparatory school employees and decreasing the course hours in the schools. (p. 32)

Following their high school education, which may or may not have been assisted by attendance at *dershanes*, students apply for universities of their choice. After entering the university, the question then arises, "What's next?". Interestingly, the pressure and stress in high school has focused so much on passing this exam than very little time indeed is given to career guidance in school. So not all students know *what next* is. Some students actually apply for university departments in order to become an undergraduate, rather than applying to a department which ensures that they can follow what they want to do or take the first step to a hoped-for career (Atılgan, 2014; Kılcı, 2003; Köse, 1999). It is interesting to note that some other countries have the same situation. Ripley (2013) writing about South Korea states "The system was as predictable as it was brutal. It sent a very clear message to children about what mattered. University admissions were based on students' skill as measured by the test. Full stop." (p. 59) Entrance to university was gained, whether or not the exam has prepared them for their life and studies there.

Preparedness, benefits and satisfaction

Manfredi (2004) summarizes the education system as filling up the students' brain with loads of information. This is no longer thought to be the way we learn, and an education system pursuing the increase of thinking skills and creativity of each student is on its way (Manfredi, 2004).

In discussing benefits, firstly we need to compare two, or more than two, things so that we can show the benefits of one above each other. The research used as a model by Smith (2009) compared Advanced Placement (AP) and IBDP programs in terms of student perspectives. Smith (2009) tried to analyze the experiences of both groups in terms of their preparation for university studies, the benefits of the respective

curricula, overall satisfaction with their program, long-term detriments and their stress during programs. According to Smith (2009) IBDP students were reported as experiencing more preparedness, benefits, detriments and overall satisfaction than AP students, whereas their stress level was not significantly different. Smith showed that IBDP graduates scored higher ACT (American College Testing) scores than did those who had followed the AP curriculum, suggesting that the IB Diploma was more beneficial than AP.

Vanderbrook (2006), who evaluated AP and IBDP programs in American schools (Texas) concluded that while neither program was perfect, it was clear that both had advantages. She noted that "both the AP and IB programs offered an advanced curriculum, which most participants found appropriately challenging". However, the Texan students sometimes thought they were not sufficiently challenged by the IB program. Nonetheless, Vanderbrook argues that the IB program with its central control and uniformity, which included a helpful global network to respond to learners' needs, was better than AP. She suggested that this uniformity and central control should also be integrated in the AP program (Vanderbrook, 2006).

Rhodes (2007), discussing the accelerated curricula more beneficial for university studies in US, agreed when he stated that they provide "better preparation for college".

Kyburg et al. were also of the opinion that such programs helped the students to become more effective in both sciences and the humanities in a holistic way than those in the AP program (Kyburg, Hertbereg-Davis, & Callahan, 2007).

Gültekin argues that IBDP students had a higher percentage of enrollments to universities than MoNEP students. She also states that IBDP students are better at

expressing themselves than MoNEP students. She continues to discuss the advantages of IBDP by pointing out that students with an IB Diploma are qualified for universities abroad (Gültekin, 2006).

Onur shares similar ideas about the worldwide acceptance of IBDP. Many universities accept an IB diploma for entrance to their faculties. On the other hand in Turkey, YGS and LYS is a must to enroll in a university, holding an IB diploma is not sufficient for entry (Onur, 2011).

Güven and Aktaş, researching at the only Turkish state school which offers the IB Diploma, the Prof. Dr. Mümtaz Turhan Social Sciences High School, noted that the reasons for choosing the IBDP were because students (or families) saw long term benefits for "their future career plans". These were given as studying and therefore learning in a second language, being awarded with two certificates, gaining "the habit of studying regularly", and having appropriate lessons rather than simply rote learning (Güven & Aktaş, 2014). On the other hand, they pointed that there were in fact many important factors for students which prevented them from choosing IB:

> On the other hand, students stated that they did not prefer this program because of the university exam, economic reasons, study load of the International Baccalaureate program, insufficient school practices, language deficiencies, not having an aim to study abroad, Turkish universities not recognizing the International Baccalaureate certificate, the experiences of the International Baccalaureate students at higher grades, not regarding the program as useful and because of some other reasons. (p. 54)

Taylor and Porath (2006) wondered if "there are long lasting benefits to having been in the IB program". The answer given was that most of the Canadian participants felt well prepared, and they appreciated the value of the rich content to which they were exposed. Taylor and Porath stated that:

> They were intellectually stimulated by the IB curriculum, and adapted to the full schedule of due dates and final exams. Although they indicated the pace was hectic at times, they valued the breadth and depth of the curriculum, and the critical thinking, study, and time management skills that they honed and carried forward into postsecondary school and beyond. Moreover, they felt they were better prepared for their postsecondary studies than those who had not been in the IBDP, and in many cases they were offered advanced credit at the postsecondary institutions they attended. The graduates also stated that being in the IB Program assisted them in achieving their career goals. In retrospect, those who have graduated from the IB Diploma Program valued the lessons learned and the time and effort required. They regard the IB experience as highly worthwhile in preparation for postsecondary school and beyond. (p. 155)

Sometimes effectiveness can be understood as university entrance examination success. Gültekin showed that the IB students (who were also taking the MoNEP) performed better at the university entrance exam. She suggests that this is because the IB program gives added value to the national curriculum (Gültekin, 2006).

Ateşkan et al. researched Turkish students studied the perceptions of the students with regard to the IBDP and MoNEP in terms of sense of belonging, critical thinking skills, academic preparation and time management skills. Even though they did not find any statistically significant difference, the focus groups revealed that IBDP and MoNEP students had different perceptions. They stated that IBDP students were better at critical thinking and already had many ideas and were able to look at an issue from different angles (Ateşkan, Onur, Sagun, Sands, & Çorlu, 2015).

Another factor Ateşkan et al. looked at was academic preparation. They summarized by saying that better prepared students felt more relaxed in their university studies especially in writing essays, conducting experiments, writing reports and answering different types of questions adequately in the examinations. In addition, the IBDP students were found to be more aware of the concept of deadlines. They stated that

IBDP students already knew about deadlines from their IB Diploma work where deadlines had to be met. This helped them when doing university tasks (Ateşkan, Onur, Sagun, Sands, & Çorlu, 2015).

Researching gifted students, Kanlı (2011) looked at 'accelerated education'. In her research, she gives IBDP as an example of acceleration where the curriculum actually provides an advanced education to students where she sees a benefit for gifted students. Poelzer and Feldhusen (1997) also found the same result in America, more than ten years previously, when they reported that IBDP students did better in terms of exam scores and GPA than the ones in the normal school curriculum.

Research conducted about the learning of mitosis and meiosis in biology classes in Turkish high schools revealed that IBDP students had better scores on post-tests than those who did MoNEP only (Başer, 2007). In the same research, IBDP students got higher scores in a survey on active learning strategies than MoNEP students. The survey questioned them about the adoption of active learning strategies such as having active roles while learning, finding new resources, having discussions with peers and learning the reasons of mistakes.

Creativity, action, service (CAS) is seen as one of the advantages of IBDP. It helps students to develop social skills, enhance their creativity, take part in sports activities as a way of life, and lets students develop solutions for national and global issues and thus become part of the world (Türkiye'de UB Raporu, 2010).

Negative aspects of the curricula

One way or another, students are faced with stress factors in their high school education. The stress caused to students in taking a double program at grades 11 and

12, in the high schools while working towards a very high stakes exam is well documented.

In Turkey, there is evidence that depression is especially high among young people attending high schools. Çakır conducted research with Anatolian Teachers High Schools, and found that the motivation of students was directly related to their depression level. She found that as students move into higher grades their depression level increases as their motivation level decreases (Çakır, 2006). She suggests that, while they are in the process of preparing for universities they may need more guidance through the process by teachers or other consultants. Because the amount of work is heavier compared to other types of schools, teachers need to keep them motivated, which may make their program more efficient and increase students' success (Çakır, 2006).

Yıldırım concludes in his study of "daily hassles" as a contributor to academic success, that hassles with family, gender, academic life and peer support relate to academic achievement. He explains that those daily hassles are a main reason for stress which may lead students into psychological problems or end with depression (Yıldırım, 2006).

Güven and Aktaş (2014) report students who state that the IB workload is heavy and so they do not choose it. In particular, they report that some IB grade 11 and 12 students told younger students that the IB was not worth doing. They also point out that one stress related to the IBDP is that IB teachers need to be different, which puts pressure on the school to find well qualified and experienced IB teachers.

Smith, who researched two programs in the US, reports that IB and AP students experience "some stress", which was about equal for both programs. She noted that

even though their stress level is similar, it is higher than for normal curricula applied in the schools (Smith, 2009).

Taylor and Porath (2006) researched the matter in Canadian schools. They state that:

> Anecdotal evidence strongly suggests that students enter the IB DP with high expectations of themselves. They hope to maintain the high grades that they have achieved in previous years, and they hope to be well prepared for postsecondary studies upon graduation from high school. They also carry with them the high expectations of their families, friends, and teachers. These hopes and expectations, coupled with the demands of the IB curriculum itself, can lead to a stressful situation for IB candidates. The resultant stress leads students, parents, and teachers to ask if the pressures and challenges these students face are worth the final result. (p. 155)

A study (Tekkaya, 2003) which looked at a particular subject area, biology, questioned the perspectives of the teachers and the students toward biology education in highs schools. Following the analysis of data, the conclusion was that the Turkish National Curriculum has "serious problems in biology education, such as the biology curriculum covering a large number of topics".

