CHALLENGES FOR THE FUTURE OF HIGHER EDUCATION INSTITUTIONS IN GERMANY: A CASE STUDY

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CHALLENGES FOR THE FUTURE OF HIGHER EDUCATION INSTITUTIONS IN GERMANY: A CASE STUDY

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Approval of the Graduate School of Educational Sciences

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I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Arts.

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This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts.

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ABSTRACT

CHALLENGES FOR THE FUTURE OF HIGHER EDUCATION INSTITUTIONS IN GERMANY: A CASE STUDY

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Rapid social, financial and political developments in the last two decade caused some challenges for the future of the Higher Education Institutions. Some of the most important challenges are privatization, decrease in the state support, competition, quality of education, non-traditional age group and diversity of the student population. The purpose of this study is to examine the German Higher Education Institutions in regards with these global challenges and figure out how important these challenges are, for the future of the German Higher Education Institutions. A qualitative research design was used to study this problem. Multiple unit case study was carried out with semi-structured and interviews with 20 high level administrators, of the German Higher Education Institutions in the North Rheine Westphalia State. The results show that privatization and quality of education are not seen as a challenge today and in the future. There is a high interest to higher education studies today and that`s why competition will be seen as a challenge in the long term period. Unlike these challenges, decrease in the state support, non-traditional age group and diversity are seen as an ongoing and future challenges for the German Higher Education Institutions.

Keywords: German Higher Education System, Higher Education and Higher Education Institutions

ÖZ

ALMAN YÜKSEK ÖĞRENİM KURUMLARINI GELECEKTE BEKLEYEN SORUNLAR: BİR VAKA ÇALIŞMASI

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Son yirmi yılda gerçekleşen sosyal, ekonomik ve politik değişiklikler, yüksek öğrenim sistemleri için gelecekte yaşanabilecek bazı sorunlara yol açtı. Bu değişikliklerden en önemli olanları; özelleştirme, devlet desteğinde azalma, rekabet, eğitim kalitesi, geleneksel olmayan yaş grubundan öğrenciler ve öğrenci demografisinde çeşitlilik olarak öne çıkmaktadır. Bu çalışmanın hedefi, Alman Yüksek Öğrenim Kurumlarını bu global sorunlar perspektivinden incelemek ve bu sorunların Alman Yüksek Öğrenimi için ne kadar önem arz ettiğini betimlemektir. Bu çalışmada nitel çalışma deseni kullanılmıstır. Nitel araştırma yaklaşımlarından çok yönlü vaka çalışması ile, yarı yapılandırılmış yüz yüze görüşmelerle veri toplanmıştır. Bu çalışmaya Almanyanın Kuzey Rhein Westpfalya eyaletinden, 20 rektör, rektör yardımcısı ve dekan, düzeyinde üst düzey yüksek öğrenim kurumu yöneticisi katılmıştır. Çalışmada ulaşılan sonuçlar şunlardır: Alman Yüksek Öğreniminin kendine has özelliklerinden ötürü Özelleştirme ve Eğitim Kalitesi konuları sorun olarak görülmektedir. Günümüzde Almanya´da yüksek öğrenime olan yoğun ilgiden ötürü Rekabet konusunda uzun dönemde ciddi bir sorun olarak hissedilecektir. Bunlara mukabil, devlet desteğinde azalma, geleneksel olmayan yaş grubundan öğrenciler ve çeşitlilik bugün ve gelecekte Alman Yüksek Öğrenimini tehdit eden unsurlardır.

Anahtar Kelimeler: Alman Yüksek Öğrenim Sistemi, Yüksek Öğrenim ve Yüksek Öğrenim Kurumları

To my Parents and my Family

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I wish to express my deepest gratitude to my supervisor Assistant Professor Sinem VATANARTIRAN for her guidance, advice, criticism, encouragement and insight throughout to the research. I also want to thank Professor Doctor Christophe W. BRIDDICK and all other participants who contribute to this research with their experiences and thoughts

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LIST OF ABBREVIATIONS

AMU	Arts and Music Universities
DAAD	German Academic Exchange Service
FH	University of Applied Sciences so called Fachhochschules
HE	Higher Education
HES	Higher Education System
GHE	German Higher Education
GHES	German Higher Education System
GHEI	German Higher Education Institutions
NRW	North Rhine Westphalia

Chapter 1: Introduction

In this section, the conceptual framework, statement of the problem, purpose of the study, research questions and the significance of the research are discussed.

1.1 Overview

Higher Education, which is also referred to as post-secondary education, tertiary education, and third level education, is one of the most important parts of the education process. After twelve or thirteen years of basic education, high school students who have successfully graduated from their schools apply to these institutions to gain occupational knowledge. The main goal of these institutions is to provide students with professional education regarding their field of interest.

Due to cultural and political differences, various higher education institution (which will be abbreviated as HEI in this study) traditions have developed in different countries during history. The most popular tradition is the Anglo-Saxon, which is mainly practiced by the U.K. and the U.S. This system is copied by many other countries in the world, especially after World War II. In this system, most of the HEIs are founded by private entrepreneurs, non-profit organizations and all of these institutions are financially independent. Most of these schools have high tuition fees, and students compete with each other to obtain scholarships from these institutions or other companies. These institutions also compete with each other to attract the most talented students and academicians. Additionally, the state also founded some HEIs and complemented the need for Higher Education. These institutions cost less than private ones but are bound by state laws, and their reputations are not as good as private ones.

There are also countries that keep their own system and develop their own HEIs. Germany is one of these countries, and they have a unique structure based on the Humboldtion System (Pasternack & Wissel, 2010). Wilhelm von Humboldt, director of Berlin University, suggested that education is a social need and has to be serviced by the state freely. Academic talent is the only requirement to study in German HEIs, and all of the teaching and research costs of the academicians have to

be covered by the state. (Paternack & Wissel, 2010) The main responsibility of students and academicians is to focus on sciences and research. This understanding developed during the last two centuries, and different types of HEIs are founded according to the needs of industry.

There are three main types of German HEIs, which include Universities, *Fachhochschule* (FH) and Arts & Music Universities (AMH). Universities are the top HEIs in Germany, and only high school students with an *Abitur* (High school graduate project) degree can enter these institutions. *Fachhochshules*, translated in English as University of Applied Sciences, are occupation-based and mostly technical institutions. All students, with or without *Abitur*, can enter these HEIs after fulfilling some requirements of the Faculty of Fachhochschules. Arts & Music Universities are HEIs structured around arts and music, and mostly students with *Abitur* enter these institutions. Some exceptional entrance cases and unique exams are also possible in Arts & Music Universities (DAAD, 2006).

Such a system is strictly bound by state regulations and the state puts limits on the activities of German HEIs. These institutions are dependent on state regulations and strictly bound by law. On the other hand, most of these institutions are very well known in university rankings and have very good reputations. Switzerland and Austria follow the German higher education tradition and shape their HEIs according to this understanding.

The consistency is remarkable in that there are very similar patterns in countries with dissimilar political-economic systems and higher educational traditions, and at extremely dissimilar stages of industrial and technological development says Johnstone (1998).Because of this, all of these different traditions are going to face some common challenges in the future. Johnston (1998) mentions that there are similarities in the reform agendas of countries whose higher education systems are elite or universal, predominantly public or private, or relatively wealthy or staggering under austerity. Technological and political changes in the last two decades have especially caused new common threats for these institutions. “In Western Europe and North America, higher education, while highly valued and acclaimed by all, faces great challenges at the millennium. Therefore, the academic community and its leaders must take stock of its present statuses, explore the

challenges of the future, and evaluate promising initiatives to meet these challenges" says Hirsch and Weber (1999) in their book about the challenges facing Higher Education at the millennium.

The aim of this research is to analyze challenges in the future of higher education institutions in Germany with the perspective of the higher education leaders. It would be better to remind readers that, following abbreviations are mostly used in this paper:

AMU	Arts and Music Universities
DAAD	German Academic Exchange Service
FH	University of Applied Sciences (Fachhochschules)
HE	Higher Education
HEI	Higher Education Institutions

1.2 Conceptual Framework

Merriam (2009) mentions that the conceptual framework is the base, skeleton, or structure of the research. Maxwell (2005) gives a more detailed definition and explains that the conceptual framework is the system of concepts, assumptions, beliefs, and theories that support the research. Every research has a conceptual framework, and this shows the researchers' perception about the challenge, explains Anfara and Mertz (2006).

In this research, only journals that have a scope of Higher Education are examined. Because of the challenge of the research, only the articles written after 2000 were considered. After these limitations, the 15 most recited articles in different countries about North American and European Universities were selected. (Boer, Enders, & Leisyte, 2007; Çekerol, 2012; Delbecq, Bryson, & Van de Ven, 2013; Eckel & King, 2008; Goldstein, 2006; Hanft & Knust, 2009; Huisman, De Boer, & Botas, 2010-2011; Kalayci, 2012; Knight 2004; Leszczensky & Barthelmes, 2011; Meyer & Rowan, 2007; Pasternack & Wissel 2010; Staley & Trinkle, 2011; Strazzeri, 2007; Teichler, 2005; Zusman 2005)

All of these research studies investigated some challenges that HEIs could face today and in the future. Six common challenges were identified amongst them. These

challenges are privatization, insufficient state funding, competition, student profile, effectiveness of the education, and diversity. The six common challenges establish the conceptual framework of this research and are described briefly below:

a. **Privatization:** Financial crises in the last decade have thrown state HEIs into a very difficult financial position ("EU Report", 2013). Some of these institutions have begun to privatize some of their programs, and some of them are opening private programs to deal with financial issues. There are also new private universities in the market, and the future of this change is a great question mark.

b. **Decrease in State Funding:** Research in many countries demonstrates that state funding for HEIs has decreased in North America and Europe ("EU Report", 2014). Such a decrease is mainly because of the economic crises of the last decade and has a negative effect, especially on research activities.

c. Competition: Due to the development of web-based programs and online studies, competition has become much more important in the Higher Education market. Globalization and the Bologna process also alleviate evaluation problems and put some standards on Higher Education ("EU Report", 2014). Such improvements make competition a big challenge for Higher Education Institutions all over the world.

d. Quality of Education: Quality of education refers to the quality of an institution's teaching and graduates. Institutions generally use employment rates of their graduates, reputation indexes, and quality management activities as basic indicators of the quality of education ("ENQA", 2009). These indicators will be an important challenge for the future of Higher Education.

e. Non-traditional Age Group: The age group of the Higher Education students has changed in the last two decades ("ENQA", 2009). Older students with a family, children, and job, who are referred to as non-traditional students, are applying to HEIs. An increase in part-time studies and online courses has

allowed older students to easily enter and study in HEIs. This change in age group is another challenge in the Higher Education market.

f. Diversity: Diversity generally comprises both the different kinds of programs and the students' ethnical backgrounds ("EU Report", 2008) Because of the institutional diversification of the German Higher Education System, only the ethnic diversity is taken into consideration in this research. The number of foreign students and cultural diversity of the campuses are another challenge in the future of Higher Education Institutions.

1.3 Research Question

In this study, the following research question is examined: "How do German Higher Education Administrators describe these six challenges of Higher Education for their own institutions?" Related with this main research question, the following sub-research questions are also examined: "Are these six challenges, which formed the conceptual framework of the paper, considered as threats for German Higher Education Institutions? What strategies do these institutions use against these six challenges? What other challenges do German Higher Education Institutions face for their future?

1.4 Significance of the Study

Higher Education becomes a much more important challenge in countries' futures. Unlike K-12 Education, Higher Education costs too much in the countries' budgets, and economic problems push legislators to decrease state support to such institutions. Additionally, private companies have started to build their own institutions to join the game. Such improvements and globalization increase the competition between these institutions in local and global markets. The quality of education in these organizations and educational content of the studies is another issue. Governments today are asking if all these efforts make sense or if they are wasting their time. On the other hand, technological improvements such as distance education or online studies also help older people study in HEIs and add a different aspect to Higher Education. Lastly, the diversity of the educational opportunities and students will be a big issue in the future of Higher Education.

German Higher Education System is a very well known, traditional, and high quality system. Throughout history, many technological improvements have been made by German scientists, and German thinkers have added important values to universal knowledge. For this reason,the examination of these six challenges for the German Higher Education System has a great importance. As previously mentioned, German Higher Education has a different development process and unique identities. Considering this system, in the perspective of the conceptual framework of the paper such as privatization, decrease in the state support, competition, non-traditional student profile, quality of education, and diversity, is crucial for the future of the German Higher Education System.

The findings of this research could be used by German legislators, German higher education administrators and German private companies to plan or design new strategies for the future of the German Higher Education System. These results could also be very important for the legislators, private companies, and administrators of Higher Education Institutions in Switzerland and Austria. These countries utilize German Higher Education traditions, making these results relevant to the future of their education systems. Lastly, this paper provides important perspectives for researchers from different countries who are working on the German Higher Education system.

Chapter 2: Literature Review

Higher Education is a very important part of the education process and every country has a different HE organizational structure. In the initial part of the Literature Review, GHES is examined. The development of the system throughout history is mentioned, main organizational structures are emphasized, and future politics of the GHES are given from the resources. After that, the six challenges of HEIs are mentioned.

2.1 German Higher Education System

Germany is one of the most important developed countries in the world and according OECD, Germany ranks third in export values after the U.S. and China**.** HEIs play an important role behind these statistics. German Academic Exchange Service (DAAD) is the official web page to service the right information about the German Higher Education System. According to DAAD, in 2006, there are 117 state and state-recognized universities in Germany with 1.360.000 students. Nearly about 17 German universities rank among top 250 universities in world. There are also different kinds of Higher Education institutions like *Fachhochschules* (Applied science universities), Technical HEIs and Arts & Music Hochschules in Germany. DAAD`s statistics mention that in 2006, there are 158 FH with 520 000 students and 58 Art & Music Universities with 33.000 students. Today, more than 2.250.000 students are studying more than 250 HEI of Germany.

The governance of these different kinds of institutions is similar and all of these institutions consist of Faculties. Professors and other teaching staff work in these Faculties and each Faculty has a dean at the top of administration. Rectors are the highest administrators in the hierarchy and vice rectors and deans have to report to the rectors. However, there are also differences between these institutions. Application rules, capacities, resources and procedures vary according to institution. Further information about the governance structure could be received through German Academic Exchange Service (DAAD).

In this part, historical development process of the GHES is given, then general information about the different institutions in GHES are highlighted and then future policies of German Higher Education are mentioned.

2.1.1 Development process of the German higher education system. The German Higher Education System (GHES) was mainly structured at the end of the 18th Century. Wilhelm von Humboldt (1767 - 1835) was the Director of the Culture and Educational Department, which is equal to Secretary of the President today. His educational reform, which was used during the founding of Berlin University in 1810, is the basic idea of the German Higher Education System (Pasternack & Wissel, 2010). The education system is divided in to three stages. The first stage is elementary school, which every child has to attend. The second stage is *Gymnasial* school (middle and higher school), for all talented and clever students to attend after elementary school. University is the third and last stage. At the end of the Gymnasium, students write their final exams and finish their final projects. This final stage is called *Abitur*. According their GPA in *Abitur*, they could choose their faculties in the University. This third stage is supported with teacher schools (*Lehramt*) and state exams for the Gymnasia school teacher candidates (Pasternack & Wissel, 2010).

At the beginning of the 20th Century and during the World Wars period, GHES mainly supported the State's political philosophy and it is difficult to talk about a scientific development of the Higher Education System during that time period. After the World War II, new legislators in the Federal Republic of Germany, West Germany, built the Education System according to Humbolditish ideas. On the other hand, in East Germany, Germany Democratic Republic, HEIs were copied from USSR. In this system, the main purpose of the HES was to improve the economic development of the society and serve Socialism (Pasternack & Wissel, 2010). The main difference between the Humbolditish HES and Communist HES was the political independence of the HEIs. According to Humboldt, science without any political thought must be the basic of the HEI. However, the basis of the HEI in East Germany was communism. This difference let the Universities in West Germany improve their structural and scientific identity.

The Humbolditish University System developed itself and turned into the *Ordinarial* University System in 60s. This system was mainly divided into faculties and faculty presidents, called *Ordinarius* Professors, who had autonomy over their faculty. Such autonomy let the *Ordinarius Proffesors* coordinate every stage of the HE in their faculty. From attendance to graduation, every rule, exams, PhD, or the other programs of the faculty were organized by these *Ordinarius* Professors (Pasternack & Wissel, 2010).

The main critique of this system is the non-participation of other faculty members in administration. Because of this, the "Group University" idea became popular at the end of the 60s. In this system, administration of the faculty was based on democratic principles and all University members had rights in administration. In this period, the "*Ordinarius"* title was not used anymore and the highest degree was the "Professor" degree in faculties (Pasternack & Wissel, 2010).

During the 70's, the main discussion about HE involved the extension of higher education to middle classes. Before, it was understood that HE was the education of the elites. However, development of the middle class and the needs of the developed economy in the 70s pushed HE institutions to change their traditional structure. In this new form, called "Inclusion structured University", new higher education institutions called "*Fachhochschules*" were founded. These schools organized like universities but, unlike universities, students from the middle class or without an *Abitur* degree could enroll. By the end of the 70s, 37-39 % of the people in West Germany had a degree from HEI, up from just 8 % in the 60s (Pasternack & Wissel, 2010). This new system, which will be addressed in the next chapter, marked the expansion of Higher Education in West Germany and had a great impact on the growth of the German Economy.

The change in Higher Education also improved the intellectual knowledge of the society, and this improvement caused a new structural form of HE called "critical University". In this new structure, HEI played a mirror role to society and science. This was very effective in the development process of the society. According this thought, HEI must find the mistakes or issues of the society and reflect it to society, forcing people to solve problems by themselves. Such a thought is known as German idealism or German perfectionism around the world. After such transformation,

especially during the 80s, HEI were known as an infrastructure and regional innovation motor (Pasternack & Wissel, 2010). Regional researches and environmental issues are the popular challenges of the HE. The economic role of the HEIs and the role of HEIs in society, called “third Mission”, is also discussed in this stage (Pasternack & Wissel, 2010).

Following the union of East and West Germany (1989), HEIs in East Germany tried to change their structures according to the West and rebuild their identity. Such a transformation process took a decade, and 29 European Countries undersigned the Bologna Process in 1999, which galvanized the globalization and unification of the HES in Europe. The globalization of the GHES, the Bologna Process, and competence in the HES will be discussed in following chapters.

