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**STUDY ABROAD MOTIVATIONS, SATISFACTION AND LOYALTY:
THE IMPACT OF SERVICE QUALITY, ACCULTURATION AND
INTERNATIONAL STUDENT CHARACTERISTICS IN HIGHER
EDUCATION**

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**Corvinus University of Budapest
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Management**

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Doctoral Dissertation

Attila Mucsi

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1. INTRODUCTION

Higher education research from the international students' perspective is an exciting field, as it allows the researcher to work with different cultures on the field and conceptualize how they see their international journey. At the same time, the researcher also has the opportunity to offer practical guidance for higher education institutions to improve the overall study abroad experience and reach higher levels of program satisfaction.

The concept of international education exists since the medieval ages however the domain received a real scientific attention only from the second half of the 20th century (Hughes, 1988). Between 1950 and 1980 the number of international students doubled in each decade (Kemp, 1990) which served as a basis for higher education institutions and governments alike to establish the international education we know today. The higher education industry is constantly growing and it is strongly intertwined with the processes connected to globalization (O'Neil & Palmer, 2004).

Higher education institutions are expected to provide high quality education for students as part of their traditional social role. Nevertheless, at the same time these institutions are also obliged to increase their revenues, along with taking care of financial performance indicators such as market share, productivity, return on investment (LeBlanc & Nha, 1997) and they must be able to methodically encourage student enrolment and retain students (Arrivabene et al, 2019). Such an effort requires a well-established strategy to manage the relationship between students and the institution through enhancing the level of service quality, satisfaction and loyalty of current and prospective students simultaneously (Asaduzzaman et al, 2013).

Institutions nowadays face many challenges, since operating in a multicultural environment makes standardization efforts more difficult (Dawson & Conti-Bekkers, 2002). Additional attention may be required to deal with students with different learning styles, expectations and previous life experiences based on their

cultural background. At the same time, students have the opportunity to choose from over 30,000 universities across the world (Webometrics, 2020), so institutions must find a way to stay ahead of their local and global competitors when it comes to attracting, recruiting or retaining international students.

Satisfied students will be more loyal, they will spread positive word of mouth which essentially serves as a free advertisement, ultimately decreasing the cost of student recruitment. Reaching that level of customer satisfaction and loyalty is a major goal for institutions as it provides the required edge in the fierce competition for students (Russell, 2005; Arambewela & Hall, 2009).

1.1. Topic outline and research relevance

The sheer growth in the number of international students makes the research field very attractive, as such growth often comes with new challenges and dimensions that are yet to be discovered. The number of international students enrolled globally have surpassed 4.5 million by 2015 (OECD, 2017) and went above 5.5 million in 2018 (UNESCO 2020). The role of international academic mobility programs is also increasing: on one hand, it supports the internationalization of the learning environment and on the other hand, it develops the cultural competence of students who participate in study abroad programs (Leutwyler & Meierhans, 2013).

The importance of service quality and student satisfaction in the higher education industry has been acknowledged by the scientific community, as there has been a surge of studies about academic service quality and satisfaction in the past two decades. While generic service quality scales (Parasuraman et al, 1988; Cronin and Taylor, 1992) were considered to be one size fits all type of measures across industries, more recent studies (Firdaus, 2006b; Brochado, 2009; Faizan et al, 2016) are using higher education industry specific service quality scales and other constructs such as loyalty and image to better explain the academic experience of international students.

Nevertheless, in case higher education institutions measure only academics related service quality, satisfaction and loyalty, they are missing out on a great deal of useful information. Institutions could increase their competitive advantage by understanding the diverse challenges and personal struggles international students

are facing during their study abroad program, which all together may impact their perception of service quality and satisfaction level.

Studies in the extant literature currently are not focusing on the search for a holistic view to describe the study abroad experience of international students, instead researchers rather look at a smaller set of constructs. An array of research is available on perceived service quality, satisfaction and loyalty of the students (Faizan et al, 2016; Arrivabene, 2019) to understand the factors related directly to the institution, and recently researchers also investigate the motivations for studying abroad, personality traits and the level of satisfaction (Mazzarol & Soutar, 1998; Yang et al, 2017) to gather insights on personal factors. In psychological research areas examples could be found when the cultural elements were examined, for instance the experienced culture shock (Sandhu & Asrabadi, 1994; Mumford, 1998) and the level of acculturation (Zhou et al, 2008) or sociocultural adaptation of international students, which is used to measure the behavioural outcome of acculturation (Wilson, 2013) in the dissertation.

Institutions could tap into an additional competitive advantage by measuring the study abroad experience beyond the academic experience of international students (Borzooei & Asgari, 2014), and such a holistic approach could include the social, cultural, physical and spiritual experiences as well. However, as mentioned earlier, higher education institutions often lack vision on the overall international student experience and the underlying reasons for satisfaction and loyalty, which are key for them to attract and recruit international students.

The current research aims to fill this gap by providing a holistic framework to investigate the study abroad program satisfaction by describing the connection between factors associated with the host country culture, host institution, personal characteristics and motivations of international students. By gaining a better understanding of the intertwined nature of the above constructs rooted in marketing and psychology can ultimately support the academic, professional and personal development of international students while giving a tool for higher education institutions to best serve their students and society.

1.2.Aim of the research and research questions

The aim of the dissertation is to explore and analyse the influence of international students' motivation for studying abroad on their satisfaction and loyalty towards their host institution, and also to examine the mediating role of acculturation in the host country culture and the perceived quality of services provided by the host institution. Following a holistic approach to describe the international student experience, the secondary aim of the dissertation is to test the effect of a wide range of control variables related to the experienced culture shock, student characteristics and personality types of international students.

The aim of the empirical research is to connect the above constructs of different research fields, expanding current theories on the topic. The proposed holistic study abroad program satisfaction framework aims to connect the motivational and cultural elements with marketing constructs such as perceived service quality, satisfaction and loyalty in the field of international higher education.

The main research question of the dissertation is the following:

What are the most important host country culture, host institution service and individual level influencing factors when measuring the relationship between self-determined motivations for studying abroad, satisfaction and the loyalty of international students?

The identified sub questions of the main research question:

1. What are the most important motivations for studying abroad and is there a direct connection to satisfaction? Does satisfaction have an impact on the loyalty of international students?
2. Does the level of acculturation mediate the relationship between self-determined motivations for studying abroad and satisfaction? Does the level of acculturation also mediate the relationship between self-determined motivations for studying abroad and the perceived service quality?
3. What are the most important culture shock factors for international students and does culture shock impact the acculturation?

4. Does perceived service quality mediate the relationship between self-determined motivations for studying abroad and satisfaction?
5. Do demographics, personal characteristics and personality traits of international students have an impact on satisfaction?

1.3.Theoretical and practical contributions

As the demand for international education exponentially grew in the early 2000's, researchers started to test the marketing and psychology constructs in the international higher education setting as well. Service quality, satisfaction and loyalty have been well-researched across multiple industries, providing a good base for further research in the higher education industry. At the same time, an array of theoretical frameworks appeared that aimed to explain the cultural aspects of international education, making improvements to the definition of constructs such as culture shock (Mumford, 1998; Hidasi, 2004), acculturation (Zhou et al, 2008; Wilson, 2013) and motivations for studying abroad (Sheldon et al, 2017; Yang et al, 2017). Based on the extant literature it seems that researchers understand the need for research beyond the academic needs of international students (Borzooei & Asgari, 2014) however there are not any holistic approaches that describe the study abroad experience of international students, including the influence of the host country culture, the services received from the host institution and the personal characteristics as well. The dissertation aims to explore these interrelationships and identify the most important factors that define these constructs and impact the satisfaction and loyalty of international students, which are the key drivers of student recruitment and retention.

The dissertation aims to expand existing theories by finding new aspects when theorizing the relationship between personal, institution level and country level constructs and satisfaction. The predictions in the dissertation are grounded in existing models, which are also confirmed by the primary qualitative research.

The expected theoretical contribution of the research is that it will expand the current theories developed in the fields of marketing and psychology, filling the gaps by connecting the study abroad motivations, culture shock, acculturation,

perceived service quality, satisfaction and loyalty constructs. This can eventually lead to developing a holistic view on the study abroad experience and program satisfaction of international students. At the same time the dissertation provides a theoretical synthesis of the culture shock, acculturation and service quality constructs in the context of international higher education. Additionally, as most studies related to international higher education focus on top study abroad destinations (for instance the US, UK, Australia or China), the current research also offers the opportunity to test the validated scales (found in the extant literature) in a Central-European setting.

The practical implications of the dissertation offer higher education institutions the insight to build a more successful study abroad experience for international students. With a solid understanding of the motivations for studying abroad, the shocking cultural elements and acculturation, and the service quality perceptions of international students, institutions can customize their programs and marketing activities to maximize international student satisfaction and loyalty. The results of the dissertation can be used as a guide by higher education institution (HEI) staff and external advisors to support the personal, professional and cultural development of their international student community. The measurement instrument could be later on used as is or can be adapted by HEIs to different cultural environments as well. Ultimately the application of the results and measurement scales of this dissertation could lead to an increased amount of loyal international students, who will spread positive word-of-mouth (WOM) or return to enrol for a different study program offered by the same HEI.

1.4. Structure of the dissertation

The research topic revolves around six key constructs: self-determined motivations for studying abroad, culture shock, acculturation, perceived service quality satisfaction and loyalty. The first section is the introduction of the topic, followed by the literature review related to the above-mentioned constructs. In the third section the empirical research plan, methods and research results are discussed, and the final conclusions can be found in section four. At the end of the dissertation, in

section five and six, the references and supporting materials, such as interview threads and questionnaires are shown.

In the introduction (1) the relevance of the topic is demonstrated, along with the research aim and research questions, followed by the expected theoretical and practical contributions of the dissertation.

The literature review (2) encompasses multiple constructs that were deemed important to develop a holistic theoretical framework to assess the study abroad program satisfaction and overall experience of international students. Firstly, the higher education industry is introduced to better understand the roles of HEIs and students, along with the main drivers of the industry and the offered international programs. Secondly, the motivations for studying abroad and the related measurement scales are described, which is followed by the review of the extant literature on culture shock and the acculturation process of international students. Next the service quality measurement models are discussed and then the customer satisfaction and loyalty constructs are detailed. Finally, the international student characteristics, including student demographics, personal student background characteristics and personality traits are presented, followed by a summary of the literature review and the **proposed theoretical framework**.

Next, **the empirical research (3)** section details the research plan, comprising of the research strategy, research questions, research design and the timeline of the research. Following that, **the qualitative research** method, data collection and sample description is presented with the results at the end. After that the **quantitative research** method is discussed, starting with the formulation of the research hypotheses, the **research model** and the operationalization of the examined constructs. Then the research results are presented, first the demographics, then the PLS method and the attained results of the PLS analysis. At the end of this section the **confirmed research model** is presented through the hypotheses of the dissertation.

The **conclusions (4)** provide a summary of the results, the final theoretical and practical contributions of the attained results and discusses the limitations, delimitations of the dissertation, and in closing, offers future research directions.

The **references (5)** and **appendix (6)** contain the analysed literature and the supporting materials such as the qualitative interview thread and the quantitative measurement tool.

2. LITERATURE REVIEW

2.1. The higher education industry

In this section the higher education industry is introduced to gain a deeper understanding of the roles of HEIs as a service provider and the concept of students as customers. Following that the international education landscape is shown in figures with regards to the type of institutions and the global and Hungarian international student trends. Finally, the key economic drivers and benefits are discussed to gain a view on the internationalization efforts of HEIs.

The government expenditure on education in terms of GDP percentage has gone up from 3,9% in 2000 to 4.5% by 2016 in case of top education exporters, signifying the importance and strength of the education industry within the service sector. The top three education exporters had the highest yearly average government expenditure (between 2000-2016: the US: 4,9%; the UK: 5,1% & Australia: 5%) in terms of the percentage of respective gross domestic product of each nation (The World Bank, 2016).

The number of private universities is growing, adding to the pressure on public institutions, where the values and objectives are not necessarily aligned as clearly as for the market-oriented private universities (Berenman et al, 2006). Public and private universities are structurally different in many aspects. Public institutions are mostly funded by governments, while private institutions heavily rely on endowments and program fees paid by students, very often with negligible amount of government funding (Zebal et al, 2012). There could be further differences in institutional processes related to the enrolment, teaching, examination, marketing, enabling functions, resources and services (Gago, 1994). There are differences in the composition of the student body as well, due to the fact that many students apply for private education when they were not accepted to a public institution (Cabrito, 2004). The very survival of private universities depends on the maintenance and year on year growth in student enrolment and student retention (Ferreira & Hill,

2007), however the competition for students is increasingly applicable for public higher education institutions as well.

Globalization has resulted in an increased competition in all sectors, and the higher education industry is no exemption from this. The shrinking government funding drives institutions towards different financial sources and the accelerated development of international education resulted in an intense commercial competition (Firdaus, 2006a). The constantly increasing demand for higher education and the application of customer models in the higher education context pushed HEIs to direct their marketing practices towards claiming differentiated unique value propositions and offering more ‘value for money’ (Molesworth et al, 2010). The main goal of HEIs, particularly the ones exporting transnational education, is to maintain or increase their competitive advantage through superior service quality and satisfaction (Hussey & Smith 2010). HEIs are more and more dependent on the number of international students, as they contribute to the HEI budget by paying full tuition fee (Hetesi & Veres, 2013).

The financial and non-financial benefits make the international education market more attractive both for institutions and countries, accordingly market share has become a key performance measure for universities (Arambewela & Hall, 2009).

2.1.1. Higher education as a service and the Student as Customer

Higher education services are rarely considered to be part of the service industry, and little focus is given to the ways of delivering and maintaining quality (Marimon et al, 2019). Higher education is within the domain of services marketing, where the performance of services depends on the situation (Schoefer & Ennew, 2005), because services performed under different circumstances by different people will not be the same (Zeithaml & Bitner, 2000). Some argue that education shows distinct characteristics compared to other services (Quinn et al, 2009), however many researchers consider education as a marketable service as any other service (Vangelis & Hill, 2019).

Based on Weaver (1976) there are four potential customers for HEI services that are the government, administrative staff working at the institutions, academic employees and consumers (students). Considering the length limitations of this

paper, the dissertation focuses exclusively on the student perspective. Based on the framework of Lovelock (1983) in case of higher education services the participation of the customer (student) is a crucial part when providing the service, and the goal of the institution should be to form long term relationships to build loyalty. Owlia and Aspinwall (1996) recommended a customer-oriented strategy which considers students as customers receiving the services. Students do active search to check service quality dimensions (Donaldson & McNicholas, 2004) and also tend to seek word-of-mouth information when choosing a university (Cuthbert, 1996).

In the student as a customer (SAC) paradigm, students are paying for educational services, hence they should be considered as a consumer of the higher education institution, therefore a marketing exchange can happen (Hill, 1995). Supporters of the SAC approach claim that this way more focus could be placed on student learning and teaching in a comfortable environment that is in line with social norms (Clayson & Haley, 2005). It also advances important market-based assets such as customer satisfaction (Yi, 1990) and the management of the strategic relationships (Anderson & Narus, 1990).

On the other hand, the SAC approach may be abused and could seem detrimental, as the consumerist perspective in the higher education context may make students feel entitled to dictate the terms of getting their degrees (Naumann et al, 2002). Marimon et al (2018) claims that the main goal of education is not to satisfy students but to provide them with the means to become professionals in their area, which is a different approach from the regular customer and service provider relationship.

The currently prevailing SAC approach is widely spread by leading exporters of transnational education (Zajda & Rust, 2016). The policies of governments and higher education institutions and the contemporary quality discourse all build on the customer model, where HEIs are the service providers and students are the buyers. Accordingly, students adopted a customer-minded approach and compare institutions based on national and international rankings to find programs that offer the best value for money. The expected and perceived quality in higher education is mostly defined by the students' experience which is captured and reinforced through satisfaction surveys and various feedback systems (Vangelis & Hill, 2019). In spite of criticism regarding the students' ability to judge quality (Balloo et al, 2017), many studies aimed for a customer model where quality assurance is driven

by accountability and ‘value for money’ while acknowledging students as rational customers (Appleton-Knapp & Krentler 2006; Douglas et al, 2015). Based on Vangelis & Hill (2019):

‘This has led to an over-concentration on the use of student satisfaction surveys as a means to measure quality, which is primarily linked to the prevalence of service quality in higher education quality management’ (p.9).

In more recent SAC models, we see students as significant stakeholders who are active, responsible and accountable participants in making the most of their educational experience (Clayson & Haley, 2005; Finney & Finney, 2010). Nowadays the SAC approach is widely accepted in the research domain of higher education, with the additional clause stating that students are also responsible for their obtained results throughout their programs (Eagle & Brennan, 2007). Also, even though HEIs are aiming to be responsive to student needs, Houston and Rees (1999) emphasized the importance of having a common understanding between the institution and its students regarding their mutual obligations, encompassing both the student requirements and the HEIs’ expectations towards students.

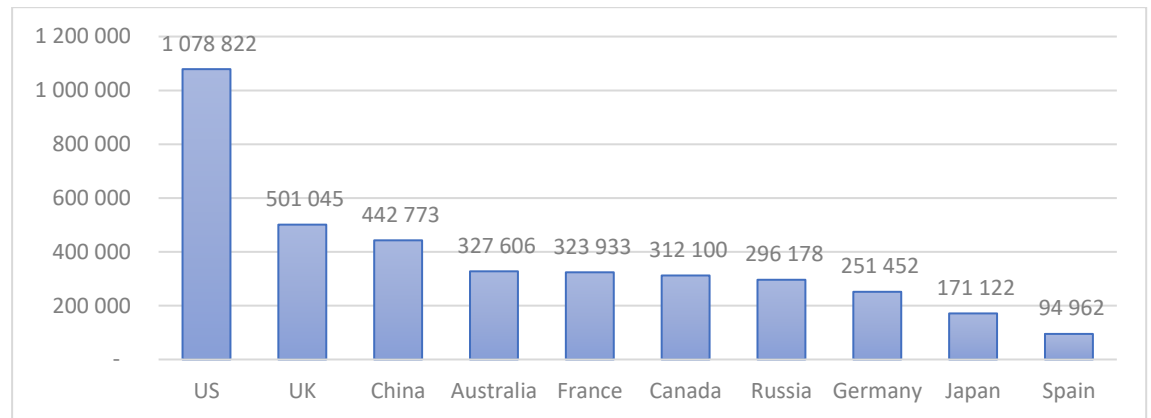
2.1.2. International higher education

International academic mobility is often referred to as cross-border education, transnational education or borderless education (Knight, 2018), in this dissertation the used term is international academic mobility, referring to the mobility of students, programs, projects and service providers. Altbach (2013) found that international academic mobility has become mission critical for HEIs. Institutions are launching academic programs and delivering education across the globe and are increasingly intertwined in a global cooperation (Knight, 2018).

The International Institute of Education launched Project Atlas (2017) and found that the top ranked international student destinations are the USA, the UK, China, Australia, France, Canada, Russia, Germany, Japan and Spain. It is important to note that the fast growth in China resulted in a historical overtake, now China is the 3rd most popular study abroad destination instead of Australia. Considering the

accelerating trends, China will soon be approaching onto the UK in terms of the yearly number of international students hosted (Figure 1.).

Figure 1. Top study abroad destinations (international students per country)



Source: IIE, Project Atlas (2017)

The top education exporters with the most international branch campuses are the USA, Australia, the UK, France and Russia, while the biggest education importers (hosting branch campuses) are the United Arab Emirates, China, Singapore, Qatar and Malaysia (Garrett, 2016) – some of which are striving to become education hubs themselves. Educational institutions aim to differentiate their offerings through various marketing campaigns in order to attract students in the highly competitive education market. The market share of international education providers is heavily influenced by policy makers, for instance Australia experienced a significant inflow of international students after the Australian Federal Government passed a law which allowed the application of students from foreign countries (Arambewela, 2006).

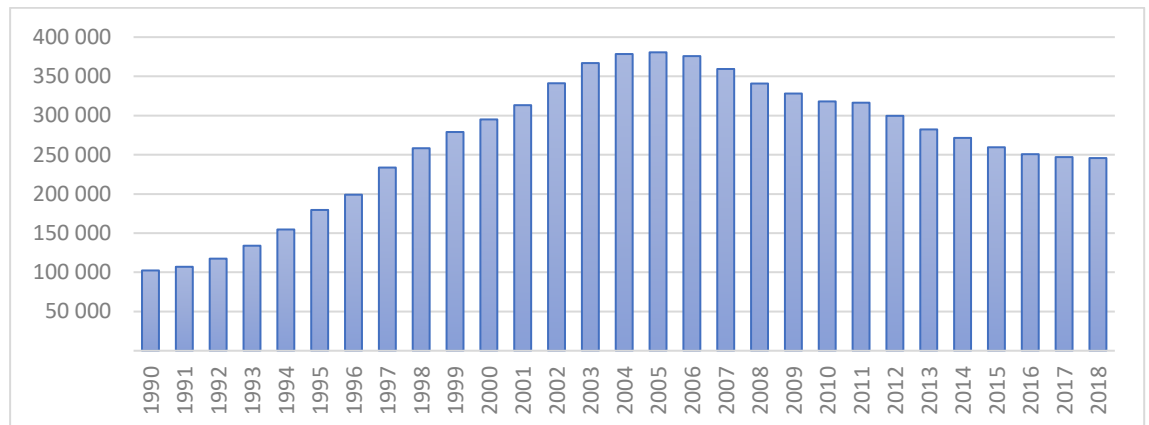
Education hubs are the third generation of international academic mobility, expanding the horizon using the building blocks of the first generation of student mobility and the second generation of program and provider mobility. There are developing education hubs in Hong Kong, Singapore, Malaysia, the United Arab Emirates, Qatar and Botswana, however they are not yet able to compete with the already popular study abroad destinations such as the USA, UK, China or Australia. It is important to note that the top education provider countries are exporting

education through branch campuses, which are set up across the world (Knight, 2018).

2.1.3. Internationalization in Hungary

As it was laid out in the previous sections, HEI competition is increasing, while in many countries the number of domestic students is decreasing. In the Hungarian higher education system, there are 64 universities offering programs at 190 faculties (Oktatási Hivatal, 2020). The number of enrolled students crossed 100,000 in 1990 and reached its maximum in 2005 by having 380,632 students enrolled in HEI, and by 2018 it gradually dropped to 245,764 active students in Hungarian higher education. Considering the trends, a year on year (average 9%) growth could be observed between 1990 and 2005, while a continuous year on year decline (average 3%) is apparent from 2006, as shown on Figure 2. (Oktatási Hivatal, 2020).

Figure 2. Students enrolled in Hungarian HEIs



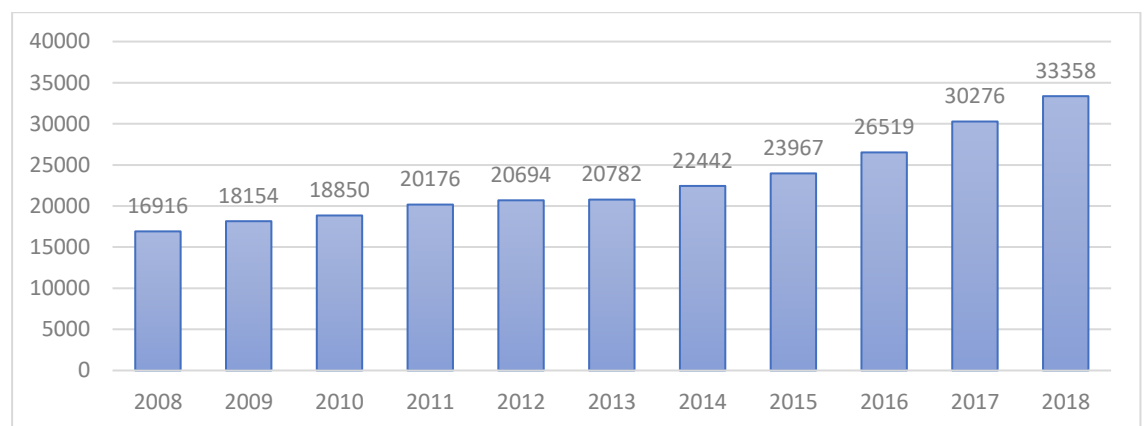
Source: Oktatási Hivatal (2020)

The change in the trendline could be the impact of the reorganization of the HEI system in Hungary. After Hungary joined the European Union in 2004 and subsequently adopted the Bologna Process from the fall of 2006, it triggered the separation of Bachelor and Master programs, resulting in a significant reduction in majors in Hungarian HEIs. Also, it allowed more room for academic international mobility programs, mainly through scholarships offered in the ERASMUS (European Community Action Scheme for the Mobility of University Students)

program or funds by the government distributed through foundations such as Tempus Public Foundation.

While the overall number of HEI students enrolled in Hungary was decreasing from 2006, the growth of the international student body has accelerated in the last few years. As shown on Figure 3, compared to the year-on-year average 7% growth between 2008 and 2018, it has reached an average 12% year-on-year growth between 2015 and 2018. Considering the last 10 years of the chart, the number of international students enrolled in Hungary doubled (Oktatási Hivatal, 2020). Besides ERASMUS, international programs such as The Global Alliance in Management Education or CEMS (formerly the Community of European Management Schools and International Companies) and CEEPUS (Central European Exchange Programme for University Studies) further increase the reputation of Hungarian HEIs, supporting the inflow of international students (Berács & Malota, 2011).

Figure 3. International students enrolled in Hungarian HEIs

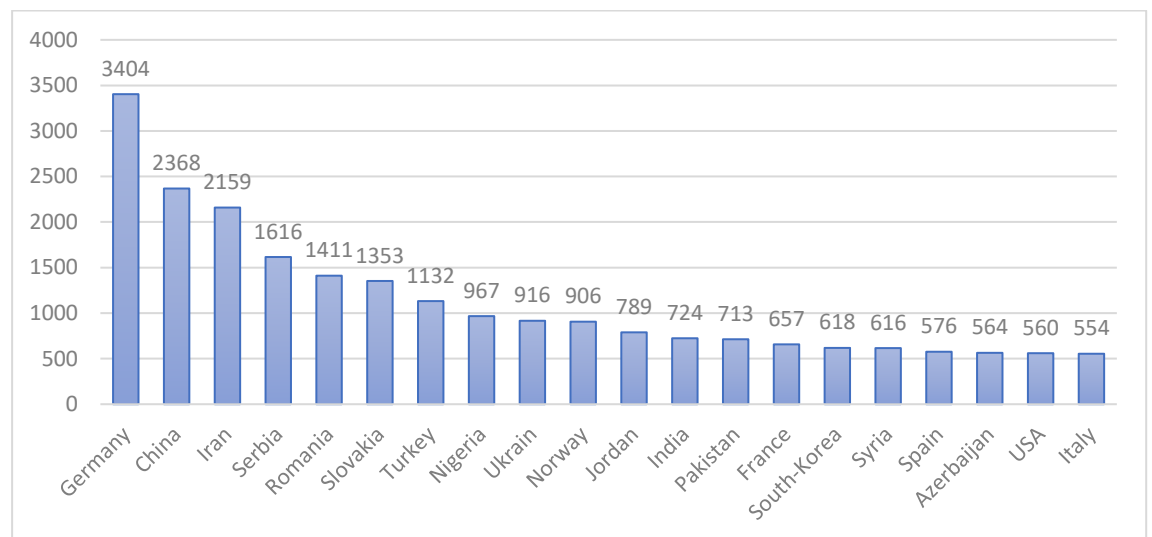


Source: Oktatási Hivatal (2020)

Naturally the decline in the overall student numbers and the increase in the number of international students means that the ratio of Hungarian and international students is changing in favour of the international students. In 2008 only 5% of the student body was international in Hungarian HEIs, however it gradually went up from year-on-year average 8% to 14% by 2018, showing the importance of understanding the needs, wants and wishes of international students in Hungary.

Alongside with the growing body of international students, the number of sender countries have increased as well: international students arrived from 118 countries in 2008, which grew to 162 nations by 2018, denoting the growing cultural differences as well. Considering the country of origin, 30 countries sent 80% of the international students, and 20 countries account for 68% of the international student body in 2018 in Hungarian HEI, as it can be seen on Figure 4. (Oktatási Hivatal, 2020).

Figure 4. International students in Hungarian HEIs per sender country in 2018



Source: Oktatási Hivatal (2020)

Germany, China and Iran are the top 3 sender countries, responsible for almost a quarter of the total international student community in Hungary. As it was expected, among the top 10 sender countries there are neighbour countries (Serbia, Romania, Slovakia, Ukraine), however Nigeria and Norway may be less expected on the top of the list, considering that other neighbours of Hungary (Austria, Croatia and Slovenia) and top study abroad destinations (the UK, Australia, Canada and Japan) sent fewer international students to Hungary in 2018. It is important to note that between 2008 and 2011, in 4 consecutive years, Romania and Slovakia were the top sender countries. It could be assumed that the decreasing trend is connected to passing the dual citizenship law in Hungary in 2010, allowing Hungarians living

outside the border to apply for Hungarian citizenship and apply to HEI as Hungarian citizens (Berács et al, 2010).

Due to the outbreak of the pandemic Hungary shifted to a virtual educational environment, which was in effect in 2020 and 2021. This had an impact on international students in a sense that they expected face-to-face classes at some point of the program, whereas the online interaction appeared to be less valuable for them. Nevertheless, international students in Hungary appreciated the digitalization efforts and the high-quality preparation from the teachers, especially in case teachers had follow up questions with regards to the well-being of students. (PÁLYÁZATI PAVILON 2020).

2.2. Study abroad motivations

As the motivations are the beginning of the journey of international students, this section discusses the international students' initial motivation definitions and measurement categorizations in the higher education context.

Motivation is a complex, dynamically changing process, built on psychological factors such as needs, wants and goals that determine the enrolment choice of international students (Maringe, 2006). Motivations before the start of the study abroad program are assumed to remain largely consistent, as they comprise of deeper intrinsic motivators (Herzberg, 1987), unlike expectations which may change over the course of the study abroad program and are harder to recall (Appleton & Krentler, 2006). Students have a variety of intrinsic motivators, such as academic self-image, degree aspirations, personal and professional goals, desire for recognition and expectations for success, which contribute to the persistence of students (Danielson, 1998). These results are also in line with the findings of Herzberg (1987), namely that the real motivations come from within the person. Even though the HEI satisfaction surveys tend to focus on the key satisfactory and dissatisfactory items, the actioned items mostly only aim to reduce dissatisfaction, instead of focusing on both categories, of which latter comprises of the real motivators (Danielson, 1998). Motivations are different from the traditional expectation construct in a way, that motivations are deeper, internal drivers (Herzberg, 1987), a commitment to self-realization (Danielson, 1988) preceding the

setting of expectations. Accordingly, in the dissertation motivations are the starting point of the theoretical framework, while expectations are not measured as a separate concept, but captured as part of the perceived service quality.

2.2.1. Push and pull factors

McMahon (1992) was among the first researchers to examine the motivations of study abroad students and he found that there are global ‘push’ factors and country specific ‘pull’ factors that drive the host country and host institution choices of international students. The main stream of research accepts the push-pull dichotomy sequence as educational motivation categories, where push factors are internal drivers while pull motivators are rooted in the external environment (Ahmad & Buchanan, 2017; Mazzarol & Soutar, 1998). The current literature considers push factors to be the initial motivations that create an urge to achieve or avoid a certain outcome, essentially answering why students should study abroad.

Following that, pull factors appear as secondary motivators, supporting the decision making by providing answers to where and how those initial motivations can be achieved in the best possible. Hetesi and Kéri (2019) found that one of the motivators for international students is to learn about the culture of the host country, which could be considered a push factor (an intrinsic motivation to study abroad) and a pull factor, defined by the targeted host country culture. Li and Bray (2007) reassessed the push and pull factors in a competitive environment, conceptualizing them as dynamically changing variables in an integrated higher education market. This means that the change of push or pull forces in one country affects the relative strength of push and pull forces in another country, for instance the increasing visa restrictions in the US will decrease the number of applicants, who will then search for another host country instead. Study abroad motivations are influenced by numerous ‘push and pull’ factors, appearing as a sequence (Mazzarol & Soutar, 2002; Gáti & Malota 2017):

- as a first step, students decide that international education is more favourable than domestic HEIs (push factors dominate in this decision),
- secondly, students consider the potential host countries (the role of pull factors is increasing) and

- finally, they choose the host institution, in which stage pull motivating factors dominate the decision-making process.

Similar to the above, Arambewela (2009) investigated the choice of host country and HEI, stating that:

'The choice of a study destination is normally considered as a two-stage process, where the student chooses a country first and then the educational institution, though the choice of a country and an educational institution can also be separate and independent of each other' (p. 557)

This assumes that the previously established push-pull sequence (Mazzarol & Soutar, 2002) may not need to follow a strict order. In order to attract international students, host countries and institutions are required to constantly adapt to the changing needs (Keller, 2017), which is particularly true in the competitive nature of the study abroad environment as described by Li and Bray (2007).

As assumed in the dissertation, there is a connection between initial study abroad motivations and the satisfaction of international students. Joran (2011) found that different initial study abroad motivations lead to different satisfaction levels among Europeans and non-European citizens. The push and pull factors essentially shed light on why international students chose a certain host country or host institution over another. Based on this insight, HEIs are able to assess their strengths and weaknesses in different areas and form the most efficient marketing mix that is in line with their internationalization plans (Ahmad & Buchanan, 2017).

The push and pull factors (McMahon, 1992; Mazzarol & Soutar, 2002) provide a good overall picture of the motivations of international students through a variety of motivation types, however it is often difficult to decide whether the push or pull factors was first (or which should come first), especially when students identify multiple motivating factors. Also, the push and pull categorization focuses on the differences between the host country and host institution level motivations which does not necessarily predict the level of student satisfaction as an outcome. For instance, a push factor can be expected to result in a more positive experience, when a student decided to study abroad because he wanted to gain first-hand experience

living abroad. On the other hand, a less positive experience is expected in case the push factor was the lack of quality study programs in the home country, forcing the student to study abroad. This ultimately shifts the question towards the level of autonomy when making the decision to study abroad.

2.2.2. Self-determined motivation (SDT)

According to the self-determined motivation theory (Deci & Ryan, 2000; Ryan & Deci, 2017), the behaviour of individuals depends on the degree of autonomy and self-determination, and it predicts different functional outcomes. Yang et al (2017:96) described it the following way:

'SDT proposes that all behaviours can be located on a continuum ranging from feeling completely controlled and non-self-determined, to feeling fully autonomous and self-determining'.

In case of the self-determined behaviour, individuals perceive that their actions were triggered by their own will (Ryan & Connell, 1989) and it feels like these actions are in line with their preferences, intrinsic values and interests (Sheldon et al, 2017). On the other end of the continuum, the controlled motivation is driven by external factors, where the actions of individuals are defined by forces such as material rewards, internal pressure or the avoidance of less favourable outcomes. In cultural researches it is important to note the difference between the concepts of autonomy and individualism. On the cultural level, individualism refers to the prioritization of individual goals and needs over the goals and needs of the wider society. On the personal level, autonomy refers to the opportunity to make self-sufficient choices as opposed to being forced to act in a certain way (Yang et al, 2017).

Based on cross-cultural studies, all humans are aiming to maximize their freedom to take actions as they wish (Chirkov, 2007), however different cultural settings may impact the experience of SDT (Ginevra et al, 2015) and the need of self-regulation (Church et al, 2013). Self-determined academic motivations (versus controlled motivations) lead to better academic performance and higher levels of satisfaction at Chinese students (Vansteenkiste et al, 2005), and cross-cultural researches found a positive correlation between self-determined motivation and

satisfaction (Chirkov et al 2003; 2005). According to SDT, individuals have three inherent needs to feel satisfied: autonomy, competency and relatedness – which refer to the freedom to act, the effectiveness of the actions and that these actions create meaningful connections. International students are more likely to collect satisfying experiences if they made a self-determined decision to study abroad, as in that case they are driven by interest, curiosity or self-actualization, instead of pursuing material rewards or being pressured by family members or the wider society (Yang et al, 2017). The study abroad motivation definitions are summarized in Table 1.

Table 1. Study abroad motivation definitions

Author(s) and year published	Motivation type	Motivation elements
Maringe (2006)	Intrinsic	needs, wants and goals
McMahon (1992) Mazzarol & Soutar (2002) Li & Bray (2007) Ahmad & Buchanan (2017)	Intrinsic External	global ‘push’ factors country specific ‘pull’ factors
Danielson (1998)	Intrinsic	personal goals and aspirations
Leutwyler & Meierhans (2013)	Intrinsic	personal, professional and culturally oriented
Malota (2016)	Intrinsic External	obligatory program, possibility to try something new, learn about a new country
Deci & Ryan (2000); Ryan & Deci (2017); Yang et al (2017); Sheldon et al (2017)	Intrinsic External	continuum ranging from self-determined motivations to controlled motivations

Source: own construction

2.2.3. The motivation construct in higher education

In the dissertation the motivation construct is an antecedent of satisfaction, comprising of intrinsic and external factors as well, where the level of autonomy predicts the satisfaction of individuals (Yang et al, 2017; Vansteenkiste et al, 2005; Chirkov et al 2003; 2005) as shown in Table 2. In the dissertation motivations are also antecedents to acculturation but that connection is presented in the relevant section of acculturation (Table 10). The connection between motivations and service quality is under researched, however the qualitative empirical research will aim to find more details on this connection.

Table 2. The motivation construct in higher education

Author(s) and year published	Relationship between constructs	The role of motivations for studying abroad
Yang et al (2017); Vansteenkiste et al (2005); Chirkov et al (2003; 2005)	Motivations → Satisfaction	Antecedent

Source: own construction

2.2.4. Measuring study abroad motivations

There is a wide range of reasons for international students to decide to study abroad. From the macro perspective Arambewela (2003) found that international students examine the country level socio-economic and environmental decision-making factors, for instance the life-style, cost of living, transportation services, racial or religious discrimination, visa regulations, potential to immigrate, friends and relatives, climate and culture in the chosen host country. At the same time students consider the academic aspects of their lives abroad such as course offering, program fee, available facilities and supporting services, intellectual atmosphere, teaching quality, teaching staff and methods, accreditation policies, image and prestige when choosing the host institution (Arambewela, 2003). The most important push factors include the desire to understand different societies (Mazzarol & Soutar, 2001), relatively low tuition fee and living cost in the host country (Hung & Ho, 2000), the perceived quality of education and equipment, the perceived value of a foreign diploma on the job market, the difficulty of enrolment in domestic institutions and the potential to settle in the host country (Maringe, 2006).

Focusing more in the development goals, based on Leutwyler and Meierhans (2013) international student motivations can be categorized as personal, professional and culturally oriented. The authors examined 260 students to explore their motivations to participate in a study exchange program, where students claimed to study abroad because they wanted to broaden their personal horizon, practice and improve languages, meet people from different cultures, make useful experiences for their future profession, invest in their personal education, get to know a foreign country, improve their professional prospects, experience something new, become more

autonomous and independent, leave home, leave the home university or go abroad because they know somebody in the host country. All of the listed items are push factors, the intrinsic and initial motivations that wake the desire in students to complete part (or all) of their education in a foreign country. International students are often driven by one or more of the above motivations, which is a necessary step before they start looking for the host country or host institution to study abroad.

The country level pull factors include the country image (Alves & Raposo, 2007), previous knowledge about the country, good social and cultural connection between the home country and host country, geographical distance, alumni network, accreditation of previous studies (Mazzarol & Soutar, 2012). Secondly, the institutional image pull factors can be divided into three categories (Sung & Yan, 2008): university personality, prestige and reputation. Mazzarol et al (1997) defined six factors that affect the choice of host country and host institutions as shown in table 2.