Ateşkan et al. (2015) in their research discussed IBDP graduates' problems as follows:

> Although academic transitioning to university was easier because of the academic preparation and skills they acquired through IBDP, and because fellow IBDP graduates attended the same university, these very points had a counter effect in respect of their sense of belonging to the university. The same friends, the similarity of the academic system and environment, lacked novelty, challenge and excitement. They were quick to criticize and resented being in the same class with students who had a different standard of English language competency and different academic skills. Such an attitude did not help in establishing friendly relationships with their non-IBDP graduate peers, with some consequent alienation. (p. 91)

Another study, conducted by Reiss (2013) in the US examined IBDP students' stress levels relating to high stakes examinations. Reiss states that:

> High stakes tests are being employed to provide evidence of academic achievement, compounding the stress for young people already dealing with normal stressors and developmental processes known to make adolescence a particularly difficult period in the life cycle. (p. 100)

In summary, it is seen that, in any country where types of university entrance examinations are conducted, high school students are faced with stress while dealing with their studies, as well as with their own development during puberty into adulthood (Credit & Garcia, 1999; Megalis, 2002; Yıldırım, 2006)

Theoretical framework

The theoretical framework for this study was provided by Tinto's longitudinal model of institutional departure which is explained below.

Tinto's longitudinal model of institutional departure reveals background information and why the survey tool asks particular questions. Tinto tried to answer the question of why undergraduate students decide to drop out from their university studies. Tinto explains dropout decisions by using the terms academic integration and social integration (Tinto, 1988). Academic integration includes exam grades, personal development, academic self-esteem, and enjoying the subject the student studies. Social integration includes the number of friends the student has, dialogue among peers and also with academics. In the figure below, Draper summarizes Tinto's model where all the ingredients lead the student to his or her dropout decision (Draper, 2008).

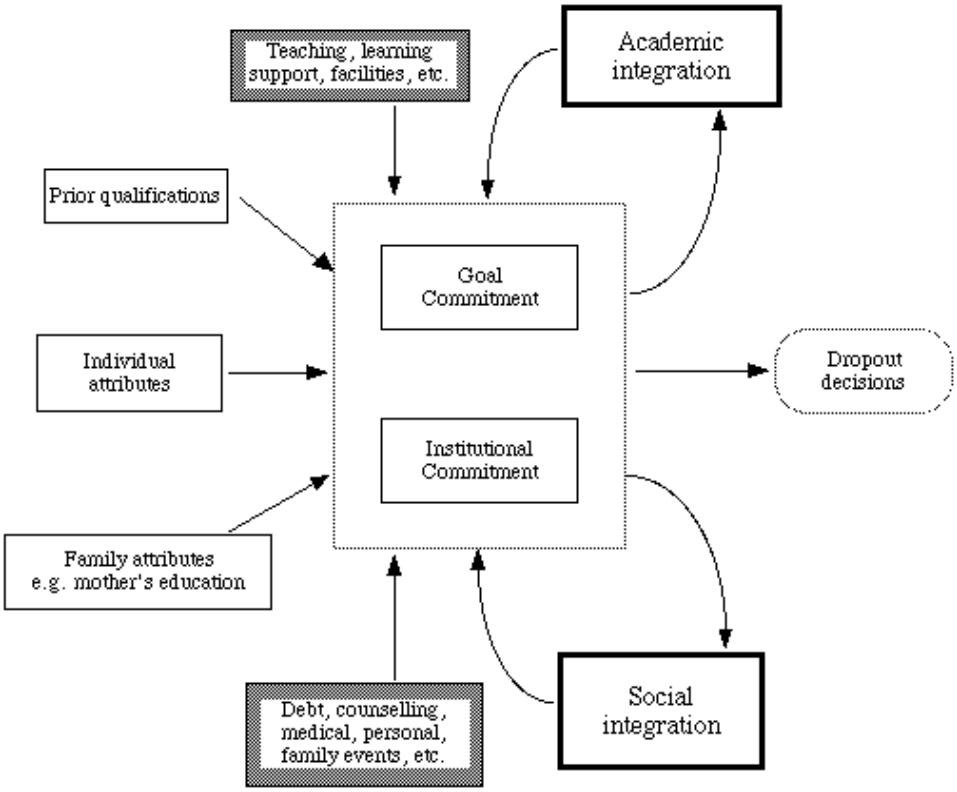

Figure 1. Tinto's Model of Student Departure, taken from Draper (2008)

Tinto discusses the separation from high school to university. Most of the time this separation progress is stressful and Tinto maintains that it needs a transformation process. According to him, the students who had a better community and benefits in the high school managed the separation progress better (Tinto, 1988).

The next stage is the transition to university. Tinto discusses transition after separation. The transition process occurs during the time after the students have come to the university, where all their norms, knowledge and behavior have to be adapted to the new environment. Students with fewer experiences in the high school of different types of questions, different types of topics and a different way of learning are more likely to have more difficulty than others.

The last stage of Tinto's model is integration into university studies. In this part, Tinto states:

> Having moved away from the norms and behavioral patterns of past associations, the person now faces the problem of finding and adopting norms appropriate to the new college setting and establishing competent membership in the social and intellectual communities of college life. Because social interactions are the primary vehicle through which such integrative associations arise, individuals have to establish contact with other members of the institution, student and faculty alike. Failure to do so may lead to the absence of integration and to its associated sense of isolation. These in turn may lead to departure from the institution. (p. 446)

Students who can deal with the new tasks and difficulties with their prior knowledge adapt more easily than other students. Tinto's ideas about being well adapted and having good prior experiences before university are important for a better university life. That is why the survey tool in this research is based on Tinto's longitudinal model of student departure. Preparedness for university life, the long-term benefits of the curriculum, overall satisfaction, as well as stress and long-term detriments can be related to Tinto's theoretical framework.

Considering the education system in Turkey, students who drop out from their university studies have interested researchers for many years. On the other hand, undergraduates who actually do not drop out, those who continue their university studies might be happy with their university life or at least coping satisfactorily with it (Gündoğar, Gül, Uskun, Demirci, & Keçeci, 2007; Bülbül, 2012; Tinto, 1988).

Cognitive theory helps with relevant questions for the study. Neisser (1967) states that the term cognition implies "the inputs of data to the brain via reduction, elaboration, transformation, storing and recovering". These inputs with time are known as change in knowledge. This in turn influences learning, self-control of what to learn and what one has taught (Smith, 2009). Smith also notes that advanced curricula like IB and AP contain such inputs. As a result students following such curricula should be developing those skills during their high school education.

Integrated in the survey are questions which ask about whether the students felt peer support, and if yes, to what extent. This is in line with Vygotsky's (1980) teaching, namely that a collaborative and cooperative environment can help students to learn faster.

CHAPTER 3: METHOD

The aim of this study was to examine the perspectives of students who have graduated from the Ministry of National Education high school program (MoNEP) and the International Baccalaureate Diploma Program (IBDP), and who have completed at least one semester at university, with regard to the following research questions:

Main research question:

What are the perspectives of undergraduate students toward the MoNEP and the IBDP with regard to their university studies?

Sub questions are as follows;

- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to university preparedness?
- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to the long-term benefits of the programs?
- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to their overall satisfaction with their program?
- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to stress caused by the programs?
- Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to long-term detriments of the programs?

A second question was developed *post hoc;*

- Do different subject areas (as described earlier) have different perspectives of each program with regard to their university studies?

Research design

An explanatory mixed method approach was utilized to examine the perspectives of undergraduate students with regard to their high school education. In addition, five interviews were conducted to explore the interviewees' opinions about their high school and life where they affect the qualitative data of the research.

A survey tool was used to examine five factors, with regard to two high school programs, as determined in the tool:

- preparedness
- long-term benefits
- overall satisfaction
- stress
- long-term detriments.

One of the programs (MoNEP) was the national curriculum taught in Turkish schools, as determined by MoNE. The other one was IBDP.

The survey tool used in the study was modified by Smith from a qualitative survey by Taylor and Porath (2006). Smith used it for quantitative research (Smith, 2009). To make Smith's questions relevant to this study, her survey tool was slightly modified to take account of IBDP and MoNE curricula without otherwise changing the factors as determined in the original study. SurveyMonkey online surveying tool was used for the research (SurveyMonkey, 2012).

Five interviews were conducted with undergraduate students who held a MoNE diploma and an IB diploma to elicit their in-depth views. The interview results are summarized at the end of the chapter, using a descriptive analysis method.

Context

The students surveyed were undergraduate students at a private foundation university in Ankara. This is one of 14 foundation or private universities in Turkey. While entrance to a Turkish university requires a student to have graduated with a MoNE diploma, some of these 14 universities offer some advantages to students who have an International Baccalaureate (IB) diploma as well as the required MoNE diploma. They may give extra scholarships, or permission to change departments inside the university (Enka Okulları, 2015; Türkiye'de UB Raporu, 2010).

Participants

Participants were undergraduate students who had completed at least one semester of university studies at a foundation university in Ankara. They were undergraduate students from freshmen (first year of university studies) to seniors (fourth and final year). The undergraduate students contacted for participation in the survey numbered 245. Of these 75 responded. 63 completed the electronic survey and 12 completed the printed survey. The total responses was therefore 75 (30.6%).

There were two groups of undergraduate students. One group had graduated from high school with only the MoNE diploma, and the other group had graduated from high schools with both the MoNE and IB diploma together.

Instrumentation

This study used the data gathered from the survey modified by Smith (2009) as stated in the previous page together with minor word changes. The researcher got permission from Dr. Shannon Saxby Smith (Appendix B) in order to use the survey, with these minor modifications. Appendix A contains the survey tool in full. It included 21 five-point Likert scale questions, where 1 was "strongly disagree" and 5 was "strongly agree". In addition, personal information such as age, year of high school graduation and university department was gathered.