2.1.2 Institutions of German higher education system. As discussed above, the German Higher Education System experienced a unique improvement process. To understand this experience, the main philosophy of the education system in Germany must first be understood. The basic sociologic theory of the education system explains the role of education as a “Selection and Classification” function of students that prepares them to fulfill the requirements of society (Meyer & Rowan, 1977). This philosophy and previously mentioned experiences, unlike other HESs, divided the German Higher Education System into four main specific and absolutely different institutions (Leszczensky & Barthelmes, 2011). These institutions are:

1. Technische HEI
2. Universities
3. Fachhochschules
4. Private Higher Education Institutions

2.1.2.1 Technical HEIs. Technical HEIs are mainly High Tech research universities in Germany. These institutions are math and science-based, highly selective schools. Their main purpose is to promote scientific improvements of the society. In most cases, unlike normal universities, Abitur is not always enough to enroll. Either technical studies or projects of the candidates during high school years or some internal exams in Math, Physics, Chemistry and Biology are required during the application process by these institutions. There are 13 of these universities in Germany, such as Technische Universitat Berlin. Switzerland and Austria also have

such schools. ETH (Eidgenosiche Technische Hoschschule) or EPFL in Lozan are similar HEIs in Switzerland, which are all high-ranked technological universities in the world.

These universities participate in educational trade shows and alumni meetings, send information to international journals, and visit partner schools out of Germany. All these marketing activities improve their recognition and demonstrate their quality. This makes them a point of interest in the eyes of foreign students (Leszczensky & Barthelmes, 2011).

2.1.2.2 Universities. Universities are the oldest and the highest level of institutions in the GHES. High School (*Gymnasium)* students who graduate with an *Abitur* degree can enter these institutions. Their main purpose is to fulfill the main needs of the society. To reach this goal, universities educate highly skilled human resources for the basic parts of the community. Social Sciences, law schools, medicine, and economics are the main streams of universities in Germany. Duisburg-Essen University, Heidelberg University, or Mannheim University are some examples of universities.

2.1.2.3 University of Applied Sciences (Fachhochschules). *Fachhochschules*, so called university of Applied Sciences, are practical HEIs. Their main purpose is to fulfill basic needs of the industry. Unlike Technical Universities, FH`s are mostly not research institutions but focus on innovation and improving the quality of business and local companies. Gymnasium-graduated students with/without an *Abitur* degree can enter these schools. Students who do not attend *Gymnasium* can also fulfill some of their job requirements and enter these institutions.

These schools continuously get a considerable amount of employers, legislators, and students (Teilcher, 2005). These well-developed institutions were the main engines of German industry from 70s to 90s. Despite the positive elements of such institutions, there are also unstable points and discussions regarding *Fachhochschules.* The main issue and hot discussion is so-called “Gleichwertigkeit, aber Andersartigkeit”, which means, “Equal Value, but otherness” (Gellert, 1991; Teilcher, 2005) These institutions are on the same level as universities in legislation,

however they are not equal in society's perception and in some rights. Such differences are also future challenges of the GHES.

2.1.2.4 Private Higher Education Institutions. Compared to the US, there are not many private HEIs in Germany. Some church universities and business schools are examples of this kind of university. Unlike the other HEIs mentioned above, private HEIs are mostly high-cost schools. Because of the wide range of these schools, it is quite difficult to generalize them and it would be better look at each case separately. For example, EBS University in Wiesbaden is mainly focused on economics and law. EBS was founded in 1971 and educates in English, which is because the main goal of the University to fulfill the international economic needs of German companies.

Like *Fachhochschules*, private HEIs want to increase the attendance of foreign students (Leszczensky & Barthelmes, 2011:123). Unlike Universities and Technische Universities, Fachhochschules and private Universities need more advertising and benchmarking outside their borders. Partner universities out of country could improve the reputation of these institutions in foreign countries.

Student transfer from one institution to another is strictly regulated and depends on the fulfillment of some requirements. In most cases, students continue in another HEI after graduation. For example, in the 80s, 10% of *Fachhochschule* graduate students continued their studies in Universities, and almost 10 % of University graduate students continued their studies by entering PhD programs (Teichler, 2005).

To sum there are 380 HEIs and a total of more than 15,000 programs in Germany. Unlike the U.S. or U.K., most of these schools have low tuition fees and teach in the German language. Education in State Universities and state *Fachhochschules* in Germany costs 15,000 € to 30,000€ according to the institution and program. But all students pay €265 tuition per semester, which makes the cost of a whole undergraduate program max $4000 for a student. Rest of this amount is paid by state. The tuitions of Private Universities vary from €10,700 ($ 15,000) to € 62,450 ($ 90,000) per program according to the University. (Hanft & Knust, 2009). As mentioned previously, they are clearly defined by law and entrance/transfer

policies are strictly ruled by legislators (Hanft & Knust, 2009). Their strict division, economic structure, and traditional uniqueness differentiate German HEIs from other HEIs around the world. The purpose of the research is to deeply explore this difference and determine the future challenges of GHES.

2.1.3 Current Policies of the German Higher Education System. There are several policies and strategies practiced for the development of the GHES. The most important three policies are globalization, Bologna Process and increasing institutional competitiveness of the GHES.

2.1.3.1 Globalization of GHES. After the unification of East and West Germany, two changes occurred in GHES. The first change was the transformation of the universities in East Germany. They began to copy the structure and policies of the universities in West Germany which took more than a decade. Before this transformation it cannot be possible to talk about German HEIs without considering East and West Germany independently. The second change was the globalization of the GHEI. According to Jane Knight (2004), "Internationalization" in higher education is the process of integrating an international, Intercultural or global dimension into the purpose, functions, or delivery of higher education. In 1996, German legislators put internalization in the center of their reforms (Teilcher, 2005). Internalization is a substantial element of University Identity. A lack of international activities, transfer of scientific knowledge and information, and change of thoughts and ideas over the borders is the sign of an unthoughtful university (Leszczensky & Barthelmes, 2011). Such different thoughts demonstrate the importance of "Internalization" and competence of the HE experts' ideas on the challenge.

During the same time period, the European Union's project in the political stage also affected the HE of European countries and Germany. Such a process, which was started during the 90s, resulted in the undersigning of the Bologna Process in 1999. After both reforms in GHE and Bologna agreement, GHEI began to change their structure and use systems like accreditation or entrance requirements according to global HEI. This change is still in effect in GHEI and globalization is still a hot topic for HEIs in Germany.

2.1.3.2 Bologna Process. The Sorbonne Declaration in 1998 played important role in the Bologna Process. In this declaration, education ministers of France, Germany, Italy, and the U.K. came together and committed the "Harmonize the architecture of the European Higher Education System." One year after this declaration, education presidents of 29 European countries came together on the 900th anniversary of the University of Bologna in Italy. They undersigned the Bologna Agreement, which had three main goals in HE. These goals were to increase the mobility, international competence ability, and employment ability of students in the EU and candidate countries (Leszczensky & Barthelmes, 2011).

To reach these goals, education ministers of these countries accepted the European Credit Transfer and Accumulation System (ECTS). In this system, which is commonly known as the bachelor system, classical 5-year Diploma education in Germany was divided into two parts - Bachelor and Master. The Bachelors degree takes almost three years, with 180-240 ECTS, and the master degree takes 90-120 ECTS, which is almost one and a half years. In this system, one year (2 semesters) corresponds to 1500-1800 study hours. After these two degrees comes the third degree, Doctoral degree, in which no ECTS is used.

The Bologna Process took more than one decade to develope. Despite many criticisms, 18 new countries joined this reform program, and 47 countries use the ECTS system in their HE system today. Student mobilization (Erasmus and Socrates programs), foreign language development, quality improvement in PhD studies, increase in exchange programs (Erasmus), and the positive global approach to HE in Europe are the main achievements of this ECTS system (Teilcher, 2005). Statistics in 2010 demonstrated that there were 102,800 German students studying outside of Germany in 2008, which is 5.8 % of German students in GHEI. This number is twice as large as it was in 1988 (Leszczensky & Barthelmes, 2011).

Germany pays great attention to the Bologna Process. In Germany in particular, resources are currently flowing into implementing the structures of the Bologna Process at undergraduate level, and continuing education has been shelved (Hanft & Knust, 2009). Almost all HEIs are using this system and it could be said that Bologna process is accomplished in Germany. According to Leszczensky & Barthlemes, after eleven years of the Bologna Process, national structures have

changed and a common HE system is being used, effectiveness and quality standards have increased, and institutional competence ability has grown in the HEI of European Countries (Leszczensky & Barthelmes, 2011).

2.1.3.3 Institutional Competence. An increase in the need of highly skilled human resources in Germany fired the competition between GHEIs in the 80s (Teilcher, 2005). Both globalization and the Bologna Process increased the competence between HE in Europe and also in the world. Like universities in Germany, the universities of other EU countries joined the market with the same system. EU rules forced Universities to form their own quality management systems, which increase the quality of their programs (Leszczensky & Barthelmes, 2011, p.28). Aside from these changes, most of these countries began to offer English programs, which is much more interesting for the foreign students of Europe. Although *Fachhochschules* and other kind of HEI are very well known in Germany, they are not so famous outside the border. They also do not include the "University" title in their name, and this is a big question mark for foreign students. In global competence, the best minds are selected by both private and state Universities. GHEIs must join this competence by sharpening their profile and seeking an international concept of the best organizations in their benchmarks (Leszczensky & Barthelmes, 2011).

Additionally, new trends in HE like lifelong learning or distance education increase the competence between HEIs in a global perspective. However, it could be said that such a movement is quite foreign for GHEI. When it comes to integrating the concept of lifelong learning, a general trend can be perceived. Whereas Finland, France, the U.K., and the U.S.A. tend to show great willingness to incorporate groups of individuals with little or no previous academic education into the university system, Austria and Germany are not open to the idea at all (Hanft & Knust, 2009). The next decade will be the competence and improvement decade between HEIs throughout the world, and GHEIs must follow such changes and try to be the leaders of the market.

2.2 Challenges and Debates Regarding to the Future of the Higher Education Systems

According to journals, which have a scope of Higher Education, several challenges are threating the future of the HEI in all over the world. However, especially after 2000, different researches from different countries (Boer, Enders, & Leisyte, 2007; Çekerol, 2012; Delbecq, Bryson, & Van de Ven, 2013; Eckel and King, 2008; Goldstein, 2006; Hanft & Knust, 2009; Huisman, De Boer, & Botas, 2010-2011; Kalayci, 2012; Knight 2004; Leszczensky & Barthelmes 2011; Meyer & Rowan, 2007; Pasternack & Wissel 2010; Staley & Trinkle, 2011; Strazzeri, 2007; Teichler, 2005; Zusman 2005) demonstrate that, six common issues are mostly used and mentioned about the challenges of the HEI in the future. These are privatization, insufficient state support, global competition, non-traditional age group, quality of the education, and diversity. Initial parts of the research, these six challenges are solely examined.

2.2.1 Privatization. Privatization is one of the biggest challenges for state universities in the future. Especially, insufficient funds and competition make privatization necessary for universities in the future. Research performed in the U.S. demonstrates that state funds for all public institutions dropped nationally from 46 per cent of current fund revenues in 1981 to 36 per cent in 2000 (Zusman, 2005). This is a great decrease, and when the increase in the costs of technology and higher education is considered, private sources have become much more important than before.

Zusman (2005) also mentions that many public institutions are themselves pursuing privatization as a means to raise revenue or reallocate scarce state dollars. Some institutions are requiring that certain academic programs, especially high-demand, high-return professional programs like law or business, become fully or nearly fully funded by clients (students), business, or other private sources. He provides Virginia University as an example, stating that Virginia's law and business schools became fully self-supporting by 2004 and many other public research universities have been exploring similar moves. Most already charge business, law, and medical students much higher fees than other students. Even teacher or school administrator training programs (which are generally not high-return) have been privatized (Zusman, 2005).

Another research study regarding the future of Higher Education in Britain demonstrates similar results. According to the research, academicians mentioned their point of views on the situation of higher education in the U.K. in 2025. Assumptions about this point are as follows:

In English higher education in 2025, the average university receives more than 10% of its revenue from private sources (excluding tuition fees) and private providers cater for 15% of students. In English higher education in 2025, fees vary by institution, but are at least £15,000 ($23,000) per year (Huisman, Boer, & Botas, 2011). These numbers empower the importance of privatization in the U.K.

Kalaycı has a similar approach to this issue, as well. He mentions that the demand of Higher Education in Turkey will move from state universities to private universities in the future. "In other words, Tribe is asserting that given the uncertainty of finding a job with a high school degree, which corresponds to the imperfect information in action (in the terminology of institutional economics), the boundedly rational person chooses to pay for higher education to increase his/her chances of employment and a higher standard of living" (Kalaycı, 2012) This will also support the role of private institutions in the future from a Turkish perspective.

Similar experiences also passed in the Universities of the Netherlands. The government of the Netherlands saw the importance of the challenge in the 90s and transformed their current universities. Since this transformation, university holdings are composed of many business companies ('subsidiaries') that valorise scientific knowledge. Through this 'privatization' of activities that are linked to the university, Dutch universities attempt to "exploit their knowledge" (Boer, Enders, & Leisyte, 2007).

All these different examples show the importance of privatization in higher education in the world. Law makers and university administrators have to pay attention to this problem and take action before it is too late. Goldstein quotes from Robert Mindrum, director of Purdue Memorial Union, who sums up the situation. "I think there will be winners and losers, and the public institutions will be hit the hardest with funding challenges. There will be a continuing change to the mix of

funding from public to private sources that will make it more difficult for public institutions" (Goldstein, 2006).

2.2.2 Decrease in the State Support. Decrease in the state support is another issue of the future. Current economic crises and the decrease in state sources show us that state support to universities will decrease in the future. Besides, all institutions face real increases in the cost of providing education. Technology and equipment costs are rising, as are the prices of journals and books, health care for employees, and building maintenance (Eckel & King, 2008). A survey regarding the situation of higher education in 2025 supports this point. Respondents were very concerned about the financial outlook for higher education in U.S. More than 40 % of respondents saw insufficient financial resources as one of the three largest threats facing higher education (Goldstein, 2006).

Current research and numbers also point to this challenge. Kalaycı (2012) mentioned that state funds in Turkey have been reduced from 69% to 57% between the years of 1995 and 2005. We see such decreases in U.S. universities. For example, state funds for the nine-campus University of California dropped from 37 % of the total operating budget in fiscal year 1990 to 23 % in 2004. At Pennsylvania State University, state appropriations declined from 21 % in 1990 to just 13 % in 2002 (Zusman, 2005). Expectations in the U.K. show that less than 1% of the gross domestic product (GDP) is spent on English higher education in 2025 (Huisman, Boer & Botas, 2011). Strazzeri (2007) mentioned similar numbers when speaking about the higher education system of Italy. According to him, the Italian 1.75% of GDP dedicated to scientific research is, of course, completely insufficient to assure long-term plans of development. "From this point of view brain drain is a false problem. "We had better talk about `resources drain´, which means that investments in higher education are too low to guarantee a proper `return on investments´" says Strazzeri (2007 , p. 2).

Eckel and King (2008) present some survival methods, which universities could utilize against this challenge. They mention that universities and colleges have three options in the face of these increased costs and reduced revenue from states and other sources. They can cut back, improve their efficiency, and/or generate new revenue. For the most part, institutions are engaged in some combination of all three.

They cut back by reducing travel and equipment purchases, postponing salary increases, leaving faculty and administrative positions vacant, reducing administrative and support staff, and postponing building and renovation. Rarely do institutions cut academic programs.

Another solution to the problem is increasing sources, for example student numbers. American colleges and universities are pursuing many efforts to diversify and expand their revenue streams, such as developing online education and niche-oriented degree and non-degree academic programs, expanding research capacities, engaging in licensing and sponsorship agreements, and pursuing auxiliary enterprises such as managing real estate and running conference centers. Because a primary source of additional revenue is student tuition and fees, they have risen at twice the rate of inflation over the past 20 years, outstripping increases in both family income and financial aid resources (Eckel & King, 2008).

The long-term prospects for state higher education funding are not favourable. Many experts believe that states' revenue problems will persist even after the economy improves because state tax systems are obsolete. For example, a growing percentage of economic activity is in non-taxed services and Internet sales – and because voter-imposed limits have made raising revenue more difficult (Zusman, 2005).

2.2.3 Competition. Globalization will change the future of the higher education system. Factors such as accreditation of the courses and easy transportation of students facilitate student transfers, which will improve competition between universities.

Goldstein (2006) sees this challenge as a threat to the American higher education system in his article. He cites, Jonathen Alger (2002), who says,

> There is greater competition coming from a lot of different places, including other countries. U.S. higher education is not the only game in town. New competition from for-profit institutions and corporate training programs is already changing higher education. Short courses, weekend programs,

> certificate programs, and changing instructional methods are being spurred by for-profit and international competition as cited in Goldstein (2006, p.9).

Staley and Trinkle (2011) also support this idea. The United States may lose its unique place in the worldwide higher education landscape. After World War II, the global movement of students flowed largely to the United States. The globalization of the higher education today means that more students are traveling internationally for higher education but they are not all going to the United States.

This challenge is also a crucial issue for British Universities. Bologna process in 1999 forced the East European countries to improve and globalize their higher education systems. In addition the international competition was severe, and from 2010 many European universities started offering programmes of similar quality to English universities (Huisman, Boer, & Botas, 2011).

Besides international competition, Eckel and King also mention the competition between universities inside a state. They support that common currency measures facilitate the student mobility.

> Students earn credits toward their degrees by completing courses. These credits can then typically be transferred to another institution if the receiving institution agrees that the academic rigor and material in the courses is roughly equivalent to its own similar courses (Eckel & King, 2008, p.8).

As a solution, Goldstein suggests being more international against this challenge. He mentions that, “Institutions will need to become more international in their outlook, focus, and to fight harder for better international students” (Goldstein, 2006). This is a difficult issue and hard to accomplish. For this reason, Boer, Enders, and Leisyte suggest finding international partner universities. They provide the Dutch university system as an example.

> In constructing (new) boundaries, relationships between Dutch universities and other universities are changing as well. They are increasingly looking for allies (in order to challenge their rivals), and to participate in consortia

> and mergers. Examples of such inter-organizational cooperation's with Dutch participation include the European Consortium of Innovative Universities and the Coimbra Group. At the national level, 'cross sector' alliances. (Boer, Enders, & Leisyte, 2007, p.36)

Another solution is decreasing obstacles for foreign students like facilitating the Visa or acceptance procedures. Eckel & King (2008) suggested this idea and criticize the current policies of U.S. and show it as negative effect for U.S. universities.