Malota (2016) surveyed 1566 international students studying in Hungary about their motivations to select a foreign higher education institution. It was found that 46% of the respondents mentioned the higher quality of education, 46% also desired to know about different cultures and 43% of them factored in a reasonable cost of living (the multiple-choice survey allowed the total sum to be over 100%). Further motivation factors on the list were mentioned by less than 25% of the respondents. It is clear that international students need to consider many factors when choosing a host country, such as the cost of living abroad, safety level, ease of getting by in the local language, the expected support abroad and most importantly whether they can realize their initial motivations in the host country. After a careful consideration of the country level pull motivators, international students need to think about the HEI, which is often associated with their global career expectations, more specifically, whether the host institution can prepare them (and get them in to an interview) with the ideal employer.

Students tend to look for a better education opportunity abroad, when they feel that they could achieve more, or when they are not able to enrol in a domestic institution for any reason: for instance, their preferred subject or program is not available (or

of low quality), or the opposite, there is a strong competition and it is too difficult to get accepted in the home country.

The study abroad motivations types are categorized in Table 3 based on the motivation sequence confirmed by Mazzarol and Soutar (2012), where the motivations are separated based on the intrinsic push factors and country level and HEI level external pull factors.

Table 3. Study abroad motivation types

Author(s) and year published	Motivation type	Motivation attributes
Danielson (1998)	Intrinsic push factors	academic self-image, degree aspirations, goals, desire for recognition expectations for success
Leutwyler & Meierhans (2013)		broaden personal horizon, practice and improve languages, meet people from different cultures, make useful experiences for their future profession, invest in personal education, get to know a foreign country, improve professional prospects, experience something new, become more autonomous and independent, leave home, leave the home university, knew somebody in the host country
Mazzarol et al (1997)		the amount and availability of information, influencers and advisers around the student, financial and mental costs, physical environment, emotional environment, geographical proximity, time zone and travel time, social connections with relatives or friends who live(d) in the host country
Mazzarol & Soutar (2001)	External pull factors, country level External pull factors, HEI level	the difficulty of enrolment in domestic institutions, potential to settle in the host country, reputation, perceived quality of education, perceived value of a foreign diploma on the job market
Arambewela (2003)		lifestyle, cost of living, transportation services, racial or religious discrimination, visa regulations, potential to immigrate, friends and relatives, climate and culture
Hung & Ho (2000)		tuition fee and living costs
Mazzarol & Soutar (2012)		previous knowledge about the country, good social and cultural connection between the home country and host country, geographical distance
Sung & Yan (2008)		university personality, university prestige, university reputation
Arambewela (2003)		study programs, courses, program fees, available facilities and supporting services,

	External pull factors, HEI level	intellectual atmosphere, teaching quality, teaching staff and methods, acceptance of course credits at the home institution, image and prestige
Mazzarol & Soutar (2012)		alumni network, accreditation of previous studies

Source: own construction

All of the aforementioned study abroad motivation types fit on the self-determined motivation continuum (Yang et al, 2017), ranging from the autonomy of decision, allowing the pursuit of intrinsic preferences to the other end of the spectrum, where decisions are influenced or determined by external contingents. Sheldon et al (2017) used the cross-culturally validated scale of the Comprehensive Relative Autonomy Index (CRAI) when asking students about their reasons to study in the US. The survey instrument comprises of six subscales representing the regulation types, including four items per subscale to measure the level of autonomy. The subscales are shown below and the full instrument (Yang et al, 2017) was utilized for the research (Appendix 2, Q18):

- Amotivation: no specific reason or lost the reason to study abroad
- External regulation: pressure from family, professors, or no choice at all
- Negative introjected regulation: sense of guilt, shame or failure in case of missing out
- Positive introjected regulation: proving self-worth and boosting self-esteem
- Identified regulation: personal choice and values, a deeper meaning
- Intrinsic regulation: joy, fun, pleasure and interest

Although there are only a few research papers available on the connection between initial study abroad motivations and acculturation, it was found that motivations have a key role in predicting acculturation (Gezentsvey & Ward, 2008) and that self-determined motivations for studying abroad predict higher levels of acculturation (Chirkov et al, 2008). In the next section the cultural elements of the study abroad program is discussed.

2.3. Culture shock and acculturation

International students are expected to adjust to the host culture in a very short period of time and perform well in academics, which sets them apart from other acculturating groups such as immigrants, ethnic minorities and expatriate workers (Sullivan & Kashubeck-West, 2015). Based on Renn and Patton (2011) university campuses must offer inclusion, safety, involvement and a community. In this section first the definitions of culture, culture shock and cultural adjustment are introduced and explained, followed by the details of acculturation strategies applied by international students.

As researchers mainly focused on immigrant groups as a whole, Smith and Khawaja (2011) have questioned the applicability of acculturative stress on international students. Supporting that claim, Sullivan and Kashubeck-West (2015) found that international students reported higher levels of acculturative stress with a marginalization acculturation mode, which was rarely the case in previous researches (Dona & Berry, 1994). International students differ from other immigrant groups in many ways: they obtain only temporary students visas, experience a high level of isolation from friends and relatives (as they travel alone usually), and are expected to perform well in their academics regardless the abrupt change of academic and cultural environment (Misra et al, 2003). Demographic characteristics such as age, gender, level of study had no significant impact on the acculturation process of international students, once again being a key differentiator from other immigrant groups in the US (Sullivan & Kashubeck-West, 2015).

2.3.1. Culture definitions

Due to the ever-increasing globalization, technological advancements (particularly the internet) and global transportation infrastructure, intercultural communication has become part of our everyday lives, enhancing the importance of cultural sensitivity. Tylor (1871) defined culture the following way:

‘Culture or civilization, taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society.’

More than a century later, the essence of the culture definition still holds true, however put in a more succinct form by Hall (2005), who described culture as a system and a set of symbols evolving over time, building up today's world. In a more comprehensive definition, more building elements of the culture are defined by Malota (2013):

culture is the sum of the visible and invisible system built by a group of people, which provides guidance, orientation, lifestyle and problem-solving schemes for its members through beliefs, norms, values, symbols, rules, behaviours, standards and customs. (p.25)

Cultural elements have a major contribution to communication, hence the term of intercultural communication was coined by Hall (1959) and based on a recent definition it is an: interaction between people whose cultural perception and symbol system are so different that it has significant impact on the communication (Samovar, 2007).

People who are traveling abroad can be categorized based on the purpose and the amount of time spent in a foreign country. Tourists spend a short period of time (days or weeks) in a foreign country and mostly aim to rest or visit the most important landmarks, however they are not necessarily forced to engage with locals or other foreigners during their time abroad (especially if they went with friends or family). International students spend a longer period of time (months or years) on study abroad programs, hence they must engage in intercultural communication to get by abroad, however they typically travel alone and usually there is considerable support provided by the host institution or home institution. Similar to the study programs, expatriates who are sent abroad by their employer to complete a work-related mission, often spend months or years abroad, with the additional burden of potentially having to move with their families, so in this scenario an entire family may need to engage in intercultural communication to manage life abroad. Immigrants are people who decide to settle in the host country for good, accordingly it is crucial for this group to be sensitive to communication between cultures (Malota, 2013). In Table 4. the culture definitions are summarized.

Table 4. Summary of culture definitions

Author(s) and year published	Culture definition
Tylor (1871)	Culture or civilization, taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society.
Hall (2005)	culture is a system, a set of symbols, which evolved over centuries and allow us to make sense of the world today.
Malota (2013)	the sum of the visible and invisible system built by a group of people, which provides guidance, orientation lifestyle and problem-solving schemes for its members through beliefs, norms, values, symbols, rules, behaviours, standards and customs

Source: own construction

In this dissertation the focus is on international students, who study in a HEI outside their home country, where they are not familiar with the cultural environment, meaning that they did not spend a considerable amount of time in Hungary or with Hungarians (parents, friends, partners) before engaging in their study abroad program in Hungary. The accepted culture definition of the dissertation is the comprehensive model of Malota (2013); hence culture is a system built by many people, and it determines the approach towards life and encompasses beliefs, norms, values, symbols, rules, behaviours, standards and customs.

2.3.2. Culture shock definitions

The definition of culture shock was coined by Kalervo Oberg who researched the acculturation process of American healthcare workers completing their foreign mission in Brazil in the 1950's. Based on Oberg (1960):

'Culture shock is an occupational disease, which occurs due to the stress caused by the different social interactions in the host country, and accordingly requires medical attention.' (p.16)

Bochner and Furnham (2001) observed that initial culture shock and acculturation research were oriented to look for remedy in clinical psychology (Brown et al, 1975), however the clinical psychology paradigm shifted towards culture learning, stress handling models and social identity theory, which recommended culture specific preparation to support the acculturation process (Bochner, 1982; 1986;

Klineberg, 1982). Culture shock definitions were focusing more on the sequence and ways of adjustment, viewing sojourners as cultural learners. Based on another definition from Kline et al (1996):

the 'shock' of culture shock really refers only to a specific aspect of the process of cultural adjustment (or 'cultural adaptation' or 'acculturation'), which can be related overall to 'the degree of psychological comfort'. (p.169)

Culture shock is generally a short phase of mental inconvenience (Martin & Nakayama, 2004) and in case the individuals are unable to build their routine in the new environment, the amount of uncertainty can further deteriorate the situation through constant stress and fatigue (Lustig & Koester, 2010). The modern approach to the phenomenon is that culture shock is the experienced physical and mental acclimatization upon encountering with a new culture (Hidasi, 2004). Hidasi (2004) identified three major reasons for culture shock: the identity crisis caused by the new social environment, the malfunction of the known communicational rules and the lack of familiar cultural norms. The cultural difficulties are rooted in the unknown social expectations, experienced cultural differences where factors related to financial, family and romantic relationships have a significant role as well (Chaney & Martin, 2011).

Encountering with a new culture can trigger numerous doubts as the basic behavioural norms, cultural signs and social norms have to be re-interpreted in order to successfully integrate in the new culture. The anxiety and stress can be mitigated with mapping out the verbal and nonverbal communication forms of the host country (Samovar et al, 2010). Shock experiences can also be conceptualized as stimuli that encourage individuals to acquire culture specific skills for smoother cultural integration (Ward et al, 2001; Zhou et al, 2008). International students are considered successful learners (Forland, 2006), which may increase the possibility of culture shock in case the previously positive self-identity is not confirmed in the academic environment of the host culture (Killick, 2008). Yang et al (2005) found that establishing an 'independent-self' and being confident about language skills (which may differ from objectively defined skills) increased the likelihood of cultural adjustment. However, coming to terms with the fact that different cultures

may interpret differently the international students' previously 'sure' knowledge, could present difficult situations (Brislin & Yoshida, 1994). The culture shock definitions are summarized in Table 5.

Table 5. Culture shock definitions

Author(s) and year published	Type	Definition
Oberg (1960); Brown et al (1975)	Clinical psychology	occupational disease that requires clinical treatment
Bochner (1982; 1986) Klineberg (1982); Kline et al (1996)	Culture learning	a specific aspect of the process of cultural adjustment
Hidasi, 2004; Martin & Nakayama, 2004; Lustig & Koester, 2010	Stress handling	physical and mental acclimatization (cultural adaptation or acculturation)
Ward et al (2001); Zhou et al (2008) Samovar et al (2010)	Complex	handling stress and acquiring culture specific skillset (culture learning)

Source: own construction

In the dissertation culture shock is conceptualized as a stimuli that can be mitigated with appropriate coping mechanisms (Samovar et al, 2010) and international students have the ability to acquire culture specific skills (Zhou et al, 2008), in other words, learn about the culture and adjust to their new environment.

The level of culture shock and the subsequent acculturation process are influenced by factors connected to the individual, a specific situation or the general cultural differences. Malota (2013) identified five categories that have an influence on the strength of culture shock (Table 6).

Table 6. Strength of culture shock

Dimension	Factors influencing the strength of culture shock
Cultural distance	the difference of the home and host culture, the way the host culture regards foreigners, the relationship between the two cultures
Biological factors	general physical and mental health, lifestyle change, age
Life experience factors	language skills, previous experience in foreign countries, the amount and the quality of the available information

Personal and personal competence factors	communication and relationship building skills, empathy, tolerance, uncertainty avoidance, emotional intelligence, intelligence quotient, sense of humour, flexibility, adaptability, cultural sensitivity, ethnocentrism, independence, confidence
Control factors	the length of the program, safety net at home, safety net in the host culture, initial expectations, decision opportunities, motivation, status in the new culture

Source: Malota (2013: p.58-59)

The level of culture shock is heavily influenced by the number and quality of relationship with people from the host country (Bochner, 1982), the number of close friends (Bochner, McLeod and Lin, 1977) and the chosen acculturation strategy (Ward & Kennedy, 1994). The sociocultural adjustment of international students is also supported by establishing connections with local students (Baba & Hosoda, 2014) further mitigating acculturative stress (Sullivan & Kashubeck-West, 2015). Researchers found that culture shock has a negative impact on the well-being and sociocultural adaption of international students (Presbitero, 2016), hence it is important to learn more about the nature of these factors (Yang et al, 2017) so HEIs may provide the best study abroad experience and increase the levels of satisfaction. In the next section the culture shock measurement tools are discussed.

2.3.3. Measuring culture shock

International students are exposed to and often experience different types and levels of acculturative stress while living abroad, such as perceived discrimination, homesickness, perceived hate/rejection, fear, stress due to change and guilt as described in the 36-item Acculturative Stress Scale for International Students (ASSIS) developed by Sandhu and Asrabadi (1994). International students most often feel alienated, because they mainly try to get support from co-nationals instead of reaching out to locals. Burbach (1972) identified three characteristics of international student alienation: powerlessness, meaninglessness and social estrangement. Homesickness was the second most important factor in acculturative stress, and it occurred when students did not feel the presence of emotional or social support systems (Pedersen, 1991), and had limited opportunities to socialize with locals due to language or cultural barriers (Furnham & Alibhai, 1985). Siegel (1991) observed that international students tend to feel obliged to keep their cultural

roots, which perpetuates the feeling of being homesick. Sandhu and Asrabadi (1994) found that perceived hate could be caused by verbal and nonverbal signals from locals and may be rooted in the increased sensitivity of international students, the experienced loss of status in a foreign country (Alexander et al, 1981). The experienced culture shock (Kim, 2001; Hidasi, 2004; Zhou et al, 2008), the unexploited skills and knowledge abroad (Mestenhauser, 1983) and the host nationals being negative and insensitive to different sets of values of international students may further intensify the level of perceived hate.

Based on Sandhu and Asrabadi (1994), fear in this context mostly refers to feeling insecure in a new environment, the racial discrimination, socio-political context and the crime statistics in the host country. Change induced stress incorporates all the factors related to climate, ethnic food, social values, expected behaviours, verbal and nonverbal communication which require some level of adjustment from the international students to feel more comfortable in their new surroundings (Dillard & Chisolm, 1983). During the pandemic of COVID-19, based on international student interviews, researchers found that the extreme sides were impacted, so in case someone had a good adjustment trajectory with strong existing host national and international relationships, it only got stronger, while those who had not previously built up their local supporting network, suffered even more from the cultural environment related stress (Pályázati Pávilon, 2020).

Sandhu and Asrabadi (1994) described the guilt of international students as a sense of cheating their own culture when adopting the values of the host culture, consciously hindering their success while studying abroad. In addition to the identified factors by Sandhu and Asrabadi (1994), it was further encouraged to include the academic stressors as one of the major contributors to acculturative stress while studying abroad (Mori, 2000). The ASSIS was used in various settings, for instance to measure the acculturative stress levels of international students studying in the USA (Mahmood & Burke, 2018) and China (Flemmings et al, 2020), however the scale was validated only in the USA (Nasirudeen et al, 2014).

Another widely used culture shock measurement item was developed by Mumford in 1998, a 12-item assessment of the experienced culture shock of British volunteers working overseas in 27 different countries. The core culture shock items were based

on the previous research of Taft (1977), who identified six aspects of culture shock: strain due to psychological adaptation, sense of loss in status, rejection from the host culture, confusion about the expectations in the host culture, anxiety and disgust due to cultural differences and the feeling of inability to cope with the changed environment. Another 6 interpersonal stress items were generated by Mumford (1998) through the content analysis of written reports from previous participants of the same volunteer program. Overall Mumford (1998) found that the 12-item culture shock questionnaire was the most reliable (Cronbach's alpha at 0.79). The questionnaire items cover areas of adaptation to stress, feeling accepted by the host culture, shocking and disgusting elements abroad, understanding the gestures of locals and handling the day-to-day situations according to the unwritten rules of the society. The scale has been widely used by researchers to measure for instance culture shock among Filipinos working in Taiwan (Chen et al, 2017) and international students studying in the USA (Yoo et al, 2006; Yang et al, 2017). The culture shock scales are summarized in Table 7.

Table 7. Measuring culture shock

Author(s) and year published	Length	Culture shock scale items
Taft (1977)	6 items	strain due to psychological adaptation, sense of loss in status, rejection from the host culture, confusion about the expectations, anxiety and disgust, inability to cope with the changed environment
Sandhu and Asrabadi (1994)	36 items	perceived discrimination, homesickness, perceived hate and rejection, fear, stress due to change and guilt
Mumford (1998)	12 items	stress, homesickness, acceptance by the local culture, role confusion, shocking or disgusting elements, helplessness, anxious or awkward interactions with locals, unfamiliar nonverbal signs, difficulty to interact with local people

Source: own construction

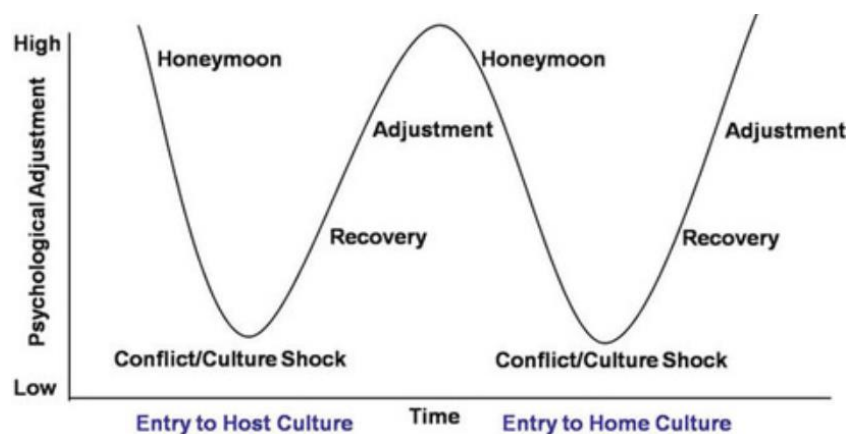
Even though the ASSIS measurement model appears to capture a richer dataset, considering the purpose of the dissertation the culture shock elements measured by the scale proposed by Mumford (1998) will be sufficient to gather the required data with the advantage of having to use much less scale items, which were validated across different cultures.

2.3.4. Acculturation models

The cultural diversity of countries is on a growth trajectory and similarly the number of international students is increasing every year, placing cultural learning in the focus of researches. Studying abroad is not only a physical journey, but a mix of emotional, mental and psychological discovery, amidst fighting the pressure to live up to the expectations of relatives, peers, institution and cultural self-image, while expecting the most from the host country, based on limited, often outdated and stereotype driven information (Killick, 2008). In the host country the procedural schema is different, hence students must re-build their daily routines starting from the smallest pieces like learning the road between the host institution and their accommodation to opening a local bank account.

The original U-shape of the culture shock model (Oberg, 1960) is the function of the psychological adjustment of sojourners and the time spent in a foreign country. The curve starts off with an emotional, a mental and psychological high point called the 'honeymoon' phase: upon entering the host country students are excited and ready to discover their new environment. After the initial excitement of the first few weeks, as students realize more and more uncertainties stemming from the cultural barriers, they tend to feel the psychological and physiological impacts of culture shock, making them stressed, confused and anxious. The upwards side of the U-shape model is the adjustment period, where students find sufficient level of comfort in their lives abroad, and finally the acceptance stage of the model refers to a high level of adjustment to the host environment (Figure 5.).

Figure 5. W-curve of culture shock stages

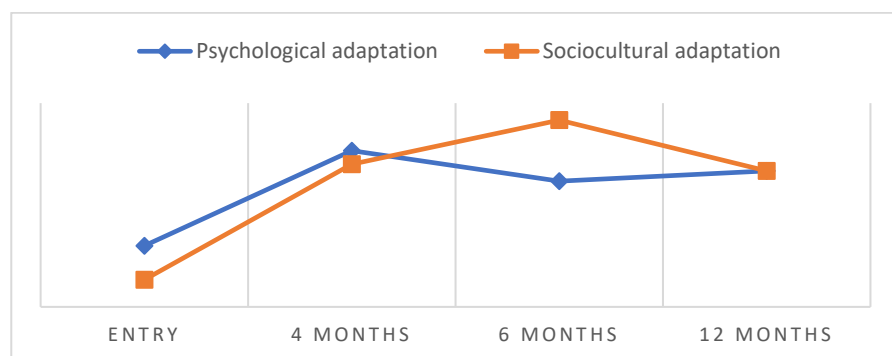


Source: based on Oberg (1960) and Gullahorn and Gullahorn (1963)

Gullahorn and Gullahorn (1963) built the W-curve based on Oberg (1960), which is essentially an additional U-shape representing the psychological adjustment cycle when international students re-enter their home countries, after the study abroad program ended. Though the U-shape or W-curve are not applicable to everyone, these simple figures give a practical visualization of the emotional ups and downs experienced by most international students. The traditional culture shock curves (U and W) are often debated, whether they present a different form of psychological adjustment than other stressful events in people’s lives (for instance starting work in a new city or accepting a new disability), however the culture shock concepts have proven useful in preparations for expatriates and international students (Killick, 2008).

Ward and Furnham (2001) argued that for instance the honeymoon phase does not necessarily exist for everyone, as assumed by the U and W curves, and stated that psychological and sociocultural adaptation can take place simultaneously, but at a different pace for each individual, because international student stress and coping mechanisms are affected by the personality of the student and the situation. In their model the psychological adaptation represents the students’ level of comfort in the new environment over the period of studying abroad. Upon entering the country, international students obtain vital information about the new environment, connect with people, get to know the academic processes which may add up to a great amount of stress. Ward and Furnham (2001) found that this psychological factor is most prominent in the beginning of the term, upon successful cultural adjustment it reaches its maximum after 3-4 months and with a solid routine it can be stabilized at that point (Figure 6.).

Figure 6. Psychological and sociocultural adaptation



Source: based on Ward and Furnham (2001)

On the other hand, the sociocultural adaptation measures the international students' ability to interact with people from the local culture, including the use of culture specific communication and interaction skills. The drop in the curve at 6 months suggests that after half a year the cultural learning is less intense, because the average international students should become adept at communicating and behaving in line with the norms and values of the host culture.

In comparison to the U and W curves, the advantage of this model is that the psychological and sociocultural factors are segmented in time. This offers more options when it comes to practical and actionable solutions to improve the cultural adjustment of international students. Following a similar logic, Based on Stier (2003) the adjustment requires a certain level of intercultural competence, which has two main facets, the content competencies (knowing the culture) and processual competencies (knowing how to implement the cultural knowledge). Knowing the language of the host country is not enough in itself for proper cultural adjustment (or it is superficial), international students need to understand the signs, symbols, people, values and the way things are done in the culture. At the same time students must critically evaluate their own cultures to put the host culture in context, minimizing the impacts of stereotypes and ethnocentrism. In terms of the processual competency, students need to possess a certain level of intercultural competence, which is essentially a set of interpersonal skills such as being a team member, a good communicator, the ability to control emotions and properly assess the communication environment adapted to the host culture's governing rules.

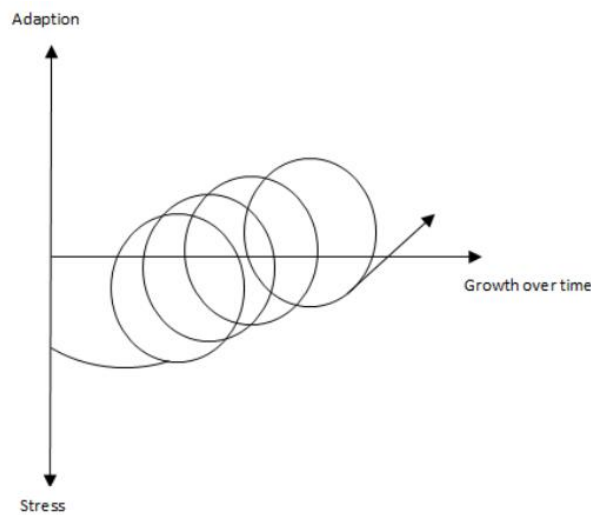
Kim (2001) defined cultural adjustment the following way:

'...all individuals crossing cultures face some common challenges as they pioneer lives of uprootedness and gradually establish working relationships with the new milieus.' (p.5)

Applying a different approach, Kim (2001) proposed a stress-adaptation-growth model, assuming that the effects of the stressors and the efforts of cultural adaptation together form an upwards spiral, signifying personal growth over time. The spiral starts downward in the beginning of the program, supposing that the stress factors prevail in the new environment, but as the adaptation efforts are perfected, culture induced stress eventually fades away. In order for an effective

cultural adjustment, international students must explore the hidden aspects of the culture which governs local behaviour and thought patterns (Weaver, 1993), and encountering these differences are the source of culture shock (Killick, 2008). In the evolution of cultural adjustment models, Kim (2001) polarized the adaptation and stress, which allows for a theoretically constant positive loop in the life of international students, while in the previous models, personal growth and the potential to eliminate psychological or sociocultural stress seemed conceptually limited (Figure 7.).

Figure 7. Stress-adaptation-growth model



Source: Kim (2001)

Killick (2008) expressed concerns about the cultural orientation programs that take place in the first weeks, as it typically coincides with the honeymoon phase of the U-shape (Oberg, 1960), hence international students are not receptive to the harsh facts of life becoming more difficult in the coming weeks. Nevertheless, considering the psychological and sociocultural adaptation models of Ward and Furnham (2001), the initial period is toughest for many international students, accordingly the orientation programs could be beneficial in the beginning, while monitoring the results. Zhou et al (2008) defined the adjustment in a time-continuum, rather than as segmented events where the stress and adaptation drive the learning curve in a certain direction:

'Acculturation is a process, it happens over a period of time rather than being a momentary phenomenon, relying on the active participation of the individual while taking into consideration personal characteristics and the situation where it is embedded' (p. 68)

Besides the psychological and sociocultural approaches, Zhou et al (2008: p.66) added the cognitive component to the cultural adjustment model, separating three acculturation categories (ABC model):

- affective (psychological) component: appropriate preparation can support the ability to cope with stress
- behavioural (sociocultural) component: culture specific skillset can be acquired and it improves communication abroad
- cognitive (identity) component: understand the cultural identity change upon encountering with a new culture

If the cultural stimuli are followed by proper emotional response, then it means that the stress coping strategy was successful on the psychological level (Zhou et al, 2008) and it increases the stress tolerance to handle a stronger stimulus in the future. The acquisition of culture-specific behavioural standards (Zhou, 2008) is a higher level of adaptation, by which the student can prevent or manage the stress situations more effectively: instead of the continuous psychological stress management, it is more efficient to behave in an accepted manner in the new culture. On the next level, cultural identity is determined by the degree of identification with the culture of the host country and the home country (Berry 1994; 1997). In case of affective adjustment, the students only gave a response based on their own culture, however through behavioural adjustment they were able to prevent the stress situation (or deal with it more effectively). The cumulative success of the psychological and sociocultural responses interacts with the identity of the students throughout the study abroad program and the most effective combination of coping mechanisms will result in the overall acculturation strategy and hence the identity (Zhou et al, 2008). These three aspects together provide a comprehensive acculturation model in which the cognitive component of social identification complements the behaviour-based culture-learning and the affective component of general stress

coping mechanisms. In case of cultural adjustment, it is important to avoid all levels of failure (self, academic, social) which may result in a loss of identity through the rejection of previous beliefs, values and behaviours, ultimately increasing frustration (Killick, 2008).

Connecting the behavioural section of the previously discussed ABC model of Zhou et al (2008), the culture-learning framework has been widely researched to gain a better understanding on the psychology of acculturation and the acquisition of culturally appropriate skills and forms of behaviour in a new cultural environment (Searle & Ward, 1990; Ward & Kennedy, 1999). Cultural competence traditionally has been measured through the assessment of behaviour-based sociocultural adaptation, posing questions about a variety of situations that require some form of interaction in a new cultural setting (Argyle, 1969; Argyle). The first intercultural measurement tool was the Social Situations Questionnaire (Bochner & Furnham, 1986), which was further developed into a Sociocultural Adaptation Scale (SCAS) by Searle and Ward (1990). Based on Wilson et al (2017:1476):

“Sociocultural adaptation was conceptualized as the acquisition of behavioural skills required for an individual to negotiate life in a new cultural environment, and was measured in terms of the degree of self-reported difficulty experienced in interpersonal situations and with the accomplishment of day-to-day tasks.”

Berry (1994; 1997) defined four acculturation strategies based on the mix of own cultural identity and the culture identity of the host country (Table 8.).

Table 8. Acculturation strategies

Acculturation strategy (Berry)	Home culture identity low	Home culture identity high
Host culture identity low	Marginalization	Separation
Host culture identity high	Assimilation	Integration

Source: Berry (1994; 1997)

Based on Berry (1994; 1997) the potential combinations of cultural identification are the following, which are the result of the cultural and psychological change upon being in touch with different cultures (Berry, 2005):

- Integration: high level of home and host culture identification
- Assimilation: high level of host, low level of home culture identification
- Separation: high level of home, low level of host culture identification
- Marginalization: low level of home and host culture identification

Based on the categorization of Berry (1994; 1997) integration is widely accepted as a desired acculturation strategy. Sullivan and Kashubeck-West (2015) found that the international students' integration is more likely in case they have an extensive social network comprising of co-nationals, host nationals and fellow international students, but too strong ties to the host country may reduce the possibility to adjust to the host environment. Hendrickson et al (2011) found that international students who made more local friends, experienced higher levels of satisfaction and had less culture shock symptoms, such as homesickness and anxiety.

Barry (2001) found that the patterns in the model of Berry (1980) were validated, as there were negative association between integration and marginalization and assimilation and separation. International students with high assimilation scores often had increased integration scores, potentially reflecting the desire to fit in the host culture, however not taking any action to achieve that (Barry, 2001). The length of stay positively influenced the assimilation and integration acculturation modes and negatively affected the marginalization, however it was not connected to the separation dimension of acculturation; while gender had no influence on the chosen acculturation mode.

Sullivan and Kashubeck-West (2015: p.5.) examined 104 international students and found that based on the modified acculturation model the acculturation orientation was the following: Integration (30.8%), Assimilation (18.3%), Separation (26.0%), and Marginalization (25.0%). Sullivan and Kashubeck-West (2015) found that Integration mode resulted in the lowest amount of acculturative stress, implying that it is worth maintaining connection from the home country, however with a stronger focus on adapting to the host culture environment. Sullivan and Kashubeck-West (2015) also confirmed the previously thought connection between

acculturative stress, the acculturation mode and the level of received social support. Accordingly, international students who were in the categories of Assimilation or Integration, experienced less acculturative stress: the conscious development of connections with the host country and increased support from locals influenced the acculturation mode and ultimately mitigated the acculturative stress. The culture shock and acculturation models are summarized in Table 9.

Table 9. Culture shock and acculturation models

Author(s) and year published	Culture shock concept	Acculturation model
Oberg (1960)	culture shock is a disease that requires clinical treatment	4 stage model: honeymoon, frustration, adjustment, acceptance in the host culture
Gullahorn & Gullahorn (1963)	culture shock is a disease that requires clinical treatment	8 stage model: honeymoon, frustration, adjustment, acceptance in the host and then the home culture
Berry (1994; 1997)	the level of identification with the host country and home country	4 acculturation modes: integration, assimilation, separation, marginalization
Kline Harrison et al (1996)	the degree of psychological comfort	a specific aspect of cultural adjustment
Ward & Furnham (2001)	a psychological and sociocultural stress	psychological and sociocultural adaption models are simultaneous, but can move at a difference pace
Kim (2001)	a challenge to gradually establish working relationships with the new milieus	growth over a period of time: stress → adaptation → growth
Zhou et al. (2008)	a process over a period of time, that relies on the active participation of the individual, while considering personal and situational characteristics	affective (psychological) component behavioural (sociocultural) component cognitive (identity) component

Source: own construction

In this dissertation the culture shock and acculturation definitions are handled separately. Based on the literature review it can be assumed that culture shock is triggered by the initial stimuli in the new cultural environment of the host country (Zhou et al, 2008), and it impacts the level of acculturation (Hidasi, 2004), or more precisely the level of sociocultural adaptation (Kim, 2001).

2.3.5. The acculturation construct in higher education

In this section the role of the acculturation construct is discussed in the framework of study abroad motivations, perceived service quality, satisfaction and loyalty. The relationship between motivations and acculturation is under researched in the higher education industry. Based on Chirkov et al (2007; 2008), Dentakos et al (2016) defined acculturation motivation as:

“...the willingness to learn about the host culture, to develop friendships with host members, and to explore the host country’s social and cultural environments”
(p.29)

Motivations to engage in the process of acculturation depends on the individual differences (Chirkov et al, 2007), and it is expected to result in a better overall experience for international students (Dentakos et al, 2016). In another research it was found that the level of acculturation motivation caused higher levels of psychological health, increasing the satisfaction of international student in Canadian universities. In turn it also supported the academic adjustment of international students (Chirkov, 2008), which may already be considered as part of the experienced service quality provided by the host institution. Acculturation motivation was independent from the time spent in the host culture (Chirkov, 2007) hence it is implied that acculturation motivation can be a good predictor of sociocultural adaptation throughout the entire study program (Dentakos et al, 2016).

Chapa and Becerra (2014) found that acculturation has an impact on consumption preferences, as differences in the generational status lead to varied results in political advertising. Davis et al (2017) also tested the relationship between the level of acculturation of immigrants and the expected and perceived service quality of dental services. They found that the service quality expectations of immigrants varied depending on their level of acculturation, however the perceived service quality did not change with the acculturation level. The reason for that may lie in the collected sample, as Davis et al (2017) noted, it was difficult to obtain a sample of immigrants with varying levels of acculturation. Nevertheless, as a practical and social implication, it is recommended to consider culturally appropriate service

quality dimensions and design the services and marketing campaigns accordingly in order to increase service utilization.

The results of Davis et al (2017) shed light to the potential connection between acculturation and service quality which has not yet been used in case of international students, however one of the research questions of this dissertation aims to explore the connection between these constructs. Replicating the results in the higher education industry with international students is promising, as dental services are similar to the higher education services in terms of frequency of consumption, lead time, and the level of involvement. First, dental care (particularly dental surgeries) can be considered a special service, as it is consumed only a few times in a lifetime, second, it has a long lead time, meaning that the perceived service quality can change radically from the time of receiving the service to years after the dental surgery. Additionally, in line with the above, they are both high-involvement services, requiring a thoughtful decision before choosing a service provider, let it be a dentist or a university (Marimon et al, 2018).

In case international student had a higher level of academic competence when living abroad, their level of satisfaction was also higher (Yang et al, 2017). In the dissertation the cultural competence obtained through cultural learning was in the focus of the research (Wilson, 2013), and it is assumed that in case the sociocultural adaptation is higher, then international students will be more satisfied with their overall program.

In the theoretical framework of the dissertation, the acculturation (within that the sociocultural adaptation part showing the measured behavioural outcomes) construct is essentially mediating the relationship between study abroad motivations and satisfaction, and also it acts as a mediator between motivations and perceived service quality. As shown in Table 10, acculturation is the consequence of motivations (Chirkov et al, 2007; 2008; Dentakos et al, 2016), and the antecedent of perceived service quality (Chapa & Becerra, 2014; Davis et al, 2017) and satisfaction as well (Yang et al, 2017).

Table 10. The role of the acculturation (sociocultural adaptation) construct

Author(s) and year published	Connection	Role of acculturation
Chirkov et al (2007;2008); Dentakos et al (2016)	Motivations → Acculturation	Consequence
Wilson, 2013; Yang et al, 2017	Acculturation → Satisfaction	Antecedent
Chirkov (2008); Chapa and Becerra (2014); Davis et al (2017)	Acculturation → Perceived service quality	Antecedent

Source: own construction

2.3.6. Measuring acculturation in higher education

The sociocultural adaptation scale (SCAS) has been widely accepted in acculturation research (Wilson et al, 2013) and besides the fields of psychology and business it was also used for the assessment of the sociocultural adaptation of international teaching assistants (Kim, 2009) and the evaluation of international students' adaptation in China (Yu, 2010).

The original SCAS included questions about behaviours such as understanding the local value system and worldview, making friends, finding their way around abroad and catching up with the pace of life, and the scale item endpoints were ranging from no difficulty to extreme difficulty (Ward & Kennedy, 1999). The scale was then revised by Wilson (2013), creating the SCAS-R, where he used a 21-item scale with modified scale endpoints ranging from not at all competent to extremely competent, better capturing self-reported culturally adaptive behaviours (Wilson et al, 2017). In the SCAS-R of Wilson (2013), the following subscales were defined as shown in Table 11.

Table 11. Revised sociocultural adaptation scale (SCAS-R)

Area of competence	Description of the scale items
Interpersonal communication	culturally appropriate interactions in the host culture and building relationships)
Academic and work performance	managing responsibilities and working with peers
Personal interests and community involvement	maintaining personal interests and dealing with bureaucracy

Ecological adaptation	adapting to the pace of life and finding their way around
Language proficiency	reading, writing, understanding and speaking in the host language

Source: Wilson (2013)

Based on a larger mixed sample, including short term and long-term migrants, international students and newly arrived migrants in New-Zealand, an 11-item bifactor measurement model version of the SCAS-R was created by Wilson et al (2017). The new model (SCAS-R, 2017) aimed to provide a sociocultural adaptation scale that allows a wide applicability across populations. However, as the current dissertation's sample consists solely of international students, the SCAS-R (Wilson, 2013) scale will be applied to capture a richer data set with the academic environment specific section in the 21-item SCAS-R, as it was used by Mahmood & Burke (2018) to measure the sociocultural adaptation of international students in the USA. In the dissertation acculturation is measured as the behavioural outcome of the acculturation construct, that is the sociocultural adaptation through cultural learning (Wilson, 2013).

2.4. Service quality

Service quality is a well-researched concept, however there is no agreement on one single definition and measurement scale to operationalize this construct. In this section a range of service quality definitions are presented, followed by the most prevailing service quality measurement instruments in higher education. At the end of this section the service quality scales, dimensions and items are summarized with a conclusion on the elements considered for the scope of the dissertation.

2.4.1. Service quality definitions

Product and service quality have received a great deal of attention since the 1980's (Parasuraman et al. 1985) as consumers demanded higher product quality than ever before (Takeuchi & Quelch, 1983). Quality is attributed to increase market share, return on investment (Phillips et al, 1983), productivity and decrease manufacturing

cost (Garvin, 1983). Parasuraman (1985) found that tangible goods were well-defined and their quality was measured reliably while service quality was rather under-researched at the time. Tangible product quality definitions varied from the predominant Japanese philosophy ‘zero-defects – doing it right the first time’ (Parasuraman, 1985) to conforming to requirements (Crosby, 1979).

Service quality on the other hand, as many researchers stated, is more abstract and more difficult to grasp (Crosby 1979; Garvin 1983; Parasuraman et al, 1985; 1988; Carman, 1990). In order to fully understand and conceptualize service quality, the intangibility, heterogeneity and inseparability of the services must be recognized (Parasuraman et al. 1985). Since services are intangible, it is more complicated (or even impossible) to count, measure, inventorize, test or verify the quality of services before making a sale, accordingly initial customer perception becomes less predictable (Zeithaml, 1981). The heterogeneous nature of services, and particularly the labour-intensive services allow for a range of service quality depending on the provider staff, customer and the time of using the service (Booms & Bitner, 1981). Most services are inseparable as service quality occurs and consumed at the same time (Carmen & Langeard 1980), during the service delivery (Lehtinen & Lehtinen 1982). In case of services, where consumer participation is significant (such as visiting doctors, getting a haircut or education), the service provider has less control over the provided quality.