The researcher asked the opinions of four professors while slightly modifying questions. The researcher neither changed the structure of the questions nor the factors determined in the survey tool. He simply eliminated questions which were not relevant to the Turkish context, and made reference to the two qualifications investigated, MoNEP and IBDP.

The survey tool was sub-grouped under five factors so that the researcher used the original factorial structure of the original survey for this study. Of the 21 questions, items 10, 11 and 14 measured the factor of university preparedness. Items 19, 20, 21, 22 measured the factor of long-term benefits. Items 29 and 30 measured overall satisfaction. Items 12, 15, 16, 17, 18 measured the factor of stress. Lastly, items 13, 23, 24, 25, 26, 27, 28 measured the factor of long term detriments.

The internal reliability of the survey tool was found to be satisfactory (Cronbach's alpha 0.76). Reliabilities of the five factors are listed in Table 1. The minimum acceptable level of internal validity for social studies was found to be 0.50 in preliminary researches (Abdul-halim, 2009; Cortina, 1993; Cronbach, 1951).

Table 1
Reliability statistics of five factors

	Cronbach's alpha	N of items
Preparedness	0.75	3
Benefits	0.75	4
Satisfaction	0.86	2
Stress	0.56	5
Detriments	0.64	7

Interviews

Five semi-structured interviews were conducted with undergraduate students who had the IB diploma to elicit their in-depth views. Interviewees were from the survey pool. Notes were taken while conducting the interviews.

Data collection

Undergraduate students were asked to participate in the study. Both electronic and printed surveys were used in order to collect quantitative data. The survey (Appendix A) included 21 five-point Likert scale questions and also asked respondents for their age, year of high school graduation and university department.

Email addresses were collected with the permission of the university. 233 possible participants were emailed and asked to fill out the electronic survey.

Interviews were done in the university campus. The researcher held a semi-structured interview with each participant, taking notes while the interviewees were commenting on both MoNE high school and IB programs.

Quantitative data were collected during the 2012-2013 fall and spring semesters. Interviews were conducted in the 2012-2013 fall semester.

Data analysis

The researcher analyzed the data, which consisted of the responses of 75 participants to 5-point Likert scale questions. The scores from questions were computed by finding the mean score of each factor for each respondent. All tests were conducted at an alpha level of .05 in SPSS 15 program. Independent-sample *t*-tests were conducted in order to check the statistical difference between the means of the scores given by IBDP graduates and MoNEP graduates separately for each factor. Levene's test for homogeneity of variances was used while doing *t*-tests on the statistical calculation program.

Analysis of variances (ANOVA) tests were conducted in order to check the statistical difference among subject areas. Before ANOVA, again, homogeneity of variances needed to be checked with Levene's test. According to the assumptions of variances, LSD and Bonferroni post hoc tests were used for equal variances and Tamhane's T2, Dunnett's T3, Games-Howell and Dunnett's C post hoc tests were used for unequal variances. Descriptive statistics such as the mean age of the respondents and the year of graduation from high school were given.

For the factor of stress and long-term detriments factors, the questions were recoded for statistical analysis.

Interview results were summarized using the descriptive analysis method, an analysis method that summarizes the data according to the themes defined (Yıldırım & Şimşek, 2004). For the analysis, the researcher frequently uses direct quotations of the interviewees in order to show critical points (Yıldırım & Şimşek, 2004). The factors within the survey used in this study provided the necessary themes for

analysis of the interviews, namely: university preparedness, long-term benefits, overall satisfaction, stress and long-term detriments.

CHAPTER 4: RESULTS

Introduction

The purpose of this study was to examine the perspectives of undergraduate students at a private foundation university in Turkey toward their Ministry of National Education high school program (MoNEP) and the International Baccalaureate Diploma Programme (IBDP). This university acknowledges the importance of the International Baccalaureate (IB) diploma by allowing students with higher diploma scores to change their department under some circumstances. Because of the way in which university placements are allocated (see Ch1), students may not find themselves in the department they prefer. Being allowed to change their department is therefore a privilege when it is accorded to IB graduates who meet the relevant criteria.

Of the 245 students contacted, 75 responded, giving an overall response rate of 30.6%. Of these, twelve responses were from the printed surveys, and 63 responses were from the electronic surveys.

The respondents were asked to state whether they graduated from high school with a MoNE high school diploma together with an IB diploma, or with the MoNE diploma alone. Respondents who had graduated from high school with only a MoNE diploma numbered 39 out of 75 (52%). The remainder 36 participants (48%) graduated from high school with a MoNE diploma together with an IB diploma.

The mean age of the respondents was 20 years 10 months old. Three of them were aged 18, 22 of them were aged 19, and 23 of them were aged 20. The remainder, 26 undergraduates, were between 21 and 32 years old.

The year of graduation from high school is shown in Figure 2. Of the respondents 37.3% (28) were first year university students who graduated from high school in 2012, and 21.3% of the respondents graduated from high school in 2011. The remainder had graduated earlier.

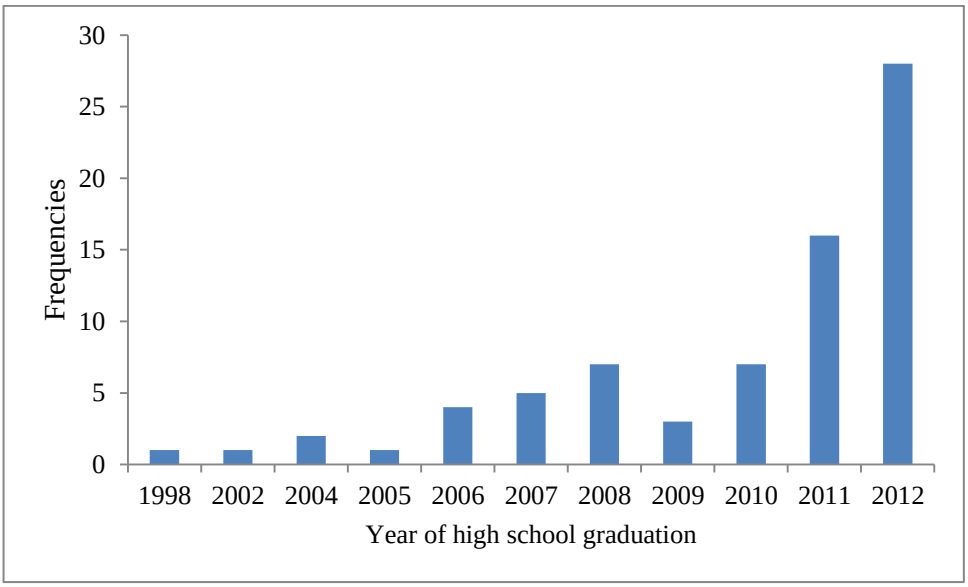

Figure 2. Year of graduation from high school

Survey results

Results for the five factors by programs IBDP and MoNE

The survey tool contained items in five factors: preparedness, benefits, satisfaction, stress and detriments. The five factors and questions checking for these factors are listed in Table 2. The scores from questions were computed by finding the mean score of each factor for each respondent. Later, IBDP and MoNEP students were grouped separately, and the mean scores of each factor were calculated for each of

the two groups. Consequently, the score for each factor was between 1 (low) and 5 (high).

Table 2
Survey items by factors

Factor	Items
Preparedness	10, 11, 14
Benefits	19, 20, 21, 22
Satisfaction	29, 30
Stress	12, 15, 16, 17, 18
Detriments	13, 23, 24, 25, 26, 27, 28

For the factor of stress and long-term detriments, the questions were recoded for statistical analysis, so that higher scores for stress and long-term detriments factors indicate that they were less stressful and less detrimental.

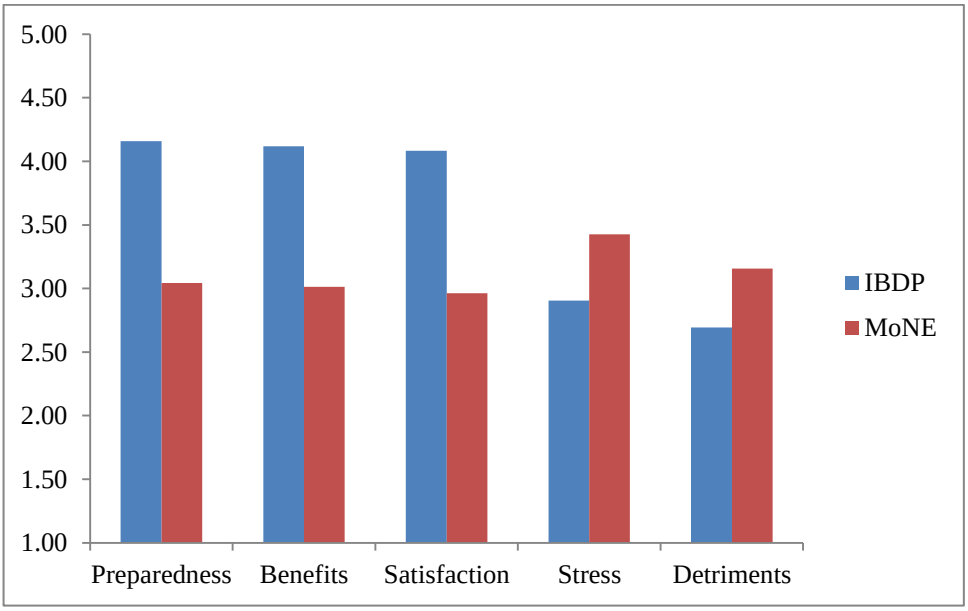

Figure 3. The comparison of means of factors between IBDP and MoNE

Table 3
Mean scores and standard deviations for IBDP and MoNE

Factor	IBDP		MoNE	
	Mean	SD	Mean	SD
Preparedness	4.16	0.65	3.04	0.88
Benefits	4.12	0.68	3.01	0.77
Satisfaction	4.08	0.82	2.96	1.09
Stress	2.91	0.64	3.43	0.71
Detriments	2.69	0.71	3.16	0.53

Figure 3 and Table 3 summarize the overall results. They show that IBDP graduates gave higher scores than MoNE graduates for the factors of university preparedness, long-term benefits and overall satisfaction, while MoNEP graduates gave higher scores for stress and long-term detriments.