> However, recent U.S. visa and homeland security policy changes, coupled with an increased desire by foreign universities to recruit abroad, mean that the U.S. share of the international student market is shrinking. Institutions from England, Australia, Canada, and New Zealand, for instance, are establishing a presence abroad and benefiting favourably from their governments' policies. (Eckel & King, 2008, p.18)

2.2.4 Quality of Education. Quality of education is one of the main concerns of the higher education in the future. Specific business demands and lack of talent, especially leadership talent, examine the quality and effectiveness of the higher education systems.

The survey regarding the situation of higher English education in 2025 says that only about 10% of the universities include elements in their mission such as independent contribution to intellectual and cultural life, citizenship, critical thinking, and academic freedom (Huisman, Boer, & Botas, 2011). It is also assumed that universities are much more specialized in terms of their educational offerings (Huisman, Boer, & Botas, 2011). Kalaycı (2012) supported this idea and says that, "The labour market in Turkey and the rest of the world is complaining about universities being not responsive enough to meet the needs of the employers and they blame the universities for the skill shortage problem".(p.205)

Different solutions and some other methods are prepared for the issue. Staley and Trinkle (2011) highlighted the key attributes and mentions that the higher education system has to focus on this challenge. According to them,

> …there is an emerging sense that general education should focus more on the key attributes that employers value as needed by a generally educated person: critical thinking, writing, speaking, arguing, researching, and mathematical reasoning. In addition to introducing a broad variety of challenges, general education should exercise skills and habits of mind. Once thought of as issues of character—and thus unteachable — attributes and skills such as leadership and creativity will come to define the new general education curriculum (Staley & Trinkle, 2011, p.19).

Kalaycı supports this idea and provides the Danish university system as an example. He quotes from Andersen (2007) and says,

> The Danish government does not provide any protection against dismissals; however with an efficient retraining system those that have been laid off are equipped with new, marketable skills and redirected to open jobs. As the Danish industrial structure is composed of small industries specializing in niche markets, this system enables the industry to be flexible in meeting changing needs of the markets and in the meanwhile allows redistribution of labor from poor performing areas to high performing ones. (Kalayci,2012, p.206)

Creating a new administrative system for higher education is another approach to the issue. This system is used in the Netherlands and changes the decision making process. Instead of horizontal decision making, a vertical decision making system is used. Boer, Enders, and Leisyte (2007, p.39) explain this system as follows:

> In this new structure, positions are also explicitly identified for being in control and bearing certain responsibility, and lines of authority are more transparent than under the previous system. The central executive board and especially the deans and directors of institutions have, for instance, a clear responsibility for research and teaching and are accountable for strategic directions. As a consequence of these newly implemented structures, another device, one that allows more co-ordination and management control in Dutch universities, concerns the introduction of ‘Management teams’ at both central and faculty level. At the central

level, these teams – informal bodies in the sense that they are not legally prescribed – are made up of the members of the central executive board and the deans. They meet frequently (once or twice a month) and 'pre-cook' the university.

Quality of the education becomes a much more important issue in the future. Especially the previous challenges that are mentioned, future demands of the industry and lack of talent in business sector makes the issue crucial in the future of Higher Education System. Possible solutions are on the table and ready for the University Administrator's decision.

2.2.5 Non-traditional Age Group. Higher educational costs and the recent increase in tuition also change the age group of students in higher education. Number of non-traditional students, who are older than 25 with family and job, become the majority in some faculties. Additionally, the perception of higher education has also changed. "Learning" becomes a goal for many students, and new understanding called "Life Long Learning" becomes the new perception of the students. Open education systems become more popular, which makes the problem much more complex.

Staley and Trinkle (2011) explain why they prefer to have students over age 25 and work as full time as "…because when they first entered education research and policy discussions, they differed from the traditional undergraduate student"(p.24) They also mention that these 'non-traditional' students are the majority of the student population in higher education. More than sixty % of students enrolled are now over twenty-five, and more than 60 % of students are now working full time while pursuing their education (Staley & Trinkle, 2011).

Zusman gives the following information: in 2000, students aged 25 years and older composed about 40 % of the total college enrolments, and nearly one quarter of full-time enrolments (Zusman, 2005). When these numbers are considered, it is easy to see the increase between 2000 and 2011. Eckley and King explain, "Three out of four American college students are considered *non-traditional*" They also mention that 80 % of students work during the academic year (Eckel & King, 2008). This

shows the importance of the economical obstacles and change in higher education during the last decade.

The other change is the perception of students, which also affects the student profile. Traditional students mostly see higher education as a tool to obtain a good job and high quality of life. On the other hand, non-traditional students approach education as a goal, which becomes the new concept of the future. Open universities and distance education programs also support this fact. Çekerol shows the importance of the challenge in his article about open education in the Turkish higher education system, saying,

> This development (change in the age group) and new situation requires the restructuring of higher education with two important concepts in mind: lifelong learning and continuous education. When the problem is analysed from an educational dimension, it is observed that `pre-adult education process´ which was once carried out traditionally by higher education, started to develop into a new concept called `lifelong learning´ and is still changing accordingly in today's world.(Cekerol 2012, p.349)

Moreover, the meaning of "learning" for students now is not "being an absolute goal" itself but just a "tool" to reach a predetermined goal. Moreover, it is now observed that "elite higher education" mentality and practices are being replaced by "mass higher education" (Çekerol, 2012).

Such changes also highlight the importance of online education. Almost every university has online educational programs today. In spite of very high tuitions, online MBA programs are very popular in the business sector. Çekerol also speaks about the challenge and says, "The increasing demand for open education worldwide (or the most recent and popular term used: "online learning") also clearly supports these arguments." According to the plan published by Sloan Consortium in 2006: "Nearly 3.2 million students were taking at least one online course during the fall 2005 term, a substantial increase over the 2.3 million reported the previous year." (Çekerol, 2012)

He compares these numbers with previous years and demonstrates that they have more than doubled in a year. He concludes his approach as follows:

> Finally, it might be concluded from the results that students consciously prefer the open education system, which has almost equal distribution of male – female population and mostly employed students. When this reorganization process is completed successfully, open education system integrated into both Turkish and international higher education systems will play more significant roles in solving the problems of the Turkish higher education system. (Çekerol, 2012, p.350)

Figure 1 Shows the non-traditional age-group in EU countries and Germany`s position below;

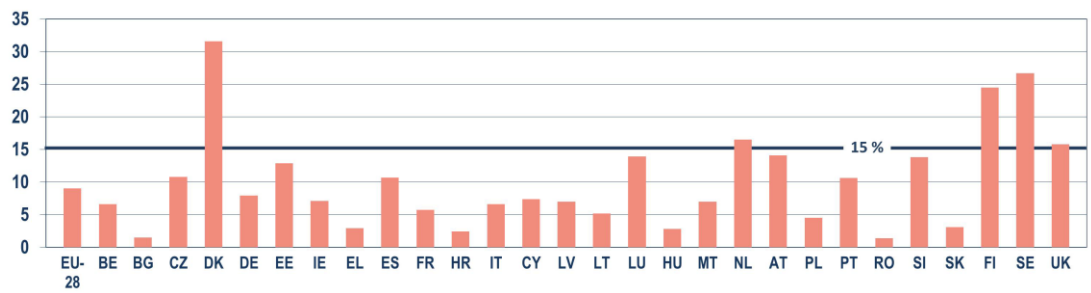

Figure 1. Percentage of the population aged 25-64 participating in formal or non-formal learning, by country in 2012. Figure Adopted from Eurostat – Labour Force Survey (data extracted on 19 September 2013, DE : 7.9 %)

These numbers and different approaches to the challenge demonstrate the importance of the issue and the increase in open education systems. Developing these systems and effects of the new profile in academic studies will be the common future challenge of higher education systems in the world.

2.2.6 Diversity. Diversity is the last challenge that is focused on in this paper. Diversity is the source of information and universities try to increase the diversity of their programs and student profile in their campuses. This improves the competition, especially for foreign students.

Goldstein mentions this point and says,

> Diversity is going to continue to be a significant challenge for our institutions, as well as an opportunity. We will see students from a variety of family, socio-economic, racial, and ethnic backgrounds who, in many cases, might not have attended college twenty years ago. Growing religious diversity and related tensions will also need to be addressed. Students, faculty, and staff will need to become educated about and sensitive to differences in this area" (Goldstein, 2006, p.7).

However, competition makes the issue much more serious. Strazzeri focused on this challenge and suggested universities improve their weak parts. According to him, diversity management is currently becoming an outstanding issue. Many definitions of diversity have been worked out, but in a simple way the expression "diverse" may be translated into "individual" or "specific" to outline that the world economic system has to rely on a wider range of professionals at present to keep developing. For this reason, professional categories which were previously considered "weaker" have gained more importance (Strazerri, 2007).

Universities in Europe also have the same problem. Educational improvement in other countries and economic problems decrease the number of foreign students in Europe. In their survey, Huiman, Boer, and Botas explain, "Although England had always been a very attractive destination for foreign students; the country's share of international students has decreased significantly" (Huisman, Boer, & Botas, 2011).

Aside from student diversity, educational diversity also plays an important role. A high demand of four-year university education decreases the demand of other educational systems. Eckley and King show this situation as a problem in the long-term situation of higher education. They say "American higher education is known for its institutional diversity. However, the characteristics that make many types of institutions distinct are fading. For instance, in some states, community colleges are seeking to offer four-year degrees to meet growing demand for higher education. (Eckley & King, 2008) However German Higher Education System is very diverse and that is why this kind of diversity is not considered in this paper.

From all view points, diversity has a very important role in higher education, and it is decreasing both student and administration perspective. Universities have to

focus on this challenge and prepare themselves by using effective policies for the future.

Chapter 3: Methodology

This section will introduce the research methodology used. The design of the study, participants, procedures, data collection, data analysis, reliability, validity, and limitations are explained.

3.1 Research Design

The purpose of the research is to examine six threats to HEI in Germany from the perspectives of high level HEI administrators. To achieve this goal, the qualitative research method is used in this study.

Denzin and Lincoln (2005) explain qualitative research as an activity that puts the researcher in the middle of the world. The qualitative researcher studies facts in their natural environment and come to understand the facts or challenges' perceptions of these facts. According to Patton (1985) qualitative research is giving meaning to facts according to some research and observation of these facts. Qualitative researchers do not think to the future of the facts, focusing solely on the current situation and try to understand the nature of the facts.

From these perspectives, this study is a qualitative research, because the researcher of the paper interview with the administrators of the German Higher Education Institutions and try to understand the current situation of the GHEI with their perspectives. Researcher studied natural facts about GHEI and tried to give a meaning to the challenges of these institutions with regards of the conceptual framework of the study.

There are several research approaches, or research designs, that qualitative researchers use. Creswell (2006) talks about five approaches to qualitative research such as narrative, ethnographic, grounded, phenomenology, and case study. On the other hand, Tesch (1990) mentions 45 different approaches. According to Creswell's five approaches to qualitative research, a case study approach is used to examine the research question.

Yin`s (2002) explanation about case study is very descriptive and easy to understand:

> A case study is preferred when the inquirer seeks answers to how or why questions, when inquirer has a little control over events being studied, when the object of the study is a contemporary phenomenon in a real life context, when the boundaries between the phenomenon and the context are not clear, and when it is desirable to use multiple sources of evidence. (p.18)

Merriam (2009) defines case study as "observing a delimited system deeply and widely" (p.40). Smith (1978) agrees with this idea, and added that the researched object has to be limited in qualitative researches.

According to these views, this study is case study, because the researcher works on a "How" question and he does not have any control about the challenge which is a real life context. The researcher used multiple sources and he limited his study in one State of Germany.

Stake (2005) adds the word "multi" to case studies and says that the most characteristic identity of the multi case study is the limitations of the object. In this type, researchers collect data from multiple resources but still in a limited environment. Yin (2009) offers different types of case studies, such as single case study, multi-unit case study and content case study. In the multi-unit case study, one case is examined from different perspectives and the same procedures are repeated in all these examinations.

This research is limited to the North Rhine-Westphalia state of Germany and administrators of HEI in this state. There are 16 states in Germany, and North Rhine-Westphalia (NRW) was selected in this research because NRW is one of the biggest states of Germany and four of the biggest cities (Cologne, Düsseldorf, Essen, Dortmund) are in this state. The HE Institutions in this state are examined in regards with the concepts in the conceptual framework with multiple units of analysis. These units of analysis are the institutional structure, educational mission, and financial structure. As each university is considered as a case, each of the six challenges are

examined as concepts in these cases and multiple units of analysis are used to analyze these concepts, embedded multiple case design is used in this research.

The embedded case study design is an empirical form of inquiry appropriate for descriptive studies, where the goal is to describe the features, context, and process of a phenomenon. Roland W. Scholz suggests that "*case is faceted or embedded in a conceptual grid*" (p. 25) which allows to identify key components of human and environmental systems(Scholz 2011).

3.2 Participants

There are 73 Higher Educations Institutions in North Rhine Westphalia State, and only the higher level administrators of these institutions such as Rectors, Vice Rectors, and Deans were invited per Email to contribute to study. All of these 73 institutions were targeted by the researcher and 448 emails were sent to these target groups. Twenty administrators of the different HEIs in NRW accepted the invitation to join this research. Nine administrators did not accept the invitation because of their busy schedule, six administrators mentioned that they did not have enough information for the study and three institutions mentioned that they were not joining such activities. The rest of the targeted participants did not respond to the invitation of the researcher.

Taylor and Bogdon (1984) mention that in qualitative research, the names of the participants and institutions need to be protected by nicknames or coded names. For this reason, of the participants and their institutions is coded in this research and shown in Table 1 below.

The institutional differences between participants are considered as one unit of analysis. In this unit, there are 4 Universities, 7 Fachhochschules and 6 Technical HEIs.

The second unit of analysis is the educational mission of these institutions. In the literature, HEIs are defined as teaching universities, research universities or both teaching and research. In this study, besides these, arts and music universities were

added to this division because of their different structures. In this unit of analysis, there are 6 teaching HEI, 11 Research HEI and 3 Arts and Music HEIs.

Lastly, institutions were considered according to their financial structure and divided into two types such as state HEI or private HEI. There are 13 State HEIs and 7 Private HEIs in this unit of analysis.

Table 1

Coding of the Institutions and Participants

Institutions	Code of the Institution	Participants` Position	Participants` Code
Universities	U1	Dean	U1D
	U2	Rector	U2R
	U3	Vice Rector	U3VR
	U4	Rector	U4R
Fachhochschules	FH1	Dean	FH1D
	FH2	Rector	FH2R
	FH3	Vice Rector	FH3VR
	FH4	Rector	FH4R
	FH5	Rector	FH5R
	FH6	Vice Rector	FH6VR
	FH7	Vice Rector	FH7VR
Technical HEIs	TFH1	Vice Rector	TFH1VR
	TFH2	Rector	TFH2R
	TFH3	Vice Rector	TFH3VR
	TFH4	Dean	TFH4D
	TFH5	Vice Rector	TFH5VR
	TFH6	Vice Rector	TFH6VR
Arts & Music HEI	AMU1	Vice Rector	AMU1VR
	AMU2	Vice Rector	AMU2VR
	AMU3	Rector	AMU3R

3.3 Procedures

In this section, the method of sampling, data collection, data analysis and reliability, and validity of the study will be discussed.

3.3.1 Method of Sampling. This study was conducted in the state of North Rhine Westphalia in Germany. There are 73 HEI in this state, and all of these institutions were planned to be included in this study. However, only 20 institutions positively responded to the invitation email. Therefore the sample consisted of only 20 administrators of the different HEI, who responded positively to the invitation.

3.3.2 Data Collection. In this this research, all data was collected by face to face structured and semi structured interviews. DeMarrais (2004) defines face to face interviews as a specific conversation between researcher and interviewer about a field, and questions regarding this field. Dexter (1970) gives much simpler definition and says that face to face interviews are conversations that are depend on a specific goal between participants of the discussion.

Because of the participants' expertise and very intense schedules, the interviews were done face to face in the participants' offices. In this process, 73 HEI institutions and their administrators were first listed from the website of their institutions. After that, an invitation email regarding the research was sent to the Rectors, Vice Rectors and Deans of these institutions. In this email, all of the information about the interview, interview questions, and acceptance form was sent to participants. Twenty institutions' administrators responded positively to the invitation. After that, a possible date was selected and all of the participants were visited in their offices. Before the interviews, participants signed an acceptance form allowed the researcher to record, transcribe, and use the data in the data analysis part of the research. The invitation email and the sample of acceptance form can be found in Appendix A.

All of the interviews have two parts, first a face to face structured interview and then a face to face semi structured interview. Merriam (2009) mentions that structured interviews are used in qualitative research to obtain the participants' demographic information such as age, gender, how many years of work experience they have, etc. In the first part of the study, general information about the participant is needed which is why this method is used. Merriam (2009) defines semi structured interviews as follows: "Semi structured interviews consist of open ended questions and describes participant`s perception of the world with his or her own ideas". That

is why the semi structured interview method is used in the second part, which is mainly about the opinions of the participants about the conceptual framework.

The interview protocol was prepared by the researcher with probe questions according to the conceptual framework. After that, all of these interview questions were sent to an expert on qualitative research method and interviewing. These questions were restructured according to the expert`s views and the last version of the questions were used in interviews. The interview protocol can be found in Appendix B.

As previously mentioned, all interviews were recorded and transcribed, because Merriam (2009) mentioned that the best way to keep data is recording and transcribing it during the data analysis. Bogdon and Biklen (2007) advised that it would be better not to lose time between recording and transcribing part of the interview, or there searcher could forget some details or important information about the research.

3.3.3 Data Analysis. There are two different data analysis types that are used in qualitative research studies: descriptive analysis and content Analysis. (Strauss & Corbin, 1990). Yildirim and Simsek (2003) describe descriptive data analysis method as follows:

> In this type of data analysis, collected data are summarized and interpreted according to the challenges, which are selected before…Researcher quotes very often from the participants of the interviews or other points which are observed during the study to show the impact of the challenge. The main goal of this type of analysis is to present collected data to the readers in a summarized and meaningful way(Yildirim & Simsek, 2013).

In this research descriptive data analysis method is used. As it is defined by Simsek & Yildirim, first conceptual framework of the study is determined and collected data are summarized and interpreted according to the conceptual framework.

Altunisik (2010) mentions four steps during the descriptive analysis. He mentions that all of the participants answer the same questions and the researcher analyzes just these answers according to a framework without any comment or contribution. He describes this analysis method in four steps;

1- A conceptual frame is structured for descriptive analysis

2- Data is collected and processed according to conceptual frame

3- Data in each frame is defined according to the units of the study.