Gronroos (1982) defined service quality as the service outcome for the customer (technical quality) and the way the service delivery happened (functional quality). Since consumers can hardly find tangible service quality cues, many researchers defined service quality - in line with the expectation-disconfirmation paradigm of Oliver (1980) - as the difference, in size and direction, between expected quality and perceived quality (Gronroos, 1982; Parasuraman et al, 1985). Expectations are confirmed, when matching the previous expectations, positively disconfirmed when the performance is better than expected and negatively disconfirmed, when the performance did not meet the expectations. Based on Athiyaman (1997), any disconfirmation or confirmation is a subjective, unique belief arising based on or following the expectations and performance beliefs, not a performance minus

expectation score, taking a different path than recommended by Oliver (1980). In this dissertation the higher education service is defined as an immaterial product that aims to satisfy customers (Kurilorf et al, 1993) and it is viewed on a subjective and relative 'humanistic' scale potentially changing from customer to customer (Holbrook & Corfman, 1985).

2.4.2. Service quality in higher education

Education is special service, only consumed a few times in a lifetime, and it has a long lead time, so the perceived quality may change before during and after consumption (Marimon et al, 2018). Perceptions may vary from student to student depending on their previous educational experience, abilities, motivations, individual values, country of origin (Hill, 1995; Green, 2014), cultural, social, local education system and teaching methods (Bolton & Nie, 2010). In case the educational goals of the student are not realistic, inappropriate or incompatible with the chosen institution, their overall experience will be negatively affected if the situation is left unmanaged (Nijhuis, 2006). The education processes (teaching, assessment and attainment) are often distinguished from the provided non-academic services (administration, support and recreation), however they are inseparable in terms of overall service quality (Vangelis & Hill, 2019).

Service quality is a top priority for HEIs across the world and it is an equally important factor for international students (Trivellas & Geraki, 2008). When choosing a host institution, international students look through various available evidence to find the best service quality on the market (Angell et al, 2008). The chances of attracting and retaining students may increase in case the students' perceptions of service quality are analysed with a marketing approach (Sultan & Wong, 2013). Service quality remains in the centre of the attention in the eyes of policy makers, as a mean to improve higher education services, however in the domain of higher education research there is an apparent lack of significant and innovative theories (Nadiri et al, 2009) and service quality measurement scales still present challenges for researchers. There is a debate and multiple approaches exist to measure and manage quality in the higher education setting, which is further

accelerated by the increasing volume of international education (Vangelis & Hill, 2019).

From the early millennium, researchers expanded service quality scales with higher education specific attributes (such as academics) in a hope of obtaining a better explanation of the construct. As the global education industry and the number of international students grew exponentially in the most recent decades, researchers started to consider the cultural settings and other attributes that may lead to a better service quality measurement scale in the higher education sector. Service quality can be measured along one, two or multiple dimensions, as Kenesei (2017) demonstrated. In order to adequately measure service quality dimensions in the higher education setting, many researchers elaborated on academic aspects (Firdaus, 2006a; Li and Kaye, 1998) considering different levels of education, such as post-graduate education (Angell et al, 2008), different fields, such as engineering education (Sakthivel & Raju, 2006) or nursing (Cook, 1997) or different pieces of service such as online library services in higher education (Wright & O'Neill, 2002).

With a slightly different approach, Tsinidou et al (2010) considered some service quality items outside the control of the institution and determined 5 service quality dimensions in Greek higher education: academic staff, administrative services, library services, curriculum structure, location, facilities and career prospects. In a broader approach, but still focusing directly on the service provider institution, Afzal et al (2010) identified eight dimensions to explain service quality in higher education, which were design, delivery and assessment, academic facilities, non-academic facilities, recognition, guidance, student representation, study opportunities and group size. Previous researches have gone up to eight (Afzal et al, 2010) or nine service quality dimensions (Gibson, 2010), while Suleyman (2014) followed a more compact approach and identified a four-factor structure consisting of behavioural aspects, academic aspects, access and academic support of the local students at Schools of Education and Sports in Turkey. Suleyman (2014) found that the academic aspects, behavioural aspects and access required more effort from the institution, and while academic support was below expectations, it was closest to matching the needs of students. Based on Suleyman (2014: p.89) the highest ranked items measured the perceived: behaviour towards students, academic aspects,

access and academic support. Alves and Raposo (2007) found that the most the important expectations of students towards HEIs was to prepare them for their career and that they are taught by highly skilled and knowledgeable professors while the key service quality attributes were the knowledge and skills of teaching staff and the course content. In more recent studies Pauli and Worrell (2017) found that enhancing career prospects is of key importance for students to participate in higher education. In terms of teaching quality, students appreciated the efforts of lecturers to clarify ambiguous points which were unclear for some students.

Letcher and Neves (2010) found eight service quality attributes, where student presage elements appeared as well: self-confidence, curriculum and instruction and classes, quality of teaching of subject matter, extracurricular activities and career opportunities, student advising, quality of teaching and instructor feedback, computing facilities and student quality and interaction. Gibson (2010) conducted an exhaustive literature review and categorized service quality into nine different dimensions (in Parahoo et al, 2013: p.139), where multiple student presage factors are represented, such as academic staff/teaching, classes/curriculum, advising support, skills development, preparation for future, services/facilities, social integration and pre-enrolment factors.

Finally, Arambewela and Hall (2009) re-examined the educational and non-educational satisfaction levels at 537 Asian postgraduate business students (from China, India, Indonesia and Thailand) studying in six Australian universities and identified seven constructs affecting satisfaction: education, economic considerations, the prestige and image of the institution, social circumstances, the available technology at the institution, accommodation and safety.

2.4.3. SERVQUAL and SERVPERF scales

Service quality measurement scales have an important role across multiple industries in identifying the most important quality attributes, and similar to the service quality definitions, a variety of instruments have been developed for this purpose.

In the dawn of operationalized service quality measurement instruments, the first major approach was the SERVQUAL scale. Parasuraman et al (1988) developed a multiple-item scale that was designed to measure perceived service quality

(SERVQUAL). The SERVQUAL instrument is a 44 items scale measuring the expected and performed service quality and it was originally developed by Parasuraman et al (1985) to assess the perceived service quality in service and retail organizations (Parasuraman et al, 1988). The instrument was widely used in manufacturing industries (Furrer et al, 2000), but it was mainly utilized in the service industry (Arambewela & Hall, 2009) and more specifically often adapted to the education service context (Fernandes et al, 2013).

Parasuraman et al (1985: p.48) identified five service quality gaps and ten service quality determinants: access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles and understanding/knowing the customer. Parasuraman et al (1988) condensed the ten theoretical dimensions into five distinct operational dimensions: tangibles, reliability, responsiveness, understanding/ knowing customers and access, while communication, credibility, security, competence and courtesy melted into the last two distinct dimensions, providing the finalized five dimensions of the SERVQUAL scale (Parasuraman et al, 1988: p.23): tangibles, reliability, responsiveness, assurance and empathy. The SERVQUAL scale calculates with difference scores, where the perceived service quality for each item equals to the perceived performance minus the expected performance. Teas (1993) noted that the performance minus expectations model in service quality operates properly for vector attributes (infinite ideal point), but it could present problems in case of classic ideal point attributes and feasible ideal point attributes. Reacting to the critique, Parasuraman et al (1994) adjusted the original SERVQUAL model's expectation standard from vector attribute to feasible ideal point. SERVQUAL was an unrivalled service quality measurement instrument until later works have emerged in the field, conceiving more critical standpoints.

Cronin and Taylor (1992) claimed that SERVQUAL's expectation-performance gap scale is not adequate from the conceptual and operational perspective and developed a performance-based scale. In order to develop and validate the suggested service performance (SERVPERF) scale, Cronin and Taylor (1992) compared four scales (weighted and unweighted SERVQUAL and SERVPERF scales) to determine the most efficient model. The unweighted SERVQUAL and

SERVPERF explained more variance in service quality respectively in comparison to their weighted counterparts, where Cronin and Taylor (1992) analysed the relationships between service quality and customer satisfaction. Cronin and Taylor (1992) found that SERVPERF is superior to SERVQUAL because it provided better fit across industries with only half of the measurement items and that SERVPERF is conceptually superior as it is based on attitude, while SERVQUAL is based on a satisfaction paradigm (disconfirmation-expectation).

Cronin and Taylor (1992) confirmed that perceived service quality is an antecedent to satisfaction. Different industries may require different indicators to obtain better results, for instance high involvement services may have different service quality definitions from low involvement services (Cronin & Taylor, 1992). Llusar and Zornoza (2000) found that the SERVPERF scale provided more reliable results compared to SERVQUAL (Parasuraman, 1988). There is no consensus on which instrument is better, some researchers used SERVQUAL (Tan and Kek, 2004), others chose SERVPERF (Firdaus, 2006a; Li and Kaye, 1998) as a base of their research approach. Babakus and Boller (1992) claimed that SERVPERF is a good instrument to capture information in an easy and practical manner. In the more current extant literature, a number of researchers found that the SERVPERF model is superior in terms of explained variance (Sultan & Wong, 2011), generalizability and applicability (Faizan et al, 2016). Dabholkar (2000) conducted a longitudinal study to compare SERVPERF, measured disconfirmation (after receiving the services) and computed disconfirmation (difference between before receiving the service and after receiving the service), and found that the SERVPERF measure performed better over other approaches. The SERVQUAL model may demonstrate higher diagnostic value in identifying service quality shortfalls, however the SERVPERF scale has stronger predictive power in an overall measure of perceived service quality (Parasuraman et al. 1994). Also halving the required measurement items can reduce respondent fatigue, accordingly in the current research the performance only measurement approach will be applied.

2.4.4. SERVQUAL and SERVPERF in higher education

Considering the cultural differences, Arambewela (2006) measured to what extent country of origin influenced service quality dimensions among international

students from China, India, Indonesia and Thailand studying in Australian universities. It was found that all five traditional SERVQUAL instrument were important for all groups, however with a varying degree of importance. Based on the results provided on a 7-point Likert scale, considering all dimension averages, Indian students claimed the highest mean importance (average 6.58), while Chinese students claimed the lowest mean importance (average 5.54) across all items. The tangibles construct appeared to have the biggest influence on the overall satisfaction of international students, which is supported by the previously demonstrated importance of university facilities, such as library and computer laboratories (Wakefield & Blodgett, 1999). On the other hand, the empathy construct had the least impact on satisfaction. The quality of teaching had a major contribution to the satisfaction of international students from China, India and Thailand, while the lecture material appeared as the most important item for students from Indonesia (Arambewela, 2006).

Contrary to the results of Arambewela (2006), Costas and Vrana (2008) noted that even though the SERVQUAL scale has high reliability indices, its validity remains questionable in the higher education setting, hence it is more useful as a secondary scale to distinguish service quality perceptions of students and staff, or to evaluate the quality of selected support services, such as academic records, admissions, career services and financial aid (Ruby, 1998). Cuthbert (1996) also applied SERVQUAL in the higher education context, but due to the unsuitable wording and negative clauses in the instrument, he faced comprehension difficulties upon analysing the mode and median. Many researchers (Firdaus, 2006a; Li and Kaye, 1998; Carman, 1990) claim that the five dimensions of the SERVQUAL instrument are not able to adequately capture information for the subsequent generalization of the results, as it represents a limited amount of industries (Saravanan & Rao, 2007). Finally, Nadiri et al. (2009) found that the performance only measurement (SERVPERF) provided good results in the higher education context.

Parahoo et al (2013) identified six factors that influence the satisfaction of students: university reputation, faculty academic competence, faculty communications, interactions among students, student interactions with admin and IT staff, service quality of electronic communications. Parahoo et al (2013) found that reputation

has a major influence on student satisfaction and that in general the student satisfaction drivers in the Gulf region differ from the underlying factors defined in western studies – further increasing the importance of culturally sensitive scale development. The model of Parahoo et al (2013) explained 53.7% of the variance in the dependent variable (satisfaction) based on a sample of 215 students. Tahar (2008) found five dimensions of perceived service quality, which were similar to Tsinidou et al (2010), with the addition of more physical and location specific factors: the ability to create career opportunities, issues of the program, cost/time, physical aspects and location. Besides the more tangible items, Sultan and Wong (2010) considered some more dynamic, event-based items. They created an instrument of 67 items to assess perceived service quality and identified eight dimensions: dependability, effectiveness, capability, efficiency, competencies, assurance, unusual situation management and semester syllabus.

2.4.5. Higher education specific scales

With the advent of industry specific service quality measurement scales, the first major higher education was developed. Firdaus (2006a) identified six service quality dimensions in the higher education setting: academic aspects, non-academic aspects, reputation, access, programme issues and understanding, and recommended to measure students' perceptions along these dimensions to reveal improvement areas, where marketing efforts could be concentrated. Following the SERVPERF approach, the higher education specific service quality and satisfaction scale was named Higher Education PERFORMANCE (HEdPERF). Firdaus (2006a: p.569) claimed that understanding the relative influence of these 6 service quality dimensions may allow for a better resource allocation at higher education institutions. Students perceived 'access' as the most dominant service quality factor, which refers to approachability, ease of contact, availability and convenience. Later, Firdaus (2006b) polished the originally six-dimensional scale down to a five-dimensional service quality scale for the higher education industry: the modified scale considered the academic, non-academic service, program issues, access and reputation aspects of the university as 'understanding' could not be sustained as a stable service quality dimension. Based on a sample of 409 students from six Malaysian universities, only access served as a predictor of service quality.

Firdaus (2006b) and Brochado (2009) compared multiple service quality instruments, such as HEdPERF, SERVPERF, the moderating scale of HEdPERF-SERVPERF and SERVQUAL in the context of higher education to determine which is the most robust in terms of unidimensionality, reliability, validity and explained variance. In this research Firdaus (2006b) used the original 41 item HEdPERF scale (only used the 28 items which were generated from literature, as the remaining 13 questions were adapted from SERVPERF already) and slightly adjusted 22 perception-items extracted from the SERVPERF scale (Cronin & Taylor 1992) to the higher education setting. Using a 7-point Likert scale, respondents were asked to rate overall service quality, satisfaction, future visits and 3 open ended questions further encouraged students to give feedback on how services could be improved. 381 valid responses were analysed from 6 Malaysian tertiary institutions and 4 dimensions emerged in the merged HEdPERF-SERVPERF scale (Firdaus, 2006b: p.38): non-academic aspects, academic aspects, reliability and empathy. The HEdPERF-SERVPERF scale is essentially combined from two HEdPERF dimensions (non-academic and academic) and two SERVPERF dimensions (empathy and reliability).

Faizan et al (2016) stated the:

'The results of both these studies concluded that the measurement of service quality by means of the HEdPERF method yielded more reliable estimations, greater criterion and construct validity, better explained variance, and consequently, HEdPERF was found to be a better fit than the other two instruments.' (p. 72).

Faizan et al. (2016) investigated the effect of the HEdPERF service quality factors on international student satisfaction and the subsequent influence of satisfaction on loyalty and university image. Based on the HEdPERF dimensions Arrivabene (2019: p.197-198) examined 206 respondents in Brazilian publicly traded for profit universities and found that the following variables were the most important influencers of student satisfaction confirming the below five service quality dimensions previously defined in the original HEdPERF model of Firdaus (2006a): academic aspects, non-academic aspects, access and reputation.

As a critique to Firdaus (2006a; 2006b), Law (2013) found that SERVPERF was more appropriate than the higher education industry specific HEdPERF in a study involving Hong Kong HEIs. Considering the nuances that may lead to the success of one scale over another, it is worth exploring the further extension and reconsideration of the HEdPERF scale. Kashif et al. (2016) noted that the HEdPERF model, regardless of being a higher education specific service quality scale, did not dominate the industry because it was too similar to SERVPERF. Instead of HEdPERF in some recent studies modified SERVQUAL scales were used to measure service quality (Calvo-Porrall et al, 2013; Shekarchizadeh et al, 2011), however all of these modified SERVQUAL scales failed to reproduce many of the traditional SERVQUAL dimensions. Kashif et al (2016) notes that all of these scales ignored the local cultural context, for instance how a certain culture perceives the traditional service quality dimensions. Firdaus (2006b) found that higher education providers should focus on the service quality dimensions which are perceived to be the most important for students, which fosters stronger relationships with current and future students (Hanaysha et al, 2011).

Acknowledging the importance of the growing number of international students across the world, in the next section the culturally sensitive service quality measurement scales are discussed.

2.4.6. Culturally sensitive scales in higher education

The SERVQUAL instrument is based on modern western cultural values, consequently it has limited validity in different cultural environments (Ladhari, 2008). It is recommended to increase the cultural sensitivity of service quality measurement scales (Kashif et al, 2016) to capture cultural nuances such as the interpretation of service quality dimensions in high-context and low-context cultures (Laroche et al, 2004). Imrie et al (2002) found that culture has an impact on service quality perceptions, as these perceptions are rooted in and shaped by the nation specific social system instilled in consumer thinking. (Hofstede, 1997).

Accordingly, cultural factors must be considered when developing a service quality measurement instrument (Furrer et al, 2000). Kashif and Cheewakrakokbit (2018)

investigated service quality, satisfaction and loyalty in the higher education context with a 31-item scale of which 3 student satisfaction and 3 student loyalty items were taken from their previous research (Kashif et al, 2016) and 25 items were applied from the PAKSERV scale developed by Raajpoot (2004). The PAKSERV scale interpreted service quality in the local culture, specifically in an Asian cultural setting and identified 3 non-western dimensions besides the original SERVQUAL dimensions of tangibility, reliability and assurance: sincerity, personalization and formality. While generic and adapted service quality measures have their merits and use, higher education industry specific measurement scales such as HEdPERF and PAKSERV provide more reliable results when measuring the service quality perceptions of international students.

2.4.7. Measuring service quality in higher education

Service quality scales were collected and categorized by the chosen approach and scale type to measure service quality dimensions (Table 12.). In terms of scale type, some researchers applied the original main dimensions of the SERVQUAL and SERVPERF instruments, and others slightly changed the wording of the service quality attributes. Further narrowing the focus, most of the listed scales were specifically designed to measure service quality in the higher education context, and in addition to that, some considered the local cultural settings and aimed to establish a scale that is sensitive to cultural differences.

Table 12. Summary of service quality scales

Author(s) and year published	Service quality scale	Service quality dimensions
<i>Generic services</i>		
Parasuraman et al (1985; 1988; 1994)	SERVQUAL	responsiveness, assurance, empathy, tangibility, reliability
Taylor & Cronin (1992)	SERVPERF	
Arambewela (2006) Costas & Vrana (2008)	SERVQUAL adapted	responsiveness, assurance, empathy, tangibility, reliability
<i>Higher education specific</i>		
Firdaus (2006a)	HEdPERF	academic aspects, non-academic aspects, reputation, access, programme issues and understanding

Firdaus (2006b)	HEdPERF-SERVPERF	non-academic aspects, academic aspects, reliability, empathy
	HEdPERF based	academic, non-academic service, program issues, access and reputation
Tahar (2008)	-	the ability to create career opportunities, issues of the program, cost/time, physical aspects and location
Arambewela & Hall (2009)	SERVQUAL based	education, social orientation, economic considerations, image and prestige
Tsinidou et al (2010)	-	academic staff, administrative services, library services, curriculum structure, location, facilities and career prospects
Afzal et al (2010)	-	design, delivery and assessment, academic facilities, non-academic facilities, recognition, guidance, student representation, study opportunities and group size
Sultan & Wong (2010)	-	dependability, effectiveness, capability, efficiency, competencies, assurance, unusual situation management and semester-syllabus
Fernandes et al (2013)	-	quality of teaching, programme organization, management and academic support, services and facilities
Parahoo et al (2013)	-	university reputation, faculty academic competence, faculty communications, interactions among students, student interactions with admin and IT staff, service quality of electronic communications
Suleyman (2014)	-	behavioural aspects, academic aspects, access and academic support
Faizan et al (2016)	HEdPERF	academic aspects, non-academic aspects, access, academic programs, reputation
Arrivabene (2019)	HEdPERF based	academic aspects, non-academic aspects, access, academic programs, reputation
Gibson (2010)	-	academic staff/teaching, classes and curriculum, advising support, skills developed by students, preparation for future, services and facilities, social integration, student centeredness and responsiveness, pre-enrolment factors
Letcher & Neves (2010)	-	self-confidence, curriculum and instruction and classes, quality of teaching of subject matter, extracurricular activities and career opportunities, student advising, quality of teaching and instructor feedback, computing facilities and student quality and interaction
Sultan & Wong (2013)	SERVPERF based	academic, administrative and facilities
Frederic et al (2019)	UnivQual	curriculum, services and facilities, skills development
<i>Culture specific</i>		
Raajpoot (2004)	PAKSERV	tangibility, reliability, assurance, sincerity, personalization and formality

Kashif & Cheew- akrakokbit (2018)	PAKSERV based	sincerity, formality, personalization
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Source: own construction

Based on the evidence provided by previous researchers (Cronin & Taylor, 1992; Babakus & Boller, 1992; Dabholkar et al, 2000; Fernandes et al, 2013), in this dissertation the SERVPERF service quality measurement approach is accepted, where service quality is an attitude which is an antecedent of satisfaction. The service quality instrument of the dissertation is based on the HEdPERF scale (Firdaus 2006a; 2006b), and the applied scale items are from the research of Faizan et al (2016). Faizan et al (2016) successfully incorporated the most important academic factors, non-academic factors of service quality and used an instrument that connected perceived service quality to customer satisfaction and loyalty, which are important parts of the dissertation and will be discussed in the following sections.

2.5. Customer satisfaction

Customer satisfaction occupies a central place in the service quality, satisfaction, loyalty measurement models, accordingly it is one of the key constructs of the dissertation. In this section first the customer satisfaction definitions are discussed, followed by the satisfaction measurement scales in the higher education setting, with a particular focus on international students.

2.5.1. Customer satisfaction definitions

Customer satisfaction is a complex construct and accordingly, there is a constant debate on its definition (Hetesi & Kürtösi, 2008). Satisfaction with an entity, for instance a product, is based on experience (Oliver, 1997; Elliot & Healy, 2001). Hunt (1977: p.459) defined satisfaction as: ‘(...) a consumer’s post purchase evaluation of the overall service experience (process and outcome)’. Oliver (1997) defined satisfaction similarly, as

‘...the consumer’s fulfilment response or the degree to which the level of fulfilment was pleasant or unpleasant. It is an affective (emotional) state of feeling

reaction in which the consumer's needs, desires and expectations during the course of the service experiences have been met or exceeded.' (p.13)

Many researchers agree that satisfaction is a state of mind felt by someone whose expectations were fulfilled by the experienced performance or outcome (Arif & Ilyas, 2013; Kotler & Clarke, 1987). Beyond that, Churchill and Suprenant (1982) claimed that satisfaction is a multi-attribute construct, as in case of high-involvement services (such as higher education) the perceived risk is high and the customer has multiple layers of expectations connected to different parts of the service (Barber and Venkatraman, 1986). In line with the inferences from the previous student as a customer section, in the higher education industry students are the main customers (Sultan & Wong, 2013), as they search, compare alternatives and purchase services (Kuh & Hu, 2001) and accordingly education providers have to meet or exceed the students' (customers) expectations (Grossman, 1999). In case of higher education, satisfaction is often neglected after the students enrolled, however it was found that satisfaction is crucial to retain customers as well (Hofmeister-Tóth et al, 2003).

The expectancy-disconfirmation theory and related models dominated the field before the millennium (Arambewela, 2003; Bolton et al, 1999; Oliver 1996; Parasuraman et al, 1994; Oliver, 1980) and are still often used by researchers to measure student satisfaction (Kaldenberg et al, 1998; Stukalina 2012; Vangelis & Hill, 2019). Elliot and Healy (2001) asserted that student satisfaction is a short-term attitude stemming from the experienced educational service, while Alves and Raposo (2007) defined satisfaction as an extent to which the HEI was able to correspond with student expectations, needs and wishes.

Based on the expectation-disconformity paradigm (Oliver, 1980) the satisfaction with the host institution could be defined by the discrepancy between the initially expected and perceived quality throughout the study program. In case the perceived quality reaches or exceeds the expectations, the customer will be satisfied with the institution, alternatively in case the expectations are not met, the customer will be dissatisfied.

The relationship between service quality and satisfaction had been intensely debated among researchers, service quality and satisfaction are similar, but distinct concepts (Tsoukatos & Rand 2007). Numerous studies Parasuraman et al (1988), Bolton and Drew (1991) and Athiyaman (1997) considered that service quality stems from customer satisfaction, while other studies from Cronin and Taylor (1992), Carman (1990) claimed that service quality is an antecedent of customer satisfaction. More recent researches confirmed that service quality is an antecedent to satisfaction, particularly when multiple constructs are involved in the overall measurement model (Faizan et al, 2016). In this dissertation service quality is handled as antecedent of satisfaction (Cronin & Taylor, 1992; Fernandes et al, 2013). The satisfaction definitions are summarized in Table 13. below.

Table 13. Summary of satisfaction definitions

Author(s) and year published	Satisfaction definition
Hunt (1977)	post purchase evaluation of the overall service experience (process and outcome)
Oliver (1980)	the discrepancy between the initially expected and perceived quality
Churchill and Surprenant (1982)	multi-attribute construct, where many service attributes can be summed up
Kotler and Clarke (1987) Arif and Ilyas (2013)	state of mind felt by someone whose expectations were fulfilled by the experienced performance or outcome
Oliver (1997)	fulfilment response, the degree to which the level of fulfilment is pleasant or unpleasant
Athiyaman (1997)	short-term attitude, an evaluation of a transaction specific consumption experience during the service delivery
Elliot and Healy, 2001	short-term attitude stemming from the experienced education service
Alves and Raposo (2007)	the extent to which the HEI was able to correspond with student expectations, needs and wishes

Source: own construction

2.5.2. Satisfaction construct in higher education

Higher education satisfaction scales became widely researched after the millennium and initially focused on the generic service industry interrelationships between constructs such as satisfaction, loyalty and image. Satisfaction is generally accepted as a main antecedent to loyalty (Alves & Raposo, 2007; Helgesen & Nettet, 2007; Fernandes et al, 2013; Faizan et al, 2016; Kashif & Cheewakrakokbit, 2018) and as

a consequence of perceived quality (Alves & Raposo, 2007; Helgesen & Nettet, 2007; Arambewela, 2009; Fernandes et al, 2013; Appio et al, 2013; Faizan et al, 2016; Marimon et al, 2018; 2019). Helgesen and Nettet (2007) claimed that satisfaction is an antecedent to reputation, whereas in the service quality literature reputation is often part of the service quality construct where it is largely viewed as an antecedent to satisfaction. The role of satisfaction is summarized in Table 14.

The host country and host institution both have a crucial impact on the study abroad program satisfaction of international students, however the importance and impact of sociocultural adaptation (Yang et al, 2017) and self-determined motivations are often neglected (Chirkov, 2008; Yang et al, 2017; Sheldon et al, 2017). International students often experience culture shock, adjustment difficulties and academic stress in the beginning of their study abroad program, however with adequate support, the host institution can further mitigate the level of culture shock (Dunn, 2001).

Table 14. The role of the satisfaction construct

Author(s) and year published	Construct relationship	The role of satisfaction
Alves & Raposo (2007), Helgesen & Nettet (2007), Fernandes et al (2013), Appio et al (2013), Faizan et al (2016), Marimon et al (2018, 2019)	Perceived quality → Satisfaction	Consequence
Chirkov (2008); Yang et al (2017); Sheldon et al (2017)	Motivation → Satisfaction	Consequence
Yang et al (2017)	Acculturation level → Satisfaction	Consequence
Alves & Raposo (2007), Helgesen & Nettet (2007), Fernandes et al (2013), Faizan et al (2016), Kashif & Cheewakrakokbit (2018)	Satisfaction → Loyalty	Antecedent

Source: own construction

To sum it up, in the theoretical framework of the current dissertation satisfaction is a consequence perceived service quality, acculturation and self-determined motivations for studying abroad, and an antecedent to loyalty. Customer satisfaction can lead to purchase, retention, repeat purchase, loyalty and word-of-mouth (Arambewela, 2006; Athiyaman, 2000). In the next section the role of loyalty and word of mouth is discussed in the HE context.

2.5.3. Measuring satisfaction in higher education

Regardless of the heated discussion about the role of satisfaction, most researchers agree that student satisfaction serves as a key performance indicator of service quality (Faizan et al, 2016). Understanding the formula to enhancing international student satisfaction, including their motivations and expectations (Cadd, 2012), their needs beyond academics, provides a competitive advantage for institutions (Borzooei & Asgari, 2014; Douglas et al, 2008). This holistic approach is the necessary theoretical base to offer modern international student services (Dungy & Gordon, 2011).

As it is show in table 15, Alves and Raposo (2007) and Marimon (2018) used global indicators such as overall satisfaction and correspondence to needs and wishes. Many researchers relied on the expectation-disconfirmation paradigm of Oliver (1980), introducing scale items that measure the satisfaction level minus expectations (Helgesen and Nettet, 2007) and combined it with global satisfaction indicators (Paharoo et al, 2013) or referenced the initial expectations of students (Kashif & Cheewakrakokbit, 2018). In a multi-attribute view the choice of customers can be broken down to affective, cognitive and conative aspects of satisfaction, capturing a more robust satisfaction construct (Faizan et al, 2016; Arrivabene, 2019).

Table 15. Summary of satisfaction scales in higher education

Author(s) and year published	Measurement items
Alves & Raposo (2007)	Global level of satisfaction Correspondence to needs and wishes
Helgesen & Nettet (2007)	Satisfaction with the university college (spontaneous judgment) Satisfaction with the university college in general Satisfaction with the university college compared with expectations Satisfaction with the university college compared with an ideal one
Paharoo et al (2013)	Overall satisfaction: I'm satisfied with the degree I am very satisfied with the services provided by my university My university has met my expectations The university has fulfilled my aspirations My university has met my needs
Faizan et al (2016)	I am satisfied with my decision to register at this university My choice to choose this university was a wise one I think I did the right thing when I chose to study at this university I feel that my experience with this university has been enjoyable Overall, I am satisfied with this university

Kashif & Cheewakrakokbit (2018)	Assuming the entire experience with this university, I am satisfied In general, my satisfaction levels related to current university is high This university has exceeded my expectations in offering quality education
Arrivabene (2019)	My choice of this university was wise (rational decision) I think I did the right thing in choosing to study at this university My experience with this university has been agreeable

Source: own construction

Considering the high service lead time in the education industry (Marimon et al, 2018), the performance minus expectations theoretical framework provides neither convenient nor reliable measurement for HEI services (Cronin & Taylor, 1992). In this dissertation satisfaction is conceptualized as a multi-attribute construct (Churchill and Surprenant, 1982), considering the affective, cognitive and conative aspects (Hennig-Thurau et al, 2002) in the form of scale items starting with “I think” or “I feel” (Faizan et al, 2016) combined with a global satisfaction indicator. In addition to that, the host institution specific satisfaction item from Paharoo (2013) is added, with a similarly phrased question about the host country.

2.6.Loyalty and Word of Mouth

Loyalty is a key objective for most HEIs, as it has been proven that loyal customers are more likely to engage in repeated purchase and tend to spread positive word-of-mouth (WOM). In this section the loyalty and WOM definitions are discussed, followed by the loyalty measurement scale applied in the dissertation.

2.6.1. Loyalty and WOM definitions

As it was previously established, loyalty is an important consequence of customer satisfaction, taking organizations a step further to increase repeated purchases and positive WOM, however there is no consensus on the definition of loyalty and WOM (Dick & Basu 1994; Jacoby & Chestnut 1978; Reichheld & Sasser, 1990; Oliver, 1997). In the 1960s loyalty was considered as repeat purchase behaviour and later on a behavioural approach was adopted. Jacoby and Kyner (1973) defined loyalty as (in Blut et al, 2007):

'a biased (non-random) repeat purchase of a specific brand (from a set of alternatives) over time by a consumer, using a deliberate evaluation process'
(p.726).

A biased purchase is evident when the customer is aware of better or cheaper service alternatives offered on the market, however still remains committed to the organization. Originally, loyalty was a unidimensional construct, however further investigating the influence of belief, affect and intention, Dick and Basu (1994) identified cognitive, affective and conative antecedents of relative attitude, which have a major impact on loyalty, and at the same time loyalty invokes behavioural consequences. Oliver (1997) investigated the elements of loyalty and defined it as:

'...a deeply held commitment to rebuy or re-patronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behaviour.' (p.392)

Based on Oliver (1997) customer loyalty can be divided into a sequence of attitudinal elements, such as cognitive loyalty (based on knowledge), affective loyalty (based on emotions) and conative loyalty (based on intention or effort) and behavioural loyalty, which is action loyalty based on re-purchase. At each stage of loyalty different influencing factors appear: cognitive loyalty relies on the perceived value, which is perceived quality and the cost of service, hence customers tend to easily switch to alternative offers on the market with a better cost-benefit ratio. Next, affective loyalty assumes a positive attitude towards the organization, leading to customer satisfaction, and accordingly it is harder for competitors to convert customers, however it is possible with a compelling brand communication. In the third stage of the sequence conative loyalty refers to the desire to intend a certain action, for instance repurchase or openly express a positive opinion (WOM) about the organization. At this stage customers tend to make a considerable effort to engage in the purchase, without considering alternative offerings. In the final stage the action loyalty means that customer does the re-purchase. Zeithaml et al (1996) operationalized conative loyalty as a combination of repurchase intention and word-of mouth intention.

Hennig-Thurau et al (2002) also confirmed that loyalty comprises of attitudinal and behavioural components, where the attitudinal component encompasses cognitive, affective and conative dimensions and the behavioural component relates to the purchasing decision. In similar categorization, Kaur and Soch (2013) also found that loyalty is often defined two ways: the behavioural and attitudinal senses. The attitudinal sense refers to the short-lived preference or emotional commitment towards an organization, measured by the intention to re-purchase or recommendation of the service (WOM), acceptance of higher prices, and choosing the service of the organization over better alternatives on the market. On the other hand, the behavioural sense assumes the potential to build a trusted relationship with the organization, where the key performance indicators are the repeated purchase and long-term commitment on the customer's side.

Word-of-mouth is a post-purchase action, when customers share their service experiences with their friends or relatives (Ladhari, 2007), which is associated with the conative level of loyalty (Dick & Basu, 1994; Zeithaml, 1996; Oliver, 1997) or in the wider conceptualization of the loyalty construct, it is part of attitudinal loyalty (Kaur & Soch, 2013). The loyalty definitions are summarized in Table 16.

Table 16. Summary of loyalty definitions

Author(s) and year published	Loyalty element(s)	Marketing outcome(s)
Jacoby & Kyner (1973)	unidimensional: behavioural approach	biased repeat purchase
Reichheld & Sasser (1990)	unidimensional: low-defect or 'zero defect'	biased repeat purchase positive word-of-mouth
Dick & Basu (1994) Zeithaml et al 1996	multidimensional: relative attitude (cognitive, affective, conative); behavioural attitude	biased repeat purchase positive word-of-mouth
Oliver (1997), Hennig-Thurau et al (2002) Kaur & Soch (2013)	multidimensional: attitudinal loyalty (cognitive, affective, conative); action loyalty: behavioural	biased repeat purchase positive word-of-mouth patronize a preferred service trusted relationship with the brand
Uncles et al (2003)	multidimensional: attitudinal loyalty behavioural loyalty	trusted relationship with the brand, positive word-of-mouth re-purchase (or a combination of these)

Source: own construction

Student loyalty has strategic importance for higher education institutions (Hennig-Thurau et al, 2002) and in the long run it is expected to positively relate to student satisfaction and institution performance (Zeithaml, 2000; Helgesen, 2006; Athiyaman, 1997). Institutions have to manage the perception of service performance to improve students' attitude towards the institution (Bagozzi, 1992) and avoid decreasing satisfaction and loyalty which could result in negative word of mouth (Maxham & Netemeyer, 2002).

In this dissertation the loyalty definition of Oliver (1997) is accepted, keeping loyalty and WOM as one construct (Fernandes et al, 2013), as multi-attribute item with attitudinal and behavioural elements, where WOM is part of attitudinal (conative) loyalty (Dick & Basu, 1994; Zeithaml, 1996; Oliver, 1997).

2.6.2. Loyalty construct in higher education

There is substantial higher education industry research supporting that customer satisfaction influences loyalty (Douglas et al, 2008; Alves & Raposo, 2010; Helgesen & Nettet, 2011; Faizan et al. 2016; Shahsavari & Sudzina, 2017; Kashif & Cheewakrakokbit, 2018) and higher education institutions can increase the loyalty of international students by properly managing all service touchpoints (Arrivabene et al, 2019). The role of the loyalty construct in the dissertation is summarized in Table 17.

Alves and Raposo (2007) found that satisfaction was an antecedent to loyalty, and that loyalty was an antecedent of WOM, however they did not find a significant direct connection between satisfaction and WOM, suggesting that word-of-mouth is only a consequence of loyalty. Other researchers conceptualized loyalty as a single construct (Helgesen & Nettet, 2007; Faizan et al, 2016; Arrivabene, 2019), which is in line with the conceptualization of Oliver (1997), where purchase intention and word-of-mouth are on the same conative level of attitudinal loyalty. Since Alves and Raposo (2007) were not able to identify a direct connection between satisfaction and word-of-mouth, there does not appear to be much added value in separating the loyalty construct (as WOM is only a consequence of loyalty). Hence in the current dissertation the loyalty construct will be considered as a single construct, incorporating WOM in itself.

Table 17. The role of the loyalty and WOM constructs

Author(s) and year published	Construct connections	The connection between loyalty and WOM
Alves & Raposo (2007);	Loyalty → WOM	2 constructs
Fernandes et al (2013); Helgesen & Nettet (2007); Faizan et al (2016); Zhou et al (2016); Shahsavar & Sudzina (2017); Kashif & Cheewakrakokbit (2018); Arrivabene et al (2019)	Satisfaction → Loyalty	1 construct (multi-attribute)

Source: own construction

The importance of WOM may differ from one service to another depending on the level of involvement with the service purchase, however it is clear that WOM has a major role in the education industry (Mazzarol & Soutar, 2002). Word of mouth from relatives and friends is a key determinant in the host institution choice (Pimpa, 2008). Institutions have an opportunity to be part of this organic line of recommendation in case they successfully engage with potential study abroad students (Markos-Kujbus & Gáti, 2012). Future international students will ask past international students about their study abroad experiences, hence it is crucial for HEIs to gather the opinion of international students while they are studying at the HEI (Malota & Gyulavári, 2018) so WOM could be managed to some extent.

2.6.3. Measuring loyalty and WOM in higher education

Loyalty in the field of international higher education has to be adjusted to the practicalities of the industry. Even though the main goal of institutions is to increase enrolment, they offer academic mobility programs as a selling point, involving many partner institutions to add variety to their offered domestic programs. In the HE context, it is also important to consider individuals, who already finished with their program, as Helgesen and Nettet (2007) found that alumni loyalty may be even more important than the loyalty of current students. Another important characteristic of loyal students is that they are less likely to drop out from the program (Thomas, 2011), while they positively affect the teaching quality with their active participation on classes, more likely to give written or oral testimonials for the HEI, support current graduates to find employment (Rodie & Kleine, 2000). Moreover, loyal students also tend to recommend the program to others, continue with a higher level (or different) program at the institution, join alumni or

financially support the institution (Helgesen, 2006). Student loyalty manifested in the form of positive WOM, allowing the institution to stand out from the crowd (Zhou et al, 2016), and it leads to long-term profitability through a steady or increasing flow of enrolments. (Alves & Raposo, 2010; Asaduzzaman et al, 2013). Alves and Raposo (2007) separated the loyalty and WOM constructs (both were consequences of satisfaction), and used attitudinal loyalty elements for the loyalty constructs (re-purchase intention) and pride and willingness to recommend as WOM indicators. The scale items of more recent higher education loyalty researches have maintained the same attitudinal loyalty elements however they did not separate the loyalty construct from WOM, but kept them as a single construct (Helgesen & Nettet, 2007; Faizan et al, 2016; Arrivabene, 2019). Another loyalty research angle was designed by Kashif and Cheewakrakokbit (2018), where only WOM items represented the loyalty construct as shown on Table 18.