Results for the five factors by subject area grouping

In order to apply for a university in Turkey, high school students need to take the university entrance exam. The Student Selection and Placement Centre (ÖSYM) conducts the entrance exam and categorizes scores under four subject areas. These subject areas and, therefore, score types are quantitative, equally-weighted, verbal and foreign language (see Ch 1). In order to see if there was a difference between subject areas, respondents in this study were grouped by their subject area, and re-analyzed into the five factors of preparedness, benefits, satisfaction, stress and detriments. It should be noted that there was no verbal subject area among respondents, so only three subject areas were analyzed: quantitative, equally-weighted and foreign language.

The means of factors were calculated according to the subject areas with MoNE and IB combined as shown in Table 4.

Table 4
Mean scores and standard deviations for subject areas

Factor	Quantitative		Equally-weighted		Foreign language	
	Mean	SD	Mean	SD	Mean	SD
Preparedness	3.31	1.04	3.98	0.70	2.81	0.81
Benefits	3.23	0.86	3.93	0.86	3.07	0.73
Satisfaction	3.27	1.08	3.87	1.02	2.71	1.22
Stress	3.16	0.68	3.14	0.78	3.43	0.69
Detriments	2.98	0.47	2.87	0.82	3.06	0.56

As can be seen from Figure 4, respondents from the equally-weighted subject area had the highest scores in university preparedness, long-term benefits and overall satisfaction. Respondents from the quantitative subject area had the second highest scores for these three factors, and foreign language the lowest. For stress and long-term detriments factors, all subject areas had similar scores.

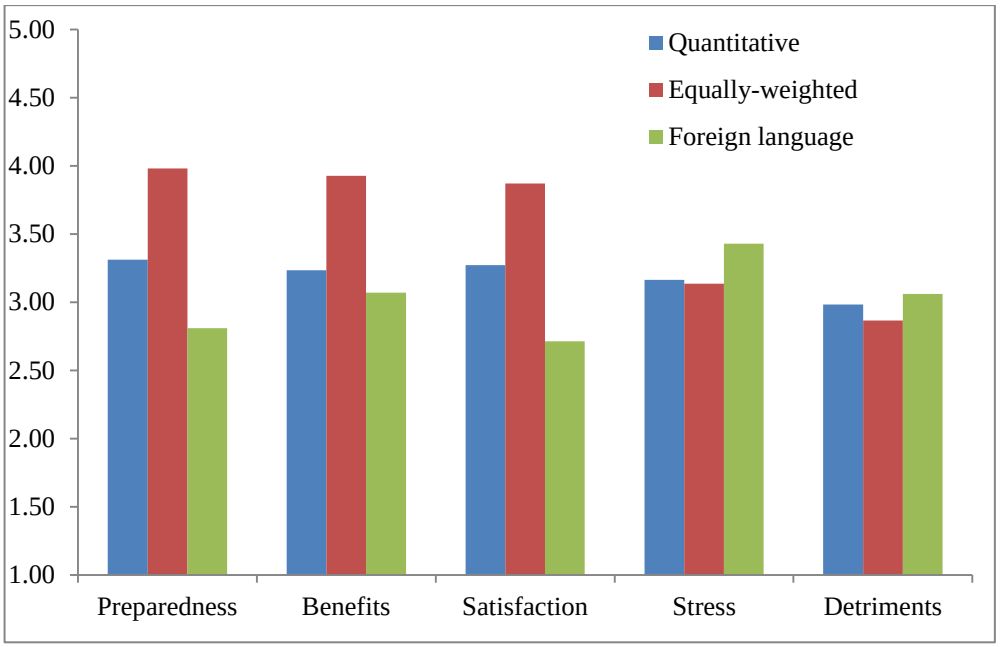

Figure 4. Means of factors per subject area (IBDP and MoNEP combined)

The results will now be analyzed factor by factor for each of the five factors, firstly for MONEP and IBDP, secondly per subject area.

University preparedness: IBDP vs MoNE

With regard to preparedness for university life, MoNE high school program graduates had a mean score of 3.04 and IBDP graduates of 4.16 (Table 3). To check whether the difference between mean scores was statistically significant, an independent-samples *t*-test was conducted to compare university preparedness levels between MoNE and IBDP graduates. As can be seen from Table 5, there was a statistically significant difference between the preparedness levels of IBDP graduates and MoNE high school program graduates; $t(73) = 6.22$, $p < .001$. The perception of IBDP graduate students was that their high school program provided more in the way of university preparation than that given by the MoNE program alone.

Table 5
t-test results for preparedness factor

Factor		Levene's test for equality of variances		t-test for equality of means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Preparedness	Equal variances assumed	3.60	.06	6.22	73	.000	1.11

Subject areas

Homogeneity of variances was checked before the analysis of variances (ANOVA). According to the results, the homogeneity of variances was ensured at a .02 significance level. ANOVA was conducted to compare the preparedness levels among the three subject areas (qualitative, equally-weighted, and foreign language). As can be seen from Table 6, there was a statistically significant difference between three subject areas $F(2, 72) = 7.93$, $p < .001$.

Table 6
ANOVA results for preparedness factor

Factor		Sum of squares	df	Mean square	F	Sig.
Preparedness	Between groups	12.13	2	6.07	7.93	.000
	Within groups	55.05	72	0.77		

Post-hoc test results using least square difference (LSD) test showed that the mean scores of equally-weighted and quantitative subject areas had a significant difference (at the $p< .05$). Also there was a statistically significant difference between equally-weighted and foreign language subject areas which can be seen from Table 7.

However, there was no statistically significant difference between foreign language and quantitative subject areas.

Table 7
Post-hoc results for preparedness factor

Dependent variable		(I) Subject area	(J) Subject area	Mean difference (I-J)	Std. error	Sig.
Preparedness	LSD	Quantitative	Equally-weighted	-0.67*	0.21	.002
			Foreign language	0.50	0.36	.171
		Equally-weighted	Quantitative	0.67*	0.21	.002
			Foreign language	1.17*	0.36	.002
		Foreign language	Quantitative	-0.50	0.36	.171
			Equally-weighted	-1.17 *	0.36	.002

* indicates a significant difference

By referring also to Figure 4, it can be seen that equally-weighted subject area students perceived more preparedness for university studies than both quantitative and foreign language subject areas.

Long-term benefits: IBDP vs MoNE

With regard to long-term benefits, MoNE high school program graduates had a mean score of 3.01 and that for IBDP graduates was 4.12. An independent-samples *t*-test was conducted to compare the perspectives of benefits between MoNE and IBDP. By reading Table 8, it can be seen that there was a statistically significant difference between IBDP and MoNE; $t(73) = 6.56$, $p < .001$. It can be concluded that the perception of the IBDP graduates was that their high school program provided more

benefits than those provided to the graduates who had taken only the MoNE high school program.

Table 8
t-test results for benefits factor

Factor		Levene's test for equality of variances		t-test for equality of means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Benefits	Equal variances assumed	0.63	.43	6.56	73	.000	1.11

Subject areas

Homogeneity of variances was checked before conducting ANOVA, and it was found that variances were not assumed equal with a score of .63 significance.

With regard to the perception of benefits from different subject areas: equally-weighted students reported a mean score of 3.93, while quantitative had a mean score of 3.24 and foreign language of 3.87. The ANOVA results given in Table 9 show a statistically significant difference for the three subject areas $F(2, 72) = 6.88$, $p < .001$.

Table 9
ANOVA results for benefits factor

Factor		Sum of squares	df	Mean square	F	Sig.
Benefits	Between groups	9.89	2	4.95	6.88	.000
	Within groups	51.78	72	0.72		

Homogeneity of variances was not ensured before ANOVA. Therefore, Dunnett's C post-hoc results were used to identify the significant difference which is shown at Table 10.

Table 10
Post-hoc results for benefits factor

Dependent variable		(I) Subject area	(J) Subject area	Mean difference (I-J)	Std. error
Benefits	Dunnett's C	Quantitative	Equally-weighted	-0.69 *	0.21
			Foreign language	0.16	0.31
		Equally-weighted	Quantitative	0.69 *	0.21
			Foreign language	0.86	0.31
		Foreign language	Quantitative	-0.16	0.31
			Equally-weighted	-0.86	0.31

* indicates a significant difference

The difference between equally-weighted and quantitative subject areas was statistically significant. No difference was found for any other comparisons. It may be concluded that students in the equally-weighted subject area perceived benefits for university studies from their high school program which were not perceived by those in the quantitative area.

Overall satisfaction: IBDP vs MoNE

The mean scores of the satisfaction factor were found to be 2.96 for MoNE high school program graduates and 4.08 for IBDP graduates. To check whether the difference was statistically significant, an independent-samples *t*-test was conducted. As can be seen from Table 11 there was a statistically significant difference between the satisfaction levels of IBDP graduates and MoNE high school program graduates;

t(70.05) = 5.07, p < .001. It seems therefore that IBDP graduates received more satisfaction from their high school program than did the students who studied the MoNE high school program only.

Table 11
t-test results for satisfaction factor

Factor		Levene's test for equality of variances		t-test for equality of means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Satisfaction	Equal variances not assumed	6.14	.02	5.07	70.05	.000	1.12

Subject areas

Homogeneity of variances was checked before conducting ANOVA, and it was found that variances were not assumed equal with a score of .38 significance.