4- Data in each frame is interpreted

At the end of the fourth step, the researcher announces the results, analyzes the relationships between the results and explains it to the readers of the research. The researcher also explains the reason-result relationship between the data and compares these results when needed (Yildirim & Simsek, 2003).

In this paper, first the future challenges of these HEIs are identified to be used as the conceptual framework of the study. After that, data was collected via interviews with the participants. Only recorded and transcribed interviews were used as a data source, and the researcher analyzed this data in the four steps outlined by Altunisik (2010) above. After that, the challenges of the similar HEI`s are compared with each other. Such a method demonstrated the differences between these institutions. It also shows the similarities and differences between these Institutions and their competitors in the international markets. At end of the research, this analysis will be discussed in the conclusion part.

To ensure effective data analysis, a computer-assisted qualitative data analysis software (CAQDAS) was used. Reid (1992) mentioned that the main goal of using a CAQDAS is to manage data analysis. Data analysis management consists of three steps: preparation, definition, and usage of the data. Richards and Richards (1998) stress the importance of the coding, and mentioned that all codes help to organize and manage the categories of the data analysis. Such organization and management will contribute the theory of the research. Because of these aspects, some of the most used CAQDAS software in the market was examined, and, Atlas/ti 7.0 was selected and used in this paper because of its special features.

Kelle (2004) explains this program as follows: “Most of the programs are limited by the hierarchical structure type. However Atlas/ti and some similar programs let the user reach complex structures. It also helps to simplify the complex researches and organizes data in a better way” (p.482-485).

In this research, all interviews were first transcribed in Microsoft Word. Then, by using the Atlas/ti program, all these transcribed interviews were uploaded to database of Atlas/ti. By using the categories option, the conceptual framework, which consists of six challenges and an “other challenge” are defined as categories in the system (for a total of seven categories). In the third step, all of the participants’ answers were coded into the seven categories according to the content of the answer, and prepared for use. At the end, researcher called upon different data according to the three units, as institutional structure, educational mission and financial structure. In the institutional structure unit, participants` institutions are considered and classified as a university, fachhochschule or technical university. In the second unit educational mission is considered. According to the literature, educational institutions are divided to three types according to their mission, such as Teaching Universities, Research Universities and both Teaching and Research Universities. In this paper, according to the uniqueness of the GHE, instead of “teaching university” term, “Teaching Institution” is used and the term “Research Institutions” covers Research Universities and both types. Additionally, Art & Music universities are also added to these types. In the last unit, institutions are classified according to their financial structure such as State-Financed HEI or private HEI.

For example, what is the approach of the administrators of the *Fachochschules* to the diversity challenge? Is there a difference between state *Fachochschules* or private *Fachochschules* on the diversity challenge? Are there similarities between teaching institutions and research institutions in diversity challenge? By using Atlas/ti software, it is very easy to categorize date and to reach the answers of these questions. Because of such positive aspects, the Atlas.ti program was used by the researcher during the data analysis part of the study.

There are different features of this program for qualitative researchers; however, because of the design of the study and data analysis method of the paper, these features were not used. User-friendly parts of the software and especially very

useful tools such as categories and codes let the researcher use this program to manage and analyze data.

Participants` mother tongues are German in this study. Because of the structure of the research, all interviews are done in English. Such a difference cause some grammatical errors and mistakes in transcribed data. Because of the reliability issues, these errors are not corrected by the researcher and cited as it is original form.

3.3.4 Reliability and Validity. Merriam (2009) mentions that reliability and validity is related to preparing a conceptual framework, data collection, data analysis, discussion, and introducing the results in all different types of qualitative researches. Firestone (1987) mentions that reliability and validity in qualitative research depends on the persuasion of the reader on the logic and acceptability of the research results. Campbell and Stanley (1963) explain this issue as depending on the sensitive design of the researcher and usage of the modern standards of qualitative research methods in their work. In this research, reliability and validity were considered separately and modern methods were used with collaboration of the educational faculty members. These steps are explained in 3.3.4.1 and 3.3.4.2 below.

3.3.4.1 Reliability Issues. Wolcott (2005, p. 160) mentions several methods to increase the reliability of a qualitative study. These methods are triangulation, participant control, sufficient participation to the research, and the role of the researcher.

Merriam (2009) mentions that triangulation is one of the most famous methods to increase the reliability of a qualitative research. According to Denzin (1978), there are four types of triangulation methods. These are using different methods in data collection, using different resources during data collection, doing research with multiple researchers, and comparison of the results with different institutions and experts.

In this research, Denzin`s approach was followed and two types of triangulation methods were used. During data collection, 20 administrators of different institutions participated in the research, and these participants all have different experiences and knowledge about the field. According to Denzin (1978),

this method is an example of triangulation, which is using different resources during data collection. Secondly, all the data analysis and results were discussed with a supervisor and faculty member of the researcher who did not join the research. This is an example of comparing and discussing results with different institutions and experts. From these two aspects, it could be said that some of the triangulation processes could be used to increase the reliability of the research.

Maxwell (2005) explains participant control as a strategy to reliability as follows: “during the research, some of the participants are informed about the results and some data about the research that they gave before. Then asked if it is right understood or not” (p.111). This method was also used in the research, and five participants were asked to review the transcribed interviews. All of the responses were positive and supported the researcher’s findings.

As already mentioned, there are 73 HEIs in NRW, and 20 participants with high positions in this state contributed this research by giving interviews. This means that almost one third of the target group joined the study, which is a high participation for such a research. From a reliability perspective, sufficient participants joined the study to obtain the right information.

The role of the researcher is one of the most important reliability criteria in qualitative research. Lincoln and Guba (2000) tell us that the researcher must always think critically during the research and percept themselves just as a tool in this research.

The researcher of the study has less information about the GHE tradition and NRW state of Germany. Additionally, interview questions were prepared objectively and checked by an expert in the field. The same questions were asked of all the participants, and other information was not given during the interviews. These steps show the role of the researcher as a tool, and increase the reliability of the study.

After all these processes, all of the research was checked by the supervisor and academic committee of the Bahcesehir University. This also demonstrates the reliability of the research.

3.3.4.2 Validity Issues. Richards (2005) explains the validity of research by providing the diaries of the captains as an example. He also tells that the validity of qualitative research depends on answers of questions such as:

-How did the researchers reach the results of the research?

-Is there a better way to do this research or did the researches do the best job?

-Is there a missing point during the research, or did the researcher put all of the research process in steps to the reader?

Unlike Richard`s example, the researcher of the study did not write all the research steps and activities. However because of the geographical distance between the researcher and the supervisor of this study, many emails were sent by the researcher and supervisor. These emails included all of the steps, research activities, and discussions about the research. There were also some Skype meetings which were audio recorded by the researcher. These materials demonstrate the validity of the research and show all of the details about the research activities done by the researcher.

Another approach to validity issues in qualitative research is done by Guba and Lincoln (1985). Lincoln and Guba posit that trustworthiness of a research study is important to evaluating its worth. Trustworthiness involves establishing the following criteria:

- Credibility - confidence in the 'truth' of the findings. The credibility criteria involves establishing that the results of qualitative research are credible or believable from the perspective of the participant in the research.

- Transferability - showing that the findings have applicability in other contexts. Transferability refers to the degree to which the results of qualitative research can be generalized or transferred to other contexts or settings.

- Dependability - showing that the findings are consistent and could be repeated. The research is responsible for describing the changes that occur in the setting and how these changes affected the way the research approached the study.

- Confirmability - a degree of neutrality or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation, or interest. Confirmability refers to the degree to which the results could be confirmed or corroborated by others.

As already mentioned in the previous part, five participants of the research is randomly selected and informed per email about the results of the study. All of these participants found the findings of the research credible and believable. This meets the credibility of the research.

According to Guba and Lincoln, the qualitative researcher can enhance transferability by doing a thorough job of describing the research context and the assumptions that were central to the research (1985). In this research, research context and assumptions are clearly defined in the abstract part and the conceptual framework of the study. Other researcher could examine these parts and transfer the data that they need.

In this research, participants mentioned their assumptions and expectations of the future challenges of German higher education institutions. The researcher reasoned the results of the study with the ongoing statistics and facts in the discussion part. For this reason, if the mentioned facts will not change in the future, the same results could be achievable in the future researches.

Each researcher brings a unique perspective to the study in qualitative researches. For this reason neutrality become very important issue in the validity of the study. To conduct confirmability, researcher of the study documented the procedures for checking and rechecking the data through the study to his supervisor per Email. She judged these steps critically and forced the researcher to do his study in a neutral manner. With this method, confirmability was achieved in this study. Emails and recorded Skype discussions are the documents of this strategy in this research.

3.4 Limitations

Glesne and Peshkin (1992) mention that describing the limitations of the research is one method that helps to demonstrate the truth of the data. The main responsibility of the researcher is to do his or her best during the research process. At the end of the study, it would be better to tell the details of the research conditions to the reader.

In this research, there were also some challenges faced by the researcher. These limitations were mainly language difficulties, triangulation, and geographical difficulties.

As the researcher does not speak German and all of the participants are German, the researcher used English as the language of communication with the participants. However, it was noticed during the interviews that some participants had difficulties with the English language. It would have been much better to do these interviews in German and then translate to English but the researcher`s German did not allow this.

Additionally only one method of data collection was used by conducting interviews. This is another limitation of the study. Lastly, because of the structure of the study, the researcher had to live in Germany during the study. This caused some communication problems between the researcher and the supervised. This challenge was tried to be overcome by connection with frequent emails and Skype talks.

Chapter 4: Results

In this study, future challenges of the HEIs in Germany are studied. To determine these challenges, a qualitative research method is used and high level administrators, who are working as the Rectors, Vice Rectors or Deans in the 20 different higher education institutions of the North Rheine Westphalia State of Germany are interviewed.

The data was analyzed by using descriptive analysis method with seven themes formed with the conceptual framework as privatization, decrease in state support, competition, non-traditional age group, the quality of education, diversity and other issues. By using Atlas/ti7 computer program, which is very well known CAQDAS (Computer Assisted/Aided Qualitative Data Analysis Software), the collected data are analyzed and presented.

During the analysis, three units of analysis are used. These units are institutional structure, educational mission and financial structure. In the institutional structure unit, participants` institutions are considered and classified as a university, fachhochschule or technical university. In the second unit of analysis, the educational mission of the institutions is considered. In this study, teaching institution, research institutions and art and music institutions are used as categories of the units of analysis. In the last unit of analysis, institutions are classified according to their financial structure such as state-financed HEIs or private HEIs.

4.1 Privatization

Today, privatization is one of the solutions against financial problems. State universities privatize some of their faculties and try to increase their sources by increasing tuitions of these programs. In this section, the opinions of the participants about the privatization challenge are analyzed.

4.1.1 General Approach to Privatization. Germany has a different governmental structure with a very high tax rate. Almost 40% of the individual's

income is cut by state and these cuts are used in public usage. State supports all educational institutions, except private ones, in the market. Details of the state support will be discussed in the next chapter.

Due to do the different governmental structure in Germany, administrators of the HEIs are mostly against privatization and it is not well understood in Germany. "*No, We are state fachhochshule and it won`t be case. And I also sure that it won`t be the case for the other Institutions in Germany. I am pretty sure about this"* (personal communication, December 2014) says FH1D from FH1. Seventeen participants also do not think that, state universities will be privatized in the future.

Only three participants mentioned that some of the programs will be privatized but these are minor movements and do not change the big picture. FH4R mentioned that *"There are certain types of privatization cases like privatization of some master programs but these are minor movements*" (personal communication, February 2015)

Twelve participants also mentioned that education has to be free and high tuitions causes discrimination in the society. "*Here in Germany we believe that education is a general need and has to be free for everyone*" (personal communication, March 2015), said TFH6VR. Six participants mentioned that education systems with high fees have both positive and negative aspects. "*Difficult question. Privatization is double sided sward as we say in German. It has positive or negative sides*" (personal communication, February 2015), said FH4R. Just two participants think that it is a good way in HEI.

4.1.2 Institutional approach to Privatization. Institutional differences of HEIs do not differentiate due to this challenge. This is mainly because, privatization depends on financial issues and it is not related with structural differences of institutions.

4.1.2.1 Universities. Only one out of seven universities (15%) mentioned that they are thinking about privatization. "*We are thinking about privatization of one institution which is about lifelong learning*" (personal communication, March 2015), says AMU2VR. However, the general approach is against private education in universities. U4R gave more details about the challenge.

Financing universities has a complex task and we talked a lot these issues and privatization is not an European tool where students have to pay too much money. That is not European style, which is the U.S. or Canada. Here we have DAAD, German Research Foundation, state and Federal supports are institutions which are supporting us. In the same way German Research and Technology foundation also support our activities (personal communication, March 2015)

4.1.2.2 University of Applied Sciences (Fachhochschules). Only two participants out of nine said that some institutions of the FH`s will be privatized in the future of GHES. "*Attendances is more and more private universities open in the market. In the last decade, I could say after Bologna process this trend begins. In the future more private FH`s will open and may be not totally but some programs of the state universities of applied sciences will privatize their faculties*" (personal communication, December 2014), mentioned FH2R. The other seven participants (81%) thought that it will not be the case in the future of the GHEI.

4.1.2.3 Technical HEIs. One out of four technical HEIs in our research mentioned that some of their programs are private. "*We have two advanced programs and two master programs are private and paid by students, but we do not plan to privatize our programs which was paid by state*" (personal communication, January 2015), said TFH1VR. The main issue in this point is the high costs of technical HEIs for private entrepreneurs and without state support it is very difficult to run such institutions in German market. Because of such difficulties the other three participants (75%) did not think that privatization will be a challenge in the future of the GHEI. TFH6VR explained this case very clearly:

It depends, looking at technical universities like engineering or physics, it is too expensive for a company to hold such institution with labs and other needs. That is why many private entrepreneurs hold economical or business universities which costs lower than technical universities. You pay just equipment not the other things. As I know we do not have technical private universities. And I do not think that universities will be privatized and in Germany if universities privatized, then they do not do any research

because of the high costs of research or limited research will be done (personal communication, March 2015)

4.1.3 Educational Mission`s approach to Privatization. High costs of the research activities have a great importance in this challenge. Financing these activities and role of privatization as a solution in this challenge differs according to educational mission.

4.1.3.1 Research Institutions. Only one out of eleven participants in this unit mentioned that they have private courses in research institutions. The other 10 participants did not think that research institutions will be privatized in the future of the GHE. This is mainly because of the high costs of the Research activities in Germany. U2R explained this challenge as follows:

In Germany we have almost 100 private universities and all of them offering the same programs like Economics, Business...etc. and I called them book universities. It is very cheap to run these institutions because they do not have labs or other high costs research centers and it is easy to do that. We have just one example called Jacob University in Bremen and university of Wittenherberge which are private full universities but they also need state support and I could not say that they are 100 % private (personal communication, January 2015)

4.1.3.2 Teaching Institutions. One third of the participants mentioned that partly privatization will be the case of the teaching institutions. Additionally more private universities will be expected in the future of GHE. On the other hand it is not clear, how these changes will affect the GHE. U1D mentioned that:

No, I think public state universities remain public. But I think private institutions like our institutions will be founded to fulfill the demand. Public universities will look more third party support and there will be competition and may be some faculties privatized but not in general (personal communication, January 2015)

4.1.3.3 Arts & Music Institutions. Arts and Music education is very important in Germany and there are different kind of institutions in these fields. Approach to privatization varies from participant to participant. AMU1VR mentions that: "*artistic education is very special and private artistic education is for those who could not succeed to come the public universities. But they are not going to privatize their system*" (personal communication, March 2015). On the other hand, AMU2VR mentioned that they are going to privatize one of their institutions. However, the majority (66%) did not think that, privatization will be a case in the future of the AMU.

4.1.4 Financial Approach to Privatization. State-financed institutions mainly against privatization and tried to protect their traditional identity. Private institutions also do not expect privatization of the State-financed universities, but they are waiting more private institutions in the future of GHE.

4.1.4.1 State-Financed Universities. Two out of thirteen participants (15%) mentioned that they are thinking about privatization of some of their institutions in the future. This will show the common attitude to this challenge. Rector of the TFH2 explained this situation as follows:

> *In Germany system is different than other countries. For example in the U.S. private universities are better than public ones but here it is vice versa, state universities are better than private ones. In Germany culture is also different and to keep the quality, I believe that privatization will not be a good solution method in Germany (personal communication, January 2015)*

4.1.4.2 Private Universities. Private universities` approach to this challenge is similar with the state universities. One out of seven universities (15%) mentioned that there will be privatization in state universities in the future. However, the general approach to this challenge is that privatization in Germany is a minor case and never be generalized. FH3VR highlighted this point as follows: "*No no, I do not think so. According my experience we will have more private institutions, perhaps two or three more than market will close. State universities do not change their structure but to do that whole political system has to change and I do not think that this is the case in Germany*" *(personal communication, January 2015).*

4.1.5 Strategies against the challenge of Privatization. The results of this study show that, majority of the participants do not think that privatization will be a case in the future of GHEI. Only two state institutions such as AMU2 and TFH3, privatized some of their current programs. According to the success of such attempts, the other state HEIs could also privatize their programs. However it is not an issue today and that`s why administrators do not plan strategies to deal with this challenge.

4.2 Decrease in State Support

According to a EU report, financial crises in the last decade cause a decrease in the state support to the HEI. (EU report, 2013) Such a change is asked to the participants and their comments about this challenge are analyzed in this part.

4.2.1 General Approach to State Support. In Germany, state covers all the costs of the students in state universities. For this reason, especially answers of the administrators of state institutions play an important role. In this research, seven participants (35%) are from private institutions and the rest thirteen are from state HEIs.

Eight participants thought that state support per student is decreasing overall. Only two mentioned that it is increasing. Five of the participants said that state support remaining constant and the rest five told that they have no idea about the challenge. Rector of TFH2 mentions that:

> *That is a very good question. Absolute amount of money is increasing because student number is increasing but if we think about the money per student it is decreasing. For example ten years ago we have 15 000 students and now it is 23 000, that is why total number is increasing. But if we look at the costs and other needs, I could say that per student is decreasing I could say (personal communication, January 2015)*

There are three main financial sources of universities in Germany and these are state support, tuitions and third party support. In state universities, tuitions have minor role and in private HEIs state support has a minor role. Third party support

takes approximately 10 - 20% of the whole budget of the universities and has a complementary role. TFH5VR said "*As I said without third party, just state support is insufficient in the whole Budget*" (personal communication, February 2015) and like him, TFH6VR mentions that "*with third party support budget is sufficient, but as you see 85 per cent is not sufficient at all''(personal communication,March 2015).*

4.2.2 Institutional approach to State Support. Institutional differences of HEIs do not differentiate due to this challenge. This is mainly because, state support depends on financial issues and it is not related with institutional differences.