Table 18. Summary of loyalty scales in higher education

Author(s) and year published	Measurement items
Alves and Raposo (2007)	I take pride in the fact that I study at the host institution I would recommend to a friend I would choose the same host institution again I would choose again for a post-graduation program
Helgesen and Nettet (2007)	Probability of recommending the university college to friends/ acquaintances Probability of attending the same university college if starting from fresh Probability of attending new courses/further education at the university college
Faizan et al (2016)	I will continue at the same university if I want to start a new course I will continue at the same university if I want to further my education I will recommend this university to my friends and family
Kashif/Cheewak-rakokbit (2018)	I recommend my family, friends and relatives to take advantage of the services offered by this university I spread positive word of mouth about this university and its high-quality services
Arrivabene (2019)	I'd stay at this university if I intended to change my major I'd stay at this university if I wanted to continue my studies (enrol in a graduate or specialization program) I'll recommend this university to my friends and relatives respectively.

Source: own construction

Following the loyalty definition of Oliver (1997), in the dissertation the scale items of Faizan et al (2016) will be used to represent attitudinal loyalty, including WOM items in a single loyalty construct, with the addition of the 'pride' attitudinal loyalty scale item from Alves and Raposo (2007).

2.7. International student characteristics

There are many satisfaction scales in the higher education industry and more recent models incorporated additional control factors such as motivations, behavioural elements, personal skills, personality types and sociocultural adaptation as well. In this section a range of student characteristics are discussed, which may influence the experienced service quality and satisfaction levels of international students.

2.7.1. Demographics, personal characteristics and personality traits

Students have to manage multiple areas in their lives besides taking care of their academic responsibilities, hence it is important to consider the demographic characteristics which may influence their choices, motivations and subsequent satisfaction with their study programs. Some of the most important differentiators are the age group, gender, study level, personality type, learning style and preceding grade point average (Fredericksen et al, 2000; Brokaw et al, 2004). Malota (2016) conducted a nationwide research in Hungary, where a range of demographic items were applied, such as program length, time spent abroad, major subject, financial status, received grants to gain further insights about international students.

Similarly, the study level affected satisfaction, as postgraduate students tend to be more critical of the HEI than undergraduate students. Students participating in local student associations were often less satisfied with HEIs due to developing higher expectations while being more active and engaged in extracurricular activities. Lazibat et al. (2014) found that the students' personal characteristics, engagement level and motivations to achieve their goals also have a positive impact on their study experience. Letcher and Neves (2010) identified eight service quality antecedents, which included the level of self-confidence at students, which was measured by the self-reported perception of the skills and knowledge gained during the study program.

The Big Five personality traits are often applied when measuring the impact of different personality types. The measurement tool uses five characteristics, which are the openness to experience, conscientiousness, extraversion, agreeableness and neuroticism (John & Srivastava, 1999). Nandi and Nicoletti (2009) found that in

the UK job market the traits of neuroticism and agreeableness resulted in lower paying jobs, while openness to experience and extraversion predicted better salaries. In the academic context Geramian et al (2012) examined the connection between academic achievements and the personality type of international students and found that traits of conscientiousness and openness to experience had significant impact on academic success. In the past years researchers have used the Big Five personality traits as a fundamental measure of personality, and have reached robust results with regards to cultural adaptation (Fang et al, 2016). Yang et al (2017) also found that in case of international students studying in the USA, extraversion predicted higher levels of basic psychological needs satisfaction, while neuroticism predicted lower levels of satisfaction abroad.

Student satisfaction levels can be increased by better understanding the nature of the above demographics and personal characteristics of students (Gibbs 2012; Shahsavari & Sudzina, 2017).

2.7.2. Prior experiences and expectations

Based on the student experience models from earlier researchers (Biggs, 1996; Parasuraman et al, 1994), Vangelis & Hill (2019) proposed to improve the perceived student experience by considering the various background of the 'student presage' such as prior knowledge and education, preferred ways of learning, abilities, country of origin, individual values and motivation. It is important to understand student expectations and perceptions at the earliest stage of the academic journey. The prospective alignment of the student experience and educational quality in the beginning of the educational program is expected to lead to an improved student experience. Accordingly, institutions should aim to explore and identify the student presage factors, adjust them to the teaching context, manage unrealistic student expectations on an ongoing basis and understand how students perceive quality (Vangelis & Hill, 2019).

In an international setting, both personal and institutional factors (Chahal & Devi, 2013) should be considered, including the country of origin as well, which is a key predictor of satisfaction and institution choice. Frederic et al (2019) found that students who perceived that they had a chance to develop their academic skillset

were more satisfied with the program, hence it is important to support students to obtain the desired skills in the academic environment.

Joran (2011) claimed that domestic students focus on academics (the quality of education and the knowledge of professors) while international students rather aim to seize the opportunity for personal development, absorb the local atmosphere (country & city) and want build a global career.

2.7.3. Measuring student characteristics in higher education

In the dissertation the international student demographics and personal characteristics and personality traits are used as control variables as detailed in Table 19.

Table 19. International student characteristics and demographics

Author(s) and year published	Type of student characteristics	Measured characteristics
Brokaw et al (2004); Fredericksen et al (2000)	Student demographics	Age, Gender, Academic performance
Chahal and Devi (2013)		Country of origin
Shahsavari & Sudzina (2017)		Study level
Malota et al (2016)		Host country, program start date, program length, time spent abroad, major subject, financial status, received grants
Lazibat et al. (2014)	Personal characteristics	Goal-oriented, engagement
Vangelis & Hill (2019)		Self-confidence
John and Srivastava (1999)	Personality traits	openness to experience
Nandi and Nicoletti (2009)		conscientiousness
Geramian et al (2012)		extraversion
Fang et al (2016)		agreeableness
Yang et al (2017)		neuroticism
Letcher and Neves (2010)	Experiences prior to the study abroad program	Pre-enrolment experience with the host institution (first impressions)
Sultan and Wong (2012)		Teaching style expectation
Vangelis & Hill (2019)		Preferred ways of learning
Vangelis & Hill (2019); Brokaw et al (2004); Fredericksen et al (2000)		Realistic expectations from the host institution and host culture
Vangelis & Hill (2019)		Career opportunities
Letcher and Neves (2010)		Skillset development
Frederic et al (2019)		Prior education was sufficient
Vangelis & Hill (2019)		Prior study abroad experience
Vangelis & Hill (2019)		Prior intercultural experience

Source: own construction

2.8. Summary of the literature review

The literature review provided the context for the constructs which will be operationalized and measured in the dissertation. The aim of the literature review was to synthesize research scales and the already researched relationships between study abroad motivations, perceived service quality, culture shock, acculturation, satisfaction and loyalty in the international high education context. By identifying the potential theoretical gaps, the examined constructs can be summarized in a holistic theoretical framework to describe the study abroad program satisfaction and overall experience of international students.

As universities receive less government funding (Zebal et al, 2012) and more programs target internationalization (Ahmad & Buchanan, 2017), the priorities of universities are shifting towards recruiting and retaining international students. This strategy ultimately provides a source of cultural diversity while allowing sustainability through increased margins on program fees. International higher education has gained worldwide momentum in the past decades with having over 5.5 million students studying abroad in 2018 (UNESCO 2020), accordingly, similar growth tendencies are seen in Hungary, as the number of hosted international students doubled between 2008 and 2018 (Oktatási Hivatal, 2020). With the abundant number of international students, the hegemony of traditional, anglophone and Western study abroad destinations are facing serious competition from developing and Eastern countries (IIE, 2017). Host countries and host institutions that wish to stay ahead of their competition, must invest in learning more about the study abroad experience of international students, preferably in a holistic manner, examining the country level cultural factors, the institution level academic and non-academic factors and the personal characteristics of international students.

Study abroad motivations are the starting points of the journey, where international students make a decision about why and where to study abroad. Motivations for studying abroad include personal development, cultural learning, exploring a new country, making international friends or nurture an international career path (Leutwyler & Meierhans, 2013). The push and pull factors (McMahon, 1992;

Mazzarol, 1998; 2002) categorized host country level and host institution level reasons to study abroad, evaluating factors such as the amount and availability of information, influencers and advisers around the student, financial and mental costs, physical environment, emotional environment, geographical proximity, time zone and travel time, social connections with relatives or friends who live(d) in the host country (Mazzarol, 1997). It is often difficult to decide whether the push or pull factors was first (or which should come first), especially when students identify multiple motivating factors. In order to overcome this, the theory of self-determined motivation for studying abroad (Sheldon et al, 2017) provided a continuum ranging from making a self-determined choice to losing the autonomy of decision, and submitting to external contingents. In the dissertation the self-determined motivations scale is used, where the highest autonomy is achieved through intrinsic, identification and positive introjected motivations, while the decision-making process has a low level of autonomy in case of negative introjection, external and amotivation (Yang et al, 2017).

As soon as international students arrived to their host destination, they start to familiarize themselves with the new cultural environment and often face some degree of culture shock (Oberg, 1960). While instantly losing the usual supporting network of family and friends (Chaney & Martin, 2011), the newly encountered norms, values, language, behaviour or people of the local culture (Malota, 2013) and fellow international students may cause a great deal of mental and even physical inconvenience (Hidasi, 2004). Culture shock often manifests in the forms of perceived discrimination, homesickness, perceived hate, rejection, fear or stress due to the change and the sense of guilt for leaving behind people in the home country (Sandhu & Asrabadi, 1994). Mumford (1998) categorized culture shock into core elements that are perceived by the individual (disgust, acceptance, stress, confusion, lack of support) and the interpersonal elements, which are related to the interactions with members of the host culture. Previous studies focused on clinical treatments for culture shock (Brown et al, 1975), however more recent findings offer frameworks around stress coping mechanisms and cultural learning (Ward & Furnham, 2001), claiming that international students can acquire the culturally appropriate skills to overcome the shocking experiences (Zhou et al, 2008). The

acculturation strategy of international students can be categorized by the level of host culture and home culture identification (Berry, 1994), where integration is the most desired strategy, with high level of home and host culture identification. In case international students experienced more intense shock in the host culture (Sandhu & Asrabadi, 1994), it was expected to be more difficult for them to adapt to their new environment (Wilson et al, 2017). Considering the simplicity and validity, the scale of Mumford (1998) is used in the dissertation to measure culture shock.

The acculturation strategy (Berry, 1997) of international students depends on the willingness to connect in multiple ways with the host culture (Chirkov, 2007; Dentakos et al, 2016) and its outcome is expected to largely define the study abroad experience. Over the last decades, multiple models have emerged to describe the sociocultural adaptation of international students, starting from a U-curve (Oberg, 1960) to the upward spiral of stress-adaptation-growth model (Kim, 2001), which were based on the perceived stress. Other researchers focused on the culture learning aspect, where acculturation was measured with the behavioural outcome, the sociocultural adaptation of international students (Ward & Kennedy, 1999). The acculturation scale, measuring sociocultural adaptation through the competence of international students in different cultures was revised and simplified by Wilson (2013) and it will be used in the dissertation.

Arguably, a key aspect of studying abroad is the academic services provided by the host institution. Service quality has been a widely researched marketing construct with various measurement models considering expectations, such as the SERVQUAL scale (Parasuraman et al, 1988) or the performance only scale of the SERVPERF approach (Cronin & Taylor, 1992). In order to obtain more accurate results, higher education specific measurement scales have emerged, for instance the HEdPERF (Firdaus, 2006a; 2006b) which was further polished by more recent research results (Faizan et al, 2016; Arrivabene, 2019). These scales consider the most important aspects of academic and faculty related service delivery, university reputation, access to services and the overall program offering, and some researchers created culturally sensitive scales as well (Raajpoot, 2014). The connection between service quality and acculturation have been under researched, however it appears that the perceived quality of services can be impacted by the

level of acculturation (Chirkov, 2008). In case international students acquire the necessary cultural competence (Wilson, 2013; Wilson et al, 2017), it is expected that they can focus more on the academic aspects and make the most of the service offerings of the host institution, leading to higher levels of satisfaction (Yang et al, 2017). In the dissertation adapted version of the HEdPERF scale (Faizan et al, 2016) as it includes the most important academic and non-academic factors and measure their interrelationship with satisfaction and loyalty.

Satisfaction is an important marketing construct: companies, universities and various organizations have been measuring it for almost a century. It is conceptualized as a multi-attribute phenomenon (Churchill & Suprenant, 1982) and it has often been often utilized as the main indicator of success in international higher education as well as in various industries (Oliver, 1997; Alves & Raposo, 2007). In the dissertation the satisfaction has a central role and will be measured both as overall host country and host institution satisfaction indicators (Paharoo et al, 2013) combined with the multi-attribute version of the host institution satisfaction scale (Faizan et al, 2016).

The interrelationship between self-determined motivations, acculturation and satisfaction in the higher education is scarcely researched. As the satisfaction construct is in the centre of the current dissertation, in the proposed holistic theoretical framework satisfaction is influenced by the earlier described self-determined motivations for studying abroad (Yang et al, 2017), the acculturation level of international students (Wilson et al, 2013) and the perceived service quality as well (Faizan et al, 2016). Loyalty is also a well-known consequence of customer satisfaction (Fernandes et al, 2013; Helgesen & Nettet, 2007), and it has an important role in the dissertation, as the attitudinal loyalty elements, including word-of-mouth (Faizan et al, 2016) are key for universities when recruiting international students.

There are various moderators included in the research to gain more insight about international student satisfaction. Some of the most important differentiators are the age group, gender, study level, personality type, learning style and preceding grade point average (Fredericksen et al, 2000; Brokaw et al, 2004). Malota (2016) conducted a nationwide research in Hungary, where a range of demographic items were applied, such as program length, time spent abroad, major subject, financial

status, received grants to gain further insights about international students. Vangelis & Hill (2019) proposed to improve the perceived student experience by considering the various background of the 'student presage' such as prior knowledge and education, preferred ways of learning, abilities, country of origin, individual values and motivation. It is important to understand student expectations and perceptions at the earliest stage of the academic journey.

The Big Five personality traits are often applied when measuring the impact of different personality types. The measurement tool uses five characteristics, which are the openness to experience, conscientiousness, extraversion, agreeableness and neuroticism (John & Srivastava, 1999). In the academic context Geramian et al (2012) examined the connection between academic achievements and the personality type of international students and found that traits of conscientiousness and openness to experience had significant impact on academic success. Yang et al (2017) also found that in case of international students studying in the USA, extraversion predicted higher levels of basic psychological needs satisfaction, while neuroticism predicted lower levels of satisfaction abroad.

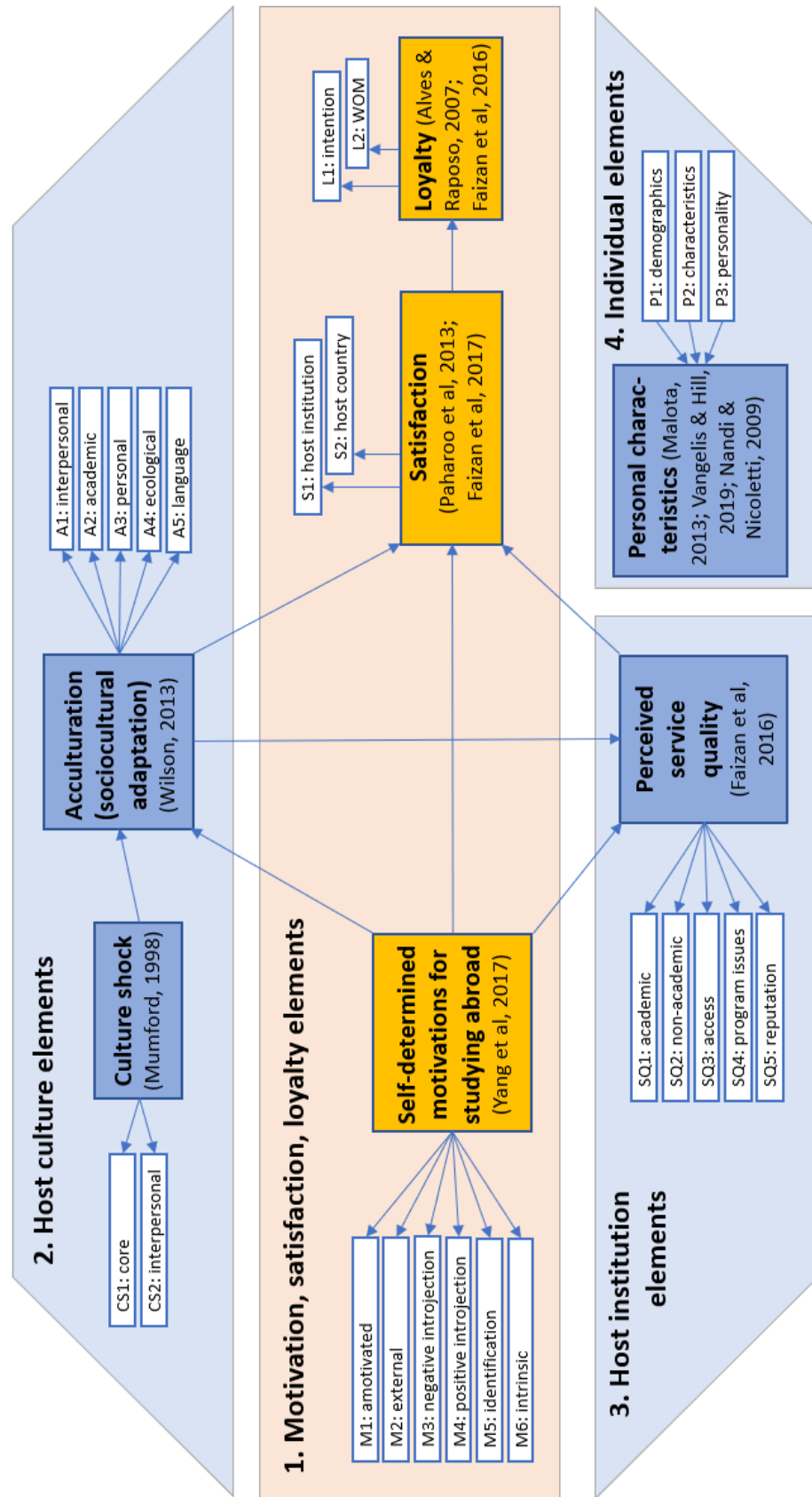
2.8.1. Proposed theoretical framework

The extant literature is abundant when considering each construct separately, however there is a varying level of evidence for their interrelationship in the higher education industry. There is already a well-established connection between perceived service quality, satisfaction and loyalty in the service industry, and also, motivations, culture shock and acculturation are well-researched in the fields of psychology with a range of individual level international student characteristics as control variables.

The novelty of the dissertation is that it applies a holistic approach to examine the study abroad program satisfaction and overall experience of international students, accounting for the host country culture, host institution services and the international student characteristics as well. The dissertation aims to find the connection between these layers with the proposed theoretical framework.

Based on the literature review there is a connection between these constructs which can be measured with a range of indicators, using validated scale items (see Appendix 2.).

Figure 8. Theoretical framework of the dissertation



Source: own construction

The middle section (light orange colour) of the model (Figure 8) represents the core of the research, which is the direct line connection between self-determined motivations for studying abroad (Yang et al, 2017), satisfaction, and the connection between satisfaction and loyalty (Paharoo, 2013; Faizan et al, 2016). The start of the journey (motivations) is expected to impact the overall study abroad program, including the perceived quality of services, acculturation and satisfaction. Amidst the fierce competition for students (Arambewela & Hall, 2009), it is imperative for HEIs to have satisfied customers (students), who then, as loyal ambassadors, can spread positive word-of-mouth about the institution.

The top section of the model discusses the host country layer, including the experienced culture shock (Mumford, 1998) in the host country and the level of acculturation of international students (Wilson, 2013). As mentioned earlier, there is a lack of research that would use acculturation as a mediator between self-determined motivations and satisfaction.

Furthermore, as the level of acculturation is primarily defined by the experienced cultural gap that must be filled (Malota, 2013), the culture shock impacts the level of acculturation. The importance of acculturation lies in gaining insights about the behaviour of international students. It is uncovering details such as how competent they felt in their social interactions, whether they understood their personal and wider social environment, to what extent were they able to communicate and behave in a culturally appropriate manner (Searle & Ward, 1990; Ward & Kennedy, 1999; Wilson, 2013). Culturally competent behaviour will result in positive feedback from the host culture, a sense of acceptance and belonging, which can in turn impact the level of satisfaction, defining the overall study abroad experience and the satisfaction with the host institution at the same time.

The bottom left section details the elements of the perceived service quality, which is considered as another key mediator to satisfaction. The service quality items represent the key touchpoints with international students via teachers (academic aspects), administrative staff (non-academic aspects), the timely deliveries and availability of the faculty staff (access), course or program specific deliverables (program issues) and the reputation of the institution (Faizan et al, 2016).

International students tend to be top of their class and head out to study abroad with a competitive mindset, which is not restricted to the pure academic knowledge, but networking gains and access to resources or courses they could not get in their home countries. Accordingly, the host institution has a great responsibility and can significantly impact the overall experience of international students.

The bottom right section comprises of the personal characteristics of international students. It is important to understand the personal background of international students and their dominating personality traits, so the HEI offerings and marketing activities may be more effective. In the dissertation the basic demographics (Malota, 2016) and the personal background (previous experience and preparation) are considered (Vangelis & Hill, 2019) with the addition of the personality traits of international students (Nandi & Nicoletti, 2009), which is also rarely researched. In the next section the details of the empirical research are discussed, which included both qualitative and quantitative research phases.

3. EMPIRICAL RESEARCH

The empirical research of the dissertation aims to explore and confirm the strength and significance of the relationships between the constructs summarized in the literature review. In this section, first the research plan is introduced starting with the research questions, the overarching research design and the timeline. Secondly the qualitative research sample, in-depth interview method and thematic content analysis are discussed, closing with the results gathered in the qualitative research phase.

In the quantitative phase the proposed theoretical framework and research model are discussed through the hypotheses derived from the extant literature and the initial qualitative research results. The quantitative sampling, data collection and structural equation modelling method are detailed, and then the attained results are discussed with regards to the research questions and hypotheses of the dissertation.

3.1. Research plan

In this section the research plan is discussed, including the main research questions and sub questions, the research philosophy and strategy, and the research timeline of the qualitative and quantitative research phases.

3.1.1. Research questions

As discussed in the introduction, the main research question of the dissertation is:

What are the most important host country culture, host institution service and individual level factors when measuring the relationship between self-determined motivations for studying abroad, satisfaction and the loyalty of international students?

The identified sub questions of the main research question:

1. What are the most important motivations for studying abroad and is there a direct connection to satisfaction? Does satisfaction have an impact on the loyalty of international students?
2. Does the level of acculturation mediate the relationship between self-determined motivations for studying abroad and satisfaction? Does the level of acculturation also mediate the relationship between self-determined motivations for studying abroad and the perceived service quality?
3. What are the most important culture shock factors for international students and does culture shock impact the acculturation?
4. Does perceived service quality mediate the relationship between self-determined motivations for studying abroad and satisfaction?
5. Do demographics, personal characteristics and personality traits of international students have an impact on satisfaction?

The aim of the empirical research is to explore and confirm the relationships between the constructs discussed throughout the literature review and condensed in the research model. The research results will enrich the fields of marketing and psychology in the context of the international higher education industry by offering a holistic framework to describe the study abroad program satisfaction and overall experience. At the same time HEIs can benefit from the results by focusing on the key improvement areas that will empower international students to make the most of their time while studying abroad, turning them into advocates of the institution.

3.1.2. Research design

For the purpose of the research the critical realist research philosophy was adopted, aiming to explain what we see in the world through understanding the underlying structures of reality. Reality has multiple layers and not all of them are observable, but it is possible to identify them by understanding the social world and its structures (Saunders et al, 2009).

In line with the critical realist research philosophy an epistemological relativism was adopted, accepting that knowledge is a social construct created by people (Bhaskar, 1989). The social actors are continually forming the researched social phenomena of the dissertation (motivations, culture shock, acculturation, service quality, satisfaction and loyalty) and their meanings, ‘constructing’ them in a subjective manner throughout history, thus multiple realities may exist depending on the observer. Accordingly, the influence of the sociocultural background and experiences of the researcher must be minimized to obtain as objective results as possible (Saunders et al, 2009).

In terms of research approach, the abductive approach was utilized, meaning that the applied epistemological view asserts that theories and empirical research are in constant interaction, where the analysis of exploratory data serves as a source for new idea generation.

The dissertation applies the mixed-methods research methodology, where the research phases complement each other, thus creating synergies that can contribute to more consistent and higher quality research results (Tashakkory and Teddlie,

2003). In the research both theoretical and methodological triangulations were applied in the form of various literature synthesis, followed by qualitative and quantitative research phases as well (Venkatesh et al 2013; Berg & Lune, 2012). Considering the gaps in the literature with regards to the connection between study abroad motivations, acculturation, culture shock and perceived service quality, satisfaction and loyalty constructs, the mixed-method research is expected to bring the best results. In the next section the research phases are discussed.

3.1.3. Research timeline

Prior to the qualitative and quantitative research phases a thorough literature review was carried out, serving as a base for the theoretical framework of the dissertation. The literature review also aimed to identify the most appropriate research methods, find validated measurement scales for each construct, and to gain a deeper understanding of the potential connections between motivations for studying abroad, culture shock, acculturation, perceived service quality, satisfaction, loyalty and the personal characteristics of international students.

The qualitative and quantitative research phases followed each other in a sequence. The results of the qualitative data collection and analysis were incorporated in the research model development and the subsequent quantitative research phase. The details of the applied research methods are discussed at the respective phases. The research timeline is summarized in Table 20.

Table 20. Research timeline

Research strategy	Aim of the research step	Data collection and analysis	Research sample	Research timeline
Phase 1: Qualitative	Research model preparation, exploring dimensions: motivations, acculturation, culture shock, satisfaction, service quality, loyalty and student characteristics	In-depth interviews and TCA	20 international students	2018 November-December
		In-depth interviews and TCA	20 international students	2020 April-May
	Research instrument development and questionnaire testing	Online survey with pilot respondents	10 international students	2021 February-March

Phase 2: Quantitative	Model and hypotheses testing: motivations for studying abroad, satisfaction, loyalty, acculturation, culture shock, perceived service quality and personal characteristics	Online survey and PLS path modelling	426 international students	2021 April-May
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Source: own construction

The first round of qualitative data was collected in 2018 by conducting 20 in-depth interviews with international students studying at Corvinus University of Budapest.

The thematic content analysis of the transcribed interviews was cross-checked with the collected literature on study abroad motivations, acculturation and satisfaction. Building on the results of the first interviews, the interview thread was expanded with the constructs of perceived service quality and loyalty as well. In the second round, the qualitative data was collected in 2020 by conducting another 20 in-depth interviews with (a different group of) international students studying at Corvinus University of Budapest. In this instance the thematic content analysis was applied to examine study abroad motivations, acculturation, satisfaction, and it covered the areas of perceived service quality and loyalty as well. During the time of the second qualitative data collection, COVID-19 already had an impact on academic mobility programs, thus the influence of the pandemic was expected and accounted for in the research. Based on the literature review and the results of the first and second rounds of qualitative data analysis, the research model was finalized.

The questionnaire was tested on a small sample of 10 international students. Based on the gathered feedback, minor wording modifications were carried out to simplify a few survey questions, minimizing comprehension issues for respondent speaking English as a second language.

The final test of the research model and related hypotheses was carried out on a sample of 426 valid international student responses (with an active student status) in Hungarian higher education institutions in the spring semester of 2021.

3.2. Qualitative research

Following the literature review, the qualitative research aimed to explore additional constructs or variables that may need to be included in the theoretical framework. It also supported the understanding of the relationship between constructs that were under researched, through narrowing down and confirming the most probable connections of the theoretical framework. The qualitative research phase also ensured a direct experience with the research subjects, allowing for a richer interpretation of the construct relationships of the dissertation (Patton, 1990). The latter is particularly important, as the dissertation aims to develop a complex theoretical framework, where the relationships between the constructs may be theorized in multiple ways based on the literature review.

In this section the qualitative data collection method, the data analysis and the qualitative research results are discussed. The data collection for the qualitative research phase was conducted in two stages as summarized in Table 20. Since the research design of the qualitative research stages were nearly identical, the attained results are discussed together, pointing out the separations in case of any differences.

3.2.1. In-depth interview method

In-depth interviews are widely used for primary research when the aim is to gain a new perspective in any research area. In the international higher education industry, there are many examples for using in-depth interviews. Researchers usually focus on a few constructs of a given research field, for instance motivations, acculturation and culture shock are discussed in psychology related journals, while perceived service quality, satisfaction and loyalty of international students are examined in education, management, marketing and international journals.

As discussed in the previous sections, the dissertation aims to build a complex theoretical framework that capture the host country culture, host institution and personal aspects of the study abroad experience. Considering the variety of the constructs, it was important to use a qualitative research method that allows an interaction with the research subject, this way the examined constructs could be

further explored and understood from the perspective of the research subject (King, 1994). More importantly, the constructs and their interrelationships could be identified faster, supporting the ongoing review of the extant literature and narrowing down the research questions.

The in-depth interview method could provide the opportunity to gain a deeper understanding of the examined phenomena or constructs, and it allowed for a richer data collection (Horváth & Mitev, 2015), supporting the aims of the dissertation. Alternatively focus interviews could have been used for a similar level of data collection (as carried out by Gallarza et al, 2017), however during an in-depth interview it is expected that participants are more likely to actively share their true feelings and thoughts even on sensitive subjects (Patterson et al, 1998), which could be even more applicable to more introverted participants. Also, at the time of the second set of the qualitative research stage the impact of COVID only allowed for online interviews, where the one-on-one interview setup was expected to perform better than a focus group. Ultimately, the individual in-depth interview approach was chosen in the hope of being able to conduct the interviews in an online setting, and dive deeper in the potentially sensitive topics as well, such as the personal, financial and emotional aspects of the study abroad experience.

3.2.2. Interview topics

In-depth interviews may be structured, semi-structured and even unstructured (Berg & Lune, 2012). Since the constructs and approximate construct relationships of the dissertation were identified in the literature review, further details could be best attained by using a semi-structured interview thread. The qualitative data was obtained through in-depth interviews, using the interview thread in Appendix 1. The semi-structured interview thread was adjusted to the dynamics of the dialogue; accordingly, the content was shaped by the researcher and the interview subject to gain the richest and most useful information from the interview.

The main interview theme for both qualitative research stages (total 40 in-depth interviews) incorporated topics around motivations for studying abroad, host country and host institution induced culture shock and the applied coping

(acculturation) strategies. The thread also covered the perceived service quality, study abroad satisfaction, loyalty, word-of-mouth and HEI image, along with a variety of international student characteristics. The qualitative research results showcased in this section are based on the 40 in-depth interviews, covering the topics of study abroad motivations, culture shock, acculturation, perceived service quality, satisfaction and loyalty.

3.2.3. Data collection and qualitative sample

Most of the first set of 20 interviews were held in English in the researcher's office (some were conducted online) and lasted between 60-80 minutes each, while due to the COVID-19 pandemic the second set of 20 interviews were conducted entirely via an online platform for safety reasons. The interview timing in both sets was specifically designed to be in the middle of the semester (at least 2-3 months after arrival), which gave students the opportunity to gain experience in the local culture and in the new academic environment.

In the dissertation purposive and quota (both non-probability) sampling techniques were applied to find interview subjects among international students studying at Corvinus Business School or outside. The minimum length of the program was set to 1 semester to gather richer details about the cultural experience of international students. The ratio of European and non-European citizens was defined in a close to 50:50 ratio to capture heterogeneity in the sample and allow cultural input from the widest range of countries possible. Also, it was an important criterion that international students in this sample did not have Hungarian parents (grandparents were allowed) and did not work or frequently visit Hungary prior to starting the study abroad program in Hungary. In Table 21 the qualitative research timeline, sampling quotas and the interview topics are summarized.

Table 21. Qualitative research timeline and requirements

	First set of 20 qualitative interviews	Second set of 20 qualitative interviews
Data collection	November – December, 2018	April – May, 2020
Sample	20	20
Sampling technique	purposive and quota sampling	
Sampling quotas	active international student status; minimum 1 semester, of which already 2 months spent abroad; minimum 50% studied in Hungary; close to 50:50 ratio of European and non-European origin; minimal cultural experience in the host country (no previous work, residence, visit to Hungary or local parents, friends)	
Interview topics	Study abroad motivations, culture shock, acculturation, perceived HEI service quality, HEI image, program satisfaction and loyalty	

Source: own construction

All of the 40 volunteer participants provided their informed consent prior to participation in the in-depth interviews and 10% extra course points were offered as an incentive (it was not mandatory, as the participants could receive the extra points for a different, written assignment). The participants were assured of anonymous and confidential care of their personal information and answers provided throughout the interviews.

The in-depth interview method has its limitations, since the researcher is in direct contact with the research subjects, meaning that some level of distortion may come due to the researcher, depending on the level of experience, independence and objectivity throughout the research (Horváth & Mitev, 2015). In order to maintain the highest level of professionalism, objectivity and independence throughout the research, the below self-reflection served as a guidance for the qualitative research phase.

Professionalism: I have gained a lot of experience in applying the in-depth interview method. I conducted multiple in-depth interviews throughout my Bachelor and Master theses, ran focus group interviews for an IT start-up, and also conducted international in-depth interviews as part of my work at a multinational company. The interview audio was recorded in order to make sure that all details are captured accurately, besides making notes during the interview. Participants

gave their informed consent to the recording and anonymous usage of the collected information for the purpose of the dissertation and future research.

Objectivity: before starting my PhD program, I studied abroad for 4 years, during which time I gained a wide range of experience and enthusiasm for the topic of studying abroad. Even though full objectivity is not possible when using the in-depth interview method, being aware of my own international experience helped to set the boundaries. Throughout the research I maintained my focus on the thoughts of the interview subjects, I asked open-ended questions, gave them time to build up their own interpretations and I consistently refrained from influencing them based on my personal views.

Independence: most of the interview subjects were studying at Corvinus University of Budapest, where I was a Ph.D. candidate at the time of the data collection. Those studying at Corvinus could earn extra points by attending the interviews, however during the research I had no authority to grade or evaluate the performance of the interviewees, and everyone had the freedom to decide if they wanted to participate in the interviews or instead, they could earn the extra points with a different, written assignment. Before the interviews, I did not meet the participants, and I had no connection to them, but during the interviews they were all open-minded, supportive and curious about the research area, and they were happy to share their personal views and experiences about studying abroad.

3.2.4. Thematic content analysis

After the data collection (40 in-depth interviews), the interview transcripts were subjected to thematic content analysis (TCA), which allowed for a systematic analysis of the content in its original context based on a coding manual, which had a predefined set of coding rules. Based on the guidelines of Braun and Clarke's (2006), the 4 steps approach was adopted: transcription, familiarization, coding and categorization. Qualitative content analysis is used to analyse any document or text to reveal hidden patterns (Gyulavári et al, 2014), in this case, between the constructs of motivations, acculturation, service quality, satisfaction and loyalty in the

international higher education. First, the transcripts were prepared and read through to get a sense of the data corpus. Throughout the thematic analysis a recursive process was applied, moving back and forth as needed between the phases. In the coding manual the following rules were defined:

- The focus was on the individual experiences,
- A narrowed data set was used within the data corpus to carry out a more detailed thematic analysis of particular themes,
- The coding category development relied both on the extant literature and inductive elements,
- During the thematic analysis of the transcripts, the explicit meanings of the data were in the focus to identify patterns in the semantic content.

The attained results from the qualitative research could allow for new interpretations and provide further understanding of the research topic (Bartis & Mitev, 2008). Combined with the literature on motivations for studying abroad, acculturation, service quality, satisfaction, loyalty and image, it may provide a stronger base for the proposed theoretical framework to describe the study abroad experience of international students.

3.2.5. Results of the qualitative research

In this section the results of the qualitative research are presented with direct quotes from the in-depth interview participants. The results are structured in line with the proposed theoretical framework (Figure 8.). Accordingly, the main relationship of the framework is discussed first (motivations for studying abroad and satisfaction), followed by the host country related cultural factors (culture shock and acculturation), the host institution related service delivery factors (perceived service quality) and finally, the personal characteristics of international students.

3.2.5.1. Sample characteristics

With regards to the sample demographics, 52.5% of the participants were female and 47.5% of the interviewed were male. The length of the study abroad programs varied from 4 months exchange programs to 5 year full-degree programs: 75% of

the students spent less than a year abroad, while the remaining 25% enrolled for a 2-5 years long study programs. The sampling quota criterion was in line with the expectations as 57.5% of the participants were not from Europe (for instance India, Kenya, USA, China, Indonesia and Afghanistan), while 42.5% were from Europe (for example France, Germany, Italy, Sweden, Slovenia and Poland), fulfilling the required cultural heterogeneity. Among all participants, 75% studied in Hungary and 25% in other countries, meeting the host country quota to ensure relevance to the Hungarian HEI system. In the first stage (in 2018) the interviews were mostly conducted in person (with the exception of participants still studying abroad outside Hungary), however in the second stage of the data collection (in 2020), all interviews were held online due to the COVID-19 pandemic. The sample characteristics are shown in Table 22.

Table 22. Sample characteristics of the qualitative research

Data collection	No.	Gender	Program length	Home country	Host country	Interview
Stage 1: 2018	R1	male	2 years	Turkey	Germany	personal
	R2	female	4 months	Netherlands	Hungary	personal
	R3	male	5 years	Afghanistan	Hungary	personal
	R4	male	4 years	India	Hungary	personal
	R5	male	1 year	Italy	Germany	online
	R6	male	4 months	Canada	Turkey	online
	R7	male	4 years	Indonesia	Hungary	personal
	R8	male	2 years	Kenya	Hungary	personal
	R9	female	4 months	France	Czechia	online
	R10	female	8 months	Australia	Hungary	personal
	R11	female	5 months	Hungary	China	online
	R12	female	6 months	Japan	Hungary	personal
	R13	female	4 years	China	Hungary	Personal
	R14	female	5 months	Poland	Russia	online
	R15	male	2 years	India	Germany	online
	R16	male	5 months	Germany	USA	online
	R17	female	5 months	Sweden	UK	personal
	R18	female	6 months	China	Hungary	personal
	R19	male	6 months	Mexico	France	online
	R20	female	5 months	Germany	Hungary	personal
Stage 2: 2020	R21	male	4 months	USA	Hungary	online
	R22	female	1 year	USA	Hungary	online
	R23	female	5 months	Germany	Hungary	online
	R24	female	5 months	Germany	Hungary	online

R25	female	1 year	Slovenia	Hungary	online
R26	female	5 months	France	Hungary	online
R27	female	4 months	USA	Hungary	online
R28	male	5 months	Belgium	Hungary	online
R29	female	5 months	USA	Hungary	online
R30	male	4 months	Germany	Hungary	online
R31	male	5 months	USA	Hungary	online
R32	male	5 months	USA	Hungary	online
R33	female	5 months	USA	Hungary	online
R34	male	5 months	France	Hungary	online
R35	male	5 months	Portugal	Hungary	online
R36	male	5 months	USA	Hungary	online
R37	female	4 months	USA	Hungary	online
R38	male	4 months	USA	Hungary	online
R39	female	5 months	USA	Hungary	online
R40	female	5 months	USA	Hungary	online

Source: own research, own construction

When presenting international students' quotes in the research results, the dissertation will use R(X) as shown in Table 22, as a reference to the demographic information of each interview subject.