For the factor of overall satisfaction, ANOVA was conducted to compare subject areas. The results are given in Table 12, showing that there was a statistically significant difference for the three subject areas $F(2, 72) = 4.82$, $p = .011$.

Table 12
ANOVA results for satisfaction factor

Factor		Sum of squares	df	Mean square	F	Sig.
Satisfaction	Between groups	10.86	2	5.43	4.82	.011
	Within groups	81.15	72	1.13		

Homogeneity of variances was not ensured before ANOVA tests. Therefore Tamhane's T2, Dunnett's T3, Games-Howell and Dunnett's C post-hoc tests were used. Although ANOVA found a significant difference, four post-hoc tests were not

able to identify the source of mean difference. The reason for this is due to the number of students in groups. If the group number becomes smaller, ANOVA can find the significant difference but post-hoc tests may not be able to identify where the significant difference is (Yatani, 2014).

Stress: IBDP vs MoNE

For the factor of stress the mean scores were 3.43 for MoNE high school program graduates and 2.91 for IBDP graduates. An independent-samples *t*-test was conducted to compare stress levels between the MoNE and IBDP high school programs. There was a statistically significant difference between the stress levels of IBDP graduates and MoNE high school program graduates; $t(73) = -3.32$, $p = .001$ which can be seen from Table 13.

It seems therefore that MoNE graduates (with a significantly higher score) perceived themselves as being less stressed by their high school program than the students who studied the MoNE and IBDP high school programs. By referring to the beginning of the chapter, it can be seen that means were recoded for calculation where higher score for stress factor indicated lower stress level. In other words, the IB students felt more stressed.

Table 13
t-test results for stress factor

Factor		Levene's test for equality of variances		t-test for equality of means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Stress	Equal variances assumed	0.11	.74	-3.32	73	.001	-0.52

Subject areas

Homogeneity of variances was checked before conducting ANOVA, and it was found that variances were not assumed equal with a score of .51 significance.

Amongst subject areas, there was no statistically significant difference for the three subject areas $F(2, 72) = 0.48$, $p = .623$. Table 14 shows the ANOVA results for three subject areas.

Table 14
ANOVA results for stress factor

Factor		Sum of squares	df	Mean square	F	Sig.
Stress	Between groups	0.50	2	0.25	0.48	.623
	Within groups	38.13	72	0.53		

Long-term detriments: IBDP vs MoNE

For the detriments factor, MoNE high school graduates had a mean score of 3.16, and IBDP graduates of 2.69. To check whether there was a statistically significant difference, an independent-samples *t*-test was conducted. Table 15 shows a statistically significant difference between IBDP graduates and MoNE high school program graduates; $t(64.49) = -3.18$, $p = .002$.

Table 15
t-test results for detriments factor

Factor		Levene's test for equality of variances		t-test for equality of means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Detriments	Equal variances not assumed	4.51	.04	-3.18	64.49	.002	-0.46

It seems therefore that graduates of the MoNE high school program (with a significantly higher score) perceived themselves as having fewer detriments than the students who studied the MoNE and IBDP high school programs together. Similar to the stress factor, the mean scores of detriments factor were recoded: a higher score indicates fewer detriments. In other words, the IB students felt that taking both programs together was more detrimental.

Subject areas

Homogeneity of variances was checked before conducting ANOVA, and it was found that variances were assumed equal with a score of .01 significance.

ANOVA was conducted to compare the mean scores for detriments among subject areas. As can be seen from Table 16 there was no statistically significant difference for the three subject areas $F(2, 72) = 0.40$, $p = .671$. All three groups reported statistically similar perception of detriments.

Table 16
ANOVA results for detriments factor

Factor		Sum of squares	df	Mean square	F	Sig.
Detriments	Between groups	0.36	2	0.18	0.40	.671
	Within groups	31.94	72	0.44		

Interview results

Five students who graduated with both the IB diploma and the MoNE diploma were interviewed in order to have an extended conversation on the benefits and challenges of each program. Results were summarized under the five factors determined in the survey tool, preparedness, benefits, satisfaction, stress and detriments.

All five students, A, B, C, D, E had graduated from private schools from which they had gained both an IB and MoNE diploma. They are summarized briefly in Table 17.

Table 17
Interview students

	A	B	C	D	E
Gender	Female	Male	Male	Male	Female
University semesters completed	7	2	1	1	1

Considering preparedness for university studies, student A stated that she had written long essays in English as part of her IBDP courses, and therefore felt more preparedness than other colleagues.

With regard to benefits, she discussed what she saw as the three main benefits of IBDP studies. Firstly, as she stated above, she considered that the greatest benefit conferred by her IBDP studies was to write essays and use English all the time during her IBDP studies. Secondly, as she stated: “I was responsible from my own learning”. An example was to learn how to analyze a literary work. Teachers did not tell students what to do; they had to find their own technique. Thirdly, the IBDP studies helped her ‘whole development’ whereas studies for the Student Selection Examination (ÖSS) concentrated on individual work only, solving test questions alone.

Student A did not mention anything about the stress which she may or may not have felt during her IB studies.

With regard to the long-term detriments of the two curricula, student A mentioned that she did not remember anything about university entrance examination.

Student B had many positive things to say about his IBDP studies. He felt better prepared than his colleagues for university studies. Like student A, writing essays helped him a lot in adapting to his university work, and he was prepared for writing long essays in his English-medium university courses. He felt also that IBDP studies taught him to think analytically, stating that if you did not know how to think analytically, you could have problems at university.

Student B gave many positive things about the long-term benefits of IBDP studies. One was the need to work hard, "working hard takes you one step forward". The second benefit was applying knowledge learned to real life. Thirdly, the best benefit of IBDP studies was using English all the time, including having a literary knowledge from the background reading of his IBDP studies.

Considering overall satisfaction, student B stated that, "IB courses make you remember good things". He also mentioned that IB studies helped him to gain a GPA of four out of four at the end of his first year at the university.

Student B discussed his perspectives related to stress. The first cause of stress was that he and his classmates had to do extra work to cover the YGS and LYS topics not included in the IBDP syllabuses. Stress with extra work was such that he thought, at one time, that it was not good to do both IBDP and MoNE high school programs together. One stress-reducing factor was the technical computer expertise gained at high school from IBDP courses, which later gave him self-confidence during his university courses.

Student B explained some of the long-term detriments related to both MoNE and IB. He stated that, "ÖSS has few advantages, unluckily", commenting that "courses in the university's first year do not have much relation with ÖSS. He went on to say

that their lecturers told them: “Now you came to the university, forget everything about the high school”. Continuing, he said that such a statement did not in the least apply to his own high school studies: “It was definitely not for me”

Student B’s conclusion was that, “IBDP studies *prepared* me for the university, ÖSS did not. ÖSS only helped me to *enter* the university”. In other words, ÖSS provided him a ticket for the university.

Student C summarized the IB system as letting students try in the classroom. He continued: “IBDP prepares students for life with its course structure and the options it provides”.

The long-term benefits that C mentioned were that IBDP teaches students to be responsible and planned all the time also, “It taught me that a lesson can be fun”

Stress was one of the issues for student C. He mentioned that taking two programs together is very stressful. Because the school must apply the MoNE curriculum, he stated that he “could not have IB alone”. One other stressor for him was that teachers also sometimes did not know what to do, neither the teacher nor the students were completely IB oriented.

Student C mentioned no detriments about doing both programs even though it was a busy education; he was able to do his sports and social activities. He also stated that he was satisfied from the program but an overall complaint was doing both programs together.

Student D summarized the advantages of IBDP around the tasks given in the program. He mentioned that IBDP gives more responsibility to students with its extended essay (EE), portfolios, exploration and experiment reports which

contributed deeply in his overall satisfaction. Creativity, action and service (CAS) was a good thing for him even though it was completely adopted in his school systematically. He thought that the MoNEP did not seem to give enough importance to those activities.

Student D stated that lab reports and EE helped him very much in that he learned how to write in a good way including the specific approach to the writing of the investigation and experiment part of those tasks.

However, he felt some stress during his study mostly because of his personality. He tended to leave his responsibilities to the deadline which was a stressor for him. He said that he forgot one of the topics before the final examinations which he "could have avoided if I was studying regularly".

Student D did not mention anything about doing both programs depriving him from doing things, but mostly his psychological state. "Having this much task from both programs lowered my motivation". He restated that it was his choice to finish his homework on the day of deadline.

Nevertheless, student D was satisfied with his IB studies. IBDP gave him a good experience and skills in how to write lab reports and essays which he was using in his university studies and would use afterwards. He mentioned that there are only four subject areas offered in MoNEP; and doing only one of them is not appealing. "Nobody needs to love chemistry or biology like those who love them, but even though you take IB courses at different levels; IBDP aims to make the student know some basic science"

Student D saw that having 40 lessons in a week is too much for a student doing IBDP and MoNEP together. There was no time left for extracurricular activities like CAS if

he wanted to do them all properly. “There would be no social activities for a student if he wants to do all the tasks. He should spend all his time working and doing homework so that he may go to bed at 11 and wake up at 7 with an easy conscience.”

Student E stated that one advantage of IBDP was to focus on fewer lessons in depth, which helps a student to specialize in the courses he wants. On the other hand, having different courses from different disciplines gives skills to think differently, especially TOK. She viewed writing lab reports in science, essay reading and writing in social sciences and humanities as an advantage of IBDP.

Student E continued with the long-term benefits of IBDP as having more general knowledge, plus being able to write essays and articles easily, read and think critically. She also mentioned that she was exempted from the university general education requirement courses like first year writing and started upper years’ courses in her first year, which she noted was a great advantage for her.