4.2.2.1 Universities. Universities` approach to state support is quite different from each other. According to U1D:

> *Overall it is insufficient. There are some universities in good position but in general I could say insufficient. For example in Hamburg, my home town, university buildings are crumbling and they do not have any resource for basic infrastructure. It is quietly differentiated according to the university but generally I could easily say that it is insufficient and it needs more support (personal communication, December 2014)*

On the other hand AMU3R mentioned that "*You can always have more, there is no boundary but it is always a challenge and it puts you a situation that we have to work more. Right now we run our business and I could say that it is sufficient but to keep this situation we have to do more on it*"*(personal communication, March 2015)* In this research three participants mentioned that state support is sufficient and the other seven thought that it is insufficient.

However, almost all participants were additional funded by third parties, such as EU funds, DAAD and other private companies. This shows that solely state support is not sufficient for the universities. Six participants out of seven (85%) mentioned that they use third party support effectively in their budget.

There is also a misunderstanding between whole state support and state support per student. Rector of the U2 explained this confusion as follows:

It is not easy to answer. Regular budget is decreasing relatively according to the inflation rates and increase the amount of the costs. We receive the same money but our costs are increased and that is why I could say it is relatively decreasing. Although we have much money, because of the increase in the student number, everything is coming more and more expensive. That is why we do not have enough money (personal communication, January 2015)

4.2.2.2 University of Applied Sciences (Fachhochschules). Similar results are found in University of Applied Sciences. Half of the participants (4 Participant) found state support is sufficient and the other four told that it is insufficient. Only one participant mentioned that, he had no idea. However majority of the participants (7 out of 8) mentioned that they were receiving third party support from different institutions. This demonstrates that, without third party, state support is insufficient in Germany. FH1D mentioned that "*It is not sufficient. I think we should have three to ten more professors to have. If you look at the students and courses that we have, we have to have more professors. It is one of the challenges that we are working for*" *(personal communication, December 2014)*

4.2.2.3 Technical HEIs. In technical HEIs, role of state support is much more visible because of the high research costs. TFH6VR explained this case very clearly. *"Yeah, for teaching activities it is enough I think but for research activities I could say insufficient. We need more money to do a better research*." *(personal communication, March 2015)* Three of the participants (75%) had the same idea about the challenge and only one participant mentioned that it is sufficient. The same results are achieved about the third party support.

Like universities and *fachhochschules*, distribution of the change in to state support is also varies according to institutions. According to TFH1VR, "*I could say it is slightly decreasing. Before student professor ratio is lower but now it is much higher and that's why I could say slightly decreasing but not much*" *(personal communication, January 2015)*

4.2.3 Educational Mission`s approach to State Support. Due to do high costs of the research activities, research institutions perception to this challenge is different than others. Teaching institutions and AMU are more comfortable in this challenge.

4.2.3.1 Research Institutions. Only two out of eleven participants (18%) mentioned that they have sufficient state support in research based state university. This is mainly because of the high costs of the research activities in Germany. U2R explained this challenge in detail:

> *In general state support to universities is insufficient in Germany. On one side policy makers wants us to educate more students but on the other hand they do not increase the amount of the money that they share for universities. Today the ratio of the student and professors is 1 to 65 and this was 1 to 40 in sixties and this change is not healthy. Our professors do not pay the quality of education as they could do in the past. It costs more and if nobody wants to pay that. (personal communication, January 2015)*

Because of such financial issues, state support especially on research institutions are more insufficient than teaching institutions.

4.2.3.2 Teaching Institutions. Three participants mentioned that partly state support is sufficient especially in teaching institutions. FH7VR mentioned that "*It is a problem to say that it is sufficient, it would be better to get more, but right we do a good work with our money. I could say sufficient*" (personal communication, March 2015). However, the other three participants did not agree this idea and mentioned that it is insufficient.

4.2.3.3 Arts & Music Institutions. AMU3R said that "*You can always have more, there is no boundary but it is always a challenge and it puts you a situation that we have to work more. Right now we run our business and I could say that it is sufficient but to keep this situation we have to do more on it*". Two participants of the Arts and Music universities found that state support is sufficient and one participant thought that it is insufficient.

4.2.4 Financial Approach to State Support. State support is the main financial source of state-financed institutions and has an important role in the budget in Germany. Conversely it has a minor role for the private institutions and for this reason, approach to this challenge differs according to different experiences.

4.2.4.1 State-Financed Institutions. Only four out of thirteen participants mentioned that state support is sufficient for their institutions in the future. This will show the common attitude to this challenge and as it is mentioned above, general trend is for insufficiency. TFH4D explained this situation as follows:

> *It is never sufficient I could say (Laughing) But I could say that we keep our business to go but more resources help us to increase our research activities and to have smaller classes or more professors. This will have always positive affect but today our resources are enough to give high quality education here in TFH4. (personal communication, February 2015)*

4.2.4.2 Private Institutions. Private institutions` approach to this challenge is quite different than state institutions. Three of the participants mentioned that the state support is sufficient and the other three found it is insufficient for the future. There is confusion about this challenge and FH3VR explained this confusion as follows:

> *I am not sure about that. If we think generally, especially state universities always complaining about that and it is not a clear case. The ratio is changing and today we have more interest and we have less academicians to teach. Almost all of the students want to study in Universities after high school and this trend is increasing. But I am not sure about this issue. (personal communication, January 2015)*

4.2.5 Strategies to the Decrease in the State Support Challenge. Decrease in the state support is seen as an important challenge today and in the future of the GHEI. The main strategy to deal with this challenge is to increase resources with third party contribution. Seventeen participants (85%) mention that, third party plays an important role in state budget. Especially EU contributions in Horizon 2020 projects and other networking activities with local companies are the most important current strategies of the GHE. The other most mentioned strategy is to negotiate with

legislators and trying to persuade them to increase the state support to HEI. It is much more political strategy and results of such an attempt are not clear. Some of the participants also mentioned that they are decreasing the costs by some cuts.

4.3. Competition

There have been important technological developments in HE in the last decade. In particular, improvements on distance education programs make competition an important issue in the HE market. This challenge is asked to the participants and their opinions are analyzed in this part.

4.3.1 General Approach to Competition. Competition in HEIs is a complex task and includes different aspects. One of these aspects is the change in the student number. According to the findings, only two participants mentioned that their student number is remaining constant in the last decade. The other 18 participants mentioned that their student number have been increasing in the same time period. TFH3VR mentioned that:

> *Yes it is clearly increasing and that is why we need more professors or other staff. For example in 2010 we have less than ten thousand student thousands but today we have more than thirteen thousands students which is almost 35 % more. In the future I expect more increase in the student number, not as much as today but increase. Because I believe in the following ten or twenty years some of these new founded private universities have to quit and we will get their students. That is why I am expecting more increase in the student numbers. (personal communication, January 2015)*

The other aspects of competition are high quality (which will be explained in the next section in more detail), wise politics and different study variations. These aspects were planned very well in Germany and for this reason HEIs in Germany are more competitive in the HE market today. 16 Participants of the interviews do not think that competition is a challenge for the GHEI today. U3VR explains this point as follows:

> *The student number is increasing and we are not thinking that competition*

is a big challenge for our university in this region because of our quality and attractiveness… There are big universities here in this region like U2 and TFH4 but we shared the study fields and that is why we could not talk about local competition. That is why we do not compete with these Ruhr region universities but we are collaborating with each other which makes Ruhr region much more attractive…We have an agreement with these universities and students could visit others courses. (personal communication, February 2015)

However, all of the participants expect more competition in the future of the GHEI. Participants are also asked whether local "local" or "global" competition will be important in the future of the GHES. Various answers were received and these different answers are analyzed in the following part.

4.3.2 Institutional approach to Competition. Institutional differences of HEIs differentiate due to this challenge. This is mainly because, competition depends on market share of these institutions and it is deeply related with institutional differences.

4.3.2.1 Universities. Universities are concerning both local and global competition in the future. (Five out of seven says both) On the other hand two participants mentioned that global competitions will be challenge in the future of the GHEI. U3VR told that,

Normally it is both. But local competition in this region is not case as I told but in international competition it is not difficult to say that, it is a case. To find a best professors or lecturers and also student numbers there will be global competition for GHES and I could say that English spoken countries are much more better position than us because of the language difference. (personal communication, February 2015)

4.3.2.2 University of Applied Sciences (Fachhochschules). Like universities, similar results are found in the University of Applied Sciences. Majority of the participants (six out of nine) mentioned that both local and global competition will

be important in the future of the GHES. Prof. Dr. FH1D explained this situation as follows:

> *I would say both. Highly depending on what we are talking about. If we talk about math, physic or finance…etc., it is clearly global competition. All sources and many researches are on English and it is clear that it is Global competition. But if we are talking about law, it is a German law and we are the only market on the planet who are teaching German law and that is why it is local. It is a German pool and all lectures and research is in German. That is why I could say both but generally depend on specific challenges. But I could say both. (personal communication, December 2014)*

4.3.2.3 Technical HEIs. According to the findings, global competition is more important than local ones in technical HEIs. Two out of three mentioned that global competition will be important in the future. TFH1VR mentioned that "*Today local but in the future global. It will become more and more globally in the following ten or twenty years*"*(personal communication, January 2015).* Rector of the FH2, also had a similar approach and said "*I think it is global. We are living in a global World and international activities are very important for us*" *(personal communication, December 2014).*

4.3.3 Educational Mission`s approach to Competition. Research institutions are considering global competition as a challenge in the future of GHEI, albeit teaching institutions focusing on local competition. According to AMUs, it mainly depends on the field.

4.3.3.1 Research Institutions. Research institutions are mainly concerned about global competition. Five participants out of nine mentioned that it will be global and the other four participants mentioned both. However they explained that global competition will be more important challenge than local competition. TFH3VR explained this issue as follows:

> According to student number it is clearly local more than global competition. Our ninety X of our students are coming from this region and that is why local. But if we talk about professors or qualified staff, it is

clearly global competition. We have to get best brains to our institution and this is a global market and we have to compete with global actors. And other perspective, if we talk about resources, we are also competing with global competition, because many universities from all over Europe are applying such EU funds and other projects. That is why from Resource perspective we also have to compete internationally.*(personal communication, January 2015)*

4.3.3.2 Teaching Institutions. Unlike research based institutions, almost all of the participants from teaching institutions mentioned that both local and global competition will be the case in the future of the GHES. (Five out of six) Rector of the FH2 mentioned that;

Both, we have to be careful and look at the local environment carefully. For example in Cologne there are a lot of institutions, which has similar programs that we have and it is difficult to survive. I said this tragically. May be it is much more difficult in Berlin but in Cologne it is also quite difficult. On the other hands Global competition is other problem, so called Massive Open Online Courses (MOOC) or Archeology Datenexport-Standard (ADEX) online programs could allow the global competitors join the German market and that is another challenge. I could say both and we will wait and see what will happen in the future. (personal communication, December 2014)

4.3.3.3 Arts & Music Institutions. In the case of Arts and music studies, it mainly depends on the field. AMU1VR explained this situation as follows:

In the case of arts it`s different than others. We have global competition, for example if we talk about piano it is everywhere and it is just good or bad playing. Music is international and we have international challenge. The same case is for dance or design. But if we talk about drama or theater are language based and we could only think about German speaking countries like Germany, Switzerland and Austria. (personal communication, February 2015)

Two participants mentioned that both global and local competition will be a challenge in the future and just one participant mentioned that local competition will be a case in the future of the GHEIs.

4.3.4 Financial Institutions Approach to Competition. State-financed universities are mostly old institutions and because of their history and reputation, they are competing with global competitors. Private institutions are mostly new in the market and competing with each other.

4.3.4.1 State-Financed Institutions. Only three out of twelve participants mentioned that global competition will be important for the future of GHEI. Eight of the participants mentioned that both local and global competition will be the case in the future. Rector of the U4, explained this situation as follows:

> *In Germany many students attend the schools in their region. Master studies much more flexible but they mostly prefer the institutions which are closed to their homes. On the other hand competition on the Research activities and academicians, I could say mainly global competition. From different perspectives I could say both. (personal communication, March 2015)*

4.3.4.2 Private Institutions. Private institutions` approach to this challenge is quite different than state institutions. Majority of the universities (3 out of 6) mentioned that local competition will be an important challenge for the future of HEIs in Germany. Two participants mentioned that global competition will be important in the future and just one participant told that it is both. This is mostly because, these HEIs are new in the market and they are competing with each other. In addition to that, AMU3R took more attention to language issue and mentioned that,

> *I could say local in general, because of the German language. It is a handicap for other students to come all over the world and learn German and study in Germany this is more difficult than to go and study in English country. That is why we are starting English courses but in the future may be global but I believe it will be more local for a long time.(personal communication, March 2015)*

4.3.5 Strategies against Competition. One of the frequently mentioned strategy is to increase the attractiveness of the programs. To achieve this goal; diversifying current programs, servicing more flexible programs (especially with E-Learning) and opening diverse master programs are mentioned. These steps could make the HEIs more attractive in the international market. In addition to that, cooperating with foreign HEIs and local companies could increase the reputation of the GHEIs and make GHEIs more competitive in the global market. Focusing on global issues and organizing global events like panels, conferences or seminars are also mentioned this part. Showing the quality of education with marketing activities and advertising important advantages of GHES like the employment rates or the academic staff – student ratio about GHEI is another strategy that were mentioned. Participants also mentioned that legislators also need to take some decisions regarding to this challenge like facilitating Visa issues for foreign students.

4.4 Quality of Education

The quality of higher education will be a very important in the future of HEI. Employment rates, alumni activities and quality management activities are some of the main idioms that show the a HEI`s quality of higher education . In this research, all of the participants mentioned that they have alumnis and according to law, they are controlled by different agencies. With exception of Art & Music institutions, all of the other participants mentioned that unemployment rates are very low, just a few percent six months after graduation. This is one of the reasons GHES is very well known generally and most of these institutions have a high level of education quality. In this section, unlike the other parts in Chapter 4, three points are analyzed in quality of education. These include the general approach to unemployment, unemployment in Art & Music institutions and quality management in GHES.

4.4.1 Quality Management in GHEI. Quality management is one of the most important challenges to increase the quality of education in HEI. Quality management activities expose the problems of the institutions and show legislators, the weak parts of their education system. There are three types of quality management institutions: internal quality management offices, private accreditation

agencies and the Science Commission, also referred to as “Wissenschaft Rat” in Germany.

4.4.1.1 Internal Quality Management Offices. All of the participants mentioned that, they have internal quality management offices in their institutions and quality management teams, evaluate the courses and try to keep quality of the programs as high as possible. TFH5VR mentioned that “*I think our quality management department does a good job. They do evaluations and questionnaires for every year. This shows annually the quality level of our institution*” *(personal communication, February 2015).* Like TFH5VR, FH7VR mentioned that,

> *We have big quality management office. It is very important issue for us. Our quality management office check the quality in all our branches and this is big challenge for us. We also work with private agencies so called Foundation Association for Quality Assurance in Higher Education (FIBAA) and Agency for Quality Assurance through Accreditation of Study Programs (AQUAS) which are evaluating and accrediting our courses. We have double checked I could say. (personal communication, March 2015)*

4.4.1.2 Private Accreditation Institutions. According to German law, all of the lectures in GHEI must be accredited by external private agencies. There are several agencies such as FIBAA, Accreditation Agency for Engineering, Computer and Natural Sciences (ASIIN) or Agency for Quality Assurance through Accreditation of Study Programs (AQUAS). These agencies have different expertise like technical studies, business studies, natural sciences, etc., and HEI must apply these institutions for their programs according to their expertise. Experts come and check the important elements of programs like the syllabus or academician of the program, and accredit these courses. Rector of the FH2 explained this system in detail:

> *We have the accreditation law which has two sided, from inside and outside. There are ten different private agencies like FIBAA, AQUAS,…etc which controls the study programs. They check our programs and also see the practice of these programs. And also on the other hand we have “Wissenschaft Rat” which means Science Commission or Science Committee above these private agencies and they also control us separately.*

As I said this ten private agencies control the accreditation of our courses and this Science Committee controls our institutional standards. Science Commission also controls these private agencies and they are the main control organization in the Germany. (personal communication, December 2014)

4.4.1.3 The Science Commission (Wissenschaft Rat). The Science Commission is headquartered in Berlin and the purpose work of this institution is to control the institutional quality of some Higher Education Institutions in Germany. Old universities and FHs with a great history or very high reputation are outside of this control. All private universities and new state universities or FH`s must be checked by the Science Commission and both the administrative and educational structures need to be approved by this institution. HEIs that have been several times approved by the Science Commission several times hold a special degree that exempts them from further Science Commission control. Their status permits them to check their institutional quality by themselves. TFH5VR explains this issue as follows:

Another point is change in our education system during Bologna process. Before 2000 we had a "diplome" system and after Bologna agreement we have this bachelor and master system…after this change evaluation and accreditation controls started and we had a lot of problem at the beginning but after a time it is a very good method to measure the quality of the courses that we offer. We also have an institutional evaluation, which means both our courses and institutional evaluation from science commission…This accreditation and evaluation process comes after the Bologna process with this bachelor and master system. I think that it is a good transformation of our system in terms of quality management. As a result we are checked by both AQUAS or FIBAA and also Wissenschaft Rat is checking our quality. But after this evaluation, which will end in May 2015, we are going to do it by ourselves. (personal communication, February 2015)

4.4.2 General Approach to Unemployment. Two of the participants did not want talk about this issue because their institutions are too young and they did not

have statistics about this issue. The remaining 15 participants mentioned that unemployment rates are less than 5 %, and six of these mentioned that all of their graduate students could find job and it just depends on time. Rector of the U2 says that,

> *We do not have an unemployment problem. I could say that all our students could find a job, may be one or two % which are unemployed because of individual problems. But in comparison with the other EU countries, like Italy or Spain, we have a very high employment rate. (personal communication, January 2015)*

Like universities, employment rates are very low in FH`s. TFH1VR mentioned that "*We have statistics and we have no unemployment, it just depend on time. Many of our students get a job before graduation. But in several months almost all of our students can easily find a job less than a year*" *(personal communication, January 2015.)*

4.4.3 Unemployment in Art and Music Institutions. Unemployment is a very important issue in arts and music studies. All of the participants mentioned that the unemployment rate is very high, unlike institutions in other fields. AMU1VR mentioned that,

> *Statistics or employment rates are difficult issue in artistic market. Unemployment is an issue but you could see our graduate students on TV after two years unemployment period. But I could say 80 per cent is working in their field after graduation and it is quite a lot in artistic fields. (personal communication, February 2015)*

Likely AMU3R says:

> *This depend very much what you are looking for. For example if we look at the arts, only two % of graduate students will be artist and rest is working in another jobs not related with arts. We have a different approach and we do not want to produce just artists. Instead we are working on programs like "arts and teacher" or "arts and therapy" and also arts in corporate*

business. According to our Alumni's statistics seventy eighty % of our graduates have a job. (personal communication, March 2015)

AMU2VR also mentions that,

Unemployment is a great problem for our students. For example flute instrument is very difficult to find job. Some orchestras quit their business and the others have enough artists…A graduate student could play in Orchestra or teach how to play or may be, work on the other jobs like playing for parties. But unemployment is a great challenge for us, it is clear. (personal communication, March 2015)

4.4.4 Strategies to deal with Quality of Education Challenge. These results about the unemployment rate and quality assurance activities of the mentioned agencies and institutions in Germany demonstrate that quality of education is not a challenge for HEIs in Germany. Arts & Music HEIs are an exceptional case due to the current needs of the market. These institutions also take some precautions and plan strategies to deal with this issue. One of the strategies is to combine some programs with each other, such as "arts and teaching" or "arts and therapy". Another strategy is building more bridges between AMU and the market which will decrease the unemployment rate in the future.