3.2.5.2. Results of motivations for studying abroad and satisfaction

Based on the qualitative analysis of the in-depth interviews the motivation factors could be further categorized within the push-pull (Mazzarol & Soutar, 2002) framework, based on their influence to the study abroad satisfaction. The results have also confirmed most of the motivation factors described by Yang et al (2017) in their work about self-determined motivations for studying abroad.

Based on the transcripts of the 40 in-depth interviews, the thematic content analysis revealed six main motivation categories (Table 23.) which can help in exploring the influence of study abroad motivations on international student satisfaction.

Table 23. Motivations for studying abroad based on the empirical results

Motivation group	Motivation group themes based on the TCA
Social pressure	conform with family, peers, professor, institutional expectations
Cost-efficient education	relatively low tuition fee and living costs, favourable scholarship offers
Career building	enrich CV in the hope of an elevated domestic or international career path, preparation for future relocation
Educational immersion	quality education, favourable program conditions, wide range of course offering
Country specific attractors	country specific cultural, language, traveling, historical and political interest, practice a foreign language in a live situation
Life experience	traveling, personal challenges, making friends abroad, gain independence and have fun.

Source: own research, own construction

Social pressure

In the minority of the cases the motivations were based on social constraints, where students tried to satisfy an external contingent. Students mentioned this kind of motivation in the form of peer pressure or as a mandatory requirement to complete their program. Others displayed amotivated behaviour: they had no specific reason to study abroad, so they just accepted the challenge when the opportunity was offered.

'Most of my colleagues already have a foreign diploma, so it was time for me to think about it as well.' (R7)

'Well, it wasn't really my decision because my German university where I studied, from where I went to study in the US, there was a mandatory semester abroad for every student.' (R16)

'I had some psychological problems at the time back in high school, like it was very difficult for me to continue to study in China, because I felt pressure on me at the time. Actually, my parents didn't expect a lot from me, like didn't expect me to go to a very good university, but I put a lot of pressure on myself.' (R18)

'Most students do it in the third year, and I wanted to get out of France to be surrounded by different people.' (R26)

Foreign students whose main motivating force was social pressure, appeared less satisfied, typically non-European citizens (for instance from Indonesia, India, China) who studied in Europe. Social pressure was often paired with cost-efficient education and career-building motivation categories, which together typically resulted in reduced satisfaction levels. In the absence of internal drivers to develop, these students were less adapted to the host country, accordingly they felt much lower levels of success that could have led to dissatisfaction.

Cost-efficient education

International academic mobility programs are receiving more support to make study abroad programs more attractive, however this is often not enough to cover the full cost of the program. Some of the students could only travel abroad with scholarship programs, which often had language learning requirements as well.

'The scholarship was offered to study in Europe, but I needed to learn Hungarian to keep the scholarship.' (R3)

'I heard about a European scholarship opportunity and I applied for it. The scholarship was the most important thing, I wouldn't have been able to study abroad without it.' (R7)

'The only difficult decision before going abroad for me was financial decision, because I don't get any money from the exchange program. My university gave me a grant because of my grades but that was only 2000 USD and the ticket here is like 2000 USD, so I guess I have to take money from my student loan and I had to save a lot of money.' (R11)

The motivation for cost-effective education was frequently paired with the desire to gain life experience and learn more about the host country, which has reduced the price sensitivity induced stress, but overall resulted in lower levels of satisfaction.

Career building

Only one quarter of the students mentioned career development as the main motivating factor.

'I study in Germany to work in Europe later.' (R1)

'In terms of like long-term goals, I am not sure what I want to do as a career, but I definitely want to seek something with an international focus, I even thought about moving abroad to teach English for a year.' (R6)

'Studying abroad is a great opportunity to build my career. I work in consulting in the US, very busy lifestyle, but I wanted to meet people from different backgrounds, that is both a personal and professional development for me.' (R31)

In general, students who were solely interested in career building were not satisfied, because there were not so many opportunities to network with the locals as they had planned before, hence their satisfaction level was usually lower. Foreign students who wanted to know more about the country at the same time (travel, local language) were generally satisfied with the study program, most likely because that motivation assumes some level of cultural openness, leading to more positive experiences while studying abroad.

Educational immersion

The quality of education, the wider range of subject offering, the reputation and prestige of the institution (Sung & Yang, 2008), was of great importance for students focusing on academic results. Arguably the educational immersion could complement the previously discussed career building motivation, as international students sometimes choose a well-reputed institution to enrich their resumes. Also, international students with high academic motivations will look for a study abroad destination where they can study the desired subjects of their chosen field.

'I was just going to a well-known university with good reputation in the world.' (R15)

'I could not take normal subjects at home, I only found something abroad that could get me deeper into my specialty.' (R19)

'I wanted to further my experiences and expand my studies. I looked at all programs and Budapest fit the course of my education.' (R37)

Career development was also important for those who aimed to dive deeper in their studies. International students with these two motivation groups were typically

critical about the host institution, as they focused directly on the academic service quality, but in general they were satisfied with the study program.

Country specific attractors

The majority of the students wanted to learn something about the host country. Most often, the aim was to learn the local language, get to know the lives of local people, travel in the country or visit a specific city. Also, some international students had roots in the host country, so they wanted to explore the history of the country and potentially reconnect with distant family members. Often, the host country was selected on the basis of personal attachments, family members who lived there, friends or personally themselves had spent their vacation in the host cost country.

'I studied about Hungary, my grandfather worked in Budapest in the embassy, so I thought it will be good for me to learn about the culture and make friends in Europe.' (R4)

'I wanted to try a new experience, where I can improve my English and German as well.' (R5)

'I already lived in Norway and studied in Denmark, so I wanted to get to know other cultures that are not Scandinavians. I met some people from Central Europe and I was curious about the history of it, so I went to Prague.' (R9)

'Dad side of the family is from Hungary, grandparents are both from Budapest, so I wanted to experience the lifestyle of my family who once lived there so then I can better connect with my grandparents. Also, I heard from some people it's one of the best locations to study abroad.' (R32)

These students usually had sufficient information about the host country from a trusted source, so they were very pleased with their overall study abroad program even if they had negative experiences.

'The administration is outdated, slow and chaotic. They said that the subjects I applied for did not exist already. After that, I went to my lessons for several weeks before they told me if they could sign me up for them. There was a lot to do, which was quite stressful ... some subjects were unorganized, but there were also very interesting subjects I could never have taken at home, so I'm happy.' (R9)

The above displayed positive attitude indicates that the motivations for studying have an influence on the level of satisfaction, as international students may feel satisfied with their programs despite a series of negative experiences abroad.

Gaining life experience

This motivation group was the dominant motivator for most international students. It was usually formed as vague descriptions, however clearly, many students were craving to experience something new, and going on a foreign adventure was the way for them to move out of their comfort zone and become independent in their lives. More specific goals in this motivation group were revolving around making new friends, having fun in life, and traveling as much as possible. Some international students have already studied abroad, but they were still enthusiastic about exploring new countries.

'I wanted to meet new people, I wanted to do something different because Australia is so far away, I wanted to do go somewhere far away and I wanted to go to a non-English speaking country.' (R10)

'I love traveling. As I kid, I always had to help at home, so I couldn't go anywhere, but now that I got a scholarship again, this is my third time studying abroad. I came to Europe because countries are so close to each other, I can visit things I've never seen before and meet new cultures very fast.' (R38)

This category is often coupled with the desire to learn about a particular country. Since these international students were focusing on gaining experience, in many cases encountering with negative experiences also resulted in a sort of a satisfaction. The below quote is an example for a student that had mixed experiences with the educational system, but in spite of all hardships she would still recommend the host institution to her friends.

'It was only on the day of enrolment that you could apply for the subjects, but since I came from Australia, I arrived late. The classes that I could finally register were ridiculously simple, and where I was in a group with local students, those subjects demanded a lot of energy. I'm happy, the classes were good, the teachers were okay.'

I need some time to get used to people because things are different in Australia (less paperwork), but I would recommend my friends to try it out.' (R10)

The motivation group related to life experience led to very high satisfaction levels, mainly because students voluntarily stretched their own boundaries and sought out extreme differences, so the negative experiences were seen as added value, another form of experience from which they could take away learnings. These foreign students were satisfied both with the host institution and the host country.

Almost all international students had more than one motivator groups, where a dominant motivator appeared and it was paired with a complementary motivator pair. International students with motivations connected to gaining life experience abroad or learning about the country (and its culture) were more satisfied than students driven by social pressure or adhering to a heavily restrained or cost saving lifestyle abroad.

3.2.5.3. Results of culture shock and acculturation

Shortly after arriving to the host country, international students face a whole new world and their feelings are ranging from excited to surprise to a bit worried and sometimes extremely anxious as their decision to study abroad materializes in front of them. Interacting with the local people, lack of knowledge of the local language, the type of foods and available accommodation were often mentioned by students as a factor of instant shock.

The initial experiences of students from Asia and Africa were often negative, mainly due to the lack of preparation and relatively higher cultural distance. International students traveling to shorter distances seemed less worried, even when they arrived unprepared, usually they managed to maintain a positive mindset towards the members of the local culture. Nevertheless, a longer distance almost always meant more cultural differences and it was more likely that students were going to experience a higher level of culture shock.

'It was shocking to see couples kissing on the open street' ... 'After some years being here, I wanted to marry a Hungarian girl, but the girl's family didn't allow it.' (R3)

'The waiter took my plate without a question, even though there was still food on it. When I said I was still eating, he stood there and waited until I finished. That's pretty rude in my opinion.' (R9)

'I only spent a few hours in China but I only met Chinese people who didn't speak English and I was scared. So, I was staying in my hotel room for like two days without going to the street at all actually.' (R11)

'My girlfriend was shopping at the supermarket, and at the cashier she was on the phone and forgot to put on the divider after the customer who just paid. The cashier guy yelled at her, threw away her stuff and no one helped her in this situation, no one reacted to this.' ... 'I had no electricity in my apartment for a full day, and no one was helping. The supplier said that the owner didn't pay for it, but my landlord didn't say anything. It was very annoying, and I received zero compensation for my troubles.' (R24)

Students who studied abroad previously, typically treated the stress situations more positively after a while. This usually happened either through growing social circles and getting into a daily routine, or simply by accepting local people as they are.

'After the first two weeks I calmed down, because I got to know a bigger community (30-35 people), so I spent my time on social events, put my life in order and I was less uncomfortable and anxious.' (R1).

'I didn't really have a strategy, but it feels like home now. I didn't change consciously, it just took time, I started to accept reality and got to know the reasons why some people aren't nice here.' (R25)

Those international students, who have developed a stress management mechanism to lead a comfortable day-to-day life, would generally recommend the host country and host institution to their friends, but those who did not manage with psychological adaptation typically expressed a more modest or negative statement about the host country. The acquisition of culture-specific behavioural standards (Zhou, 2008) is a higher level of adaptation, by which students could prevent or manage the stress situations more effectively. In order to “enter” a culture, some international students were trying to learn the local language and observed the behaviour of locals, and some of them even started to pay more attention to their

own behaviour to be able to blend in (Wilson, 2013). Those students whose culture was found interesting by locals and fellow foreign students, perceived a smoother sociocultural adjustment.

'Many foreigners were interested in Chinese culture. We had very different cultures, eating habits and thinking and all. Everyone wondered if we were eating snakes and live with pandas... I was happy to share my culture with others.' (R13)

'After one month you just try to put your culture 'away' and try to enter this kind of communication: you need to learn a bit of the local language. This made me feel more comfortable to interact with the culture.' (R28)

'I realized that I'm speaking too loud in the public transport, which would be normal in the USA. I wanted to draw less attention with my behaviour so I tried to speak quieter.' (R37)

The amount and quality of social interactions affected the success of the acculturation process. Students who could count on the help of their friends (co-national, foreign, or local students), the counsel of the international office or their professors, had a very good chance of integrating into the new culture.

'I lost my close friend ... I spoke openly with my international friends and my Turkish friends. They all helped a lot to survive this difficult period... I found many real friends abroad.' (R1)

'The biggest advantage of having 4 people living together is that we help each other. When I forgot something, my flat mates helped and vice versa: reminders for the payment deadlines, doing research for free entries to galleries and university stuff like getting a learning agreement.' (R35)

When international students tried to solve difficult situations with their own cultural tools, it often led to separation or marginalization (Berry, 1994) to the point where the students were so exhausted from the cultural differences, that simply wished to escape the foreign environment (Mumford, 1998). At the same time, those who were willing to step in the shoes of the local culture and had intrinsic motivations to understand the local culture (Yang et al, 2017), were more likely to adapt to their new environment and benefit from the experience.

'I was looking forward to going home at the very end. So, when I only had one month left, I was really waiting to go home, to go to my room, to be in my normal environment.' (R11)

'Cultures are different [Afghan and Hungarian], but I try to get the best out of each one. [Afghans] are sitting on the carpet, we eat by hand (more delicious) and drink 20 cups of tea a day and my religion is important. In Europe, women are treated differently and when I return to Afghanistan, I want to do my best to improve gender equality in my country.' (R3)

The COVID-19 pandemic influenced many of the interviewed students (in 2020), meaning that many of them had to travel back home and continue their semester in a virtual environment. These students could only spend an average of 2 months abroad (instead of the planned semester), so they often felt that they missed a lot of opportunities. This shows the importance of the quick sociocultural adjustment, that could allow more time for international students to collect meaningful experiences.

'I missed my parents and sometimes felt sad, but I didn't allow that emotional roadblock in a once in a lifetime opportunity. Then with COVID in the picture, I wanted to focus on every day like I'll go home tomorrow.' (R37)

3.2.5.4. Results of perceived service quality, satisfaction and loyalty

The perceived service quality was usually heavily influenced by the connection with academic staff and the international coordinators. International students often had trouble gathering information about classes, exams, or local bureaucracy, so they truly appreciated if someone helped them overcome the more difficult periods of the semester. On another note, it was important to connect with local and international students from the academic sphere, but outside the classes, so extracurricular or volunteer activities helped them increase their sense of belonging. With regards to the academic quality, international students wanted to learn from professors who are knowledgeable in their fields, speak good English, provide regular feedback on the students' academic progress and demonstrate a sense of cultural empathy towards international students. During the COVID-19 pandemic international students often needed a higher level of flexibility and they expected

professors to maintain the same quality of education in the virtual teaching environment.

'Yes, I am satisfied. I did volunteer work and also found an internship, and in the future maybe I can go to ERASMUS. So, a lot of opportunities for us, nice university. If you want to learn some things it is not very difficult, the professors will give you help and also your friends can help you.' (R13)

'Teachers were knowledgeable, but some were not well structured, and I didn't receive enough feedback or help to properly do my assignments. Also, the grading and the expectations were not clear for me in some cases – but the other teachers were fine.' (R22)

'Professors were working in the field, had their own companies and they were very practical. It was really cool to get such a broad and detailed knowledge and they were also approachable.' (R25)

'The international office helped with everything I needed. They gathered all the papers on one day, told us what to do, ran through it all and it was done.' (R32)

'It was mandatory to put on the video for my classes, which was not always easy, as I had to adjust to the time-zone difference. All together my professors handled the digital switch pretty well.' (R33)

The importance of word of mouth in family and friends (Pimpa, 2008) appeared in several cases, some had already suggested the institution during their study abroad program. Satisfaction and positive WOM was more likely in case of those students who successfully integrated into the new culture and made new friends in the early phase of the study abroad program. These students sometimes even took on the additional responsibility to help fellow international students.

'I have already recommended the university to my brother - he started his first semester last year' ... 'Many complain, but I can imagine my life in Budapest. I try to help my Afghan friends to make it easier for them... I loved my professor, I learned a lot from him, I would definitely recommend to everyone to study here.' (R3)

3.2.6. Conclusions of the qualitative research

The results of the 40 in-depth interviews broadly confirmed the examined constructs and their assumed interrelationships which were identified and assumed based on the literature review.

The first research question of the dissertation was about the connection between motivations for studying abroad, satisfaction and loyalty of international students. Satisfaction is an important construct, as it is an antecedent to loyalty. Loyal foreign students have a major role in recruiting international students (through positive WOM) and they contribute to the tourism industry of the host country, as many international students indicated that they want to return someday.

The overall study abroad program satisfaction appeared to be in line with the level of autonomy when making the decision to study abroad. In the extant literature the motivations for studying abroad were categorized into push and pull factors (Mazzarol et al, 1997) which appeared at all international students in the form of home country, host country and host institution related motivational elements. Motivations were also conceptualized as a range from autonomy to external control (Sheldon et al, 2017) and the qualitative results have confirmed most of the theorized factors of the self-determined motivation construct and its connection to satisfaction and loyalty.

The earlier discussed self-determined motivations for studying abroad (Yang et al, 2017) can be matched with the motivations of international students' satisfaction levels. As shown on Table 24, when international students faced social pressure, it was often because of an external pressure or a state of amotivation, which is expected to result in lower levels of satisfaction, as the individual had no control over the events. In case of cost-efficient education, the drivers are still external or internal, but are based on avoiding negative outcomes. Career building and immersion in education are strongly connected and were usually fuelled by living up to the potential of the individual, however these motivations alone often came with lower levels of satisfaction with regards to the overall study abroad experience. The country specific and life experience motivation groups were most often connected to intrinsic motivations, which represent the highest level of autonomy

of an individual. Since students in these groups had a deep personal reason to study abroad, in line with Yang et al (2017), it is expected that they will be more satisfied with their study abroad experience, even if they had negative experiences with their host country or host institution.

Table 24. Motivation groups based on the initial qualitative results

Yang et al (2017)	Empirical research results		
Motivation groups	Motivation groups and descriptions (aligned with the push and pull categories)	Co-motivation (pairs)	Level of satisfaction
Amotivated, External	Social pressure: conform with family, peers, professor, institutional or workplace expectations	Career building, Cost-efficient education,	Low by itself, Low with co-motivation
External, negative introjection	Cost-efficient education: relatively low tuition fee and living costs, favourable scholarship offers, avoid missing out	Life experience, Country specific	Low by itself, Medium with co-motivation
Positive introjection	Career building: enrich CV in the hope of an elevated (international) career path, preparation for future relocation	Country specific attractors	Low by itself, Medium with co-motivation
Positive introjection, identification	Educational immersion: quality education, favourable program conditions, wide range of course offering	Career building	Medium by itself, Medium with co-motivation
Identification, intrinsic	Country specific: cultural, language, traveling, historical and political interest, practice a foreign language in a live situation	Life experience	High by itself, High with co-motivation
Intrinsic, positive introjection	Life experience: traveling, personal challenges, making friends abroad, gain independence and have fun.	Country specific	High by itself, High with co-motivation

Source: own research, own construction

Motivation groups appeared to coexist, but based on the attained results, at least one factor dominated. If the student had the initial motivation to gain life experience or to become familiar with the country, satisfaction was more likely than in the other four categories. On the other side of the coin, if the life experience and learning about the country were not among the initial motivations, then dissatisfaction was more likely as expected based on Yang et al (2017). Altogether, students were more flexible and more satisfied when they mainly wanted to learn

about the country and gain life experience as well, so it is important to learn more about the impact of the host country culture.

The second and third research questions of the dissertation examined the impact of acculturation and culture shock. International students often experienced a range of culture shock, such as homesickness, rejection (Sandhu & Asrabadi, 1994) and felt stress when adjusting to the local culture or found shocking or disgusting elements (Mumford, 1998) while studying abroad.

Regarding the acculturation process, the majority of international students approached intercultural difficulties with their own cultural toolkit and were often unwilling to adjust their behaviour to the sociocultural norms of the host country (Wilson et al, 2017). Low levels of sociocultural adjustment often resulted in the lack of cultural integration (Berry, 1994) and the subsequent lack of satisfaction and positive WOM. It is important to note that the actual level of acculturation may deviate from the perceived level of acculturation, as international students sometimes believed that they coped well with the differences of the local culture, but looking at the self-reported behaviours in other parts of the qualitative interviews, sometimes evidence was found for the opposite. In the dissertation the level of acculturation is measured through rating the competence of demonstrating culturally appropriate behaviours (Wilson, 2013), which provides a good measure for acculturation.

As expected, based on Bochner (1982), the overall satisfaction seemed to be affected by the support received from local and international friends and the initial sacrifices (mainly financial and emotional) that students had to make in order to be able to study abroad. International students, who were open to learn about foreign cultures and maximized all forms of social interactions – made local, international friends and built good relationships with local professors and coordinators – often managed to reach higher levels of integration in the host culture. These students were mostly satisfied with their study abroad program and they tended to spread positive WOM.

A pattern was recognized between motivation groups for studying abroad and the acculturation. International students showing lower level of self-determined motivations, tended to form less connections in the host country compared to those

who had an intrinsic motivation to engage with people from the host culture, hence it is worth investigating the relationship between these constructs. The experienced culture shock was ranging from mild to severe shock in some cases, which apparently had an influence on the willingness to adjust to the local culture, in line with the findings of Dentakos (2016).

On another note, the connection between the level of acculturation and the perceived service quality is under researched (Davis et al, 2016), however based on the answers gathered from the in-depth interviews, there is enough evidence to maintain this assumption as well, and test the relationship in the research model.

Based on the results, the second and third research questions must be retained, as they supply important information about the life of the international students in the host country and seem to affect the levels of satisfaction, as assumed in the theoretical framework.

The fourth research question investigated the impact of perceived service quality on satisfaction. Acculturation appeared to influence service quality, as students striving to understand and accept the local culture were usually more satisfied with the quality of the services received, both with the academic and non-academic aspects. Motivations are also important factors for service quality, as the motivation groups seemed to have a direct impact on perceived service quality based on the findings. For instance, international students focusing on building their careers or immersing in education were more critical towards the quality of services provided by the higher education institutions. At the same time, study abroad motivations such as gaining life experience and learning about the host country tended to yield higher levels of perceived service quality, as international students appeared to be more forgiving, even when they encountered with a negative service experience at the host institution.

The connection between the perceived quality of services provided by the host institution and satisfaction was confirmed by the qualitative research phase. All of the key service quality areas defined by Faizan et al (2016) seemed to influence satisfaction, such as the knowledge, experience and communication skills of the academic staff, the availability, helpfulness and knowledge of international coordinators.

The fifth research question examines the role of demographics, personal characteristics and personality traits. Some of the international students had already studied abroad, and apparently, they were able to adapt to their host environment much faster for the second or third time. Also, it is important to highlight the importance of preparation and setting realistic expectations (Vangelis & Hill, 2019) there was a clear pattern showing that students who did their research on the host country culture, experienced lesser culture shock and were generally more satisfied with their study abroad experience. Personality factors were measured indirectly in the interview (Nandi & Nicoletti, 2009). Students who were more outgoing and talkative, made more friends in the beginning of their program and built a supportive network faster, which often helped them through hard times while studying abroad, as it was expected based on Bochner (1982). On the other hand, some students tended to worry more about their perceived academic and culture related problems, which often led to lower levels of satisfaction.

The in-depth interviews allowed for a better understanding of the constructs and their role in the proposed theoretical framework and also confirmed the importance and relevance of the research questions. In the next section the constructs and their relationship in the proposed theoretical framework are examined with quantitative methods.

3.3. Quantitative research

The literature review helped to identify the research questions, research constructs and their fundamental connection to each other. The qualitative research phase confirmed the research questions and the elements of the examined constructs, and also provided useful insights that could potentially fill the gap in the extant literature by explaining the relationships proposed in the theoretical framework (Figure 8.). The aim of the quantitative data collection and analysis is to confirm the most important elements of each construct and test their interrelationship.

3.3.1. Research hypotheses and the proposed research model

Based on the extant literature and the qualitative research results, the following hypotheses were drawn to describe the connection between motivations for

studying abroad, culture shock, acculturation, perceived service quality, satisfaction and loyalty of international students. The hypotheses in the model were specifically designed to fit the international higher education industry, accordingly motivation and cultural adjustment have important roles. In this section the hypotheses are discussed and categorized based on the assumed relationship between the examined constructs.

Based on the literature review and the qualitative research, the research questions were finalized, of which the first one was: *What are the most important motivations for studying abroad and is there a direct connection to satisfaction? Does satisfaction have an impact on the loyalty of international students?*

There is relatively low amount of research material about the connection between motivations for studying abroad and international student satisfaction (Chirkov 2003; 2005). In the current dissertation the construct of motivations for studying abroad is the first step of students to begin their international journey. The push and pull factors (Mazzarol et al, 1997) adequately capture the sequence of choosing the host country and host institutions. Study abroad goals can vary from person to person, some of the top study abroad goals of international students engaging in an exchange program from Western countries revolve around personal development, cultural learning, exploring a new country, making international friends or nurture an international career path (Leutwyler & Meierhans, 2013). Students also often decide to study abroad when they feel they have less opportunities at home, want to settle in a foreign country or they are pressured by family to study abroad (Mazzarol & Soutar, 2001). When international students receive a scholarship to participate in a full-degree program in a country with a higher development index than their home country, then the quality of education, learning about cultures and the cost of living (Arambewela, 2003) becomes more important for them and these factors will influence their level of satisfaction (Malota, 2016).

There is sufficient evidence in the literature that the level of autonomy in making the decision to study abroad also impacts the level of satisfaction of international students. Self-determined motivations for studying abroad can be conceptualized as a continuum from autonomy to external control factors (Yang et al, 2017). Based on the qualitative research phase the motivations for studying abroad can be

categorized based on the level of self-determined motivations, which then in turn appeared to influence the level of satisfaction. For instance, international students who faced external pressure to study abroad were less likely to be satisfied compared to fellow students who had intrinsic or personal value driven motivations to explore a new country or a culture while studying abroad.

On the other hand, there is an abundance of literature on the relationship between satisfaction and loyalty in the service industry, including the higher education sector. Researchers generally agree that loyalty is a consequence of satisfaction (Fernandes et al, 2013; Helgesen & Nettet, 2007; Faizan et al, 2016; Zhou et al, 2016; Shahsavar & Sudzina, 2017; Kashif & Cheewakrakokbit, 2018; Arrivabene et al, 2019) however there are ongoing debates about the loyalty construct. Loyalty is most often conceptualized as a single multi-attribute construct (Oliver, 1997; Helgesen & Nettet, 2007; Faizan et al, 2016; Arrivabene, 2019), but some researches separate loyalty as antecedent to word-of-mouth. Researchers tended to choose loyalty as a single construct when investigating international higher education, accordingly in this research it is also measured as a single construct. The qualitative research confirmed the importance of loyal behaviour of international students and found that those who were more satisfied with their study program, were more likely to recommend the host institution and host country to their friends and family. Based on these conclusions the following hypotheses were drawn.

H1a: Self-determined motivations for studying abroad have a positive influence on satisfaction

H1b: Satisfaction has a positive influence on loyalty

The second research questions of the dissertation examined the following: *Does the level of acculturation mediate the relationship between self-determined motivations for studying abroad and satisfaction? Does the level of acculturation also mediate the relationship between self-determined motivations for studying abroad and the perceived service quality?*

In the theoretical framework of the dissertation, the acculturation construct is essentially mediating the relationship between motivations and satisfaction, and

also between motivations and perceived service quality. In the extant literature the host country effect is often conceptualized as the country specific socioeconomic and environmental factors such as cost of living, climate, lifestyle, regulations and culture (Arambewela, 2003). In the dissertation the host country factors focus on the cultural elements only, more specifically on the experienced culture shock (Oberg, 1960; Hidasi 2004; Malota, 2013) and the cultural competence of international students (Wilson, 2013; Wilson et al, 2017). The relationship between motivations and acculturation is under researched (Chirkov et al, 2007; 2008). Acculturation motivation is a good predictor of sociocultural adaptation, which is the behavioural outcome of acculturation (Wilson, 2013). International students were able to learn more about the host culture when they were open for new experiences and spent more time on socializing with people from the local culture (Dentakos et al, 2016). The in-depth interviews provided multiple examples to support this claim. International students who reported higher levels of acculturation, tended to express the desire to learn about the host culture's people, history, gastronomy and visited cities outside of their host city. This way they had more opportunity to mingle with locals, get to know them, make new friends and understand their point of view, often discovering common cultural values between the host country and home country.

The results of Davis et al (2017) shed light to the potential connection between acculturation and service quality, a relationship that has been quite under researched in case of international students. Acculturation also supported the academic adjustment of international students (Chirkov, 2008), which may already be considered as part of the experienced service quality provided by the host institution. Interview subjects of the empirical research who put an emphasis on acculturation and understanding the behaviour of local people often seemed to perceive higher level of service quality. Based on the qualitative findings of the in-depth interviews, it is worth further investigating whether acculturation can be a mediator between self-determined motivations for studying abroad and perceived service quality.

When international students felt competent in the academic area, and performed better while living abroad, their level of satisfaction was also higher (Yang et al, 2017). In the dissertation the cultural competence was in the focus of the research (Wilson, 2013), and it was assumed based on the scarce amount of available literature that in case the cultural competence is higher, then international students will be more satisfied with their overall program. Based on the qualitative results, international students, who were open to learn about foreign cultures and made local, international friends, built good relationships with local professors and coordinators often managed to reach higher levels of integration in the host culture. Since they performed better in their academic life due to the gained local support and cultural competence, it often resulted in an increased level of satisfaction with the services provided by their host institution, even when they had some difficulties with obtaining host institution services. Based on the above conclusions from the literature review and the qualitative findings, the below hypotheses were formed.

H2a: Self-determined motivations for studying abroad have a positive influence on acculturation (sociocultural adaptation)

H2b: Acculturation (sociocultural adaptation) has a positive influence on satisfaction

H2c: Acculturation (sociocultural adaptation) has a positive influence on perceived service quality

The third research question investigated the impact of culture shock in international higher education: *What are the most important culture shock factors for international students and does culture shock impact the acculturation?*

Culture shock is a well-researched construct in the field of psychology and it is an important factor that may define the cultural experience of study abroad students. International students have to cope with a lot of stress in a foreign culture, impacting the cultural learning or acculturation process (Hidasi, 2004; Ward et al, 2001; Zhou et al 2008). Culture shock often manifest in the forms of perceived discrimination, homesickness, perceived hate, rejection, fear or stress due to the change and the sense of guilt for leaving behind people in the home country (Sandhu & Asrabadi, 1994). Mumford (1998) categorized culture shock into core elements that are

perceived by the individual (disgust, acceptance, stress, confusion, lack of support) and the interpersonal elements, which are related to the interactions with members of the host culture. The qualitative empirical research showed when international students had more frequent shocking experiences, they tended to focus less on cultural learning, they rather just accepted the situation as it was. Since it was a short-term tactic to avoid stress and discomfort, without the actual sociocultural adaptation their cultural competence did not increase significantly. Based on the available literature and the qualitative findings the following hypothesis was formed.

H3: Culture shock negatively impacts acculturation (sociocultural adaptation)

The host institution has an important role in the study abroad experience, as it provides the frame for the life of international students. Accordingly, the next research question examines the impact of perceived service quality at the host institution: *Does perceived service quality mediate the relationship between self-determined motivations for studying abroad and satisfaction?*

The connection between self-determined motivations and perceived service quality is quite under researched, hence the empirical research results will be utilized to fill in this research gap. Based on the interview results, it can be claimed that some international student motivation groups had a more positive impact on perceived service quality, while others resulted in negative outcomes. International students tended to list positive experiences when their motivation groups were either the country specific or life experience (leaning towards intrinsic/identification motivations), while negative experiences appeared in case of students who were aiming to build their careers abroad or immerse in their academics (leaning towards positive introjection motivation). International students who originally aimed to focus on studying and networking abroad, were more critical towards the host institution when they felt that they received subpar services either from the academic staff or the international coordinators. On the other hand, those who had stronger intrinsic motivations, and deeper values connected to learning about the country or culture, seemed to be more forgiving and had a more positive experience, even when the received services did not meet their needs.

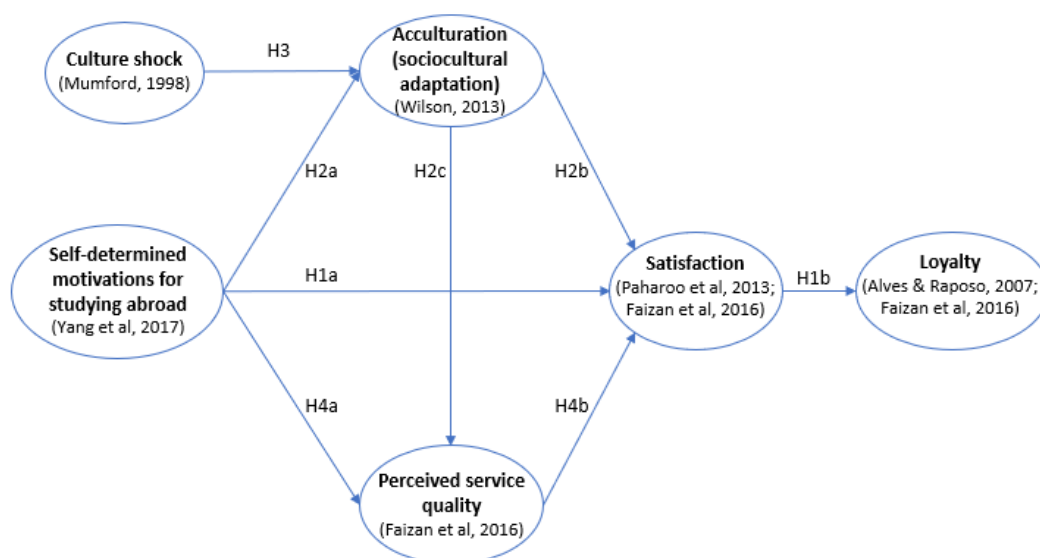
Perceived service quality has been a key marketing constructs since the 1980's in the service industry. Parasuraman et al (1985; 1988; 1994) has created the SERVQUAL model to measure service quality across industries, using the expectation minus performance model. Cronin and Taylor (1992) debated the above approach and argued that a performance only measurement (SERVPERF) can lead to better results with less measurement items. As researchers were looking for more accurate results, industry specific measurement scales appeared and Firdaus (2006a; 2006b) developed the higher education specific HEdPERF scale. The HEdPERF scale comprises of service quality dimensions such as academic, non-academic aspects of provided services, access to teachers and international coordinators, academic program offering and the reputation of the institution. The HEdPERF scale served as a base for many researchers when investigating international students' service experiences at the host institution (Faizan et al, 2016; Arrivabene, 2019). There is a wide range of research about the connection between perceived service quality and satisfaction, and most researchers agree that perceived service quality is an antecedent to satisfaction (Alves & Raposo, 2007; Helgesen & Nettet, 2007; Fernandes et al, 2013), Appio et al, 2013; Faizan et al, 2016; Marimon et al, 2018; 2019). The qualitative research also confirmed that the perceived knowledge, helpfulness, manners and experience of the academic staff and international coordinators had an impact on the level of satisfaction. The below hypotheses were drawn with regards to the role of perceived service quality.

H4a: Self-determined motivations for studying abroad have a positive influence on perceived service quality

H4b: Perceived service quality has a positive influence on satisfaction

Based on the extant literature review and the findings of the qualitative research the research model was developed, shown on Figure 9.

Figure 9. Final research model with hypotheses



Source: own construction

The direction and the strength of the relationships between the constructs will be measured with the research model (Figure 9.). In the next section the research constructs and the respective constructs scales are discussed along with the development of the quantitative research instrument of the dissertation.

3.3.2. Operationalization of the constructs

In this section the constructs of the model are discussed together with the scale items that provide the base of the quantitative research instrument. As mentioned in the literature review, there are multiple construct definitions with a variety of scale items, so it is important to focus down to the ones that will be used in the dissertation. The full scales for the operationalized constructs are shown in Appendix 2.

Self-determined motivations for studying abroad: based on the literature review the construct of self-determined motivations for studying abroad will be based on Yang et al (2017) as it offers a continuum as opposed to the dichotomous model of the push and pull motivational factors proposed by Mazzarol & Soutar (2001; 2002; 2012). The self-determined motivation continuum is based on the level of autonomy individuals have when making decisions (Sheldon et al, 2017). On the lower end of

the spectrum the construct has items grouped around amotivation (no specific reason to study abroad or unsure how to continue), external motivations (pressure from people), negative introjection (aims to avoid guilt or shame). At the higher end of the spectrum the more positive motivation groups are found such as positive introjection (prove worthiness, increase self-esteem), identification (deeper value and meaningful experience) and intrinsic motivations (joy, fun, interesting) of which the latter two offer the most autonomy and overall satisfaction to individuals (Yang et al, 2017). In the dissertation this self-determined motivation scale is used to measure the level of freedom international students had, when they made their choice to study abroad.

Acculturation (sociocultural adaptation): early research proposed clinical treatment (Oberg, 1960), then the stress-adaptation-growth theory (Kim, 2001) considered the psychological and sociocultural adaptation. More recent studies focus on the culture learning theory, hence in the dissertation acculturation is measured with the behavioural outcome of acculturation (sociocultural adaptation) through the competence of international students to demonstrate culturally appropriate behaviour (Wilson, 2013). Based on the work of Ward and Kennedy (1999), Wilson (2013) developed the revised sociocultural adaptation scale which included five key areas: interpersonal communications abroad, academic and work performance, maintaining personal hobbies and getting involved in local community activities, adaptation to the city and lifestyle abroad and understanding and speaking the host country language. In the current dissertation these areas are all represented in the sociocultural adaptation facet of the acculturation construct.

Culture shock: the culture construct of the dissertation is based on the research of Mumford (1998). The construct comprises of two main factors, the core culture shock elements and the interpersonal culture shock. In the first category the core elements cover the host culture related perceptions of the individual (disgust, acceptance, stress, confusion, lack of support) and the interpersonal elements, which are related to the interactions with members of the host culture. In the dissertation the culture shock construct is defined as the sum of the core and interpersonal elements of the culture shock scale by Mumford (1998).

Perceived service quality: the higher education industry has multiple measurement scales based on the SERVQUAL (Parasuraman, 1985) and SERVPERF (Cronin and Taylor, 1992) approach. In the dissertation a higher education specific measurement scale will be used that was initially developed by Firdaus (2006a) and developed and tested further by Faizan et al (2016). The perceived service quality construct of Faizan et al (2016) consists of five areas: quality of teaching, the attitude, communication and experience of professors (academic aspects), quality of the services received from the administrative staff, such as the international office (non-academic aspects), the timely deliveries and availability of the faculty staff (access), course or program specific deliverables (program issues) and the reputation of the institution. In the dissertation the perceived service quality as measured along these five higher education specific dimensions.

Satisfaction: it is the key construct of the dissertation as the desired outcome for institutions is that their international students are satisfied with their services. In this dissertation satisfaction is conceptualized as a multi-attribute construct (Churchill & Surprenant, 1982), considering the affective, cognitive and conative aspects (Hennig-Thurau et al, 2002) in the form of scale items starting with ‘I think’ or ‘I feel’ (Faizan et al, 2016) combined with a global satisfaction indicator. In addition to that, the host institution specific satisfaction indicator from Paharoo (2013) is added, with a similarly phrased question about the host country. The construct aimed to capture the multi-attribute nature of satisfaction while also including the host country and host institution specific and overall satisfaction indicators.

Loyalty: using the theoretical base of Oliver (1997) in the dissertation the scale items of Faizan et al (2016) will be used to represent attitudinal loyalty, including WOM items in a single loyalty construct, with the addition of the ‘pride’ attitudinal loyalty scale item from Alves and Raposo (2007). In the dissertation loyalty is handled as a single construct which is a consequence of satisfaction.

The relationships between the main constructs are expected to be moderated by a range of control variables as it was seen in previous research. In the dissertation the international student demographics, personal characteristics and personality traits are used as control variables. The majority of demographic factors are applied based on the research of Malota (2016), including questions about program length, host country, home country, study area, financial status, scholarship holding status and the time spent abroad. The personal characteristics of international students are measured with their previous international experience, preparation for the study program, learning style, freedom of institution choice, personal sacrifices and previous intercultural experiences (Vangelis & Hill, 2019). The personality of international students is also controlled for by using a shortened version of the Big Five personality trait test applied by Nandi and Nicoletti (2009). Many of these characteristics also emerged from the qualitative research findings, accordingly their moderating effect will be tested in the quantitative research phase.