Student E felt some stress during her study, mainly because of deadlines and exams. Any deadline, whether IBDP or MoNEP, caused her to feel stress during high school. She complained about not being able to sleep enough during her high school time. The workload caused by having two programs together deprived her of sleep and also socializing in her community. However, she was satisfied from what she did in her high school. In particular, she was able to do two courses relevant to Turkey (higher level Turkish, standard level Turkey in the 20th century), both of which helped her literature and history background.

Student E was eager to share her personal experience about IBDP specific to her school generally. She mentioned that nearly all of the lessons were very demanding. She always had to rush in a way to catch up with all the courses. She also wanted to

take other external exams like SAT and IELTS between the deadlines that she was expected to meet. She remembers those times as the most stressful parts of her life.

In summary, for nearly all of the undergraduates, the use of English was seen as the most important benefit of their IBDP studies, helping them to write better assignments in their university courses, as well as participating more in class work. All of them noted that doing both programs together was the main stressor for them. No-one was regretful of doing IBDP and all were satisfied from their education in high school. Two of them were able to exempt some of the first year courses in the university.

CHAPTER 5: DISCUSSION

Introduction

This chapter gives the discussion of the results in the light of the related literature. Implications for practice, implications for further research and limitations of the study are given at the end of the chapter.

Discussion of the findings

The discussion of the findings will deal with each of the five factors which were the subject of the research: preparedness, long-term benefits, overall satisfaction, stress and long-term detriments. For each, the research question and the survey items will be given in order to save cross referencing.

Preparedness

The research sub-question referring to university preparedness was: Is there any difference between the perspectives of MoNEP and IBDP graduates with regard to university preparedness?

The category included these three items:

10. The pace of instruction in my high school courses was appropriate, and allowed me to absorb the information that was presented to me.

11. I felt that I was prepared for introductory level university courses.

14. Graduating with a high school diploma allowed me to begin taking more advanced courses at the beginning of my university career.

Preparedness for university studies means being ready to enter university level academic activities. Such activities may be summarized (Smith, 2009) as being able to work independently, and without close supervision, able to undertake research projects, having good writing skills, having competent time-management skills and able to meet deadlines, being able to work collaboratively in small groups, and having adequate prior knowledge from courses studied in the high school.

The research reported here showed that, for the factor of preparedness, MoNEP graduates had a mean score of 3.04 and IBDP graduates of 4.16 (Figure 3 and Table 2). This was a significant difference (Table 5), showing that IBDP graduates felt that they were more prepared for the university than the MoNEP graduates.

To understand why IBDP graduates gave higher scores in the survey, let us look closer at the interview comments. The classroom environment was commented on: MoNEP classrooms included more teacher-centered education whereas IBDP was more student-centered, letting students learn for themselves. They became responsible for their own learning, more independent and autonomous, 'responsible for my own learning'.

Another important reason was the English level required for an English medium university. IBDP graduates feel confident in the university classes as the IB program at high school is taught and examined in English, assignments are written in English, and many assignments included collaborative group work.

A third reason was analytical thinking. An interviewee stated that: "If you did not know how to think analytically you could have problems at university, I was already doing university-like tasks during my high school times" .The analytical thinking involved in IBDP studies trained students in the analysis and interpretation of data,

both verbal and numerical, followed by exam questions which tested higher order thinking skills. Examinations relating to the MoNEP curricula were restricted to multiple choice questions, few of which required students to be prepared in critical thinking and analytical writing (Türkiye'de UB Raporu, 2010).

Students in first year (and following) undergraduate classes are expected to follow up their classes by reading, attending problem-solving sessions, analyzing documents and articles, preparing extended writing, doing individual practical work and collaborative group work. They are thus allowing their brains to range outside the memorization of detailed facts, and they generally reflect on and write about the work they do (Aydın, 2008).

If students already have two years of such experience, they can more easily participate in, adapt to, and understand the work habits of a university (Uçar, 2008; Türkiye'de UB Raporu, 2010). It seems that the IBDP program is nearer to university work and therefore acts as a better preparation for it, than the program in place leading to the Turkish university entrance exam. Uçar (2008) also stated that the IBDP allows students autonomy, freedom and responsibility. This is different from the constant attention given to the mastering of detailed information for MCQs, mainly recall questions, necessary to succeed in the university entrance examination. Because of the pressure to gain a university placement, students taking only the university entrance exam spend a large amount of time, both in schools and in *dershanes* in their free time, learning both how to answer MCQs, the content necessary to get the questions right (Kılcı, 2003), and the speed to answer them.

A recent study by Ateşkan et al. found that IBDP graduates (also did MoNEP) had higher university cumulative GPAs than those taking MoNEP alone. They also found

that IBDP graduates had higher scores for Turkish, English, mathematics, chemistry and physics common courses taken during the first and second undergraduate years at university. It is interesting to note that, in the same study, IBDP graduates had slightly lower scores on university entrance examination. Two possible reasons were offered for the result: one was that students who only did MoNEP alone had specialized in preparing for the exam. The second was that because IBDP students also had to do MoNEP, they did not have enough time to study for the university entrance exam which consisted only of multiple choice questions (Ateşkan et al., 2015).

Başaran studied the appropriateness of the courses taken in Turkish high schools in relation to university courses. University lecturers were asked if they found the high school math courses aligned with their university education. Some of the topics were found not relevant to university studies in the departments where math plays an important role (Başaran, 2013).

Students may learn better if they are surrounded by their educated peers so that they can cope with different assignments (Chaiklin, 2003). Similarly, Bruner (1983) stated that students need to observe others while learning new tasks. MoNEP students often reported that they have to work by themselves while solving multiple choice questions, many hours working through page after page of examples (Aydın, 2008), whereas IBDP students are involved in group work and tasks such as Group 4 projects and CAS where students need to interact with others (Aydın, 2008; Taylor & Porath, 2006). An IB teacher reports in an interview that IBDP graduates were able to cope with different kinds of tasks during their high school work which supposedly increased their readiness for university studies (Üstünışık, 2013). Learning how to

collaborate helps IBDP students to learn on their own, express themselves and socialize in the community (Kocabaş & Akkök, 2007).

Such determined concentration on one aspect of learning, preparing for the ÖSS exam, may also translate into social as well as academic behavior (Yılmaz & Sipahioğlu, 2012). At university, many Turkish students are, for the first time, away from the protective environment of home. They are in a new city, new friends to make (and impress), with many different activities on offer. Those who are prepared for their university studies by two years of independent and autonomous work in the IB curriculum, which includes outside activity in CAS, may, it could be argued, be better able to settle into university life socially. A social life in which they feel comfortable gives them time to give attention to, and set time limits for, their academic work, while not allowing the new activities to distract them too much (Voltan-Acar, Arıcıoğlu, Gültekin, & Gençtarım, 2008; Demirel & Coşkun, 2009). Bülbül (2012) reports that many Turkish first-year undergraduates sometimes lose their way, waste their time, and perform weakly in their first year because of academic reasons.

The second part of this research considered different subject areas. Quantitative, equally-weighted and foreign language subject area high school curricula were investigated in order to detect if students from one subject area felt more prepared than other subject areas. In this section of the research, IBDP and MoNEP graduates were combined.

Students in this research (IBDP and MoNEP combined) who graduated from the equally-weighted subject area gave higher university preparedness scores than both those who graduated from the quantitative subject area and those who graduated

from the foreign language subject area (Figure 4). The difference between equally-weighted and quantitative subject areas was significant, and the difference between equally-weighted and foreign language subject areas was also significant (Table 7). There was no significant difference between quantitative and foreign language subject areas (Table 7). It indicates that the equally-weighted group felt more prepared than the two other groups, and that the quantitative group feels more prepared than the foreign language group.

The quantitative subject area is often seen by students as necessitating excessive work and being irrelevant to the profession they are planning to study (Gündoğar et al., 2007; Köse, 1999). Demirel and Coşkun (2009) found that undergraduate students from the equally-weighted area school graduates had higher curiosity levels than those who had come from other high school subject area groupings. Demirel and Coşkun postulated that the reason is that equally-weighted students take more relevant courses to their career and therefore are more interested. On the other hand, quantitative subject area students take mainly science and math courses with few letter courses, which do not give students many opportunities to develop verbal skills. It is interesting to note that Berberoğlu and Kalender analyzing the 2003 PISA results (when Turkey got low scores on math and reading) according to subject areas and school types in Turkey, found that students from almost all types of schools got similarly low scores with a few exceptions, but only science high schools got very high scores relative to other types of schools such as the Anatolian high schools, Anatolian teacher high schools and other private schools (BerberoğIu & Kalender, 2005).

Gültekin (2006) found that students who graduated from both IBDP and the MoNEP equally-weighted subject area had a higher mean high school MoNEP diploma score

than the mean high school diploma scores of Turkey as a whole; and that those who graduated from MoNEP quantitative subject area and also had an IBDP diploma had higher ÖSS scores.

It seems then that the equally-weighted curriculum gives some benefits to the students who follow that curriculum. The reason may lie in the lack of specialism to be found in the equally-weighted curriculum. Quantitative area students specialize in the sciences and mathematics, foreign language area students specialize in language and arts subjects. Research conducted on the knowledge level of high school students on environmental issues found that equally-weighted students are more aware of their environment and they are more likely to comment on events around them like sustainability, climate change and preserving the nature (İncekara & Tuna, 2010). With regard to preparedness in adapting to university life, it may be that the more balanced high school curriculum is more useful, especially in the first year of undergraduate studies where possibly half the courses taken are not in the main subject area, which may create a pressure on university students (Bülbül, 2012). As a possible interpretation of it, quantitative subject area students may have more difficulties with writing tasks than equally-weighted subject area students (Berberoğlu, 2012; Kania-Gosche, 2009).