4.5 Non-traditional Age Group

Four participants in this part told that they have huge number of students and it is almost impossible to talk about approximate percentage of non-traditional students in their institutions. Other participants mentioned their views about the challenge and gave approximate number about their institutions

4.5.1 General Approach to Non-traditional Age Group. Majority of the participants mentioned that non-traditional age group has been increased in the last decade. TFH3VR told that,

Yes we have non-traditional students and I could say that this trend is increasing. Today approximately 10% of our students are non-traditional

and we expect more increase in this part of the student profile. I believe it will be 20% or 25% in the following ten years. (personal communication, January 2015)

The number of the non-traditional students in GHEIs is analyzed in to three categories such as; less than 10%, between 10 to 50% and 50% and more. In this research, seven participants mentioned that the percentage of the non-traditonal students is less than 10%, five participants mentioned that it is between 10 to 50 % and rest four mentioned that it is more than 50%.

4.5.2 Institutional approach to Non-traditional Age Group. Educational content of Fachhochschules and Technical HEIs are appealing for the older students who have a work experience. On the other hand educational content of universities are mostly attractive for the traditional students.

4.5.2.1 Universities. Universities are mostly big organizations in Germany and two out of seven participants did not want to give detailed information about this challenge. However majority of the other participants (three out of five) mentioned that, non-traditional students are less than 10 % and this is an increasing trend in Germany. AMU3R mentioned that: *"Definitely non-traditional students are increasing. That is why we are offering more courses in part time studies. These part time programs attract older students which will increase non-traditional students in the future"(personal communication, March 2015).*

4.5.2.2 University of Applied Sciences (Fachhochschules). Unlike universities, non-traditional students interested on studying in FHs. Majority of the participants (six out of nine) told that, more than 10 % of the all students are non-traditional students. Practice based programs in FHs, attracted more non-traditional students than the other institutions. FH1D explained this situation as follows: "*I could say that half of our students are traditional and the other half is non-traditional. Mainly because of our specific courses for workers, mostly older students are coming to us. But I could say that half-half.*" The ratio of the non-traditional age group is more than 50 % in three participant`s institutions, the other three participant mentioned that it is between 10 to 50 % and the other three participants mentioned that it is less than 10 % in their institutions.

4.5.2.3 Technical HEIs. Like FH`s, high percentage of non-traditional students are seen in technical HEIs. Two participants mentioned that the ration of the non-traditional age group is between 10 to 50 % and the other participant mentioned that it is more than 50%. TFH6VR explained this issue as follows,

> *In the future it is increasing and because of the demographical change, we expect decrease to traditional students but again in respect to higher education from the other parts of the community we expect an increase in non-traditional students. Totally over all 50% is non-traditional actually. With part time studies, this ratio will increase in the future I believe. (personal communication, March 2015)*

4.5.3 Approach to Non-traditional Age Group According to Educational Mission. Research institutions have high percentage of non-traditional age group students, albeit teaching institutions have a few percent of these kinds of students. AMUs approaches to this subject differentiated according to the institution.

4.5.3.1 Research Institutions. Research institutions` situation in this challenge varies according to different approaches. Seven participant`s answers are proportionally divided. Two participants mentioned that it is less than 10 %, three participants said that it is between 10 to 50 % and the other two participants mentioned that it is more than 50%. FH5R explained this issue as follows:

> *We have both kind of students and from my point of view this number is increasing. If you are looking our programs, we started with on campus education and then we set more and more e-learning studies. This will help us to reach many different kind of students. (personal communication, February 2015)*

4.5.3.2 Teaching Institutions. Unlike research institutions, majority of the participants (4 out of 6) in the teaching institutions mentioned that non-traditional students will not be a case in the future of the GHEI. U1D reasoned this point as follows,

It is very traditional right now. We could say almost all bachelor students are traditional. Majority of the Master studies are also traditional. Most of our students continue their studies after bachelor program without any break. We see such nontraditional students in our MBA studies (personal communication, December 2014).

4.5.3.3 Arts & Music Institutions. In the case of arts and music studies, it mainly depends on the institution. AMU1R said that,

No because, in the case of arts it is better to finish the studies as early as possible. In all of our programs it would be better to finish at the age of 26 because other words there are a lot of artists in the market and to be late is not case. Artists need to be young to get this education (personal communication, February 2015).

However AMU3R mentioned that,

Yes I could say non-traditional students increased but I do not know if there is a more increase in the future but I could say that this is a new factor in German Higher Education System I could say. Today we have almost 40 % of our students are non-traditional and rest is traditional, and this ratio is higher in Part time studies and master programs (personal communication, March 2015).

For this reason, this challenge is controversial in different aspects.

4.5.4 Approach to Non-traditional Age Group According to Financial Structure. Both state-financed institutions and private institutions mentioned that number of non-traditional age group students is low today. However they all expect more students in the future of GHEIs.

4.5.4.1 State-Financed Institutions. 4 out of 9 participants mentioned that the number of non-traditional students is low but it will increase in the future of GHEI. Only two participants mentioned that it is more than 50%. TFH2R explained this situation as follows: "*Yes, yes, there is a great change. We get more and more non-*

traditional students. We have more and more students who break studies, work a little than come to study our university" *(personal communication, January 2015)*

4.5.4.2 Private Institutions. Private Institutions approach to this challenge is similar with the state institutions. Majority of the participants (3 out of 7) mentioned that today the ratio of the non-traditional students is low but it will increase in the future and this is much more an issue for the future. FH2R took more attention to online education and mentioned that "*Actually we do not see this up to now because of our class room based programs. But we started online programs and it will increase the non-traditional student`s number in the future*"*(personal communication, December 2014)*

4.5.5 Strategies to Non-traditional Age Group Challenge. Participants mentioned that current programs, need to be more flexible and structured for the adult`s needs. 75 % of the participants mentioned that non-traditional students are more motivated and hardworking than others. Some of the participants mentioned that to attract more non-traditional students, more part time programs will be offered in their institutions in the future and E-Learning programs will be practiced, especially on master courses. These strategies could attract more non-traditional students and as it was already mentioned in 5.1.3. , make GHEI more attractive in the market for adults.

4.6. Diversity

Diversity is a very frequently discussed challenge in HEIs and very well-known HEIs are proud of the diversity of their programs and student profile in their campuses. As already mentioned, GHE consist of different kinds of institutions and the system is generally very diverse according to institutional diversity. For this reason, in this part, diversity of the students are asked and these answers are analyzed. Foreign students` percentage is an important criteria during the analysis of diversity of the students.

4.6.1 General Approach to Diversity. Diversity is one of the important challenges for the GHEIs. Most of the participants (15 out of 20) mentioned that it

will be a challenge for the future and obstacles in this challenge have to be reduced and removed. Rector of the FH2, mentioned that ,

> *Of course, absolutely and it is a positive challenge. More diverse students, colleges or lecturers are better educational offer should be. We are sure that we need it and we have a problematic history as everybody knows that suffers a lot in this point. That is why it is important for us (personal communication, December 2014).*

During the interviews, only one participant did not want to mention any percentage about the ratio of the foreign students. The other answers are divided in to three parts such as; less than 10%, between 10 to 20% and 20% or more. According to results, nine participants mentioned that foreign students are less than 10 %, six participants mentioned that it is between 10 to 20 % and the other four mentioned that it is more than 20 %.

4.6.2. Institutional approach to Diversity. Universities are more diverse institutions than Fachhochschules and Technical HEIs according to foreign students number. It is mainly because, Fachhochschules and Technical HEIs are not known outside of Germany.

4.6.2.1 Universities. Universities in Germany mostly have good academic reputation and high education quality. For this reason, mostly foreign students prefer or want to study in these institutions and that is why unlike general approach, foreign student percentage is very high in universities. Four out of seven participants mentioned that, foreign students take more than 20% of the students. U2R mentioned that they do not have any strategy to attract more foreign students because they are already coming and with immigrants who have foreign background, almost 25 % of their students are coming from different cultures or nationalities. Two participants mention that this ratio is between 10 to 20 % and just one participant mention that it is less than 10 %.

4.6.2.2 University of Applied Sciences (Fachhochschules). Unlike universities, *Fachhochschules* have less percentage of foreign students. Majority of the participants (Six out of eight) told that, they have less than 10 % foreign students.

They mentioned that, foreign students do not know the difference between universities and FH`s and because of this ignorance, they have less interest on studying in a FH. However, immigrants who have a German pass but belongs to different cultures or nationalities, know the system in Germany and they have interest to study in FHs. TFH4D explained this situation as follows:

> *It is difficult to say. For example we have students who have a German pass but they belong to other nationalities. If we just look at the foreign pass, I could say that we have just 5% foreign students. However my assumption is, 25 % of our students are foreigners. That is why I could approximately say that foreign students take 5 % to 25 % of our whole students.(personal communication, February 2015)*

4.6.2.3 Technical HEIs. In technical HEIs, foreign student`s percentage differs from institution to institution. For example a very well-known institution like FH2, have high number of foreign students and a less known technical HEIs like FH6 have less foreign students. Rector of the FH2 mentioned that they have 3500 foreign students who do not have German pass (More than 15%) and this number has to be interpreted more because of the immigrants who have German pass. Two participants mentioned that the ratio of foreign students is less than 10 % and the other ten mentioned that it is between ten to twenty percent.

4.6.3 Approach to Diversity according to Educational Mission. According to number of foreign students, AMUs are the most diverse institutions in Germany. Research institutions also have high percentage of foreign students, albeit teaching institutions do have less percentage of these kinds of students.

4.6.3.1 Diversity in Research Institutions. Number of foreign students in the research institutions varies according to reputation and brand name of the institution. However all participants mentioned that it is less than 20 %. Five participants told that less than 10% and the other six participants said that it is between 10 to 20%. Immigrant issue is again another point which is misleading statistics. TFH4D highlighted this issue as follows:

Yes we have foreign students and in general it is 12 % who have a foreign pass. But there are many students who have German pass with an immigrant background. That is why trusting to the statistics is not enough in this point and I believe there is something wrong in these statistics(Laughing) (personal communication, February 2015).

4.6.3.2 Diversity in Teaching Institutions. Unlike research institutions, majority of the participants (3 out of 4) in teaching institutions mentioned that foreign students will be the case in the future of the GHES. Because of the language obstacle, the percentage of the foreign students are very low in lecture based HEIs in Germany. FH4R reasoned this point as follows "*We have foreign students but I could say that the number is very low in German programs, because of the language obstacle. But in English programs 30% of our students have foreign passport*" *(personal communication, January 2015)*

4.6.3.3 Diversity in Arts & Music Institutions. Unlike other HEIs in Germany, all arts and music institutions have a very high percentage of foreign students in their institutions. AMU1 had an award because of the highest foreign student`s percentage in their institution. AMU1VR mentioned that they have many foreign students and he reported that 40 % of their students do not have German pass. Additionally he said that ,

We have a diversity management team here in AMU1 and they are focused on especially language issue. They are giving German courses and students have to have a specific degree. We do not like also that Korean students come together and do not contact with others, I mean managing the diversity is another challenge. (personal communication, February 2015)

4.6.4 Financial Approach to Diversity. Diversity challenge or number of foreign students in GHEIs do not change according to financial structure of a institution. It mainly depends on reputation, history and number of English programs. For this reason similar answers are received in both type of HEIs.

4.6.4.1 Diversity in State-Financed Institutions. One of the participants did not want to give an exact percentage and majority of the other participants (6 out of

12) mentioned that the number of foreign students is very low. Vice Rector of FH6 reasoned this situation as follows:

> *We are doing collaborations with foreign universities and also organizing abroad study programs. Our problem is that we do have English courses but we do not have any program which is completely in English. That is why foreign students have to know German. However foreign students have difficulties to get enough scores in German language skills. That is why we have less foreign students here. (personal communication, February 2015)*

4.6.4.2 Diversity in Private Institutions. Private institutions approach to this challenge is similar with the state universities. Majority of the universities (4 out of 7) mentioned that today the ratio of the foreign students is low. This ratio is much more different in graduate studies than undergraduate studies. This is mainly because most of the students come to Germany for graduate studies and there are a lot of master programs in English language. FH2R took more attention to this point and mentioned that,

> *It is difficult to give an exact percentage but we try to increase foreign students. I could say that in Master programs half of the students are international and in MBA studies 80 % is international. But in general, 20 % of our students are foreign students.(personal communication, December 2014)*

4.6.5 Strategies to Diversity Challenge. All of the participants in the research mentioned that diversity is a big challenge today and in the future of the GHEIs. The most announced strategy to deal with this challenge is to remove differences between universities and FHs. More transparent GHES has to be structured for the future. More advertising in the global markets, increasing the 100 % English programs in GHEIs and partnership activities with foreign universities are the other mentioned strategies in the interviews.

4.7. Other Challenges

In this part all of the participants gave their own ideas about the future challenges of the GHES rather than six challenges that we mentioned above. Three of the participants mentioned that, the main issues are already discussed and there will not be any another important challenge rather than the six challenges. The rest highlighted various points as a challenge in the GHES which is shown in Table 2.

Table 2

Other challenges of the German Higher Education System

Challenges	Frequency
FH - Uni difference	3
Z Generation	3
Digitalisation	2
LessNumber of special positions	1
Regional Industrial Problems	1
E-Learning	1
More global culture in Music studies	1

4.7.1 FH – University Difference in GHES. As it is mentioned in the second chapter, Germany has a unique HES and this system is mainly depending on two structures such as; universities and university of applied sciences. This structure, which was founded in early seventies, becomes an obstacle and a challenge in front of the GHES today. Bologne Process, globalization and internalization of HEI in Germany make this issue much more obvious. TFH5VR explained this issue very well:

> *Interesting thing here in Germany is that we have an unique Higher education system. Unlike rest of the world we have here normal traditional universities and also practice based applied university of sciences so called Fachhochschules... In seventies there is problem, so called lack of engineers who has a field experience. That is why Fachhochschules are founded and they graduate engineers and some other staff especially to solve this issue…*

In the last fifty years we do not have such a big problem and also traditional universities changed their structures... At the same time Fachhochschules improved themselves and do research activities or offer different courses like traditional universities. This means there are no differences between these two types of intuitions anymore...Today only difference is in PhD courses. Only universities could offer such courses and we have to collaborate with universities in this point. (personal communication, February 2015)

This challenge is also important in the other German spoken countries such as Switzerland and Austria. If the traditional structure of the HEI in European countries is considered, especially German spoken ones, it seems it will take more time to solve this problem.

4.7.2 Z – Generation. Z-Generation refers to the new generation who grow up with laptops, mobile phones and social media. It could be said that, these are the students who born in nineties and studying right now in the universities. Because of the improvement of the digital technology, this generation has a different life style. They have different values and behaviors than other generations. U1D highlighted this issue as follows,

I could also say that millennium generation have different values, understanding or culture. We have to more communicate with them and it is not easy like ten or twenty years ago. The Z generation has different needs and expectations and it will change the demand. (personal communication, December 2014)

Like U1D, U3VR mentioned that this generation is much more different and unmotivated than before*;*

The new generation is less interested on study or research in general. Minority is focused on studying and going deep in study programs but numbers of students who do not pay attention to academic studies are decreasing. Academic Attitude or academic sprite is disappearing I could say (personal communication, February 2015).

This new generation has different understanding and life style and especially academicians in social sciences have to make more research on this challenge.

4.7.3 Digitalization. TFH3VR explained this challenge as follows:

> *I think there are two more challenges. First is ongoing digitalization of the society. We have further needs of the competences of digital equipment, and I think universities have challenge to react this development of such kind of students. Second is the Z generation. They have different expectations, values and other needs. They are very different and we have to challenge with these changes (personal communication, January 2015).*

Such a change in educational sciences could affect many other parts of the HEIs in the world. Today huge libraries could be saved to the mini recorders and to reach information is much easier than ever before. TFH1VR also mentioned this issue and explained it as follows: *"Digital technologies become more and more important, for example internet. All of our students have to use internet professionally and effectively. Next generation has different values and understandings and this will be a different issue"(personal communication, January 2015).*

Chapter 5: Conclusion

According to the October, 2014 EU report, "Modernization of Higher Education", highlighted that higher education systems are changing, and will change, all over the world. The reasons and driving factors of these changes are mentioned as follows:

> We have witnessed considerable - and ongoing - changes in higher education in recent years and the landscape is constantly evolving. This is being driven by many factors: the economic and social imperatives are calling for higher levels of skills, the student body is becoming more diverse, people are continuing to study throughout their working life and there is a growing desire for more flexible study opportunities. Furthermore, as digital technologies become ubiquitous, there is an emergent expectation from society for easier access, better quality, more flexible approaches and greater online opportunities in higher education provision. (EU Report, 2014)

These changes will be challenges for HEIs and they will need strategies and solutions to deal with them. Because of the importance of the challenge, research about the current systems and different practices plays important role in the future of the HES as a whole. This paper focuses on GHEI reaction to such changes and challenges. In order to draw a conclusion of this paper, the results of this study will be interpreted from different aspects. During this interpretation, the important points are highlighted first. Secondly, all the results of the study will be compared with the EU and OECD reports and their similarities and differences will be discussed. Additionally, expert views regarding these challenges will be compared with the participants` approaches to challenge. These different approaches will tried to be reasoned and future advice will be given.