3.3.3. Research instrument and pilot study

The research instrument was developed based on the extant literature, and the qualitative findings also confirmed the assumed connection between the constructs. The quantitative survey applied multiple choice questions, dropdown lists and 1-5 Likert type scales. The survey blocks were as follows: introduction, study abroad experience, demographics, personal background, personality, study abroad motivations, study abroad culture shock and acculturation, service quality, satisfaction and loyalty and an outro with the option to provide free text feedback on the survey. The applied scales in the survey blocks are shown (Table 25.) below.

Table 25. Applied scales of the research instrument

Author(s) and year published	Variable and scale name	Scale item number and scale type
Yang et al (2017)	Motivation: self-determined motivations for studying abroad (SDT)	24 items 1-5 Likert type
Mumford (1998)	Culture shock: Culture Shock questionnaire (CSQ)	12 items 1-5 Likert type

Wilson (2013)	Acculturation: Revised Sociocultural Adaptation Scale (SCAS-R)	21 items 1-5 Likert type
Faizan et al (2016)	Perceived service quality: Higher Education Performance (HEdPERF)	30 items 1-5 Likert type
Paharoo et al (2013) Faizan et al (2016)	Satisfaction: HEdPERF and host country and host institution satisfaction	7 items 1-5 Likert type
Alves and Raposo (2007) Faizan et al (2016)	Loyalty: attitudinal component, conative loyalty (including WOM)	4 items 1-5 Likert type
Nandi and Nicoletti (2009)	Personality traits: shortened version of the Big Five survey	15 items 1-5 Likert type

Source: own construct

The research instrument was tested on a smaller sample of 10 international students in order to filter out the potentially difficult or ambiguous questions. In the pilot native English speakers and non-native English speakers participated as well. Upon receiving verbatim feedback from them, minor wording changes were carried out and the order of the questions was slightly rearranged to accommodate a better flow for respondents. The final research instrument is in Appendix 2.

3.3.4. Quantitative sample and data collection

Similar to the sampling process of the qualitative research, international students were considered as the total population. The sampling criteria were that the international students had to have at least 2 months of study abroad experience at the time of the data collection to be able to evaluate the local cultural elements and the quality of the host institution. The ‘country of origin’ ratio criterion was lifted, however only students studying in Hungary were sampled this time.

Respondents for the current research were recruited through the institution of Tempus Public Foundation (TPF). TPF was established in 1996 by the Hungarian government as a non-profit organization to manage education related international cooperation programs and trainings (TPF, 2021). The link to the survey was sent out with the regular newsletter of TPF, reaching the higher education institutions in Hungary, accordingly the sample consisted of international students studying in Hungary. The current dissertation or any future publications will use aggregated

results or anonymized data to keep the identity of the respondents confidential. The questionnaire was hosted in Qualtrics and a total of 463 responses were recorded in May 2021.

After a rigorous data cleansing, 37 responses were removed because the respondents indicated that they had great to extreme difficulties to understand the survey questions or filled in the questionnaire too fast, providing inconsistent answers. The final valid sample of 426 international students is a smaller fraction of the approximately 30,000 plus international students in 2021, as 33,358 international students studied in Hungary in 2018 (Oktatási Hivatal, 2020), hence the results cannot be generalized.

3.3.5. Analytical method: Partial Least Squares (PLS) path modelling

In this section the most important features, criteria and evaluation of the analytical method is discussed. Structural equation modelling (SEM) is a standard analytical method in the field of marketing (Babin et al, 2008). The most important feature of the SEM analysis is the ability to measure latent variables (constructs of the dissertation) as part of the ‘outer model’ at the observation level and also test the theoretical connection between the constructs as part of the ‘inner model’ (Hair et al, 2012).

The SEM method has two main types, where the covariance based (CB-SEM) aims to estimate the model parameters in a way that the difference between the estimated model matrix and the sample’s model matrix are minimized. On the other hand, the variance based partial least squares (PLS-SEM) runs an iterative sequence of ordinary least squares to estimate partial model relationships which will in turn maximize the variance explained by the endogenous latent variables (Hair et al, 2012). In case of PLS-SEM, the latent variable scores represent the linear combination of their manifest variables, where the manifest variables can perfectly substitute the latent variable, capturing the variance explained in the endogenous latent variables (Fornell & Bookstein, 1982).

PLS-SEM does not contain distributional assumptions nor have identification issues, hence even the more complex models with multiple constructs and interrelationships can be tested without restrictions (Hair et al, 2011). Since PLS is

capable of explaining complex models, while CB-SEM provides weaker results with more indicators (Kemény, 2015), the PLS-SEM will be applied for the complex model of the dissertation. PLS-SEM has been widely used in the field of marketing, service research, international marketing (Hair et al, 2012) and many researchers used it to analyse the service quality, satisfaction and loyalty constructs in the higher education industry (Firdaus 2006a; 2006b; Faizan et al, 2016). The strength of the PLS-SEM lies in its predicting power (Wold, 1985), so it is the most suitable analytical method to develop complex models that expand beyond the current theories.

In order to have a robust PLS-SEM estimation, as a rule of thumb, the minimum sample size should be ten times more than the number of path relationships aiming at a certain construct in the inner model (Barclay et al, 1995). With regards to the sample size, Firdaus (2006b) used a sample of 381 international students reaching a 7:1 ratio of observations to latent variables, while Faizan et al (2016) used a smaller sample of 241 responses in their final PLS path modelling analysis.

As normal distribution is not a requirement in case of PLS-SEM, a resampling technique called bootstrapping can be used as a means to test model significance (Henseler, 2009), where the maximum recommended number of iterations is 15000 (Ringle et al, 2010).

The earlier mentioned outer and inner model evaluation has certain measurement criteria when assessing the results of PLS-SEM. As part of the outer model evaluation the internal consistency reliability, convergent and discriminant validities of each construct is measured. The theoretical framework of the dissertation contains reflective models only. In order to appropriately evaluate reflective outer models, the reliability and validity assessments must take place, as summarized below based on Hair et al (2012; p.429). The indicator reliability must be reported using the standardized indicator loadings, which is minimum 0.4 for exploratory research (Hulland, 1999). The internal consistency reliability should be measured with the composite reliability (instead of Cronbach's alpha) and has to reach a minimum value of 0.6 (Bagozzi & Yi, 1988). With regards to convergent validity, the average variance extracted (AVE) is used and must be above 0.5 (Bagozzi & Yi, 1988) while the discriminant validity can be measured with the Fornell-Larcker criterion, where the AVE of each construct must be higher than its

squared correlation with any of the measured constructs (Fornell & Larcker, 1981). Compared to composite reliability, AVE provides a stricter measure of convergent validity, so AVE may be disregarded in case of high composite reliability, based on Malhotra and Dash (2011):

"AVE is a more conservative measure than CR. On the basis of CR alone, the researcher may conclude that the convergent validity of the construct is adequate, even though more than 50% of the variance is due to error." (p.702).

In case the outer model is reliable and valid, then the inner model estimation can be examined as a next step. The most important measure of the inner model is the coefficient of determination (R^2), which shows the explained variance of the endogenous latent variables. Additionally, the effect size (f^2) has to be reported to understand the predictive relevance of the significant paths (Hair et al, 2012).

After the data collection and data cleaning, the quantitative analysis of the data was carried out with SmartPLS 3 (Ringle et al, 2015). The main aim of the statistical analysis was to analyse the relationships between the constructs of the research model (Figure 9.).

3.3.6. Results of the quantitative research

In this section the quantitative research results are discussed, starting with the descriptive statistics of the sample demographics, followed by the PLS results of the measurement model (outer) and the structural model (inner), and finally the moderating effects of the control variables are presented.

3.3.6.1. Sample demographics and program characteristics

The online survey was distributed through Tempus Public Foundation via their regular newsletter to Hungarian universities. The data cleaning process resulted in the elimination of 37 responses because of incomplete and inconsistent answers, and responses were also deleted when the respondents indicated comprehension difficulties in the relevant control question. Accordingly, the final quantitative data analysis was conducted based on the remaining valid data from 426 international student responses.

The sample demographics are shown on Table 26, followed by Figure 10, detailing the nationality of international students, while the program characteristics are in Table 27. A small amount of the respondents did not answer certain questions, ranging from 0,2% to 1,4% for each demographic or program characteristic item, which is also shown in the summary tables of this section.

Table 26: Personal demographics of international students

Personal demographics		Number of respondents	Ratio (%)
Age group	18-20	41	9,6%
	21-23	97	22,8%
	24-26	83	19,5%
	26+	205	48,1%
	Total	426	100,0%
Host city	Budapest	223	52,3%
	Other Hungarian cities	203	47,7%
	Total	426	100,0%
Gender	Male	226	53,1%
	Female	200	46,9%
	Total	426	100,0%
Financial situation	Much above average	19	4,5%
	A little above average	56	13,1%
	Average	249	58,5%
	A little below average	63	14,8%
	Much below average	34	8,0%
	Not answered	5	1,2%
	Total	426	100,0%
Academic performance	Much above average	140	32,9%
	A little above average	144	33,8%
	Average	124	29,1%
	A little below average	11	2,6%
	Much below average	2	0,5%
	Not answered	5	1,2%
	Total	426	100,0%
Host country was first choice	Yes	281	66,0%
	No	145	34,0%
	Total	426	100,0%
Prior intercultural experience	Yes	336	78,9%
	No	90	21,1%
	Total	426	100,0%

Source: own research, own construction

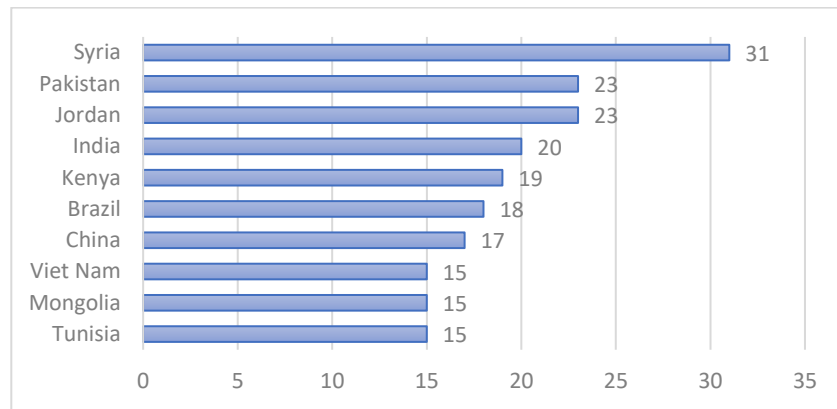
As shown in Table 26, the majority of international students was older than 26 (48,1%), while the three other age groups combined (18-26) reached 51,9%. The gender ratio was relatively even, 226 male and 200 female respondents provided their answers. More than half of the students (58.5%) reported an average financial status compared to fellow students, while less than a quarter of the students (22,8%) reported below average and even less students considered to be in a better financial situation compared to others (17,6%). The majority of students studied in Budapest (52,3%), while the combined respondents of other cities was 47,7%, including Debrecen, Miskolc, Győr, Pécs, Szeged, Sopron and Esztergom, however in the scope of the current dissertation these are not investigated separately.

With regards to the academic performance, the majority of students (66,7%) said that their grades were above average, less than one third thought to have average grades, while only 1,6% thought their grades were worse than their peers. Two-thirds of the students (66,0%) chose Hungary as their host country in the first place, however 34,0% of the international students initially planned to study abroad somewhere else. Most of the respondents (78,9%) had some prior intercultural experience before their current study abroad program, either studied abroad before, engaged with foreigners in different situations or had substantial travel or intercultural exposure at some point in their lives. Nevertheless 21,1% of the students reported that their Hungarian study abroad program was their first significant intercultural experience.

Based on the responses, international students arrived to study in Hungary from 56 countries in total. Most of them came from Asia (54,5%) and Africa (21,6%), but there are many responses from Europe (14,6%) and South America (6,6%) as well, and only 1,6% from North American countries. As shown on Figure 10, the top 10 sender countries account for almost half of the nationalities represented in the sample: Syrian Arab Republic (7,3%), Pakistan (5,4%), Jordan (5,4%), India (4,7%), Kenya (4,5%), Brazil (4,2%), China (4,0%), Tunisia (3,5%), Mongolia (3,5%) and Vietnam (3,5%). The full list of the sender countries with the number (and ratio) of international students is available in Appendix 3. As mentioned

earlier, the scope of the current research does not cover the potential cultural differences between the home country of the respondents.

Figure 10. Top sender countries



Source: own research, own construction

The research included numerous program characteristics as well. As shown on Table 27, the study program level was almost even, as 152 students were studying in Bachelor level programs, 136 students were in Masters programs and 132 students were working towards completing their PhD.

Since the data collection occurred through TPF, the majority of the respondents received financial support (94,8%) in the form of government grants throughout their studies, while a small portion of the sampled students did not receive such financial support or did not answer this question (5,2%). Most students started their study abroad program before the outbreak of the pandemic (81,5%), however 18,5% arrived to Hungary from the 2021 spring semester, at the time when most COVID-19 restriction came into effect in Hungary. Only a fraction of the respondents had a study abroad program shorter than 1 year (6,8%), a quarter of the international students were staying for 1-2 years (25,6%), while most students came to Hungary for longer programs, as 58,7% planned to stay for 3-4 years and 8,5% for over 4 years. At the time of the data collection all international students were in Hungary, completing their study abroad program.

Table 27. Study abroad program characteristics

Study abroad program characteristics		Number of respondents	Ratio (%)
Study program level	Bachelor	152	35,7%
	Masters	136	31,9%
	PhD	132	31,0%
	Not answered	6	1,4%
	Total	426	100,0%
Scholarship holder	Yes	404	94,8%
	No	18	4,2%
	Not answered	4	0,9%
	Total	426	100,0%
Program start	2018 autumn - 2019 autumn	347	81,5%
	2020 spring or later	79	18,5%
	Total	426	100,0%
Program length	Less than 1 year	29	6,8%
	1-2 years	109	25,6%
	3-4 years	250	58,7%
	4+ years	36	8,5%
	Not answered	2	0,5%
	Total	426	100,0%
Time spent abroad	Less than 1 year	11	2,6%
	1-2 years	17	4,0%
	3-4 years	84	19,7%
	4+ years	314	73,7%
	Total	426	100,0%
Major studies	Arts	8	1,9%
	Humanities	35	8,2%
	Engineering	99	23,2%
	Computer sciences	25	5,9%
	Life sciences and medicine	51	12,0%
	Natural sciences	37	8,7%
	Social sciences	49	11,5%
	Management	46	10,8%
	Agriculture	18	4,2%
	Other	57	13,4%
	Not answered	1	0,2%
	Total	426	100,0%

Source: own research, own construction

The vast majority had spent over 4 years in Hungary already (73,7%), while another 19,7% spent 3-4 years in Hungary allowing substantial time for sociocultural adaptation.

With regards to the academic field of the respondents, the top 5 majors accounted for two-thirds of the study areas: almost a quarter of the students studied in the field of engineering (23,2%), followed by life sciences and medicine (12,0%), social sciences (11,5%), management (10,8%) and natural sciences (8,7%).

3.3.6.2. Outer model results

In this section the PLS analysis results are discussed, focusing on the reliability and the validity of the examined constructs: self-determined motivations for studying abroad, culture shock, acculturation (sociocultural adaptation), perceived service quality, satisfaction and loyalty. The database had a total of 66 missing values (<0.15% of the total database), during the construct analysis the missing values were replaced by the means.

The PLS algorithm was applied with 300 iterations (stop criterion 10^{-7}) for the construct analysis. When measuring indicator reliability, indicators with factor loadings below 0.4 must be deleted, however indicators with factor loadings between 0.4-0.7 may be kept in case the convergent validity criterion is met for the construct and the items are supported by previous empirical results in the extant literature (Hair et al, 2012). In case the convergent validity criterion ($AVE > 0.5$) is not met, the indicators with factor loadings between 0.4-0.7 can be still maintained in case the composite reliability of the construct is above 0.7 based on Malhotra and Dash (2011).

A total of 18 indicators were removed from three constructs due to low level of contribution to the constructs (12 items: self-determined motivations for studying abroad; 2 items: culture shock; 4 items: acculturation). The analysis checked for multicollinearity and found that in case of 7 items the required criterion of $VIF < 5$ (Hair et al, 2011) was not met, accordingly these indicators were also deleted (4 items: satisfaction, 2 items: service quality, 1 item: loyalty). Items with factor loadings between 0.4-0.7 were retained in the acculturation, motivation and culture shock constructs because of their explaining power. In the culture shock construct

indicator CS3 was a reverse scale item, so it was recoded into a positive statement before the PLS analysis.

Table 28. Factor loadings for all indicators in the measurement model

Construct name	Items	Statements (measurement tool items)	Factor loading	
Acculturation (sociocultural adaptation)	ACC1	Interacting at social events	0.591	
	ACC2	Interacting with members of the opposite sex	0.515	
	ACC4	Building and maintaining relationships	0.662	
	ACC5	Adapting my speaking style in a culturally appropriate way	0.625	
	ACC6	Changing my behaviour to suit social norms, rules, attitudes, beliefs, and customs	0.552	
	ACC7	Accurately interpreting and responding to other people's emotions	0.616	
	ACC8	Managing my academic/work responsibilities	0.635	
	ACC9	Working effectively with other students/work colleagues	0.738	
	ACC10	Gaining feedback from other students/work colleagues to help improve my performance	0.734	
	ACC11	Expressing my ideas to other students/work colleagues in a culturally appropriate way	0.743	
	ACC12	Maintaining my hobbies and interests	0.634	
	ACC13	Obtaining community services, I require (e.g. accommodation, healthcare, banking)	0.648	
	ACC14	Dealing with the bureaucracy	0.555	
	ACC15	Attending or participating in community activities	0.668	
	ACC17	Adapting to the population density	0.551	
	ACC18	Finding my way around	0.648	
	ACC19	Adapting to the pace of life	0.672	
	Culture shock	CS1	Do (did) you feel stressed from the effort to adapt to a new culture?	0.612
		CS3	Do (did) you feel generally accepted by the local people in the new culture?	0.574
CS4		Do (did) you ever wish to escape from your new environment altogether?	0.674	
CS5		Do (did) you ever feel confused about your role or identity in the new culture?	0.752	
CS6		Have (had) you found things in your new environment shocking or disgusting?	0.687	
CS7		Do (did) you ever feel helpless or powerless when trying to cope with the new culture?	0.722	
CS8		Do (did) you feel anxious or awkward when meeting local people?	0.747	
CS10		Do (did) you feel uncomfortable if people stare(d) at you when you go (went) out?	0.586	
CS11		When you go (went) out shopping, do (did) you feel as though people may be trying to cheat you?	0.599	
CS12		Are (were) you finding it an effort to be polite to your hosts?	0.439	
Loyalty		LOY2	I will continue at the same university if I want to further my education	0.865

	LOY3	I will recommend this university to my friends and family	0.933
	LOY4	I take pride in the fact that I study (studied) at the host university	0.894
Self-determined motivations for studying abroad	MOT1	Because studying abroad is interesting	0.736
	MOT2	Because it is a pleasure to study abroad	0.785
	MOT3	Because studying abroad is fun	0.629
	MOT4	Because I enjoy studying abroad	0.802
	MOT5	Because studying abroad is meaningful to me	0.787
	MOT6	Because it is my personal choice to study abroad	0.616
	MOT7	Because studying abroad is personally important to me	0.750
	MOT8	Because I strongly value studying abroad	0.758
	MOT9	Because I want to feel good about myself	0.644
	MOT10	Because studying abroad boosts my self-esteem	0.679
	MOT11	Because I want to prove to myself that I am capable	0.555
	MOT12	Because I want to feel proud of myself	0.578
Satisfaction	SAT4	I feel (felt) that my experience with this university has been enjoyable	0.913
	SAT6	I am (was) very satisfied with the services provided by my host university	0.911
	SAT7	I am (was) very satisfied with my life in the host country	0.882
Perceived service quality	SQ1	Teachers have (had) the knowledge to answer my questions relating to the course content	0.731
	SQ2	Teachers treat(ed) me in a polite way	0.686
	SQ3	When I have (had) a problem, teachers showed a sincere interest in solving it	0.756
	SQ4	Teachers show(ed) a positive attitude toward students	0.773
	SQ5	Teachers communicate(d) well in the classes	0.762
	SQ6	Teachers provide(d) feedback about my progress	0.748
	SQ7	Teachers are (were) highly educated in their respective field	0.765
	SQ8	Teachers adequately provide(d) the materials discussed in the class	0.775
	SQ9	Teachers adequately provide(d) documentations I require(d)	0.801
	SQ10	When I had a problem, the administrative staff show(ed) a sincere interest in solving it	0.762
	SQ11	Administrative staff provide(d) caring attention	0.751
	SQ13	Administrative staff keep (kept) accurate and retrievable records	0.729
	SQ14	When the administrative staff promise(d) to do something by a certain time, they do (did) so	0.775
	SQ16	Administrative staff communicate(d) well with students	0.771
	SQ17	Administrative staff have (had) good knowledge of the university systems	0.751
	SQ18	Administrative staff respect(ed) the terms of confidentiality when I disclose(d) information to them	0.712
	SQ19	Teachers are (were) willing to respond to my request for assistance	0.776
SQ20	Teachers allocate(d) sufficient time for consultation	0.772	

SQ21	Teachers and the administrative staff ensure(d) that they are (were) easily contacted	0.805
SQ22	Teachers are (were) knowledgeable when responding to my request	0.833
SQ23	The university have (had) excellent quality programs	0.785
SQ24	The university offer(ed) a wide range of programs with various specializations	0.711
SQ25	The university operates an excellent counselling service	0.749
SQ26	The university offers programs with a flexible structure	0.758
SQ27	The university has a professional image	0.755
SQ28	The academic program run by the university is reputable	0.787
SQ29	The university's graduates are easily employable	0.637
SQ30	The university has a good image	0.777

Source: own research, own construction

For internal consistency reliability the composite reliability (CR) was applied, which is recommended to be over 0.7 and convergent validity (AVE) must reach 0.5 as well (Hair et al, 2012), however in case the composite reliability of the construct is above 0.7, then lower AVE is accepted, as the high CR value ensures convergent validity (Malhotra & Dash, 2011). After removing the indicators with low contribution or due to multicollinearity, all of the examined constructs met the recommended criterion of $CR > 0.7$, hence the constructs are reliable and valid, even in case of $AVE > 0.5$ (Table 29.).

Table 29. Reliability and convergent validity of the constructs

Construct name (full)	Construct	CR	AVE
Acculturation	ACC	0.920	0.407
Culture shock	CS	0.825	0.417
Loyalty	LOY	0.925	0.806
Self-determined motivations for studying abroad	MOT	0.918	0.487
Satisfaction	SAT	0.929	0.814
Perceived service quality	SQ	0.974	0.574

Source: own research, own construction

Discriminant validity was analysed with two measures, first based on the criterion of Fornell and Larcker (1981) and the results were also checked for the cross loadings of the constructs (Hair et al, 2011). Based on the results shown in Table

30, each construct's AVE was higher than its squared correlation with any other construct, meeting the Fornell-Larcker criterion for discriminant validity.

Table 30. Discriminant validity based on Fornell and Larcker

	ACC	CS	LOY	MOT	SAT	SQ
ACC	0.638					
CS	-0.375	0.646				
LOY	0.369	-0.390	0.898			
MOT	0.328	-0.241	0.379	0.698		
SAT	0.435	-0.389	0.821	0.430	0.902	
SQ	0.396	-0.390	0.749	0.393	0.780	0.758

Source: own research, own construction

Also, each indicator has the highest loading in the construct it was intended to measure, so there are no cross loadings in the model. Based on the results of the outer model analysis, there is sufficient evidence for the reliability and validity of the examined constructs, hence the inner model may be examined in the next section.

3.3.6.3. Inner model results

This section discusses the analysis of the inner model, aiming to uncover the significance and validity of the relationships between the examined constructs. The database had a total of 66 missing values (<0.15% of the total database), during the path modelling analysis the missing values were replaced by the means.

Since PLS SEM is distribution free, in order to conduct significance testing, it must apply bootstrapping samples (resampling) when delivering the model evaluation (Henseler, 2009). The bootstrapping parameter was set to 5000 subsamples (Hair et al, 2011; 2014), and complete bootstrapping was run at a 0.05 significance level. Based on the path modelling, all of the hypothesized construct relationships were significant as shown in Table 31.

Table 31. PLS path modelling inner model results

Direct effect	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
ACC -> SAT	0.125	0.126	0.033	3.810	0.000
ACC -> SQ	0.299	0.304	0.052	5.759	0.000
CS -> ACC	-0.314	-0.324	0.044	7.171	0.000
MOT -> ACC	0.251	0.254	0.041	6.073	0.000
MOT -> SAT	0.119	0.119	0.042	2.847	0.004
MOT -> SQ	0.295	0.296	0.055	5.341	0.000
SAT -> LOY	0.821	0.822	0.023	36.448	0.000
SQ -> SAT	0.685	0.684	0.040	17.036	0.000

Source: own research, own construction

Based on the results of the direct relationship between the constructs, the self-determined motivations, acculturation (sociocultural adaptation) and perceived service quality have a positive effect on satisfaction; acculturation (sociocultural adaptation) has a positive effect on perceived service quality; satisfaction has a positive influence on loyalty while culture shock negatively influences acculturation (sociocultural adaptation).

Based on the original samples (Table 31), perceived service quality has the strongest influence ($\beta=0.685$) on satisfaction, followed by the level of acculturation (sociocultural adaptation) ($\beta=0.125$) and self-determined motivations for studying abroad ($\beta=0.119$). It can also be concluded that the perceived service quality was impacted by the level of acculturation (sociocultural adaptation) ($\beta=0.299$) and to slightly lesser extent also by the self-determined motivations for studying abroad ($\beta=0.295$). Motivations appeared to also have an impact on acculturation ($\beta=0.251$) while culture shock negatively influenced the level of acculturation ($\beta=-0.314$). Finally, satisfaction had an effect on loyalty ($\beta=0.821$), which appeared to be the strongest connection in the model.

The goodness of the model was assessed with the R^2 values, where in case of $R^2 > 0.1$ the strength of the structural path is acceptable (Falk & Miller, 1992), because an acceptable amount of variance is explained in the endogenous construct (Table 32.).

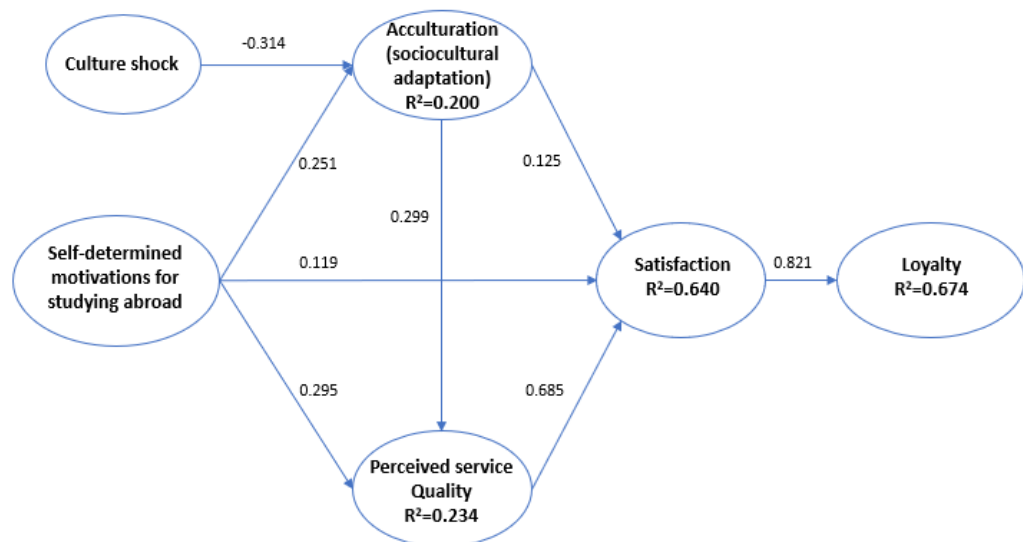
Table 32. Goodness of the model based on R² values

Endogenous constructs	Original Sample (β)	Sample Mean	Standard Deviation	T Statistics	P Values
ACC	0.200	0.214	0.037	5.450	0.000
LOY	0.674	0.676	0.037	18.272	0.000
SAT	0.640	0.645	0.038	16.960	0.000
SQ	0.234	0.246	0.046	5.076	0.000

Source: own research, own construction

The reported R² values are above 0.1 for all of the examined endogenous constructs, hence the predictive capability of acculturation (sociocultural adaptation), perceived service quality, satisfaction and loyalty are established. Satisfaction (R²=0.640) and loyalty (R²=0.674) had the strongest predictive capability, and in marketing studies the 0.5-0.75 range is considered to have a moderate to high explaining power (Hair et al, 2014). The variance explained by MOT and ACC in SQ is R²=0.234, which, in case of psychological constructs such as MOT and ACC, is considered a moderately strong effect. Similarly, the variance explained by MOT and CS in ACC (R²=0.200) is a moderately strong effect in the context of sociocultural adjustment as shown below (Figure 11.).

Figure 11. Significant paths and R²



Source: own research, own construction

The dissertation research questions also investigated the mediating role of perceived service quality and the mediating role of acculturation (sociocultural adaptation); accordingly, the mediation analysis was performed to assess these indirect effects. Since there is a direct effect (significant path) between MOT and SAT, and MOT exerts some of its influence directly on ACC, similar to the connection between ACC and SAT, there is a partial mediation between MOT and SAT through ACC. The strength of the indirect effect is $\beta = 0.075$, which is weaker than the direct effect between MOT and SAT ($\beta=0.119$).

With regards to the mediating role of the perceived service quality, both the direct and indirect paths are significant, accordingly, perceived service quality is also a partial mediator between SAT and MOT. The strength of this partial mediation is $\beta = 0.202$, which is stronger than the direct effect between MOT and SAT ($\beta=0.119$). The third mediating effect examined is between ACC and SAT, where all paths are also significant. In line with that, SQ acts a partial mediator between ACC and SAT with a combined path strength of $\beta = 0.205$, which is stronger than the direct effect of ACC on SAT (0.125). The summary of the partial mediation of the examined constructs is shown in Table 33.

Table 33. Indirect effects (partial mediation)

Indirect effect	Original Sample (β)	Sample Mean	Standard Deviation	T Statistics	P Values
ACC -> SQ -> SAT	0.205	0.208	0.036	5.723	0.000
MOT -> SQ -> SAT	0.202	0.203	0.042	4.830	0.000
MOT -> ACC -> SQ	0.075	0.077	0.018	4.075	0.000

Source: own research, own construction

Finally, the effect size (f^2) is examined to determine the strength of the effects in the model, where 0.02 is considered weak, 0.15 is a moderate and 0.35 is a strong effect (Cohen, 1988). Based on the results (Table 34), SQ has a strong effect on SAT ($f^2=0.991$) and SAT exerts an even stronger influence on LOY ($f^2=2.063$). On the other hand, ACC has a moderate impact on SQ ($f^2=0.104$) and similarly, the effect size of MOT and SQ ($f^2=0.102$), CS and ACC ($f^2=0,116$) and MOT and ACC ($f^2=0.075$) have a moderately strong predictive relevance for the model. Lastly, some weaker, but still significant effects have been found, both for ACC and SAT ($f^2=0.035$) and MOT and SAT ($f^2=0.032$).

Table 34. Effect size (f^2)

Direct effect	f^2 value
CS->ACC	0.116
ACC->SAT	0.035
ACC->SQ	0.104
MOT->ACC	0.075
MOT->SAT	0.032
MOT->SQ	0.102
SAT->LOY	2.063
SQ->SAT	0.991

Source: own research, own construction

In the next section the moderating power of international student characteristics, demographics and personality traits are discussed.

3.3.6.4. Moderating variable results

The PLS path modelling analysis included a set of moderators. Based on the literature the measurement survey collected data on the demographics, personal characteristics and personality of international students. The results were obtained with the same settings as above (bootstrapping with 5000 subsamples), where the non-significant moderators were eliminated from the model in an iterative manner. In table 35 the remaining significant control variables are shown with their corresponding path coefficient and significance values. At the 95% significance level, CS and ACC were impacted by the level of awareness of differences in teaching style in Hungary ($\beta=-0.136$), meaning that those who had more intense culture shock, reached lower level of acculturation when they were less prepared for the differences in teaching style.

CS and ACC was also moderated by the amount of interaction with members of the home country ($\beta=0.095$), so those who were in daily touch with their friends and family, reached higher level of sociocultural adaptation. SAT and LOY were slightly negatively moderated by the amount of sacrifice international students had to make to be able to study abroad ($\beta=-0.066$), so students who had to make more sacrifices scored lower on loyalty. SAT was moderated by two control variables: age ($\beta=-0.057$) and academic performance ($\beta=0.066$), where higher age group

students were less satisfied, while a better academic performance positively moderated SQ and SAT.

Table 35. Moderating variables in the proposed model

Moderating effect	Dependent variable	Original Sample (β)	Sample Mean	Standard Deviation	T Statistics	P Values
I was aware of the differences in teaching style between my home country and the host country	ACC	-0.136	-0.136	0.043	3.162	0.002
While studying abroad, I was in daily interaction with people from my home country	ACC	0.095	0.094	0.043	2.215	0.027
I had to make significant personal sacrifices to be able to study abroad	LOY	-0.066	-0.065	0.028	2.312	0.021
Age group	SAT	-0.057	-0.056	0.025	2.253	0.024
Academic performance compared to others	SAT	0.066	0.064	0.031	2.170	0.030

Source: own research, own construction

It is worth mentioning that the analysis of control variables related to the personality of international students did not yield significant results, however the trait of agreeableness was close to the cut-off point ($p=0.058$). After measuring the direct relationships between all constructs, it was found that the additional control variables such as gender, financial situation, host country choice, prior cultural exposure, study program level, host city, program length and program start (pre-COVID / during COVID), time spent abroad and the major study area did not moderate the examined relationships.

In the next section the empirical research results are connected with the research questions, hypotheses and the extant literature review to draw the final conclusions of the dissertation.

3.3.7. Research hypotheses results

The first research question (*What are the most important motivations for studying abroad and is there a direct connection to satisfaction, and an indirect connection to the loyalty of international students?*) included two hypotheses to examine the relationship between self-determined motivations for studying abroad, satisfaction and loyalty.

H1a: Self-determined motivations for studying abroad have a positive influence on satisfaction

H1b: Satisfaction has a positive influence on loyalty

There is scarcity in research materials about the connection between motivations for studying abroad and international student satisfaction (Chirkov 2003; 2005). International students are influenced by push and pull factors (Mazzarol et al, 1997) which define the sequence of choosing the host country and host institutions and most motivations can be categorized based on that theory. The push and pull factors (McMahon, 1992; Mazzarol, 1998; 2002) categorized host country level and host institution level reasons to study abroad, evaluating factors such as the amount and availability of information, influencers and advisers around the student, financial and mental costs, physical environment, emotional environment, geographical proximity, time zone and travel time, social connections with relatives or friends who live(d) in the host country (Mazzarol, 1997). Motivations for studying abroad include personal development, cultural learning, exploring a new country, making international friends or nurture an international career path (Leutwyler & Meierhans, 2013). Sheldon et al (2017) provided a continuum ranging from making a self-determined choice to losing the autonomy of decision. The level of autonomy in making the decision to study abroad also impacted satisfaction (Yang et al, 2017). Based on the qualitative research phase the motivations for studying abroad can be categorized based on the level of self-determined motivations, which then in turn appeared to influence the level of satisfaction. In the quantitative research phase of the dissertation the PLS path modelling confirmed that the **self-determined motivations for studying abroad exert a positive influence on satisfaction, accordingly H1 is accepted.**

There is plentiful research about the relationship between satisfaction and loyalty and many researchers support the view that loyalty is a consequence of satisfaction (Fernandes et al, 2013; Helgesen & Nettet, 2007; Faizan et al, 2016; Zhou et al, 2016; Shahsavari & Sudzina, 2017; Kashif & Cheewakrakokbit, 2018; Arrivabene et al, 2019). Loyalty is most often conceptualized as a single multi-attribute construct (Oliver, 1997; Helgesen & Nettet, 2007; Faizan et al, 2016; Arrivabene, 2019), including word-of-mouth. The qualitative research confirmed the importance of loyal behaviour of international students and the PLS path modelling provided quantitative evidence to **confirm the positive influence of satisfaction on loyalty, hence H2 is also accepted.**

The second research question (*Does the level of acculturation mediate the relationship between self-determined motivations for studying abroad and satisfaction? Does the level of acculturation also mediate the relationship between self-determined motivations for studying abroad and the perceived service quality?*) included three hypotheses as shown below:

H2a: Self-determined motivations for studying abroad have a positive influence on acculturation (sociocultural adaptation)

H2b: Acculturation (sociocultural adaptation) has a positive influence on satisfaction

H2c: Acculturation (sociocultural adaptation) has a positive influence on perceived service quality

The interrelationship between self-determined motivations, acculturation (sociocultural adaptation), perceived service quality and satisfaction in the higher education is scarcely researched.

The acculturation strategy (Berry, 1997) of international students depends on the willingness to connect in multiple ways with the host culture (Chirkov, 2007; Dentakos et al, 2016) and its outcome is expected to largely define the study abroad experience. Other researchers focused on the culture learning aspect, where acculturation was measured with the behavioural outcome, the sociocultural adaptation of international students (Ward & Kennedy, 1999; Wilson et al, 2013).

In the extant literature the host country effect often consists of socio-economic and environmental factors such as cost of living, climate, lifestyle, regulations and culture in general (Arambewela, 2003), however the acquisition of cultural skills (Zhou et al, 2008) is not examined as a predictor of service quality or satisfaction. In the dissertation the host country factors focus on the cultural elements only, more specifically on the experienced culture shock (Oberg, 1960; Hidasi 2004; Malota, 2013) and the cultural competence of international students (Wilson, 2013; Wilson et al, 2017), where the relationship between motivations and acculturation is also under researched (Chirkov et al, 2007; 2008). The qualitative research phase indicated that there might be a connection between these factors.

Based on the PLS path modelling, **self-determined motivations for studying abroad have a positive influence on acculturation (sociocultural adaptation), so H2A is supported.**

Yang et al (2017) found that when international student felt competent in the academic area, and performed better while living abroad, their level of satisfaction was also higher (Yang et al, 2017). In the dissertation the cultural competence was in the focus of the research (Wilson, 2013), and it was assumed based on the scarce amount of available literature that in case the cultural competence is higher, then international students will be more satisfied with their overall program. Based on the qualitative results this claim received more support.

The path modelling confirmed that the **acculturation (sociocultural adaptation) has a positive influence on satisfaction, so H2B is accepted.**

According to Davis et al (2017) acculturation may have an impact on service quality, however that relationship is quite under researched in case of international students. Acculturation also appeared to support the academic adjustment of international students (Chirkov, 2008), which is part of the experienced service quality provided by the host institution. The in-depth interview results showed a tendency that acculturation can be a mediator between motivations and service quality, as international students with more culture-oriented motivations were more likely to adapt to the local culture and have the confidence to ask questions from teachers and communicate more frequently with international student coordinators.