According to research conducted by Korkmaz and Şenol (2013) freshman medical students had a more money-oriented mind towards their profession. This reveals another fact, namely that many of the quantitative subject area high school students were directed to choose that area. If so, because students have to study quantitative subject area in their high school and take YGS and LYS exams to become a doctor, it seems that their parents play an important role in deciding their child's career and thence their university programs (Berberoğlu, 2012; Aydın, 2008)

Benefits

The sub-question that referred to benefits of the curricula was:

Is there any difference between the perspectives of IBDP graduates and MoNEP graduates with regard to long-term benefits of the programs?

The category included these four questions:

19. Participation in my high school program provided me with effective organizational/study skills.

20. Participation in my high school program provided me with effective time management skills.

21. Participation in my high school program provided me with scholarship opportunities.

22. Participation in my high school program provided me with a core group of friends (peer support).

To gain benefit from the high school program means to derive something positive from it, something which leads to an advantage or an opportunity, which gives the participant a leading edge or allows him/her to succeed. In this case two questions asked students to think about the skills they have acquired in the high school program, and two questions considered other benefits which may have come from the high school work.

There are several explanations for the feel-good factor of the IBDP graduates. While both IBDP and MoNEP reported that they had gained benefit from their high school

program, the IBDP group reported more benefits, with a score of 4.12, than did the non-IBDP group, 3.01.

Firstly, although they had double workload, their work resulted in a valuable qualification, in addition to the university entrance exam. Gültekin (2006) points to the excessive workload the IBDP imposes on its students when they also follow the program leading to the university entrance exam, and she considers that this workload might affect later academic success in a positive way.

Nevertheless, if the IB Diploma qualification takes considerable work to achieve, in the doing, students learn the extra skills included in the IBDP curriculum which enable them to function better at university. One example is laboratory work. According to Berberoğlu (2012), MoNEP has a topic-based philosophy, rather than activities or tasks that need skills. More importantly, Berberoğlu states that few thinking skills and strategies are included in the MoNEP and not all the teachers know how to make students learn these crucial thinking skills. Gültekin (2006) and Üstünışık (2013) assert that the IBDP teaches discipline, learning how to learn, and helps to develop an international mind, thus boosting academic success.

Students also had to learn time management in order to keep abreast of requirements for both programs, which is considered a beneficial skill (Taylor & Porath, 2006) where students know how to use their time effectively in their daily life.

The valuable qualification itself may assist entrance to a university which considers the IB Diploma to be an advantage, as well as (in some universities) allowing students flexibility in choosing their department.

A second important advantage is the skill in English which IB diploma owners have. They have developed reading and writing skills in order to pass the IB examinations

including Theory of Knowledge and writing the Extended Essay (Türkiye'de UB Raporu, 2010; Üstünışık, 2013). They have therefore studied and been examined in English for two years and, on entry to an English-medium university, find themselves able to understand the spoken word, read and write papers in English, and contribute to class discussion. Of course, their MoNEP peers also have learned English and have an English qualification which enables them to join the undergraduate classes; however, they have not had the rigorous training the IB diploma owners received in their last two years at high school. This leads to a further benefit: the IB diploma owners usually have good enough English to go directly into the first year undergraduate classes, without spending one or more semesters in the university English preparatory school to reach the required standard. Further, some private universities award scholarships, considering their IB qualification (Doğa Koleji, 2013; Enka Okulları, 2015; Üstünışık, 2013). They may also be at an advantage when exchange programs are considered, because of their English language skills (Gültekin, 2006).

The English medium universities are ranked highest in Turkey in the annual world-wide ranking of universities (Times Higher Education, 2015). Families, and students, are therefore keen to study at an English medium university, which is perceived as leading to economic advantage in later life (Onur, 2011). Their IB studies give them that advantage. This leads to a consideration of the lifelong advantage of fluency in a second language, leading to the possibility and ease of working abroad in English speaking countries.

Students in a Turkish-medium university will also find their English an advantage, in internet searches and reading.

One long-term benefit was shown by Ateşkan et al. (2015). Their study included 70 MoNEP and 70 IBDP 2009 high school graduates who had completed four years at university. Of the IBDP group (with MoNEP), 43 (61.4%) successfully completed their degree in four years. Of those who had taken only MoNEP at high school, only 16 (22.8%) completed in four years. To be able to complete in four years, rather than some time longer, bestows a very great benefit in terms of time, money and opportunity, not to mention the personal desolation of having to repeat failed courses.

Let us look now at the results for the different subject areas. It is interesting to note, again, that the equally-weighted group (Figure 4) perceived their curriculum as more beneficial than the quantitative subject area group, a significant difference (Figure 4 and Table 10). However, the difference between equally-weighted and foreign language was not seen as significant. The reason is possibly the group size difference between foreign language and equally-weighted subject areas where ANOVA gives weaker calculations (GraphPad, 2014). The equally-weighted curriculum contains more discussion-type courses than the quantitative curriculum, for example philosophy and sociology, helping students to develop ways of expressing themselves. First year undergraduate courses include several liberal arts courses, which are not subject-area oriented. It may be, therefore, that the more balanced curriculum of the equally-weighted group prepares students better for their introduction to university studies.

Satisfaction

The sub question of the category satisfaction was:

Is there any difference between the perspectives of IBDP graduates and MoNEP graduates with regard to their overall satisfaction?

This category included these two questions:

29. My high school program has helped me to pursue my career goals.

30. Overall, I was satisfied with my high school experience in my high school program.

Satisfaction means that the graduates of a high school program had valuable feelings toward that program; they felt satisfied if they thought that they had been able to achieve their plans after they had graduated from the program, and because of it. For the satisfaction factor, IBDP graduates had statistically higher mean score than MoNEP graduates.

The two survey questions were direct and aimed at overall satisfaction (or dissatisfaction) with the high school program followed, and its relationship to the career goal of the student insofar as such goals had been achieved or were in sight.

It is clear from the survey result that the IBDP group was more satisfied with their high school program, although one must bear in mind that they had experienced both high school programs, as well as having taken and passed the final examinations of each. Despite the extra work involved – or perhaps because of it – their satisfaction levels at university were considerably higher than those of the MoNEP (alone) group. The fact that they might have been better prepared, and thus more able to participate in and profit from the university courses they took, was discussed earlier.

Another reason may be that those with the required IB and university semester grades may, at university, been able to transfer to a different department which offered them a path to the career goals they had wished for.

Another important reason could be that IBDP graduates, whose high school time had allowed them to develop both socially and personally (Kocabaş & Akkök, 2007; Üstünışık, 2013) were better able to integrate into their new community.

Başer (2007) showed that IBDP biology students have more self-efficacy while learning biology. Also their active learning strategies scores were higher than those who did not do IBDP. Başer interprets this as meaning that they tend to use their active learning strategies while studying the reading and assignments for their university courses, or indeed doing any kind of activity. This provides evidence that IBDP students become good learners, having developed self-efficacy, thus helping their future work in the university, and increasing their satisfaction level.

With regard to the three subject areas studied, although ANOVA found a significant difference between subject areas, none of the post-hoc tests was able to detect where the difference was (Table 12). The reason for this is due to the small number of students in groups.

Stress

The sub question of the category stress was:

Is there any difference between the perspectives of IBDP graduates and MoNEP graduates with regard to stress caused by the programs?

This category included these five questions:

12. While I was in my high school program I felt that the workload was excessive and/or unmanageable.

15. Sometimes I was really worried that I was not going to be able to meet the requirements of my high school program.

16. During the first year of my university studies, I felt less stressed than my classmates because of my high school preparation.

17. Sometimes I was really worried during my high school that I would not be able to keep up with all the work that was required.

18. I was afraid that I would not be accepted into university institution of my choice.

Stress is defined as an unhealthy level of functioning according to Credit and Garcia. In this case, it can be re-stated as having anxiety about the near future, not being capable of doing the work, and feeling strain and tension in one's body (Credit & Garcia, 1999).

In this survey, IBDP graduates were found to perceive more stress than MoNEP graduates. The IBDP score was calculated as 2.91 and that for the MoNEP graduates as 3.43, which was recoded for statistical calculation where lower score means a worse stress for the program. The difference between IBDP and MoNEP was statistically significant.

It should be noted that, among three subject areas, no significant difference was found; all (equally-weighted, quantitative, foreign language) felt similar stress, with scores around 2.8.

Not unexpectedly, it is clear that following both the IBDP and the MoNEP diplomas together causes stress on students (Üstünışık, 2013). Such students have to study the extra topics included in the MoNE syllabuses, which are extra to the full IB curriculum; and the IB curriculum, of course, covers topics which are not included in the MoNE curriculum. Amongst these are very substantial pieces of work such as the extended essay and the CAS program, both of which take students out of the comfort zone of the classroom and into research and the outside world, occupying precious time as well as developing a new way of participation. The third is an extra course, Theory of Knowledge, which takes students into a whole new area of study. Further, for the science students, there are laboratory reports to do for the IB diploma, resulting from careful and detailed experimental work, teacher assessed but with teacher grades subject to standardization by the IB examinations board.

Credit and Garcia (1999) also point to the stress caused by homework, in this case homework which applies to both programs. They also discuss the effect of parental pressure on the students. Parents sometimes contribute to these stress factors by creating a high expectance level on the learner.

It is interesting to note, however, that Vanderbrook in a study of IBDP and Advanced Placement (AP) students found that students did not find the IBDP harder than AP, just very time consuming. As found, AP handled the topics in a more complex way (Vanderbrook, 2006). Certainly over-commitment may cause stress where students become overly involved with their extracurricular activities, as may be the case with their CAS project (Credit & Garcia, 1999; Türkiye'de UB Raporu, 2010). Protracted time away from the work place may interfere with the completion of assignments.