5.1 Discussion of Findings according to Conceptual Framework

The conceptual framework of this study consists of six challenges including privatization, decrease in state support, competition, quality of education, non-traditional age group, and diversity. These issues were presented to experts of the sector and the results of these interviews were analyzed in previous sections. The implications of these results, with respect to research questions, will be discussed below.

5.1.1 Privatization. According to the findings of this research, privatization won`t be a challenge in the future of GHEIs. 17 participants did not expect privatization in state institutions of Germany. However, Zusman (2005) mentioned that financial issues forces HEI to privatize their faculties all over the world. Huisman, Boer, and Botas (2011) also support this idea stating that privatization will be an important challenge in England. Kalayci provided Turkey as an example and highlighted the importance of privatization. Boer, Enders, and Leisyte (2007) also believe that privatization is very important for HEI in the Netherlands. German Higher Education Administrators accepted the financial issues but, unlike in these other countries, thought that GHEIs do not practice privatization, opting instead to solve their financial problems through other methods.

EU reports also highlight this problem. The financial crisis of 2007-2008 and the consequent economic downturn have had a huge impact on public finances in all European Union countries over the last five years. Increasing public deficits and the level of public debt has raised fears about the sustainability of public finance in the European Union.(Funding of Education in Europe 2000-2012*)* This situation also has a negative effect on HEI all over the world. For this reason, many state universities all over the world privatize some of their faculties or open private programs to deal with these financial crises. However just a few participants, (AMU2VR and TFH3VR), mentioned that they will offer some private programs in Germany like other institutions around the world.

As mentioned above, the results of the interviews generally demonstrate that privatization won`t be the case in the future of GHEI. This is mainly because the

whole German system depends on “free education”. Almost all of the participants mentioned that education must be free, and covering the costs of students, academicians and universities is the responsibility of the States. Controversially, a majority of the participants expect more private HEI in the future, mainly because of the increase of HE studies or special courses that state institutions do not offer.

From these results, it could be said that, the financial situations of GHEI are not as critical as other HEI in America and Europe. OECD reports also support this point. The following points about education in Germany are highlighted in a 2014 OECD report:

> Between 2008 and 2011, Germany’s public expenditure on educational institutions, across all levels of education, increased by 10%. However, because Germany’s GDP increased by only 2% during that period, public expenditure on educational institutions as a percentage of GDP increased by 8% over 2008 levels. On average across OECD countries, public expenditure on educational institutions increased by nearly 7% between 2008 and 2011, while GDP increased by about 1%. As a result, expenditure on educational institutions as a percentage of GDP increased by 5.4% over 2008 levels. Nevertheless, in the shorter period 2009-11, an increase in GDP combined with a smaller increase in public expenditure resulted in a 2% decrease in the share of public expenditure on education as a percentage of GPD (OECD Report, 2014).

This report demonstrates that the German state supports its educational institutions more than other states. This is why GHE administrators do not see privatization as a challenge or they do not consider changing their current system in response to the financial crises.

The other part of this challenge is whether or not, privatization is the right method to deal with these crises. “Will "privatizing" work for public institutions? Becoming more like private higher education will not solve the problem, although it may provide some interim amelioration,” says Williams (1999). Similar approaches were also mentioned by the participants of the study. Social reactions to such a change and an increase in the financial gap between poor and rich citizens could

potentially be negative results of such a transformation. For this reason, Williams says that privatization alone won`t be the solution, and the real solution depends on the productivity of the faculty. "Nevertheless, the faculty must be enabled to be more productive. The solution lies in using the faculty in the most effective way as one of the resources available in the learning process*."* (Williams, 1999) EU commission supported this approach. An EU report about the funding of HEI stays that, "In Germany, additional funds will be provided in the field of tertiary education to support the HEI to cover the high number of entrants to higher education institutions. Another priority will be financial support for students in tertiary education, including special grants for highly-talented students and young scientists" (EU Report, 2012).

5.1.2 Decrease in State Support. According to results of this study, 55% of state university administrators mentioned that there has been a decrease in state support, in respect to inflation and increase in the costs, 27% believe that state support has remained constant, and 18% noted that there is an increase. Likely, 70% of the participants mentioned that state support alone is insufficient for the university budget. However, if the Arts and Music Universities are disregarded and focus is just put on state Research Institutions, 90% of the participants mentioned that state support alone is not sufficient for the university budget. Third party support plays a crucial role in the budget of the universities. According to 85% of participants it is impossible to run their business without third party support.

These findings support Eckel and King´s (2008) approach to United States the HEI financial problems. Goldstein (2006) and Zusman (2005) also highlighted the same issue for U.S. HEIs. Kalayci mentions that state support decreased from 69% to 57% in Turkey between 1995 to 2005, and warned of the effects of such a decrease. Strazzerri (2007) also highlighted this issue by providing Italy as an example. Eckel & King´s (2008) methods to combat this challenge, such as reducing costs, increasing efficiency, and finding new sources, are also mentioned by the participants of this research. This demonstrates the similar understanding between GHEI leaders and HEA in the other parts of the world. According to a EU report regarding financing public education institutions:

> The financial and economic crisis of 2008 gave a renewed impetus to policy actions and initiatives related to education funding, and more particularly

> those promoting efficiency. As a result of the crisis, public services in Europe faced significant challenges and were put under great pressure. Education budgets, for instance, were reduced in many European countries, and mostly in those with a large public deficit. In these conditions, the need to do more with less was emphasized more than ever. (EU Report, 2009)

A 2014 OECD report contained a similar approach to the challenge. Trends for Germany also show that entry rates into tertiary programs increased by 10 percentage points from 36% in 2005 to 46% in 2011 (OECD average: 54% and 60%, respectively). Because of this increase in student numbers, state support to public HEI has increased in the last decade. However, this increase is not sufficient in respect to inflation and expenditure per student. This point is explained as follows;

> Despite increases in recent years, in 2011 Germany's total expenditure on educational institutions, from both public and private sources, as a percentage of its GDP was 5.1% – much lower than the OECD average of 6.1%. Germany spent below-average shares of GPD at all levels of education except early childhood education: 2% on primary and lower secondary education (the OECD average is 2.5%), 1% on upper secondary education (the OECD average is 1.2%), and 1.3% on tertiary education (the OECD average is 1.6%)(OECD Report, 2014).

Other EU reports also highlighted the same point and warned legislators as that, "in the context of Europe 2020 (the EU's growth strategy for the current decade), investment in education is considered a key priority. This notably requires policy actions and initiatives from public authorities, and particularly those in charge of education" (EU Report, 2014). EU commissions see these changes as an opportunity and highlighted two advices such as prioritizing public investment and deploying financial resources in 2014:

> The financial circumstances in Europe today can be regarded as an opportunity to reflect on how to build more efficient and sustainable funding systems for education. The European Commission's communication 'Rethinking Education: Investing in skills for better socio-economic outcomes (2012) clearly exposes the double challenge faced by European

> countries: firstly to “prioritize public investment in the education and training sector”, as it is a key to increasing productivity and economic growth; and secondly to “find more efficient ways of deploying available financial resources which might call for structural reforms in particular education systems (EU Report, 2014).

Hirsch (1999) had the same idea as the others, stating,

> Many factors can be held responsible for the present financial troubles of most universities, both in Western Europe and North America. The decline in government support is one important factor, but not the only one. Research, and with it graduate education, has become increasingly costly, particularly in the sciences, where ever more expensive equipment has become a necessity (Hirsch, 1999).

His ideas to deal with this issue are similar with EU reports. He highlighted finding new sources by productivity and networking activities between universities.

Certain networks are crucial for the strategy of the university. For example, many universities are faced with a decrease in state funding as a consequence of strategies to balance the state budget. If we do not want to compromise our ambitions and objectives, we have to pull away from the traditional, overly-strong dependence on state funding and gain more financial autonomy. Those networks that enable us, to find additional resources, through cooperation with partners in the private sector, must have a high priority in our strategy (Hirsch, 1999).

Participants of this research are following this advice and trying to increase third party support by new projects. With this method they are closing the gap in their budget. The main issue is increasing productivity and conducting more research, but it is not easy. Most of these third party supports have time limitations which is a great obstacle in these activities. Researchers are very uncomfortable because of the time limitations in their contracts making it difficult to solve this issue in the long term. Therefore, increasing state supports and finding more trustable and long-term resources are very important solutions.

5.1.3 Competition. Demographic changes and an increase in HEI and globalization are the main changes that make competition a big challenge in the future of HEI. However, because of the high interest in GHEI, this won`t be a crucial point in the short term. Most (90%) of the participants mentioned that student numbers have increased in the last decade, and the other 10% reported that their numbers have remained constant. This 90% also stated that they expect a slight increase in student numbers in the next decade. Additionally, 80% also added that they do not consider competition to be a challenge in the short term of GHES. OECD reports also show the same results. According to the Education at a Glance Report (2014), tertiary graduation rates are increasing in Germany. An estimated 30% of young people in Germany are expected to graduate from tertiary education in their lifetime, up from 14% in 1995 (OECD averages: 39% in 2010; 20% in 1995).

On the other hand, Goldstein (2006) and Staley and Trinkle (2011) highlight the importance of globalization and warns HEA of the great global competition in the HE market. Huisman, Boer, and Botas discuss the effects of such competition for the future of British HEI. These thoughts are also accepted by GHEI leaders. In this research, 60% of the participants stated that both global and local competition will be a challenge in the long term, 30% consider only global competition as a challenge and just 10% think that local competition will be a challenge in the future of GHES. In particular, research institutions think that global competition will be a crucial issue in the long term future (60%). Boers, Enders, and Leisyte`s (2007) solution methods such as cooperation with international HEI or decreasing obstacles for foreign students are also mentioned by the participants of the research.

An OECD report in 2014 also mentioned this approach, and warned that Germany`s international education market share is falling.

> Having hosted 6% of all international tertiary students in 2012, Germany ranks third (behind the United States and the United Kingdom) among top destinations for tertiary students enrolled outside their country of origin. However, the share of international students who chose Germany fell by almost three percentage points between 2000 and 2012, as other countries, such as the Russian Federation, attracted an increasing number of international students (OECD Report, 2014).

One of the possible reasons of this decrease could be the achievements of the Bologna process. After the Bologna process, basic standards and quality management procedures increased in EU countries, and will increase the competition between HEI in the whole EU. According to an EU report in 2008:

> The achievements of the Bologna process regarding the increase in quality issues and basic standards are explained as follows:
> the quality assessment agencies, European Association for Quality Assurance in Higher Education (ENQA),
> the universities , European University Association (EUA)
> other higher education institutions, European Association of Institutions in Higher Education (EURASHE)
> The students, European Students' Unions (ESU).
>
> The multidimensional balancing act that these parties achieved between their 'home fronts' and the different countries resulted in standards and guidelines of a process-oriented character rather than prescribing, for instance, quality assurance models or levels of quality work achievement.

Another possible reason is the increase in companies that provide higher education services. These companies have a good brand name and students think that, they will have a better chance of getting a job, if they attend these programs. EU reports about the modernization of HEI in 2014 explained this issue as follows,

> Higher education institutions are no longer the sole provider of higher education services, with a range of specialist companies now providing elements of the higher education package such as course platforms, examination and certification services, learning support, learning analytics, etc. The degree programs itself is facing competition with moves towards shorter, more targeted types of courses (EU Report, 2014).

Additionally, GHEI will face a global competition in the future to reach the best minds and have a highly talented academic staff. Researched institutions feel this need today and think about possible strategies to combat this issue.

One of the most frequently mentioned strategies is to increase the attractiveness of the programs. To achieve this goal, diversifying current programs, servicing more flexible programs (especially with E-Learning), and opening more programs are suggested. These steps could make current programs more attractive in the international market. In addition to this, cooperation with foreign HEI and local companies could increase the reputation of the HEI and make GHEI competitive in the global market. Focusing on global issues and organizing global events like panels, conferences, or seminars are mentioned. Showing the quality of education with marketing activities and advertising important points like employment rates or academic staff – student ratios are other possible strategies. These are the strategies of GHEI, and they also mentioned that legislators have to make some decisions about this challenge. In particular, Visa issues are the main obstacle in this point. EU reports also highlighted this and explained that governments across Europe are embarking on different pathways to ensure that their higher education systems have the capacity to respond effectively and efficiently to diverse economic and societal demands and global competition (EU Report, 2014).

5.1.4 Quality of Education. The quality of education is an important challenge in HES. Huisman, Boer, and Botas (2011), Staley and Trinkle (2011), Kalayci (2012) and Boers, Enders, and Leisyte (2007) see the quality of education a very important challenge for HEI in the U.S., Turkey, G.B., Netherlands, and Italy. The EU commission highlighted this issue for all of the European Universities in 2013 as follows:

> Improving the quality and relevance of higher education is also given a high priority….Two thirds of the countries report policy developments in quality assurance and employability of higher education graduates respectively. In the area of quality assurance, there is a trend towards establishing a single quality assurance and accreditation body that aims to provide more integrated and transparent services, as well as a move from program to institutional accreditation. Efforts to improve the employability of higher education graduates include, among others, an emphasis on shorter, more practically oriented courses which often focus on economic sectors experiencing skills shortages (EU Report, 2013).

These two issues were presented to the participants of the study and are analyzed in Chapter 4.4. Quality assurance is the first issue that is mentioned in the EU report. Internal quality management offices, private accreditation agencies, and the Science Commission (Wissenschaft Rat) are institutions responsible for working on quality assurance of GHEI. These institutions follow the EU standards and fulfill the requirements of the EU. "For many countries, the Bologna Declaration itself had been a reason to adapt quality assurance schemes (e.g. Germany, the Netherlands, Spain), or to introduce one." states the EU report about the Bologna process, called "The first decade of working on Higher Education Area".

What kinds of standards are required or how the system works is explained by the European Quality Assurance Register for Higher Education (EQAR). EQAR became operative as the "European register of quality assurance agencies, covering public, private, and thematic agencies, operating or planning to operate in Europe" in 2008 (EQAR, 2009, p. 31). According to EU report in 2008 the structure of the EQAR is explained as follows:

> The EQAR has a sophisticated governance structure, in which all E4 stakeholder parties are represented. Its Register committee met three times in the first year of EQAR's operation to decide on applications of agencies. Out of the 22 applications considered, one application was rejected and three were withdrawn (Register Committee EQAR, 2009), leading to 17 agencies being listed (www.eqar.eu). All EQAR-listed agencies are also full members of European Association for Quality Assurance in Higher Education. One of the drawbacks of this system appears to be that, on the basis of the same European Standards and Guidelines for Quality Assurance in Higher Education and the same reviews, different bodies reach different conclusions a situation which may be difficult to explain to general audiences.

Different agencies in Germany follow EQAR`s standards and try to keep the quality of GHEI above a limit. This is a different challenge, and could be discussed in further studies.

The second issue is unemployment rate of the graduates, which is highlighted in an EU report. The unemployment rate is only high in Arts and Music Institutions in GHES. The other 17 participants of the study mentioned that their unemployment rate is less than 5% six months after graduation. OECD reports in 2014 also support this result:

> Germany is one of the few countries in which unemployment rates have declined continuously, and across all education levels, between 2005 and 2010 and between 2010 and 2012. Between 2005 and 2012, unemployment rates decreased by 7 percentage points among adults without upper secondary education (from 20.1% to 12.8%), by 6 percentage points among those with an upper secondary or post-secondary non-tertiary education (from 11.0% to 5.3%); and by 3 percentage points among those with a tertiary qualification (from 5.6% to 2.4%). By contrast, on average across OECD countries, unemployment rates increased between 2005 and 2012 at each of those levels of education (by 3 percentage points, 1.6 percentage points and 1.1 percentage points, In 2012, unemployment rates at the different levels of education in Germany were below the OECD averages (OECD averages are 13.6%, 7.8% and 5.0%, respectively).

These statistics demonstrate that the quality of education is not a challenge for GHES. Only Arts and Music HEIs are an exception due to the current market. These institutions also take some precautions and plan strategies to deal with this issue. One strategy is to combine some programs with each other like “arts and teaching” or “arts and therapy”. These strategies could build more bridges between AMU and the market which will decrease the unemployment rate in the future.

5.1.5 Non-traditional Age-Group. According to Orr, Schnitzer, and Frackmann (2008), people who enter higher education from non-traditional routes are narrowly defined as students who accessed ‘higher education through validation of prior learning and work experience—with or without a higher education entrance examination’ (Orr 2008, p. 41). This will be an important trend increasing HEI and this change will either be a challenge or an opportunity to HEI.

Because of the unique structure of GHES, the non-traditional age-group is an opportunity for GHES. *Fachochschules* and Technical Universities are mainly attractive for older students who have experience in industry and technology. During the interviews, one third of the participants from FH mentioned that the non-traditional age group makes up more than 50% of their studies. The other one third mentioned that the non-traditional age group takes between 10 – 50% and the last one third reported that it is less than 10%.

Conversely, 60% of the participants from universities mentioned that non-traditional students are less than 10% and the other 40% of the participants mentioned that the percentage of non-traditional students is between 10 to 50%. Such a difference depends on the structural focus of the education and courses of these two types of HEI in Germany.

In spite of such a structural advantage of GHES, non-traditional student age group is less than the European average. According to Staley and Trinkle (2011), the ratio of the non-traditional age group is more than 60% in England. Zusman (2005) and Cekerol (2012) discuss the increase in non-traditional age group students in the U.S. and in Turkey. Such an increase throughout the world makes the non-traditional age group a big future challenge of GHEI. According to EU reports in 2013:

> Adult participation in lifelong learning is far from reaching the 15 % benchmark in the majority of EU countries; only five Member States (Denmark, the Netherlands, Finland, Sweden and the United Kingdom) have exceeded this target. However, current policies to increase adult participation in lifelong learning can be found in countries with rates both above and below the 15 % benchmark target. But in general, the lower performing countries report fewer measures than the high performers taken since 2011 to increase adult participation in lifelong learning (EU Report, 2013).