The PLS analysis also confirmed that there is a **significant positive path between acculturation (sociocultural adaptation) and perceived service quality, hence H2C is accepted.**

The third research question (*What are the most important culture shock factors for international students and does culture shock impact the acculturation?*) contained one hypothesis:

H3: Culture shock negatively impacts acculturation (sociocultural adaptation)

When international students go abroad, they start to familiarize themselves with the new cultural environment and face some level of culture shock (Oberg, 1960). Among the dramatic changes, they lose the supporting network of family and friends (Chaney & Martin, 2011), and have to adapt to the new norms, values, language, behaviour or people of the local culture (Malota, 2013) and fellow international students, which is a frustrating mental and physical inconvenience (Hidasi, 2004). Culture shock often manifests in the forms of perceived discrimination, homesickness, perceived hate, rejection, fear or stress due to the change and the sense of guilt for leaving behind people in the home country (Sandhu & Asrabadi, 1994). Mumford (1998) categorized culture shock into core elements that are perceived by the individual (disgust, acceptance, stress, confusion, lack of support) and the interpersonal elements, which are related to the interactions with members of the host culture. Previously clinical treatments were considered (Brown et al, 1975), more recent frameworks offer stress coping mechanisms and cultural learning (Ward & Furnham, 2001) as a solution, saying that international students can learn to behave in a culturally appropriate manner and overcome the shocking experiences that way (Zhou et al, 2008). In case international students experienced more intense shock in the host culture (Sandhu & Asrabadi, 1994), it was expected to be more difficult for them to adapt to their new environment (Wilson et al, 2017). In the qualitative research it was also found that those who described their experiences as really shocking, seemed to lose interest in learning more about the culture, they just accepted things as they were and coped on the stress response level (Zhou et al, 2008).

Based on the PLS path modelling there is a **significant negative relationship between culture shock and acculturation (sociocultural adaptation), accordingly H3 is accepted as well.**

With regards to the host institution factor, the fourth research question (*Does perceived service quality mediate the relationship between self-determined motivations for studying abroad and satisfaction?*) included two hypotheses

H4a: Self-determined motivations for studying abroad have a positive influence on perceived service quality

H4b: Perceived service quality has a positive influence on satisfaction

Service quality has been a widely researched marketing construct with various measurement models considering expectations, such as the SERVQUAL scale (Parasuraman et al, 1988) or the performance only scale of the SERVPERF approach (Cronin & Taylor, 1992). In order to obtain more accurate results, higher education specific measurement scales have emerged, for instance the HEdPERF (Firdaus, 2006a; 2006b) which was further polished by more recent research results (Faizan et al, 2016; Arrivabene, 2019). Academic services provided by the host institution are important for international students for many reasons. These scales consider the most important aspects of academic and faculty related service delivery, university reputation, access to services and the overall program offering, and some researchers created culturally sensitive scales as well (Raajpoot, 2014).

The connection between self-determined motivations and perceived service quality is quite under researched. Based on the interview results, it can be claimed that some international student motivation groups had a more positive impact on perceived service quality, while others resulted in negative outcomes. Nevertheless, those who had stronger intrinsic motivations, and deeper values connected to learning about the country or culture, seemed to be more forgiving and had a more positive experience, even when they perceived subpar service quality.

Based on the PLS analysis the **self-determined motivations for studying abroad had a positive influence on perceived service quality, so H4a is accepted.**

There is a wide range of research about the connection between perceived service quality and satisfaction. Most researchers agree that perceived service quality is an

antecedent to satisfaction (Alves & Raposo (2007; Helgesen & Nettet, 2007, Fernandes et al, 2013), Appio et al, 2013; Faizan et al, 2016; Marimon et al, 2018; 2019). The qualitative research also confirmed that the perceived knowledge, helpfulness, manners and experience of the academic staff and international coordinators had an impact on the level of satisfaction.

Based on the quantitative path modelling, there is a **significant positive connection between perceived service quality and satisfaction, hence H4B is also accepted.**

All of the examined hypotheses were accepted as a significant path in the model and are summarized in Table 36.

Table 36. Summary of research hypotheses results

H1a	Accepted	Self-determined motivations for studying abroad have a positive influence on satisfaction
H1b	Accepted	Satisfaction has a positive influence on loyalty
H2a	Accepted	Self-determined motivations for studying abroad have a positive influence on acculturation (sociocultural adaptation)
H2b	Accepted	Acculturation (sociocultural adaptation) has a positive influence on satisfaction
H2c	Accepted	Acculturation (sociocultural adaptation) has a positive influence on perceived service quality
H3	Accepted	Culture shock negatively impacts acculturation (sociocultural adaptation)
H4a	Accepted	Self-determined motivations for studying abroad have a positive influence on perceived service quality
H4b	Accepted	Perceived service quality has a positive influence on satisfaction

Source: own research, own construction

3.3.8. Conclusions of the quantitative research

The quantitative research provided extensive insights about the examined constructs and their interrelationship. It must be noted, that since the quantitative data collection occurred during the lockdown, the final constructs reflect the circumstances provided by the virtual education system and the lockdown measures that were in effect in Hungary in 2021 (public places, bars, restaurants were closed and events and public gatherings were cancelled or heavily restricted).

The construct of self-determined motivations was reliable and valid. Yang et al (2017) used a parcelling approach to reduce the number of indicators when

measuring self-determined motivations, and they used eventually only 4 indicators, combining: intrinsic, identified and positive introjected indicators, and using one for negative introjected, external and amotivation indicators respectively. In contrast with that in the current research the lower autonomy part of the scale (amotivation, external, negative introjection) were removed due to their insignificant contribution to the construct. Based on the quantitative results, the construct of self-determined motivations for studying abroad included the higher autonomy indicators such as intrinsic motivations, identification and positive introjection. The key indicators of self-determined motivations were joy, meaningful experience, personal importance, curiosity and a boost to self-esteem, all of which are in the high autonomy end of the SDT motivation continuum.

The remaining motivation categories (amotivation, external, negative introjection) have appeared throughout the data corpus, however did not contribute significantly to the motivation construct. The low contribution of the eliminated indicators could be due to the impact of the characteristics of the sample and the country-wide lockdown together. Since most of the respondents were in Hungary already for over 3 years, they could have had difficulties recalling their initial (potentially more externally controlled) study abroad motivations. Also, during the lockdown, international students (and the population in general) had plenty of time to reflect on their goals and priorities, so they could have re-evaluated their motivations 1-2 years ago. Based on the literature review (Mazzarol & Soutar, 2001) the introjection, identification and intrinsic motivations were expected to be less prevalent, however also due to the lockdown, international students had to rely more onto themselves. At the same time, expectations from the home country may have been deprioritized, which could indicate a higher level of desire to settle in Hungary (Maringe, 2006) after finishing the study abroad program.

Also, it is a possible explanation, that during the lockdown international students were focusing more on the higher-end of the autonomy scale, emphasizing their own wants and needs, resulting in a higher weight towards positive introjection, identification and intrinsic motivations in the measured construct (Yang et al, 2017).

The constructs of satisfaction and loyalty were also reliable and valid. The most important satisfaction indicators were the sense of enjoyable experience (Faizan et al, 2016), the services provided by the host institution and life in the host country (Paharoo et al, 2013). The highest scoring loyalty indicators were about the pride in studying at the host institution (Alves & Raposo, 2007), the recommendation to friends and family, and that students would choose another program at the same HEI in case they wanted to enrol to a different program in the future (Faizan et al, 2016). Based on the quantitative empirical research there is a significant connection between self-determined motivations for studying abroad and satisfaction, which supports the results of Yang et al (2017). This was also supported by the qualitative results, as it was seen that international students who had higher intrinsic and positive introjection related motivations (indicating higher autonomy in the motivation) appeared to be more satisfied with their life in the host country and host institution as well. The empirical results also confirmed that loyalty is a consequence of satisfaction (Fernandes et al, 2013; Helgesen & Nettet, 2007; Faizan et al, 2016; Zhou et al, 2016; Shahsavar & Sudzina, 2017; Kashif & Cheewakrakokbit, 2018; Arrivabene et al, 2019) and that loyalty can be measured as single multi-attribute construct, including word-of-mouth in the loyalty construct (Faizan et al, 2016).

The perceived service quality construct was measured with a performance only approach (Cronin & Taylor, 1992) based on a higher education specific HEdPERF scale developed by Firdaus (2006a). Based on the empirical results, the indicators of the construct largely contributed to the construct, retaining all of the key elements: academic aspects, non-academic aspects, access, program issue and reputation as well, confirming the validity of the service quality scale used by Faizan et al (2016). The most important perceived service quality indicators were the professional knowledge of teachers, availability of teachers and administrative staff, adequate documentation from teachers, the reputation of the study program and the overall service quality of the program. These results are in line with previous researchers (Gibson, 2010; Fernandes et al, 2013; Suleyman, 2014; Arrivabene, 2019) and the qualitative empirical research results as well.

Only two indicators were removed from the non-academic aspects due to redundancy, as the attitude and efficiency of the administrative staff of the HEIs were too similar to knowledge, communication skills and reliability of the coordinators. This may be a result of the virtual education system, as international students did not have face-to-face time with their coordinators, there were less visible facets (such as attitude) to be distinguished based solely on the e-mail communications. It is important to note that the reputation of the host institution was less prominent in the qualitative phase (mostly students from Western countries), while in the quantitative phase where the sample consisted of students mostly from non-Western countries, the importance of reputation and image of the HEIs was more important.

The path modelling confirmed that self-determined motivations have a significant influence on perceived service quality. This is an important finding of the empirical research, as the extant literature did not yield quantitative research results connecting these constructs in the higher education context. By understanding the motivations of international students, HEIs could be able to better customize the international student experience to increase perceived service quality. The qualitative research found that when international students were motivated by learning about the host country or wanted to gain life experience (showing high levels of autonomy: intrinsic and identification motivations, Yang et al, 2017), appeared to be more satisfied with their host institution. Collecting life experiences, living independently and becoming autonomous was important for students, and these motivators provided a generally positive mindset for them to accept problems and challenges related to the host country or host institution, as part of their journey on self-development.

Self-determined motivations also had a significant impact on acculturation. The relationship between motivations and acculturation is under researched (Chirkov et al, 2007; 2008), hence it is an important finding of the dissertation. Understanding the motivations of international students is key for HEIs to help them in their acculturation journey, which significantly impacts the perceived quality of services as noted earlier. Dentakos et al (2016) described the relationship

between acculturation motivation and found it to be a good predictor of sociocultural adaptation, especially when international students were open for new experiences and spent more time on socializing with people from the local culture. Based on the in-depth interviews, higher levels of self-determined motivations (intrinsic, identification) such as gaining life experience and learning about the local culture naturally led to higher rates of acculturation among the interviewees.

The connection between perceived service quality and satisfaction is well-researched and generally perceived service quality is conceptualized as an antecedent to satisfaction (Alves & Raposo, 2007; Helgesen & Nettet, 2007, Fernandes et al, 2013; Appio et al, 2013; Faizan et al, 2016; Marimon et al, 2018; 2019). Both the qualitative and quantitative research confirmed that the indicators applied by Faizan et al (2016), such as knowledge, availability, helpfulness, feedback provided, manners and experience of the academic staff and international coordinators had an impact on the level of satisfaction of international students.

The construct of acculturation (sociocultural adaptation) was valid and reliable, and only a few indicators were removed due to low level of contribution to the construct. The acculturation construct in the empirical research focused on the behavioural outcomes of acculturation (Zhou et al, 2008) and used a sociocultural adaptation scale that was originally developed by Searle and Ward (1990) and Ward and Kennedy (1999). The scale was revised by Wilson (2013) who grouped the competence of international students in the areas of interpersonal communication, academic performance, personal interests and community involvement, ecological adaptation and language proficiency. Applying the scale of Wilson (2013), the most important acculturation (sociocultural adaptation) indicators were expressing ideas to other students in a culturally appropriate manner, working effectively with students from other cultures, adapting to the pace of life, participating in community activities and building and maintaining relationships. These indicators were in line with the qualitative research results, where it was found that international students were often craving to connect with locals and other international students, so any chance of a common activity or working on a course project together was an important cultural experience for them.

It is key for institution that international students do not fail in their socializing efforts, as it could lead to frustration and lack of adjustment (Killick, 2008), ultimately affecting perceived service quality, satisfaction and loyalty towards the institution.

Based on the empirical research, all of the competence categories were retained, except for the language proficiency (Wilson, 2013), which did not contribute to the model. In previous research (Malota, 2016) language was an important factor for foreigners studying in Hungary, however due to the lockdown, international students most likely had significantly less chance to interact with locals throughout 2020 and 2021, accordingly it is understandable that language competence was less important for the acculturation (sociocultural adaptation) construct. The sociocultural competence indicators of interpreting the gestures and facial expression of locals and the adaptation to the noise level was also insignificant for the same reason, for most students the curfew restricted the opportunities to interact with the local environment. The research did not aim to measure the impact cultural distance had on the level of acculturation, however as a general guide, when the cultural distance is smaller, a higher level of acculturation is expected (Malota, 2013).

Acculturation (sociocultural adaptation) had a significant effect on perceived service quality and satisfaction as well. In the theoretical framework of the dissertation, the acculturation (sociocultural adaptation) construct is mediating the relationship between motivations and satisfaction, and also between motivations and perceived service quality. The relationship between acculturation and service quality has been quite under researched (Davis et al, 2017), acculturation was found to support the academic adjustment of international students (Chirkov, 2008). Accordingly, another important finding of the empirical research, is that there is a significant direct relationship between acculturation (sociocultural adaptation) and the perceived service quality. The host country culture was rarely investigated in this context; hence this is an additional opportunity for HEIs to explore how they could improve their intercultural training orientation programs. There could be multiple cases and interpretations to explain the connection. The in-depth interviews also confirmed that in case international students were able to better

adapt to their cultural environment, set up their routine, social supporting circle (Hidasi, 2004) and adapt to the pace of life, they could focus more on their studies. Also, in this case they received more help from peers and had a better academic performance, which could lead to enhanced perception of service quality and satisfaction as well. Also, through cultural learning (Zhou et al, 2008) international students can acquire the necessary intercultural competence (Wilson et al, 2017) to confidently approach their professors and coordinators with their questions. It could be argued that in case international student are more focused on their cultural environment, they pay less attention to their studies, however since most of the students were receiving a scholarship, they had to comply with minimum requirements to keep the grant.

Culture shock was also a valid and reliable construct and it had a significant negative impact on acculturation. This connection is in line with the expectations based on the literature and the in-depth interviews. The culture shock construct retained both the core culture shock items and the interpersonal culture shock items. Based on the results the top culture shock indicators from the scale (Mumford, 1998) were the confusion about the role or identity in the new culture, anxiety when meeting local people, the sense of helplessness and powerlessness when trying to cope with the new culture and encountering with some shocking or disgusting elements in the host culture. These indicators are in line with the experiences brought by international students during the in-depth interviews, as they often felt that they could not ask for help in everyday situations (for instance shopping or using public transport) or they had to worry about having their student ID delayed for months. Only two indicators proved to be insignificant, on one hand, in accordance with the revised sociocultural adaptation scale (Wilson, 2013), the lack of interaction with locals resulted in that students did not have to intensely focus on learning about the gestures and facial expressions of locals. Later on, this may lead to potentially more negative cultural experiences after re-opening the country, as international students missed the opportunity to learn about interpreting the behaviour of locals. On the other hand, the indicator of missing family and friends back home was left out as well, which could mean that international students who have spent years in Hungary, do not need to rely on their home supporting network

anymore. The negative impact of culture shock signifies that a higher level of acculturative stress (Sandhu & Asrabadi, 1994) will lead to lower level of sociocultural adaptation (Wilson et al, 2017). In the qualitative phase this was often the case: international students who faced very intense or prolonged stress due to cultural differences, often just acknowledged that local people and their reactions are different, but did not feel confident or did not want to endure the stress required for growth as modelled by Kim (2001). On the other hand, when someone experienced minor differences in the local culture, local academic system, the attitude of people, and received more help from the local culture, they were more likely to step on the journey of acculturation. This is also in line with the findings of previous studies that emphasized the importance of building a supportive network of local and international students (Bochner, 1982) and reaching a positive academic-self in the host country (Killick, 2008).

The international students' characteristics, demographics and personality traits were used as control variables in the research to see which factors moderated the main constructs of the model. Confirming the findings of Vangelis & Hill (2019), international students who knew more about the differences in teaching style between their home country and Hungary, were more likely to reach higher levels of acculturation. Students who kept in touch with their friends and family on a daily basis also reached higher level of acculturation, which seems to contradict the current theories (Berry, 1994; 1997). However, the lockdown may have caused this, as international students essentially had to sit at home, so family and friends could have been the only option to socialize for a substantial period of time. In case international students had to make significant sacrifices (Vangelis & Hill, 2019) to be able to study abroad, they were less loyal to the host institution. The reason for that could be that loyalty was largely measured by intentions to further studies at the same HEI and word-of-mouth, so in case they had to make a huge sacrifice, potentially their level of satisfaction was not that high to think it was worth the sacrifice, hence they will rather not spread positive word-of-mouth about the host institution. International students who were above 26 years old, were less satisfied with their study abroad program. A plausible reason for that could be that based on their general experience in the higher education they had higher

expectations which were not met, as opposed to younger student, who may be less familiar with what they could expect from the HEI and tolerates mistakes easier. Academic performance moderated the level of satisfaction, so in case international students had better grades (Brokaw et al, 2004), they were more satisfied with their overall study program as well. As mentioned earlier, the additional control variables such as gender, financial situation, host country choice, prior cultural exposure, study program level, host city, program length and program start (pre-COVID / during COVID), time spent abroad and the major study area did not moderate the examined relationships. The lockdown may have eliminated many of the specific needs, leaving only the basic requirements which do not significantly differ across different demographics. If that is the case, it is expected to be a temporary phase, and with the face-to-face education reinstated, international students will have again much more stimuli to evaluate, which will lead to more differences depending on the personal characteristics of international students.

4. CONCLUSIONS

In the conclusions the empirical research results are discussed based on the research questions and the corresponding hypotheses, followed by the theoretical and practical contributions of the dissertation. At the end of the section the research limitations and future research directions are presented.

4.1. Summary of the results

In the literature review of the dissertation the constructs have been introduced and established based on the currently available theories. The key constructs of the dissertation were the self-determined motivations for studying abroad, perceived service quality, acculturation (sociocultural adaptation), culture shock, satisfaction and loyalty in the context of international higher education.

The aim of the dissertation was to understand the motivations of international students and how it impacts their satisfaction and loyalty, and to what extent do the host country culture and the host institution services influence the overall study abroad program satisfaction. The research aimed to provide a theoretical framework to describe the study abroad experience in a holistic approach, where the cultural, institutional and personal factors are connected. In the first phase of the empirical research 40 in-depth interviews were conducted and analysed with thematic content analysis to gain first hand insights from international students. In the second phase of the empirical research 463 responses were collected from international students through an online survey, of which 423 valid responses were analysed with PLS path modelling. The research results are presented through the research questions of the dissertation

Research question 1: what are the most important motivations for studying abroad and is there a direct connection to satisfaction? Does satisfaction have an impact on the loyalty of international students?

Based on the PLS analysis, motivations for studying abroad consisted of the higher autonomy items such as intrinsic motivations, identification and positive introjection (Sheldon, 2017; Yang et al, 2017). The key indicators of self-determined motivations in the dissertation were joy, meaningful experience, personal importance, curiosity and a boost to self-esteem. These motivations are in line with the results of the in-depth interviews of the empirical research and also with the motivations identified by Leutwyler & Meierhans (2013). The remaining motivation categories (amotivation, external, negative introjection) did not contribute significantly to the motivation construct. The low contribution of the latter indicators could be due to the impact of the characteristics of the sample and the country-wide lockdown together.

Based on the PLS path modelling there is weak, but significant direct connection between self-determined motivations for studying abroad and satisfaction, and there is a strong and significant direct connection between satisfaction and loyalty.

Research question 2: does the level of acculturation mediate the relationship between self-determined motivations for studying abroad and satisfaction? Does the level of acculturation also mediate the relationship between self-determined motivations for studying abroad and the perceived service quality?

The acculturation construct in the empirical research focused on the behavioural outcomes of acculturation (Zhou et al, 2008) and used a sociocultural adaptation scale that was originally developed by Searle and Ward (1990) and Ward and Kennedy (1999). The scale was revised by Wilson (2013) who grouped the competence of international students in the areas of interpersonal communication, academic performance, personal interests and community involvement, ecological adaptation and language proficiency. Applying the scale of Wilson (2013), the most important acculturation (sociocultural adaptation) indicators were expressing ideas to other students in a culturally appropriate manner, working effectively with

students from other cultures, adapting to the pace of life, participating in community activities and building and maintaining relationships.

The relationship between motivations and acculturation is under researched (Chirkov et al, 2007; 2008), and Dentakos et al (2016) found that acculturation motivation could be a good predictor of sociocultural adaptation. Based on the in-depth interviews, self-determined motivations such as interest in the local culture and gaining life experience (intrinsic and identification motivations (Yang et al, 2017) appeared to indicate higher rates of acculturation. The relationship between acculturation and service quality has been also quite under researched (Davis et al, 2017), but acculturation was found to support the academic adjustment of international students (Chirkov, 2008).

Based on the PLS analysis the acculturation (sociocultural adaptation) has a weak partial mediating effect on the relationship between self-determined motivations for studying abroad and satisfaction. The mediation is only partial, because the direct connections of the construct were also significant as discussed in the previous research question. At the same time, acculturation was a moderately strong partial mediator construct between self-determined motivations for studying abroad and service quality. Based on these partial mediations the importance of adjusting to the host country culture has been proven as well.

Research question 3: what are the most important culture shock factors for international students and does culture shock impact the acculturation?

Based on the scale of Mumford (1998), the top culture shock indicators were the confusion about the role or identity in the new culture, anxiety when meeting local people, the sense of helplessness and powerlessness when trying to cope with the new culture and encountering with some shocking or disgusting elements in the host culture. The culture shock items are also in line with the findings of Sandhu and Asrabadi (1994) and the in-depth interview results of the current research.

The PLS path modelling confirmed that there is a moderately strong negative connection between culture shock and acculturation, meaning that a higher level of culture shock resulted in lower level of acculturation (sociocultural adaptation).

Research question 4: does perceived service quality mediate the relationship between self-determined motivations for studying abroad and satisfaction?

Perceived service quality was measured with a performance only approach (Cronin & Taylor, 1992) based on a higher education specific HEdPERF scale developed by Firdaus (2006a). Based on the empirical results, the most important indicators of perceived service quality (Faizan et al, 2016) were the professional knowledge of teachers, availability of teachers and administrative staff, adequate documentation from teachers, the reputation of the study program and the overall service quality of the program. These results are in line with previous researchers (Gibson, 2010; Fernandes et al, 2013; Suleyman, 2014; Arrivabene, 2019) and the qualitative empirical research results as well.

The PLS path modelling analysis showed that perceived service quality has a partial mediating role between self-determined motivations for studying abroad and satisfaction. This finding confirms the importance of the services provided by HEIs, and also that perceived service quality can be improved through identifying and managing the motivations of international students.

Research question 5: do demographics, personal characteristics and personality traits of international students have an impact on satisfaction?

The PLS path modelling identified a number of demographics, personal characteristics that have an impact on the satisfaction of international students, however personality traits did not have a significant impact. Confirming the findings of Vangelis & Hill (2019), international students who knew more about the differences in teaching style between their home country and Hungary, were more likely to reach a higher level of acculturation. Students who kept in touch with their friends and family on a daily basis also reached higher level of acculturation, which seems to contradict the current theories (Berry, 1994; 1997). However, the lockdown may have caused this, as international students essentially had to sit at home, so family and friends could have been the only option to socialize for a substantial period of time. In case international students had to make significant sacrifices (Vangelis & Hill, 2019) to be able to study abroad, they were less loyal to the host institution.

The satisfaction of international students was negatively moderated by the age group of the students and it was positively moderated by the academic performance of the students confirming the results of Brokaw et al (2004). The additionally measured control variables such as gender, financial situation, host country choice, prior cultural exposure, study program level, host city, program length and program start (pre-COVID / during COVID), time spent abroad and the major study area did not moderate the examined relationships.

To sum it up, based on the literature review, a strong connection was expected between perceived service quality, satisfaction and loyalty, and also between culture shock and acculturation (sociocultural adaptation). The self-determined motivations for studying abroad, culture shock and acculturation received less attention in the international higher education context, hence it is an important finding of the dissertation that these psychological constructs were proven to be significantly connected to the well-known marketing constructs of perceived service quality and satisfaction. The above summarized results have answered the main research question as well: the study abroad motivation construct is an important starting point for the study abroad journey, acculturation (sociocultural adaptation) is a key host country related construct and perceived service quality is a prominent host institution related construct, and all of these have a significant impact on satisfaction, which in turn influences loyalty in the higher education industry.

4.2.Theoretical and practical contribution

The theoretical significance of the dissertation comprises of three elements.

On one hand, the literature review of the dissertation is a synthesis for the extant literature of study abroad motivations, culture shock and acculturation and also service quality, satisfaction and loyalty in the international higher education context. On the other hand, the dissertation explored and confirmed new theoretical connections between psychological and marketing constructs, proving the importance of motivations and cultural elements in international higher education research.

Secondly, the dissertation expanded the current theoretical framework. The most innovative findings of the dissertation are the established quantitative connections between self-determined motivations and satisfaction, self-determined motivations and acculturation, self-determined motivations and service quality, and finally the relationships between acculturation and perceived service quality and satisfaction. This is among the first studies connecting these constructs in a single theoretical framework, providing a holistic view on the study abroad program satisfaction and overall student experience by considering the host country culture factors, host institution factors and individual level factors as well.

Lastly, in addition to the new findings of the theoretical framework, the dissertation tested the culture shock scale of Mumford (1998), the acculturation (sociocultural adaptation) scale of Wilson (2013), the self-determined motivation scale of Yang et al (2017), the perceived service quality scale of Faizan et al (2016) and the shortened Big Five personality traits scale of Nandi and Nicoletti (2009) in the higher education context.

It is important to note that the research was also innovative in a sense that it was among the first studies investigating international student behaviour with a complex model during a world pandemic, showing that the key connections between constructs are maintained even during a nationwide lockdown, while some moderating differences disappear.

The practical contribution of the dissertation is the holistic theoretical framework that could guide higher education institutions in designing the study abroad experience of their international student community.

The model elements could be used as is or modified to fit the circumstances and could be filled even prior to enrolment at the host institution, that way the institution could learn about the motivations and background 'presage' of the students and take actions accordingly. As emphasized by Vangelis & Hill (2019), it is important to understand the background and personal characteristics of international students, that way higher education institutions can provide a better study abroad experience.

The results also offer practical insights to higher education academic staff, international office coordinators and advisors. Based on the quantitative analysis, the study abroad motivations, acculturation and service quality are all important factors when it comes to the overall experience of international students.

International coordinators and academic staff teaching international students must have the required cultural competence, openness and willingness to learn and embrace different cultures, so that the international students may personally benefit from the experience, and the faculty staff also grows their intercultural knowledge. Based on Renn & Patton (2011) higher education institution should provide a safe and inclusive environment where international students can thrive. This is particularly important during the world pandemic, when it is even more difficult to engage students in a fully virtual or hybrid educational model. Institutions must find a way to engage and excite international students, enhance their perceived service quality, provide professional support (and set an example with its staff) when it comes to sociocultural adaptation.

As part of the acculturation support, the institutions could have closer collaboration with the HEI's international student organizations and external advisors as well, and also host families could be appointed to increase the interaction between international students and members of the host culture.

HEIs must keep in mind that loyal students are their top supporters when recruiting international students. Based on the results, HEIs could measure the study abroad motivations, experienced culture shock, acculturation and the service quality perceptions of their students to understand how they could support their intrinsic motivations and acculturation process. By doing so, students will experience higher levels of service quality and satisfaction, which will lead to loyalty and international students who are voluntarily spreading positive WOM about the institution.

4.3.Limitations and future research directions

The research had limitations which are discussed in this section, along with the potential directions for new research.

In spite the PLS path modelling provided evidence for the existence of all of the constructs and their interrelationship, the sample size (426 valid responses) does not represent the total population of international students in Hungary, hence the results cannot be generalized. Nevertheless, the results of the dissertation confirmed the examined constructs and uncovered theoretical connections that were not hypothesized before in the context of higher education, which adds to the extant literature and opens ways for new research directions.

Considering the sample, the quantitative data collection was impacted by the COVID-19 pandemic, as the sample consisted of international students who were in lockdown in Hungary for at least one year. It would be interesting to test the same model during a time when there is face-to-face education or use it to develop new scales that are fully adapted for the virtual educational environment.

Another limitation of the study is that in the sample most of the students spent already three years in Hungary, which might have resulted in lower accuracy in terms of recalling initial study abroad motivations and cultural experiences. It would be beneficial to collect a sample of international students who only spent a few months in the host country. Also, the quantitative research had only 14,6% of the students from Europe and 1,6% from North American countries, so it would be interesting to compare the results with a European or North American sample. In case of a larger sample collection, the cultural differences of the sender countries could be investigated as well and culture specific scales could be developed later on. The majority of the respondents received financial support (94,8%) from the Hungarian government, so it could be also further explored whether the moderating relationships stand or change in case of students without study abroad scholarships. The host institutions were not investigated in the current research, so a future data collection could collect larger samples from each university to define host institution and host city specific indicators.

With regards to the constructs of the research model, the main limitation could be the measurement of self-determined motivations for studying abroad. Based on the results, the amotivation, external and negative introjected motivations did not appear significant in the construct, contrary to the expectations, which could be due to the pandemic, or that since students already spent years abroad, they might not have been able to recall their initial motivations as accurately as they thought. In a future research it would be beneficial to collect a longitudinal sample with measurement points in the beginning and at the end of the study program (and on a yearly basis in case of full-degree programs).

Another construct limitation could be the shortened model of the Big Five personality traits (Nandi & Nicoletti, 2009), as it did not yield significant results, the full-length Big Five personality traits test could be used based on John and Srivastava (1999).

As mentioned in the dissertation, the scope of the dissertation did not intend to measure other host country factors such as climate, cost of living, cultural differences based on the home country of the respondents. In a future research these factors could be included as well to further expand the host country factor in the theoretical framework.

5. REFERENCES

1. Afzal, W., Akram, A., Akram, M.S. & Ijaz, A. (2010): On students' perspective of quality in higher education. Paper presented at 3rd International Conference on Assessing Quality in Higher Education, Lahore, 6-8 December 2010
2. Ahmad, S. Z. & Buchanan R. F., (2017): Motivation factors in students' decision to study at international branch campuses in Malaysia. *Studies in Higher Education*, 42 (4) 651-668.
3. Alexander, A. A., Klein, M. H., Workneh, F., & Miller, M. H. (1981) Psychotherapy and the foreign student. In Pedersen P., Draguns J., Lonner W. & Trimble J. (Eds.), *Counseling across cultures*, (2nd ed., 227-243). Honolulu: University of Hawaii Press.
4. Ali, F. & Amin, M. (2014): The influence of physical environment on emotions, customer satisfaction and behavioural intentions in Chinese resort hotel industry, *Journal for Global Business Advancement*, 7 (3) 249-266.
5. Ali, F., Zhou, Y., Hussain, K., Nair, P. & Ragavan, N. (2016): Does higher education service quality effect student satisfaction, image and loyalty? *Quality Assurance in Education*, 24 (1), 70-94. Available from: doi:10.1108/QAE-02-2014-0008
6. Alves, H. & Raposo, M. (2007): Conceptual Model of Student Satisfaction in Higher Education. *Total Quality Management*, 18, 571-588. Available from: 10.1080/14783360601074315.
7. Alves, H. & Raposo, M. (2010): The influence of university image on students' behavior. *International Journal of Educational Management*, 24 (1), 73-85. Available from: doi:10.1108/09513541011013060
8. Anderson, J. & Narus, J. (1990): A model of distributor firm and manufacturer firm working partnerships. *Journal of Marketing*, 54 (1), 125-144.
9. Angell, R.J., Heffernan, T.W., & Megicks, P. (2008): Service quality in postgraduate education. *Quality Assurance in Education*, 16 (3), 236-254.
10. Appio, J., Tontini, G., & Silveira, A. (2013): *Antecedentes da Lealdade e suas Relacoes em Instituicao de Ensino Superior*. Anais do IV Encontro de Ensino e Pesquisa em Administracao e Contabilidade, Brasilia: EnEPQ.
11. Appleton-Knapp, S., & Krentler, K. (2006): Measuring Student Expectations and Their Effects on Satisfaction: The Importance of Managing Student Expectations. *Journal of Marketing Education* 28 (3), 254-64. Available from: doi:10.1177/0273475306293359.
12. Arambewela R.A., & Zuhair, S. (2003): Economic impact of internationalisation of educational services, refereed paper. *Conference proceedings, Internationalisation of Education – Risk and Returns*, Melbourne.
13. Arambewela, R. & Hall J. (2006): A Comparative Analysis of International Education Satisfaction Using Servqual. *Journal of Services Research* 6 (3), 142-163.
14. Arambewela, R. & Hall, J. (2009): An empirical model of international student satisfaction. *Asia Pacific journal of marketing and logistics*, 21 (4), 555-569. Available from: doi:10.1108/13555850910997599.

15. Argyle, M. (1969): Social interaction. London: Meuthen and Co. Ltd.
16. Arif, S. & Ilyas, M. (2013): Quality of work-life model for teachers of private universities in Pakistan. *Quality Assurance in Education*, 21 (3), 282-298.
17. Arrivabene S., Paulo R. & Cecília L. (2019) Impact of Service Quality, Satisfaction and Corporate Image on Loyalty: A Study of a Publicly Traded for Profit University, *Services Marketing Quarterly*, 40 (3), 189-205. <https://doi.org/10.1080/15332969.2019.1630174>
18. Asaduzzaman, M., Hossain, M., & Rahman, M. (2013) Service Quality and Student Satisfaction: A Case Study on Private Universities in Bangladesh. *International Journal of Economics, Finance and Management Sciences*, 1 (3), 128-135.
19. Athiyaman, A. (1997) Linking student satisfaction and service quality perceptions: the case of university education. *European Journal of Marketing*, 31 (7), 528-40.
20. Athiyaman, A. (2000) Graduates' perception about business education: an exploratory research. *Journal of Further and Higher Education*, 25 (1), 5-19.
21. Baba, Y. & Hosoda, M. (2014). Home away home: Better understanding of the role of social support in predicting cross-cultural adjustment among international students. *College Student Journal*, 48 (1), 1-15.
22. Babakus, E. & Gregory W. B. (1992) An Empirical Assessment of the SERVQUAL Scale. *Journal of Business Research*, 24, 253.
23. Babin, B. J., Hair, J. F., and Boles, J. S. (2008): Publishing research in marketing journals using structural equation modeling. *Journal of Marketing Theory & Practice*, 16(4), 279-285.
24. Bagozzi, R. P., and Yi, Y. (1988): On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.
25. Bagozzi, R.P. (1992) The self-regulation of attitudes, intentions, and behavior. *Social Psychology Quarterly*, 55, 178-204.
26. Balloo, K., R. Pauli, & M. Worrell. (2017) Undergraduates' Personal Circumstances, Expectations and Reasons for Attending University. *Studies in Higher Education* 42 (8), 1373-84. Available from doi:10.1080/03075079.2015.1099623.
27. Barber, M. B. & Venkatraman M. (1986) The Determinants of Satisfaction for a High Involvement Product: Three Rival Hypotheses and Their Implications in the Health Care Context. in *Advances in Consumer Research*. Richard J Lutz ed., Ann Arbor, Michigan: *Association for Consumer Research*, 13, 316-320.
28. Barclay, D. W., Higgins, C. A., and Thompson, R. (1995): The partial least squares approach to causal modeling: personal computer adoption and use as illustration. *Technology Studies*, 2(2), 285-309.
29. Barry, D. T. (2001) Development of a new scale for measuring acculturation: The East Asian Acculturation Measure (EAAM). *Journal of Immigrant Health*, 3 (4), 193-197. Available from: doi:10.1023/A:1012227611547
30. Bartis, E. and Mitev, N. (2008): A multiple narrative approach to information systems failure: a successful system that failed. *European Journal of Information Systems*, 17 (2), 112-124. doi: 10.1057/ejis.2008.3

31. Berács J. & Malota E. (2011) Megéri hozzánk jönni tanulni? *Educatio*, 20 (2), 220-234.
32. Berács J., Malota E. & Zsótér B. (2010) A magyar felsőoktatás nemzetköziesedésének folyamata 2, *Bologna Füzetek*. 8, TKA, Budapest
33. Berg, B.L. & Lune, H. (2012): *Qualitative research methods for the social sciences*. Pearson Education Inc. New Jersey.
34. Berry J.W. (1980) Acculturation as varieties of adaptation: In: Padilla A. ed. *Acculturation: Theory, Models and Some New Findings*. Boulder, CO: *Westview*, (1980) 9-25
35. Berry, J. W. (2005): Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29, 697–712. Available from: doi: 10.1016/j.ijintrel.2005.07.013
36. Berry, J.W. (1994) Acculturation and psychological adaptation. In *Journeys into cross-cultural psychology*, ed. A.-M. Bouvy, F.J.R. van de Vijver, P. Boski & P. Schmitz, 129–41. Lisse: Swets and Zeitlinger.
37. Berry, J.W. (1997) Immigration, acculturation and adaptation. *Applied Psychology: An International Review*, 46, 5–34.
38. Bhaskar, R. (1989): *Reclaiming Reality: A Critical Introduction to Contemporary Philosophy*. London: Verso
39. Biggs, J. (1996) Western Misconceptions of the Confucian-Heritage Learning Culture. In the *Chinese Learner: Cultural, Psychological and Contextual Influences*, edited by D. Watkins and J. Biggs. University of Hong Kong, Comparative Education Research Centre.
40. Blut, M., Evanschitzky, H., Richelsen, V. & Ahlert, Dieter (2007) Switching Barriers in the Four-Stage Loyalty Model. *Advances in Consumer Research*. 34, 726-734.
41. Bochner S. (1986) Coping with unfamiliar cultures: Adjustment or culture learning? *Australian Journal of Psychology* 38, 347-58.
42. Bochner, S. (1982) The social psychology of cross-cultural relations. In *Cultures in contact: Studies in cross-cultural interaction*. ed. S. Bochner, 5–44. Oxford: Pergamon.
43. Bochner, S., B. McLeod & A. L. (1977) Friendship patterns of overseas students: A functional model. *International Journal of Psychology* 12, 277-297.
44. Bolton, D., & R. Nie. (2010) Creating Value in Transnational Higher Education: The Role of Stakeholder Management. *Academy of Management Learning and Education* 9 (4), 701-714.
45. Bolton, R.N. & James H.D. (1999) A multistage model of customers assessment of service quality and value. *Journal of Consumer Research*, 17, 375-84.
46. Bolton, Ruth N. and James H. Drew (1991) A Multistage Model of Customers' Assessments of Service Quality and Value. *Journal of Consumer Research*, 17 (March), 375-84.
47. Booms, B. H. and Bitner J. M. (1981) Marketing Strategies and Organization Structures for Services Firms. in *Marketing of Services*, J. Donnelly and W. George, eds., Chicago: *American Marketing*, 47-51.
48. Borzooei, M. & Asgari, M. (2014): Effects of service quality and price on satisfaction and the consequent learning outcomes of international students. *International Journal of Information, Business and Management*, 6, 132-145.