Taylor and Porath (2006) state that high achieving students encounter more stress than others, which they attribute to the fact that students have to work harder in order to survive in the school environment which consists of other high achievers. They spur each other on, and by so doing may raise stress levels. Taylor's results are relevant here as, in some schools, students who wish to be included in the IB Diploma program are included only if they are seen as being capable of completing it, thus forming a cohort of good achievers. Finally, even though IBDP students found themselves often in a worried mood, they stated that they were well-prepared for their final examinations.

Finally, one may consider that these students are late-adolescents. Megalis (2002) suggests that adolescents with peer competitiveness may suffer more from fear of failure than older or younger people. Such feelings would add to the stresses indicated in the previous paragraphs. Because MoNEP is an academically oriented curriculum, students unwillingly deal with the stress in cases of failure (Yıldırım İ. , 2006). Nevertheless, one of the questions asked (*During the first year of my university studies, I felt less stressed than my classmates because of my high school preparation.)* suggests that all that stress may prove worthwhile in achieving a goal (see previous section).

Detriments

Is there any difference between the perspectives of IBDP graduates and MoNEP graduates with regard to long-term detriments of the programs?

This category included seven questions:

13. While I was in my high school, I frequently felt that the workload was detrimental to my wellbeing

23. Participation in my high school program provided me with a false sense of preparedness for university.

24. Participation in my high school program deprived me of spending time with friends outside the school.

25. Participation in my high school program deprived me of being able to participate in extracurricular activities.

26. Participation in my high school program deprived me of sleep.

27. Participation in my high school program deprived me of maintaining my physical fitness.

28. Participation in my high school program deprived me of being able to choose extra optional high school classes.

The word detriment can be defined as loss or disadvantage (Dictionary.com, 2015). For this category, students were asked if they had any loss of sleep, were unable to participate in wanted activities, and if they felt loss of fitness in their relative high school program.

In this survey, IBDP graduates were found to perceive more detriments than MoNEP graduates. The IBDP score was calculated as 2.69 and that for the MoNEP graduates as 3.16 (Figure 3, Table 3), remembering that the scores were recoded where lower scores for the factor meant worse detriments. The difference between IBDP and MoNEP was statistically significant (Table 15).

It should be noted that, among three subject areas, no significant difference was found, all (equally-weighted, quantitative, foreign language) felt similar detriments, with scores around 2.6 (Figure 4).

Detriments include the extra workload of taking a double program at high school, although it should be noted that Nugent and Karnes (2002) found that a higher workload in the high school, in spite of sleepless nights, meant that students were better prepared for their university courses. This finding was mentioned also in the previous section.

It is not only sleep which suffers as students struggle to fit a double program into their lives, but also the social activities they would otherwise be enjoying (Smith, 2009). Trudeau and Shephard (2008) point out that physical activity also suffers, many such students do not have time to keep up with their sports, in spite of the fact that those who do say that sport helps them somewhat in motivation as far as their work is concerned.

Nonetheless, taking a long term view, even though detriments may be seen as hardship while students are engaging with them, later life brings problems which have to be solved, and training in solving such perceived problems at school may help later (Üstünışık, 2013).

Theoretical model

The theoretical model used in this research was Tinto's model of student departure (Fig 1). In relating this research to the model, it can be seen that the commitment to goals and to the institution (in this case the student's university) on the part of IBDP graduates was found to be high, leading to success in their university studies. The

same is shown in the research of Ateşkan et al. (2015) in that IBDP students are more likely to finish their universities in the expected time than the MoNEP students. In the same research, IBDP students were found to have higher GPAs than MoNEP students in the common courses of the early years of their university studies.

The research results of this study also show that the prior qualification of an IB Diploma, together with the teaching and learning support and the facilities provided by an IBDP program, feed into the student's adaptation to, and success in, the university courses.

It is certainly seen in the research that social integration is important, the whole leading to academic integration. However, it was not possible to investigate the effects of individual or family attributes and events on goal or institutional commitment in this study, but such would form a topic for future research.

In conclusion, it can be seen that Tinto's longitudinal model discussed in the study has formed a useful theoretical framework.

Subject areas

In reaction to the finding from the data subject areas gave interesting results, and ancillary research question was developed post hoc. The result showed that equally-weighted subject area had significantly higher preparedness, benefits and probably satisfaction. A possible explanation is that equally-weighted, as clearly stated in its name, gives students access to all sides of the curriculum, science and arts. The other two areas investigated, quantitative and foreign language, gave students greater access to one part of the curriculum only. It seems reasonable therefore to conclude that equally-weighted students faced with a balanced curriculum in the first years of

their university career should have higher benefits and satisfaction and probably preparedness. It should be noted however the subject area results did not distinguish between the two groups of IBDP and MoNEP. Nonetheless, we can argue the subject area results support the main research question of this thesis by providing a balanced curriculum approach to university studies in the same way as does the IBDP.

Implications for practice

- Because of the stress on students taking both IBDP and MoNEP, consideration could be given to the inclusion of IB grades into university entrance procedures.
- From this study it is seen that the IBDP gives benefits. The national program may consider incorporating some of the strengths of the IBDP.
- Because of the demands of the IBDP, schools need to evaluate a student's capacity for success in the IBDP and direct him or her into the program only if he or she is fit.

Implications for further research

- The subject areas (equally-weighted, quantitative, verbal and foreign language) could be followed up to see the advantages of each program at university level.
- The IBDP graduates, with observed advantages in this study, could be followed up further at university, especially to see how their completion rates compare with non-IBDP graduates, and how they perform in later years at university.
- Investigation of the effects of individual or family attributes on student commitment and progress at university is possible for future research.

Limitations

- No high school classrooms were observed to see how each program is similar or differs.
- More interviews could have been held.
- It was not possible to hold interviews with university lecturers to have their observations on the progress and achievements of IBDP and MoNEP students.

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APPENDIX A: SURVEY

Participant Information

1. Age:

2. University:

3. Department:

4. Semesters completed (about to be completed) in the university (excluding summer schools):

5. The score that you were accepted to the university:

a. Score (whole number. i.e. 267):

b. Score Type (i.e. SAY-2, EA-1 for ÖSS) (i.e. MF-3, TM-1 for LYS):

6. Name of your high school (Optional):

7. Year of the high school graduation:

8. Which program did you graduate from?:
○IBDP (International Baccalaureate Diploma Programme) + MEB
○MEB (Milli Eğitim Bakanlığı)

9. Did your school provide IB Diploma Programme?
○ Yes ○ No ○ Not sure

Survey questions

10. The pace of instruction in my high school courses was appropriate, and allowed me to absorb the information that was presented to me.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

11. I felt that I was prepared for introductory level university courses.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

12. While I was in my high school program I felt that the workload was excessive and/or unmanageable.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

13. While I was in my high school, I frequently felt that the workload was detrimental to my wellbeing.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

14. Graduating with high school diploma allowed me to begin taking more advanced courses at the beginning of my university career.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

15. Sometimes I was really worried that I was not going to be able to meet the requirements of my high school program.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

16. During the first year of my university studies, I felt less stressed than my classmates because of my high school preparation.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

17. Sometimes I was really worried during my high school that I would not be able to keep up with all the work that was required.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

18. I was afraid that I would not be accepted into university institution of my choice.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

19. Participation in my high school program provided me with effective organizational/study skills.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

20. Participation in my high school program provided me with effective time management skills.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

21. Participation in my high school program provided me with scholarship opportunities.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

22. Participation in my high school program provided me with a core group of friends (peer support).

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

23. Participation in my high school program provided me with a false sense of preparedness for university.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

24. Participation in my high school program deprived me of spending time with friends outside the school.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

25. Participation in my high school program deprived me of being able to participate in extracurricular activities.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

26. Participation in my high school program deprived me of sleep.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

27. Participation in my high school program deprived me of maintaining my physical fitness.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

28. Participation in my high school program deprived me of being able to choose extra optional high school classes.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

29. My high school program has helped me to pursue my career goals.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

30. Overall, I was satisfied with my high school experience in my high school program.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

31. (Optional / Zorunlu değildir) Bu çalışma katılımcı desteğine ihtiyaç duymaktadır. Eğer daha fazla katkıda bulunmak isterseniz linki arkadaşlarınıza gönderebilir veya kutucuğa önerebileceğiniz birkaç kişinin elektronik posta adresini yazabilirsiniz.

APPENDIX B: PERMISSION LETTER

---------- Original Message ----------

Subject: Re: Permission
From: "Shannon Smith" <shannonssmith@gmail.com>
Date: Wed, June 13, 2012 1:46 pm
To: "Samet TEKE" <samet.teke@bilkent.edu.tr>

Good morning,

Thank you for your request, I am happy to allow you to use my survey for the purposes of your study. I would be interested to hear your results at the conclusion of your research. Best wishes.

On Wed, Jun 13, 2012 at 5:07 AM, Samet TEKE <samet.teke@bilkent.edu.tr>wrote:

Hello Dr. Smith

My name is Samet Teke and I am a master student at Bilkent University Graduate School of Education in Ankara Turkey. I am currently in the process of writing my thesis for my IB teaching certificate in biology, I found your dissertation on ProQuest. The purpose of my study is to explore attitudes of undergraduate students' in Bilkent University toward IB and non-IB high school education. I am writing to ask permission to use your survey instrument with modifications. My research will be used only for educational purposes.

Thanks in advance for your precious time

Best regards

Samet Teke
Bilkent University
Graduate School of Education
samet.teke@bilkent.edu.tr
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Best,

Shannon Smith, Ph.D.
Mathematics Instructor
251-680-2493
shannonSsmith@gmail.com