According to these statistics, it could be said that the percentage of the non-traditional age group (7.9%) is just over half of the EU average(15%). This is mainly because of the very low unemployment rate in Germany and traditional structure of the GHEIs. Due to these facts, older students are less interested in HE. Participants

mentioned that current programs need to be more flexible and structured for adult needs. Fifteen out of twenty participants mentioned that non-traditional students are more motivated and hardworking than others. Some participants mentioned that more part-time programs will be offered in their institutions in the future and E-Learning programs must be practiced, especially in master courses. These strategies could attract more non-traditional students and, as previously mentioned, make GHEI more competitive in the global market. Williams (1999) also highlighted the advantages of distance education and flexibility in HE studies:

> While distance education expands the ability of current programs to reach off, campus populations, this is not the greatest potential of information technology. Rather it is to challenge the assumption that education must take place in classrooms where professors teach groups of students. It is now feasible to distribute contents and allow high levels of interaction between and among teachers and students without requiring schedules to be synchronized. Non-synchronous education, already common in doctoral programs, can now be available to all students (Williams, 1999).

Out of these strategies, the EU commission also advises strengthening partnership activities in adult education.

> *The 2013 Annual Growth Survey also emphasizes the need to improve access to lifelong learning throughout working life, including for older workers, by strengthening partnerships between the public and private institutions involved in the provision, application and updating of specific skills. (European Commission, 2012a, p. 11).*

5.1.6 Diversity. According to the results of this research, it could be said that, diversity is a great challenge for Germany, as Fachhochschules and Technical HEIs are not widely known outside of Germany. Four out of seven participants from universities stated that the foreign student ratio is more than 20 % of all students. However, six out of eight the participants from FHs said that foreign students are less than 10%. The other two participants stated that the same ratio is between 10 to 20 %. Technical Institutions also gave similar answers. Half of the participants (four) from Technical Institutions mentioned that this ratio is less than 10%, and other half

stated that it is between 10 to 20 %. These results show that foreign students are hesitating to choose FHs or Technical Institutions.

The other interesting result is that, all of the participants from Arts and Music universities mentioned that, the foreign student ratio is more than 20 %. This is mainly because of the reputation of these schools and the success of these institutions against their global competitors.

Goldstein (2006) and Strazzeri (2007) highlighted this challenge for the future of HEI in the U.S. and Italy. Both experts mention that attracting more foreign students will be an important goal of HEI in the future. Huisman, Boer, and Staley also support this idea and warn of a decrease in foreign students in British HEIs. Eckley and King (2008) saw this challenge as a big threat for the future of some HEIs in the U.S., and participants in this research also have similar approaches to the challenge. All of the participants mentioned that diversity is a big challenge in the future of GHE. To deal with this issue, differences between universities and FHs need to be removed and more transparent HES must be structured. Increasing 100% English programs in GHEI and partnership activities with foreign universities both strategies that were mentioned in the interviews.

OECD reports also point to this issue. According to a 2104 review of the OECD, Germany`s market share of the international students is decreasing.

> Having hosted 6% of all international tertiary students in 2012, Germany ranks third (behind the United States and the United Kingdom) among top destinations for tertiary students enrolled outside their country of origin. However, the share of international students who chose Germany fell by almost three percentage points between 2000 and 2012, as other countries, such as the Russian Federation, attracted an increasing number of international students (OECD Report, 2014).

These results are also supported by Erasmus statistics. According to these reports, the most popular destination among students was Spain, which received 35,386 students, followed by France, the United Kingdom, Germany, and Italy.

According to these statistics and mentioned advantages in privatization (Chapter 5.1.1.) and quality of education (Part 5.1.4), decrease in the foreign students is an odd point for the GHES. Administrators and legislators of the system must focus more on these points and the mentioned strategies to deal with this challenge in the future.

5.1.7 Other Challenges. In Table 4, the other challenges of the GHES are shown. Most of these challenges are related to the other issues that have been discussed in the conceptual framework of this study. However, some challenges, like the Z-generation and digitalization of society were not touched on the conceptual framework of this research. These issues are very important and will force HEI to change some of their structures.

Despite this, many HEIs are not ready to implement such changes according to the EU reports.

> But many universities are not yet ready for this change – and government have been slow to take the lead. While there are instances of innovation, the landscape is fragmented, various barriers prevent widespread uptake, and fully-fledged institutional or national strategies for adopting new modes of learning and teaching are few and far between (EU Report, 2014).

Such changes, values of the new generation, pros and -cons of digitalization, and communication skills of future generations are all stimulating challenges for HEI, and they must be researched separately by sociologists and Higher Education Administrators. In this paper, these points are just mentioned and left for other studies.

5.2 Conclusion

As mentioned and explained in the initial parts of this research, Germany has a unique HES. It is stimulating to look at the German system in respect to the future challenges of the HEI around the world. For this reason, this research focused on this challenge, and researcher of this study tried to determine the challenges of GHEIs by interviewing administrators of HEI in the NRW state of Germany.

In this study, the following research question was examined: “How do German Higher Education Administrators describe the six challenges of Higher Education Institutions for their own institutions?” Related to this main research question, the following sub-research questions are also examined: “Are the six challenges, which formed the conceptual framework of this paper, real threats for German Higher Education Institutions? What are the strategies of these institutions against these six challenges? Are there any other important challenges for the future of the German Higher Education that are not mentioned in the conceptual framework of this paper?”

The answers to these questions are analyzed in the fourth section and compared with EU reports, OECD reports and expert views regarding higher education administration and German higher education institutions. After the discussion, the following results were achieved.

Challenges regarding privatization and the quality of the education will not be issues in the future of the HES in Germany. Despite the expert views and EU reports, a majority of GHE administrators in this research support free education and do not expect privatization in the future of GHES. They believe that privatization could cause other problems and it would be better to consider other solutions for financial problems. A majority of the participants also think that thequality of education is assured by different agencies in Germany. The EU and OECD reports support this approach and demonstrate that unemployment rates are very low in Germany. From these aspects, privatization and quality of education are not challenges in the future of GHES.

A majority of the participants mentioned that the number of students has been increasing in the last decade and only two of them mention that number remaining constant. The OECD reports also support this increase in the higher education institutions in Germany. For this reason, the participants do not think that competition will not be a challenge in the short-term; however in the long-term, participants expect more competition in higher education market. In particular, participants of private HEIs are considering local competition as a threat in the future, and administrators of state HEIs think global competition is a challenge for the future of the GHES. Increasing the attractiveness of GHEI, cooperation and

partnership activities with foreign HEI, focusing global issues, organizing international events, and alleviating the Visa and entrance issues are the main strategies against competition challenges in the future.

Decrease state support, the non-traditional age group and diversity are important challenges that GHES deals with today and will continue in the future. The EU reports and OECD reports, state that, Germany must spend more on education. According to OECD, Germany´s total expenditure on education institutions as a percentage of its GDP was 5.1% (OECD average 6.1) Inflation, an increase in costs, and economic crises make current state support insufficient in respect to other costs. For this reason, universities use third party support and negotiate with legislators as a solution.

Non-traditional age group students, also referred to as adult participation in HEI is a challenge in Germany. According to EU reports, the EU average of the non-traditional age group in higher education institutions is 15%. However, this percent in Germany is just 7.9%. More flexible programs, E-Learning programs and more contact with the business world and community are the main strategies mentioned in the research.

The last challenge for the future of GHEI is diversity. According to OECD reports, 6% of the international tertiary students chose GHEI in 2012 ranking third after the United States and Great Britain, a 3% decrease from 2000 to 2012. This challenge is especially important for Fachochules. A Majority of the participants from Fachochschules mentioned that foreign students account for less than 10 %. Conversely universities and Arts and Music Universities have more foreign students in their campuses. Removing differences between types of institutions, transparent HEI, and a competitive and global approach to HEI are the strategies mentioned by the participants.

Participants also mentioned several challenges such as digitalization and the Z-Generation, which will be also important for the future of GHES. Some strategies for these challenges are discussed in this paper, and future challenges are also mentioned.

5.3 Recommendations for Future Research

Third party support and reliable resources for the future of the GHES are very important challenges. In particular, the financial crises of the last decade highlight the importance of these challenges for HEI. It would be interesting to research these challenges, their role, and how to increase universities` share, as they are also important challenges.

Differences between Universities and Fachhochschules and their future developments are another important element. How do these institutions change their structure, and is there a transformation expected in these institution? These questions could be researched in other work.

Practices of the mentioned strategies could be researched in the future, including how effective they are, if there are other solution strategies rather than the ones previously mentioned.

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Appendix A: Invitation Email

INVITATION EMAIL

Dear Prof. Dr. X,

I am a researcher at Bahcesehir University and I am conducting a research study on challenges faced by German Higher Education System in the future. I would appreciate if you allocate some of your time for an interview. Your name and your institution name will be kept anonymously in this research. I would like to schedule an interview with you at your convenient time in your office. You could find the interview questions in the attachment part of this Email.

Not: Interview processes will be recorded by the researcher and only used in this research

Your Sincerely,

Mehmet Evrim Altin

Appendix B: Interview Protocol

INTERVIEW PROTOCOL

Interview Questions

1. How long have you been Rector/ V. Rector/ Dean in this Institution?
2. If we want to classify this Institution could we say that this Institution is Technical University, University, Fachhochschule or Private University?
3. Is this Institution a teaching university, research university or arts & Music University?
4. How many students do you have in your Institution this year?
5. What kind of programs do you offer in your institution? Bachelor, Master, PhD?
6. What about tuitions? How much cost a normal bachelor, Master and PhD programs?
7. What do you think about privatization in higher education?

   Probe : How do you think it influences higher education system?
8. Because of the economical crisis in the last decade, state funds to higher education institutions have decreased globally. First of all, do you think that state funds have decreased for German higher education institutions?

   Probe : How do you think German higher education institutions in general and your institution in specific have been influenced by this?

   Probe : How much % of your institution's budget is state-funded?

   Probe : Do you think that this state fund will be sufficient for your institution in the future?

   Probe : What are the strategies used by your institution to deal with this challenge?
9. What do you think about competition among higher education institutions?

   Probe : Which competition is a bigger challenge for German higher education institutions, local competition or global competition? Why?

   Probe : What do you think is the best way to deal with this challenge?
10. How do you think the student profile has changed during the last decade?

Probe : Do you have students older than 25? If so, what do you think is the percentage?

Probe : Do you think the number of these non-traditional students are increasing?

Probe : What do you think their motivation is to get a higher education degree after a certain age?

Probe : How do these students become a challenge for higher education institutions?

Probe : What do you think higher education institutions should do differently for these students?

11. How do you think quality of education could be a challenge for higher education institutions?

Probe : How do you think quality of education could be measured?

Probe : How do you think your institution is dealing with this challenge?

12. How do you think diversity in terms of multi-national student body becomes a challenge for higher education institutions?

Probe : What kind of strategies do you use as an institution to enroll and to keep international students?

13. I asked you some questions about challenges to higher education institutions. Can you add other challenges that could be important for the future of German higher education institutions?

14. What kind of strategies do you use to deal with these challenges?

ACCEPTANCE FORM

Date / Place

I hereby declare that Mr. Mehmet Evrim Altin could record my voice during the interview and transcribe recorded document and use this data in his research study about “Challenges for the German Higher Education System in the Future”.

Name and Surname:

Signature:

Appendix C: Curriculum Vitae (CV)

CURRICULUM VITAE (CV)

Name and Surname: Mehmet Evrim Altin

Date of Birth: 12.06.1982

Place of Birth: Konya

Marital Status: Married

Millitary Situation: Exempted in 2010

Education:

02.2014 – 06.2015	**Master Degree in Bahcesehir University**, Istanbul, Turkey M.A. degree in Higher Education Administration and Leadership.
09.2011 – 06.2012	**Bachelor Degree in Salem State University,** Salem, Massachusetts, USA B.A. degree in Mathematics with 3.43 G.P.A.
09.2004 – 09.2009	**Bachelor study in Mathematics in Zürich University,** Zurich, Switzerland Break to my studies because of the Health Problems
09.2000 – 01.2002	**German Language Course in** Istanbul, Turkey and Karlsruhe, Germany DSH degree in German Language
09.1997 – 06.2000	**Meram Fen Lisesi,** Konya, Turkey

Work Experiences:

10.2013 – 08.2014 **Senior Recruitment Specialist in Assistt**, Istanbul, Turkey

- Hiring experts and high qualified workers to Administration of the Company
- Director of the Turnover project

09.2007 – 09.2008 **HR Consultant in Berufs Informationen Zenter (Job Consulting Center)** Winterthur, Switzerland

- Writing job specifications and being involved in interviewing job applicants.

- Organizing and arranging interviews for candidates and career planning

09.2005 – 09.2006 **Student Advisor in Zurich University,** Zurich, Switzerland

- Teaching Calculus 1-2
- Mentoring.

Language Skills

- Turkish, Mother Tongue
- English, Excellent
- German, Excellent
- Spanish, Basic

Computer Skills:

- MS-Office, Windows and Mac (Very Good)
- Mathematica, Latex, Photoshop, Adobe Illustrator, Adobe InDesign and Fireworks, Atlas/ti.7.0 (good)
- Auto Cad, SAP (Basic Knowledge)

Appendix D: Turkish Summary

TURKISH SUMMARY

Çalışmanın başında da belirtildiği üzere, Almanza kendine has bir yüksek öğrenim sistemine aittir. Bu açıdan yüksek eğitim sistemini gelecekte bekleyen sorunları, Alman eğitimine bakarak araştırmak gayet önemli ve ilgi çekici olmaktadır. Bu açıdan, bu araştırmada bu konu üzerine eğinilmiş ve araştırmacı Almanyanın North Rheine Westfalya eyaletinki yüksek öğrenim yönetimi yöneticileri ile yüz yüze görüşmeler yaparak bu sorunları incelemiştir.

Bu araştırmada temel olarak 'Alman yüksek öğrenim yöneticileri, yüksek eğitim kurumlarını bekleyen altı sorunu kendi kurumları açısından nasıl değerlendirmektedir?' sorusu incelenmiştir. Bu soruya ek olarak, 'Bu altı sorun Alman yüksek öğrenim kurumları için gerçek bir tehlike midir?, Bu sayılan sorunlara karşı alınabilecek önlemler nelerdir? Bu sayılan sorunlardan başka, Alman yüksek öğrenimini bekleyen başka sorunlar var mıdır?' gibi alt sorulara da cevap aranmıştır. Bu sorulara alınan cevaplar dördüncü kısmda incelenmiş ve Avrupa birliği raporları, OECD raporları ve yüksek öğrenim uzmanlarının görüşleri ile karşılaştırılarak tartışılmış ve sonuçlar beşinci sunulmuştur.

Buna gore özelleştirme ve yüksek öğrenim kurumlarının kalitesi Alman yüksek öğrenim yöneticileri tarafından bir sorun olarak görülmemektedir. Yüksek öğrenim uzmanlarının aksine olarak, Avrupa Birliği raporları ve Alman yüksek öğrenim yöneticileri, Almanya'nın geleceğinde özelleştirmenin olamayacağını söylemektedir. Özelleştirmenin beraberinde başka sorunların doğurabileceği vurgulanmış ve finansal problemlerin çözümünde başka yolların denenmesi belirtilmektedir. Aynı şekilde Avrupa Birliği, OECD raporları ve katılımcı görüşlerine göre Alman yüksek öğrenim kurumlarının çok iyi bir kalitede olduğu ve kalite yönetimi konusunda gelecekte sorun beklemediklerini ortaya konmuştur.

Bununla beraber skatılımcıların çoğunluğu son on yılda öğrenci sayısının arttığını veya yakın gelecekte rekabet gibi bir sorunla karşı karşıya olmadıklarını belirtmiştir. Fakat yeni açılan yüksek öğrenim kurumları ve globalleşen Dünya ile beraber uzak gelecekte rekabetin önemli bir sorun teşkil edebileceği üzerinde

durulmuştur. Özellikle devlet üniversiteleri uluslararası rekabetin önemli olduğunu vurgularken, özel üniversiteler yerel rekabetin daha etkili olacağını vurgulamışlardır. Yurt dışın ile ortak çalışmalar ve ortaklıklar yapma, uluslar arası faaliyetler düzenleyip global sorunlar üzerine çalışma gibi stratejiler bu soruna karşı belirtilmiştir.

Devlet desteğinin azalması, yetişkinlerin yüksek öğrenime ilgisizliği ve çeşitlilik gibi konular ise bugün ve gelecekte Alman yüksek öğretimini tehdit eden sorunlar arasında yer almaktadır. Avrupa Birliği raporları ve OECD raporları alman devletinin yüksek öğrenim kurumlarına gerektiğinden az destek verdiğini raporlamıştır. Buna göre Almanza gayri saffi hasılasının %5.1 ini yüksek öğrenime ayırmıştır ki, OECD ülkelerinin ortalaması %6.1 dir. Enflasyon, eğitim masraflarında artış ve ekonomık krizler bu sorunu daha ciddi bir hale getirmiştir. Üniversitelere dışardan destek ve devlet desteğinin artırılması için yapılacak çalışmalar bu soruna çözüm yolları olarak göze çarpmaktadır.

Yetişkinlerin yüksek öğrenime ilgisizliğide ayrı bir sorun olarak karşımıza çıkmaktadır. Avrupa Birliği raporlarına göre, Avrupa ülkelerinde yetişkinlerin yüksek öğrenime katılma ortalaması %15 iken bu oran Almanya için sadece %7.9 dur. Alman yüksek öğreniminin daha esnek bir hale getirilmesi, online programların arttırılması ve iş dünyası ile yapılacak projeler ile bu sorunun üzerine gidilebileceği belirtilmektedir.

Son olarak da öğrenci çeşitliliği Alman yüksek öğrenimini tehdit etmektedir. OECD raporlarına göre yurt dışından Almanya'ya gelen öğrenci sayısı 2000 ile 2012 arasında %3 oranında azalmış ve %6 ya gerilemiştir. Özellikle Alman yüksek öğrenim kurumlarına has olan Fachhochschule ve Teknik yüksek öğrenim kurumları bu konuda zorluk yaşamaktadır. Bu kurumların katılımcılarının çoğunluğu, yabancı öğrenci sayısının %10 un altında olduğunu ve yabancı öğrencilerin Almanyadaki yüksek öğrenim kurumlarının çeşitliliğini bilmedikleri için kendilerini seçmediklerini belirtmiştir. Daha şeffaf bir yapının oluşturulması, uluslar arası reklam çalışmaları ve kurumlar arası farklılıkların azaltılması değinilen çözüm önerilerindendir.

Bu sorunlara ek olarak katılımcılar, dijitalleşmenin ve Z kuşağının ileride Alman yüksek öğrenimini tehdit edecek unsurlardan olabileceğini vurgulamışlardır. Bu konulara kısaca giriş yapılmış ve çözüm önerileri üzerinde kısaca durulmuştur ve daha detaylı çalışmalar için başka araştırmalara kapı aralanmıştır.