49. Braun, V. & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3 (2), 77-101.
50. Brislin, R. W. & T. Yoshida (1994) *Intercultural Communication Training: An Introduction*, London, Sage.
51. Brochado, A. (2009) Comparing alternatives instruments to measure services quality in higher education. *Quality in Higher Education*, 17 (2), 1-30.
52. Brokaw, A.J., Kennedy, W.A. & Merz, T.E. (2004) Explaining student satisfaction. *Journal of Business Education*, 5 (1), 10-20.
53. Brown, G.W., M.N. & Bhrolchain & T. Harris. (1975) Social class and psychiatric disturbance among women in an urban population. *Sociology* 9, 225-54.
54. Burbach, H. J. (1972) The development of a contextual measure of alienation. *Pacific Sociological Review*, 15, 225-234.
55. Cabrito, B.G. (2004) Higher education: an education for the elites? The Portuguese case. *Higher Education in Europe*, 29 (1), 33-45.
56. Calvo-Porrall, C., Levy-Mangin, J. P., & Novo-Corti, I. (2013) Perceived quality in higher education: An empirical study. *Marketing Intelligence and Planning*, 31 (6), 601-619.
57. Carman, J.M. (1990) Consumer perceptions of service quality: an assessment of the SERVQUAL dimensions. *Journal of Retailing*, 66, 33-55.
58. Carmen, J. M. & Langeard E. (1980) Growth Strategies of Service Firms. *Strategic Management Journal*, 1 (January-March), 7-22.
59. Chahal, H. & Devi, P. (2013). Identifying satisfied/dissatisfied service encounters in higher education. *Quality Assurance in Education*, 21 (2), 211-222.
60. Chaney, L.H. & Martin, J.S. (2011) *Intercultural Business Communication*. 5th ed. New Jersey: Pearson Prentice Hall.
61. Chapa S. and Becerra E. (2015): The Effect of Generational Status In Language-Tailored Political Messages Why Advertising Needs to Adjust To Appeal to Young-Adult Latino-Americans. *Journal of Advertising Research*. 54, 356.
62. Chen A. S., Lin Y. and Sawangpattanakul A. (2011): The relationship between cultural intelligence and performance with the mediating effect of culture shock: A case from Philippine laborers in Taiwan. *International Journal of Intercultural Relations*, 35(2), 246-258. ISSN 0147-1767, <https://doi.org/10.1016/j.ijintrel.2010.09.005>.
63. Chirkov, V. I., Ryan, R. M., and Willness, C. (2005): Cultural context and psychological needs in Canada and Brazil: Testing a self-determination approach to internalization of cultural practices, identity and well-being. *Journal of Cross-Cultural Psychology*, 36(4), 425-443.
64. Chirkov, V. I., Ryan, R. M., Kim, Y., and Kaplan, U. (2003): Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology*, 84(1), 97-110.

65. Chirkov, V. I., Safdar, S., De Guzman, J., and Playford, K. (2008): Further examining the role motivation to study abroad plays in the adaptation of international students in Canada. *International Journal of Intercultural Relations*, 32(5), 427-440.
66. Chirkov, V., Vansteenkiste, M., Tao, R., and Lynch, M. (2007): The role of self-determined motivation and goals for study abroad in the adaptation of international students. *International Journal of Intercultural Relations*, 31 (2), 199-222.
67. Church, A. T., Katigbak, M. S., Locke, K. D., Zhang, H., Shen, J., de Jesús Vargas-Flores, J. and Ching, C. M. (2013): Need satisfaction and well-being: Testing self-determination theory in eight cultures. *Journal of Cross-Cultural Psychology*, 44(4), 507-534.
68. Churchill, G.A., & Suprenant, C. (1982) An investigation into the determinants of customer satisfaction. *Journal of Marketing Research*, 19 (November), 491-504.
69. Clayson, D.E. & Haley, D.A. (2005) Marketing models in education: students as customers, products, or partners. *Marketing Education Review*, 15 (1), 1-10.
70. Cohen, J. (1988): *Statistical power analysis for the behavioral sciences*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
71. Cook, M. J. (1997) A student's perspective of service quality in education. *Total Quality Management*, 8(2/3), 120 –125.
72. Costas Z. and Vrana V. (2008) Service quality assessment in a Greek higher education institute. *Journal of Business Economics and Management*, 9 (1), 33-45
73. Cronin, J. Joseph. & Steven. A. Taylor (1992) Measuring service quality: re-examination and extension. *Journal of Marketing*, 56 (3), 55-68.
74. Crosby, P.B. (1979) *Quality is Free: The Art of Making Quality Certain*, New American Library, NewYork.
75. Cuthbert, P.F. (1996) Managing service quality in HE: Is SERVQUAL the answer? Part 1. *Managing Service Quality*, 6 (2), 11-16.
76. Dabholkar, P.A., Shepherd, C.D. & Thorpe, D.I. (2000) A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of Retailing*, 76 (2), 139-73.
77. Danielson C. (1988) Is satisfying college students the same as decreasing their dissatisfaction? In *The AIR 1998 Annual Forum Paper*; Minneapolis: ERIC document N° 422812.
78. Davis K., Mohan, M. and Rayburn S. (2017): Service quality and acculturation: advancing immigrant healthcare utilization. *Journal of Services Marketing*, 31. 00-00. 10.1108/JSM-03-2016-0118.
79. Dawson, J. & Conti-Bekkers, G. (2002) Supporting international students' transitional coping strategies. *Focusing on students, Proceedings of the Annual Teaching Learning Forum*, Edith Cowan University, Perth, 5-6 February.
80. Deci, E. L., and Ryan, R. M. (2000): The what and why of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.

81. Dentakos S., Wintre M., Chavoshi S. and Wright L. (2016): Acculturation Motivation in International Student Adjustment and Permanent Residency Intentions: A Mixed-Methods Approach. *Emerging Adulthood*, 5.
82. Dick, A.S. & Basu, K. (1994) Customer loyalty: toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 22 (2), 99-113.
83. Dillard, J. M., & Chisolm, G. B (1983) Counseling the international student in a multicultural context. *Journal of College Student Personnel*, 24, 101-105.
84. Dona, G., & Berry, J. W. (1994) Acculturation attitudes and acculturative stress of Central American refugees. *International Journal of Psychology*, 29, 57-70. Available from: doi:10.1080/00207599408246532
85. Donaldson, B., & McNicholas, C. (2004) Understanding the postgraduate education market for UK based students: A review and empirical study. *International Journal of Nonprofit and Voluntary Sector Marketing*, 9 (4), 346-360.
86. Douglas, J. A., Douglas A., McClelland, R. J. & Davies J. (2015) Understanding Student Satisfaction and Dissatisfaction: An Interpretive Study in the UK Higher Education Context. *Studies in Higher Education* 40 (2), 329-49. Available from: <http://www.tandfonline.com/doi/abs/10.1080/03075079.2013.842217>
87. Douglas, J., McClelland, R. & Davies, J. (2008) The development of a conceptual model of student satisfaction with their experience in higher education. *Quality Assurance in Education*, 16 (1), 19-35.
88. Dunn, A. (2001) Into the unknown. *Education Age*, 7th March, p. 16
89. Eagle, L., & Brennan, R. (2007) Are students customers? TQM and marketing perspectives. *Quality Assurance in Education*, 15 (1), 44-60.
90. Elliot, K.M. & Healy, M.A. (2001) Key factors influencing student satisfaction related to recruitment and retention. *Journal of Marketing for Higher Education*, 10 (4), 1-11.
91. Faizan A., Zhou Y., Kashif H., Nair K. & Neethiahnanthan A. R. (2016): Does higher education service quality effect student satisfaction, image and loyalty? A study of international students in Malaysian public universities. *Quality Assurance in Education* 24 (1), 70-94, <https://doi.org/10.1108/QAE-02-2014-0008>
92. Falk, R. and Miller, Nancy. (1992): A Primer for Soft Modeling. The University of Akron Press: Akron, OH.
93. Fang, K., Friedlander, M., and Pieterse, A. L. (2016): Contributions of acculturation, enculturation, discrimination, and personality traits to social anxiety among Chinese immigrants: A context-specific assessment. *Cultural Diversity and Ethnic Minority Psychology*, 22(1), 58-68.
94. Fernandes, C., Ross, K. & Meraj, M. (2013) Understanding student satisfaction and loyalty in the UAE HE sector. *International Journal of Educational Management*, 27 (6), 613-630. Available from: <https://doi.org/10.1108/IJEM-07-2012-0082>
95. Ferreira, A.I. & Hill, M.M. (2007) Organisational cultures in public and private Portuguese universities: a case study. *Higher Education*, 55, 637-50.

96. Finney, T.G. & Finney, R.Z. (2010) Are students their universities' customers? An exploratory study. *Education and Training*, 52 (4), 276-291.
97. Firdaus A. (2006a) The development of HEdPERF: a new measuring instrument of service quality for the higher education sector, *International Journal of Consumer Studies*, 30 (6), 569-581. Available from: DOI: 10.1111/j.1470-6431.2005.00480.x
98. Firdaus, A. (2006b) Measuring service quality in higher education: HEdPERF versus SERVPERF. *Marketing Intelligence and Planning*, 24 (1), 31-47.
99. Flemmings F. N., Victor C., Wellman K. and Wulan P. S. (2020): Proceedings of the International Joint Conference on Arts and Humanities (IJCAH 2020)
<https://doi.org/10.2991/assehr.k.201201.003>
100. Forland, H. (2006). *The international student learning experience: bridging the gap between rhetoric and reality*. Going Global 2. Edinburgh, British Council.
101. Fornell, C. G., and Bookstein, F. L. (1982): Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing Research*, 19(4), 440-452.
102. Fornell, C. G., and Larcker, D. F. (1981): Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
103. Fredericksen, E., Pickett, A., Pelz, W., Shea, P. & Swan, K. (2000) Student satisfaction and perceived learning with online courses: principles and examples from the SUNY Learning Network. *Journal of Asynchronous Learning Network*, 14 (2)
104. Furnham, A. & Alibhai, N. (1985) The friendship networks of foreign students: a replication and extension of the functional model. *International Journal of Psychology*, 20, 709-722.
105. Furrer, O., Liu, B. S. C., & Sudharshan, D. (2000) The relationships between culture and service quality perceptions basis for cross-cultural market segmentation and resource allocation. *Journal of Service Research*, 2(4), 355-371.
106. Gago, J.M. (1994) *Prospectiva do Ensino Superior em Portugal*. Ministerio da Educacao, Departamento de Programacao e Gestao Financeira, Lisboa.
107. Gallarza, M. G. – Seric, M. – Cuadrado, M. (2017): Trading off benefits and costs in higher education: A qualitative research with international incoming students. *The International Journal of Management Education*, 15, 456-469.
108. Garrett, R., Kinser, K, Lane, J., & Merola, R. (2016) *International branch campuses: Trends and developments*. The Observatory of Borderless Higher Education and C-BERT. Retrieved from www.obhe.ac.uk/documents/download?id¼1049
109. Garvin, D. A. (1983) Quality on the Line. *Harvard Business Review*, 61 (September-October), 65-73.
110. Gáti, M. & Malota, E. (2017) The relationship between international students' satisfaction with general and educational facilities and their repeated choice concerning the higher educational destination In: Chova L. G., Martínez A.L. I Candel Torres *EDULEARN17 Proceedings: 9th International Conference on Education and New Learning Technologies*. Barcelona, Barcelona: International Academy of Technology, Education and Development (IATED), 3753-3763.

111. Geramian S., Mashayekhi, S. and Ninggal, M.T. (2012): The Relationship Between Personality Traits of International Students and Academic Achievement. *Procedia - Social and Behavioral Sciences*. 46. 4374-4379. 10.1016/j.sbspro.2012.06.257.
112. Gezentsvey, M., and Ward, C. (2008): Unveiling agency: A motivational perspective on acculturation and adaptation. In Sorrentino R. M. and Yamaguchi S. (Eds.). *Handbook of motivation and cognition across cultures*. San Diego CA: Elsevier Inc.
113. Gibbs, G. (2012) *Implications of 'Dimensions of Quality' in a Market Environment*. York: The Higher Education Academy.
114. Gibson, A. (2010) Measuring business student satisfaction: A review and summary of the major predictors. *Journal of Higher Education Policy and Management*, 32 (3), 251-259.
115. Ginevra, M. C., Nota, L., Soresi, S., Shogren, K. A., Wehmeyer, M. L., and Little, T. D. (2015): A cross-cultural comparison of the self-determination construct in Italian and American adolescents. *International Journal of Adolescence and Youth*, 20(4), 501-517.
116. Green, P. (2014) Measuring Service Quality In Higher Education: A South African Case Study. *Journal of International Education Research; Littleton* 10 (2), 131.
117. Gronroos, C. (1982) *Strategic Management and Marketing in the Service Sector*. Helsingfors: Swedish School of Economics and Business Administration
118. Grossman, R.P. (1999) Relational versus discrete exchanges: The role of trust and commitment in determining customer satisfaction. *Journal of Marketing Management*, 9 (2), 47-58.
119. Gullahorn, J. T., & Gullahorn, J. E. (1963) An extension of the U-curve hypothesis. *Journal of Social Issues*, 19(3), 33-47. Available from: <https://doi.org/10.1111/j.1540-4560.1963.tb00447.x>
120. Gyulavári T., Mitev A., Neulinger Á., Neumann-Bódi E., Simon J. and Szűcs K. (2014): A marketingkutató alapjai [The basics of marketing research]. Akadémiai Kiadó, Budapest
121. Hair, J. F., Sarstedt, M., Ringle, C. M. & Mena, J. A. (2012): An Assessment of the Use of Partial Least Squares Structural Equation Modeling in Marketing Research. *Journal of the Academy of Marketing Science*. 40, 3, 414–433.
122. Hair, J. F., Hult, G. T. M., Ringle, C. M. and Sarstedt, M. (2014): *A primer on partial least squares structural equation modelling (PLS-SEM)*. Sage Publication, London
123. Hair, J. F., Ringle, C. M. and Sarstedt, M. (2011): PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*. 19(2), 139-151.
124. Hanaysha, J., Abdullah, H. & Warokka, A. (2011), Service quality and students' satisfaction at higher learning institutions: the competing dimensions of Malaysian universities' competitiveness. *Journal of Southeast Asian Research*, 1, Available from: www.ibimapublishing.com/journals/JSAR/2011/855931/a855931.html
125. Helgesen, Ø. & Nettet, E. (2007) What accounts for students' loyalty? Some field study evidence. *International Journal of Educational Management*, 21 (2), 126-143.
126. Helgesen, Ø. & Nettet, E. (2011) Does LibQUAL account for student loyalty to a university college library? *Quality Assurance in Education*, 19 (4), 413-440.

127. Helgesen, Ø. (2006) Are loyal customers profitable? Customer satisfaction, customer (action) loyalty and customer profitability at the individual level. *Journal of Marketing Management*, 22, 245-66.
128. Hendrickson, B., Rosen, D., & Aune, R. K. (2011) An analysis of friendship networks, social connectedness, and satisfaction levels of international students. *International Journal of Intercultural Relations*, 35, 281-295. Available from : doi:10.1016/j.ijintrel.2010.08.001
129. Hennig-Thurau T., Gwinner P. K. & Gremler D. D. (2002) Understanding Relationship Marketing Outcomes: An Integration of Relational Benefits and Relationship Quality. *Journal of Service Research*, 4 (3), 230-247.
130. Henseler, J., Ringle, C. M., and Sinkovics, R. R. (2009): The use of partial least squares path modeling in international marketing. *Advances in international marketing*, 20, 277-319.
131. Henseler, J., Ringle, C. M., and Sinkovics, R. R. (2009): The use of partial least squares path modeling in international marketing. *Advances in international marketing*, 20, 277-319.
132. Herzberg, F. (1987) One more time: How do you motivate employees? *Harvard Business Review*, 65, 109-120.
133. Hetesi E. & Kéri A. (2019) Miért jönnek Magyarországra és mit várnak tőlünk a külföldi hallgatók? Magyarországon tanuló külföldi hallgatók motivációi és elvárásai. *Marketing és Menedzsment*, 52 (1), 47-65.
134. Hetesi E. & Kürtösi Zs. (2008) Ki ítéli meg a felsőoktatási szolgáltatások teljesítményét és hogyan? A hallgatói elégedettség mérési modelljei, empirikus kutatási eredmények az aktív és a végzett hallgatók körében. *Vezetéstudomány*, 39 (6) 2-17.
135. Hetesi E. & Veres Z. (2013) *Nonbusiness marketing*. Akadémiai Kiadó, Budapest.
136. Hidasi, J. (2004) *Interkulturális kommunikáció*. Budapest: Scholar
137. Hill, F.M. (1995) Managing service quality in higher education: the role of student as primary consumer. *Quality Assurance in Education*, 3 (1), 10-21.
138. Hofmeister-Tóth, Á. (2003): *Fogyasztói magatartás*, Aula, Budapest
139. Hofstede, G. (1997) *Organization culture*. In A. Sorge and M. Warner (Eds.), *The IBM handbook of organizational behavior* (193-210). London: Thomson Business Press.
140. Holbrook, M.B. & Corfman, K. (1985) *Quality and value in the consumption experience: Phaedrus rides again*. In: R. Peterson (ed.) *Perceived Quality: How Consumers View Stores and Merchandise*. Lexington, MA: Heath, 31-57.
141. Horváth, D. and Mitev, A. (2015): *Alternatív kvalitatív kutatási kézikönyv*. Alinea Kiadó, Budapest
142. Houston, D. & Rees, M. (1999) Developing a quality management system for a postgraduate education programme: A case study. *Journal of Higher Education Policy and Management*, 21 (2), 227-235.
143. Hughes, H. (1988) *Education as an export industry*, in Hogbin, G.R. (Ed.), *Withering Heights: The State of Higher Education in Australia*, Allen and Unwin, Sydney, pp. 217-55.
144. Hulland, J. (1999): Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal*, 20(2), 195-204.

145. Hung, F. S., Chung Y. P. & Ho. E. S. C. (2000). To Work or to Continue to Higher Education? The Choice of Senior Secondary Students in Shenzhen, China. *Higher Education*, 39 (4), 455-67.
146. Hunt, H.K. (1977) CS/D-Overview and future directions. In Hunt, H.K. (Ed.), Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction, *Marketing Science Institute*, Cambridge, MA, 455-488.
147. Hussey, T., & P. Smith. 2010. *The Trouble with Higher Education: A Critical Examination of Our Universities*. Abingdon: Taylor and Francis.
148. Imrie, B. C., Cadogan, J. W. & McNaughton, R. (2002) The service quality construct on a global stage. *Managing Service Quality*, 12(1), 10-18.
149. IIE, International Institute of Education's Project Atlas (2017) <https://www.iie.org/research-and-insights/Project-Atlas>, Downloaded: 2020.09.10.
150. Jacoby, J. & Kyner D. B. (1973) Brand Loyalty vs. Repeat Purchasing Behavior. *Journal of Marketing Research*, 10 (1), 1-9.
151. Jacoby, J. & Robert W. C. (1978) *Brand Loyalty: Measurement and Management*. New York, NY: Wiley.
152. John, O. P., and Srivastava, S. (1999): The Big Five Trait taxonomy: History, measurement, and theoretical perspectives. In Pervin L. A. and John O. P. (Eds.), *Handbook of personality: Theory and research*, Guilford Press, 102-138.
153. Joran van Art (2011) *Key influencers of international student satisfaction in Europe*. 2011 StudyPortals, Eindhoven
154. Kaldenberg, D., Browne, W. & Brown, D. (1998) Student customer factors affecting satisfaction and assessments of institutional quality. *Journal of Marketing Management*, 8 (3), 1-14.
155. Kashif M. & Cheewakrakokbit P. (2018) Perceived service quality-loyalty path: A PAKSERV based investigation of international students enrolled in business schools in Thailand. *Journal of Marketing for Higher Education*, 28 (1), 51-65, Available from: doi: 10.1080/08841241.2017.1402113
156. Kashif M., Ramayah T. & Syamsulang S. (2016) PAKSERV – measuring higher education service quality in a collectivist cultural context. *Total Quality Management and Business Excellence*, 27 (3-4), 265-278. Available from: doi: 10.1080/14783363.2014.976939
157. Kaur, H., & Soch, H. (2013) Mediating roles of commitment and corporate image in the formation of customer loyalty. *Journal of Indian Business Research*, 5 (1), 33-51. Available from: doi:10.1108/17554191311303376
158. Keller, K. (2017) *A turizmusmarketing környezete (Environment of Tourism Marketing)*, In: Lőrincz, K. & Sulyok, J. (ed.): *Turizmusmarketing (Tourism Marketing)*, Budapest, Akadémiai Kiadó, 2017, 39-61.
159. Kemény, I. (2015): Competition is just a click away. Repurchasing and Word of Mouth Intention in the Different E-Commerce Categories. Doktori (PhD) értekezés, Budapesti Corvinus Egyetem, Gazdálkodástani Doktori Iskola. DOI 10.14267/phd.2015030

160. Kenesei, Zs. (2017) A vevői elégedettség mérésének lehetőségei többdimenziós szemléletben. *Statisztikai Szemle*, 95 (1) 29-50.
161. Killick, D. (2008) *Culture Shock and Cultural Adjustment*. In C. Daglish & P. Evans (Eds.), *Teaching in the Global Business Classroom* (20-36). Cheltenham: Edward Elgar.
162. Kim, E. (2009): Beyond language barriers: Teaching self-efficacy among East Asian international teaching assistants. *International Journal of Teaching and Learning in Higher Education*, 21, 171-180.
163. Kim, Y. Y. (2001) *An Integrative Theory of Communication and Cross-Cultural Adaptation*, London: Sage.
164. King, N. (1994): The qualitative research interview. In: Cassel, C., Symon, G. (eds.): *Qualitative methods in organizational research - A practical guide*. Sage Publications, London
165. Klarmann, M. (2011): *Construct Measurement and Structural Equation Modeling*. Doctoral Seminar Handbook, Corvinus University of Budapest, 15/16 September, 2011.
166. Kline H., Chadwick J. M. & Scales M. (1996) The Relationship Between Cross-Cultural Adjustment and the Personality Variables of Self-efficacy and self-monitoring. *International Journal of Intercultural Relations*, 20 (2) 167-188.
167. Klineberg, O. (1982) *Contact between ethnic groups: A historical perspective of some aspects of theory and research*. In *Cultures in contact: Studies in cross-cultural interaction*, ed. Bochner S., 45-55. Oxford: Pergamon.
168. Knight J. (2018) *International Education Hubs*. In: Meusburger P., Heffernan M., Suarsana L. (eds) *Geographies of the University. Knowledge and Space*, 12. Springer, Cham. Available from: https://doi.org/10.1007/978-3-319-75593-9_21
169. Kotler, P. & Clarke, R.N. (1987) *Marketing For Health Care Organizations*. Prentice-Hall, Englewood Cliffs, NJ.
170. Kuh, G. & Hu, S. (2001) The Effects of Student-Faculty Interaction In the 1990s. Review of Higher Education. *Journal of the Association for the Study of Higher Education*, 24, 309-332. Available from: 10.1353/rhe.2001.0005
171. Kurilorf, A., Hemphill, J.M., & Cloud, D. (1993) *Starting and managing the small business*. Singapore: McGraw Hill Edition.
172. Ladhari, R. (2007) The Effect of Consumption Emotions on Satisfaction and Word-of-Mouth Communications. *Psychology & Marketing*, 24, 12, 1085-1108.
173. Ladhari, R. (2008) Alternative measures of service quality: A review. *Managing Service Quality*, 18 (1), 65-86.
174. Laroche, M., Ueltschy, L. C., Abe, S., Cleveland, M., & Yannopoulos, P. P. (2004) Service quality perceptions and customer satisfaction: Evaluating the role of culture. *Journal of International Marketing*, 12(3), 58-85
175. Law, D.C.S. (2013) Initial assessment of two questionnaires for measuring service quality in the Hong Kong post-secondary education context. *Quality Assurance in Education*, 21(3), 231-246.

- 176.Lazibat T., Baković T. & Dužević I. (2014) How perceived service quality influences students' satisfaction? Teachers' and students' perspectives. *Total Quality Management and Business Excellence*, 25 (7-8), 923-934. Available from: doi: 10.1080/14783363.2014.916036
- 177.LeBlanc, G. & Nha, N. (1997) Searching for excellence in business education: an exploratory study of customer impressions of service quality. *The International Journal of Educational Management*, 11 (2), 72-80.
- 178.Lehtinen, U. & Lehtinen, J. (1982) Service quality: A Study of Quality Dimensions, unpublished Working Paper; Service Management Institute, Finland OY, Helsinki.
- 179.Letcher, D. W., & Neves J. S. (2010) Determinants of Undergraduate Business Student Satisfaction. *Research in Higher Education Journal* 6 (1), 1-26.
- 180.Leutwyler B. & Meierhans C. (2013) Exchange Students in Teacher Education. Empirical Evidence on Characteristics and Motive. *Educational Research* 4 (1), 1-11.
- 181.Li, M., & M. Bray. (2007) Cross-border Flows of Students for Higher Education: Push-Pull Factors and Motivations of Mainland Chinese Students in Hong Kong and Macau. *Higher Education* 53 (6), 791-818.
- 182.Li, R.Y., & Kaye, M. (1998) A case study for comparing two service quality measurement approaches in the context of teaching in higher education. *Quality in Higher Education*, 4 (2), 103-113.
- 183.Llusar, J.C.B. & Zornoza, C.C. (2000) Validity and reliability in perceived quality measurement models: an empirical investigation in Spanish ceramic companies. *International Journal of Quality and Reliability Management*, 17 (8), 899-918.
- 184.Lovelock CH. (1983) Classifying Services to Gain Strategic Marketing Insights. *Journal of Marketing*. 47 (3), 9-20. Available from: doi:10.1177/002224298304700303
- 185.Lustig, M.W. & Koester, J. (2010) *Intercultural Competence*. Boston, MA: Pearson/Allyn and Bacon
- 186.Mahmood, H. and Burke, M.G. (2018): Analysis of acculturative stress and sociocultural adaptation among international students at a non-metropolitan university. *Journal of International Students*. 8, 284-307. 10.5281/zenodo.1134307.
- 187.Malhotra N. K. and Dash S. (2011). *Marketing Research an Applied Orientation*. London: Pearson Publishing.
- 188.Malota E. & Gyulavári T. (2018) A magyar kultúraszemélyiség észlelésének különbségei a magyarok és a külföldiek között, *Turizmus Bulletin*, 18 (2)
- 189.Malota E. (2013) *Kulturális sokk és adaptáció*. In Malota Erzsébet & Mitev Ariel (2013) *Kultúrák találkozása*. Budapest, Alinea kiadó.
- 190.Malota E. (2016) *Hallgatói Véleményfelmérés: Magyarország és a magyar felsőoktatás a külföldi hallgatók szerint*, Campus Mundi.
- 191.Marimon F., Mas-Machuca M. & Berbegal-Mirabent J. (2018) Fulfilment of expectations on students' perceived quality in the Catalan higher education system, *Total Quality Management and Business Excellence*, 31. 5-6. pp. 483-502. <https://doi.org/10.1080/14783363.2018.1433027>

192. Marimon F., Mas-Machuca M., Berbegal-Mirabent J. & Llach J. (2019) UnivQual: a holistic scale to assess student perceptions of service quality at universities, *Total Quality Management and Business Excellence*, 30 (1-2), 184-200. Available from: doi: 10.1080/14783363.2017.1302795
193. Maringe, F. (2006) University and Course Choice: Implications for Positioning, Recruitment and Marketing. *International Journal of Educational Management* 20 (6), 466-79.
194. Martin, N.J., & Nakayama, T.K. (2004) *Intercultural Communication in Context*. 3rd ed. New York: McGraw-Hill.
195. Maxham, J.G. & Netemeyer, R.G. (2002) A longitudinal study of complaining customers' evaluations of multiple service failures and recovery efforts. *Journal of Marketing Research*, 66 (4), 57-71.
196. Mazzarol T. & Soutar N. G. (2012) Revisiting the global market for higher education. *Asia Pacific Journal of Marketing and Logistics*, 24 (5), 717-737.
197. Mazzarol T. (1998) Critical success factors for international education marketing. *International Journal of Educational Management*, 12 (4), 163-175.
198. Mazzarol, T. & Soutar, G.N. (2002) "Push-pull" factors influencing international student destination choice. *International Journal of Educational Management*, 16 (2), 82-90. Available from: <https://doi.org/10.1108/09513540210418403>
199. Mazzarol, T., & G. Soutar. (2001) *The Global Market for Higher Education: Sustainable Competitive Strategies for the New Millennium*. Cheltenham: Edward Elgar.
200. Mazzarol, T., Kemp, S. & Savery, L. (1997) *International Students Who Choose Not to Study in Australia: An Examination of Taiwan and Indonesia*, Australian International Education Foundation, Canberra.
201. McMahon, M. (1992) Higher Education in a World Market: An Historical Look at the Global Context of International Study. *Higher Education* 24 (4): 465–82.
202. Misra, R., Crist, M., & Burant, C. J. (2003) Relationships among life stress, social support, academic stressors, and reactions to stressors of international students in the United States. *International Journal of Stress Management*, 10, 137-157. Available from: doi:10.1037/1072-5245.10.2.137
203. Molesworth, M., Scullion R. & Nixon L. (2010) *The Marketisation of Higher Education and The Student As Consumer*. Abingdon: Routledge.
204. Mori, S.C. (2000) Addressing the mental health concerns of international students. *Journal of Counseling and Development*, 78, 137-144.
205. Mumford, D. B. (1998). The measurement of culture shock. *Social Psychiatry and Psychiatric Epidemiology*, 33(4), 149-154.
206. Nadiri H., Kandampully J. & Kashif H. (2009) Students' perceptions of service quality in higher education. *Total Quality Management*, 20 (5), 523-535. Available from: DOI: 10.1080/14783360902863713
207. Nandi, A. and Nicoletti, C. (2009): Explaining Personality Pay Gaps in the UK. *Institute for Social and Economic Research*, ISER working papers. 46. 10.1080/00036846.2014.922670.

208. Narteh, B. (2013) Service quality in automated teller machines: an empirical investigation. *Managing Service Quality*, 23 (1), 62-89.
209. Nasirudeen, A. M. A., Koh J., Lau A., Lim S. and How L. (2014): Acculturative Stress among Asian International Students in Singapore. *Journal of International Students*. 4. 10.32674/jis.v4i4.455.
210. Nijhuis, J. (2006) *Learning Strategies, Student's Characteristics and Their Perceptions of the Learning Environment an Integrated Study among Business Students*. PhD dissertation, Universiteit Maastricht.
211. O'Neill, M., & Palmer, A. (2004) Importance-performance analysis: A useful tool for directing continuous quality improvement in higher education. *Journal of Quality Assurance in Education*, 12 (1), 39-52. Available from: doi:10.1108/09684880410517423
212. Oberg, K. (1960) *Culture shock, Adjustments to new cultural environments*. Practical Anthropology 7 ed.
213. OECD (2017) Nemzetközi diákok száma. <http://monitor.icef.com/2017/09/oecd-charts-slowing-international-mobility-growth/>, Downloaded: 2019.05.11.
214. *of Professional Services Marketing*, 16(1) 135-157.
215. Oktatási Hivatal (2020) A Magyarországon tanuló külföldi és magyar hallgatók száma állampolgárságuk szerint 2008 és 2018 között. https://www.oktatas.hu/felsooktatas/kozerdeku_adatok/felsooktatasi_adatok_kozzetetele/felsooktatasi_statisztikak, Downloaded: 2020.09.15.
216. Oliver, R. L. (1980) A Cognitive Model of the Antecedents and Consequences of Satisfaction Decision. *Journal of Marketing Research*, 17 (November), 460-469.
217. Oliver, R. L. (1996) *Satisfaction: A behavioural perspective on the consumer*. Irwin, McGraw-Hill
218. Oliver, R. L. (1997) *Satisfaction: A Behavioral Perspective on the Consumer*. McGraw-Hill, New York, NY.
219. Owlia, M.S., & Aspinwall, E.M. (1996) A framework for the dimensions of quality in higher education. *Quality Assurance in Education*, 4 (2), 12-20.
220. PÁLYÁZATI PAVILON (2020): <https://tka.hu/nemzetkozi/15213/a-kulfoldi-hallgatok-jelentosen-hozzajarulnak-a-hazai-gazdasagi-fejlodeshez>, Downloaded: 2021.02.28.
221. Parahoo K. S., Harvey H. L. & Tamim R. M. (2013) Factors influencing student satisfaction in universities in the Gulf region: does gender of students matter? *Journal of Marketing for Higher Education*, 23 (2), 135-154. Available from: doi: 10.1080/08841241.2013.860940
222. Parasuraman, A., Berry, L. & Zeithaml, V. (1985) A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49, 41-50.
223. Parasuraman, A., Berry, L. & Zeithaml, V. (1988) SERVQUAL: a multiple item scale for measuring consumer perceptions of service quality. *Journal of Marketing*, 64 (1), 12-40.
224. Parasuraman, A., Berry, L. & Zeithaml, V. (1994) Reassessment of expectations as a comparison in measuring service quality: implications for further research. *Journal of Marketing*, 58 (1), 111-24.

225. Patterson, P., Romm, T. and Hill, C. (1998): Consumer satisfaction as a process: a
226. Patton, M. Q. (1990): *Qualitative Evaluation and Research Methods*. Sage Publications Ltd., London
227. Pedersen, P. B. (1991) Counseling international students. *The Counseling Psychologist*, 19 (1), 10-58.
228. Phillips, L. W., Chang R. D., & Buzzell D. R. (1983) Product Quality, Cost Position, and Business Performance: A Test of Some Key Hypotheses. *Journal of Marketing*, 47 (Spring), 26-43.
229. Presbitero, A. (2016): Culture shock and reverse culture shock: The moderating role of cultural intelligence in international students' adaptation. *International Journal of Intercultural Relations*, 53, 28-38.
230. qualitative, retrospective longitudinal study of overseas students in Australia. *Journal*
231. Quinn, A., G. Lemay, P. Larsen, & D. Johnson. (2009): Service Quality in Higher Education. *Total Quality Management and Business Excellence* 20 (2), 139-52. Available from: doi:10.1080/14783360802622805.
232. Raajpoot, N. (2004): Reconceptualizing service encounter quality in a non-western context. *Journal of Service Research*, 7 (2), 181-201.
233. Reichheld, F. F. and Sasser, W. E. (1990): Zero defections: quality comes to services. *Harvard Business Review*, 68 (5), 105-11.
234. Renn, K.A. & Patton, L.D. (2011): Campus ecology and environments. Student services. A handbook for the profession. 5, 242–256.
235. Ringle, C. M., Sarstedt, M., and Mooi, E. A. (2010): Response-based segmentation using finite mixture partial least squares: theoretical foundations and an application to American Customer Satisfaction Index data. *Annals of Information Systems*, 8, 19-49.
236. Ringle, C. M., Wende, S., and Becker, J.-M. (2015): SmartPLS 3. Boenningstedt: SmartPLS GmbH, <http://www.smartpls.com>.
237. Rodie, A., & Kleine, S. (2000): *Customer participation in services production and delivery*. In T. Swartz and D. Iacobucci (Eds.). *Handbook of Services Marketing and Management*, 111-125. Thousand Oaks, CA: SAGE Publications.
238. Ruby, C. (1998): Assessing Satisfaction with Selected Services Student Using SERVQUAL, a Market-Driven Model of Service Quality, *NASPA Journal* 35 (4), 331-341.
239. Russell, M. (2005): Marketing education: A review of service quality perceptions among international students. *International Journal of Contemporary Hospitality Management*, 17 (1), 65-77. Available from: <https://doi.org/10.1108/09596110510577680>
240. Ryan, R. M., and Connell, J. P. (1989): Perceived locus of causality and internalization. *Journal of Personality and Social Psychology*, 57, 749-761.
241. Ryan, R. M., and Deci, E. L. (2017): *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York: Guilford.
242. Sakthivel, P. B., & Raju, R. (2006): An instrument for measuring engineering education quality from students' perspective. *The Quality Management Journal*, 13 (3), 23-34.

243. Samovar, L. A., Porter R. E. & McDaniel E. R. (2010): *Communication Between Cultures*. 7th ed. Belmont, CA: Wadsworth Cengage Learning
244. Sandhu, D. & B. Asrabadi (1994): Development of an accumulative stress scale for international students: Preliminary findings. *Psychological Reports* 75, 435-443.
245. Saravanan, R. & Rao, K. S. P. (2007): Measurement of service quality from the customer's perspective – an empirical study. *Total Quality Management and Business Excellence*, 18 (3/4), 435-449.
246. Saunders, M., Lewis, P. and Thornhill, A. (2009): Understanding research philosophies and approaches. *Research Methods for Business Students*, 4. 106-135.
247. Schoefer K. & Ennew, C. (2005): The impact of perceived justice on consumers' emotional responses to service complaint experiences. *Journal of Service Marketing*, 19 (5), 261-70.
248. Searle, W. and Ward, C. (1990): The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations*, 14, 449-464.
249. Shahsavari T. & Sudzina F. (2017): Student satisfaction and loyalty in Denmark: Application of EPSI methodology. *PLoS ONE* 12 (12) Available from: <https://doi.org/10.1371/journal.pone.0189576>
250. Shekarchizadeh, A., Rasli, A., & Hon-Tat, H. (2011): SERVQUAL in Malaysian universities: Perspectives of international students. *Business Process Management Journal*, 17 (1), 67-81.
251. Sheldon, K. M., Osin, E. N., Gordeeva, T. O., Suchkov, D. D., and Sychev, O. A. (2017): Evaluating the dimensionality of self-Determination theory's relative autonomy continuum. *Personality and Social Psychology Bulletin*, 43(9), 1215-1238.
252. Siegel, C. (1991): Counseling international students: a clinician's comments. *The Counseling Psychologist*, 19 (1), 72-75.
253. Smith, R. A., & Khawaja, N. G. (2011): A review of acculturation experiences of international students. *International Journal of Intercultural Relations*, 35, 699-713. Available from: doi:10.1016/j.ijintrel.2011.08.004
254. Stier, J. (2003): Internationalisation, Ethnic Diversity and the Acquisition of Intercultural Competencies. *Intercultural Education*, 14 (1), 77-91.
255. Stukalina, Y. (2012) Addressing Service Quality Issues in Higher Education: The Educational Environment Evaluation from the Students' Perspective. *Technological and Economic Development of Economy* 18 (1), 84-98.
256. Suleyman M. Y. (2014) Service quality evaluation in the school of physical education and sports: An empirical investigation of students' perceptions. *Total Quality Management and Business Excellence*, 25 (1-2), 80-94. Available from: doi: 10.1080/14783363.2011.637804
257. Sullivan & Kashubeck-West (2015): The Interplay of International Students' Acculturative Stress, Social Support, and Acculturation Modes. *Journal of International Students*, 5 (1), 1-11. ISSN: 2166-3750 Online
258. Sultan, P. & Wong, H.Y. (2010): Service quality in higher education: a review and research agenda. *International Journal of Quality and Service Sciences*, 2 (2), 259-272.

259. Sultan, P. and Wong, H. Y. (2011): Service quality in a higher education context: antecedents and dimensions. *International Review of Business Research Papers*, 7 (2), 11-20.
260. Sultan, P., & Wong, H. Y. (2013): Antecedents and consequences of service quality in a higher education context: A qualitative research approach. *Quality Assurance in Education*, 21 (1), 70-95.
261. Sung, M., & Yang S. U. (2008): Toward the Model of University Image: The Influence of Brand Personality, External Prestige, and Reputation. *Journal of Public Relations Research* 20 (4), 357-76.
262. Taft R. (1977): Coping with unfamiliar cultures. In: Warren N (ed) *Studies in cross-cultural psychology*, 1, Academic Press, London, 121-153.
263. Tahar, E. B. M. (2008): *Expectation and perception of postgraduate students for service quality in UTM*. Thesis, Universiti Teknologi Malaysia, Kuala Lumpur.
264. Tan, K. C. & Kek, S.W. (2004): Service quality in higher education using an enhanced SERVQUAL approach. *Quality in Higher Education*, 10 (1), 17-24.
265. Tashakkori, A. & Teddlie, C. (ed.) (2003): *Handbook of Mixed Methods in Social & Behavioral Research*. SAGE, Thousand Oaks, pp. 3-50.
266. Teas, R. K. (1993): Expectations, Performance Evaluation and Consumers' Perceptions of Quality. *Journal of Marketing*, 57 (October), 18-34.
267. The World Bank (2018) Government expenditure on education, total (% of GDP), UNESCO Institute for Statistics.
https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?most_recent_year_desc=true&view=map , Downloaded: 2020.09.18.
268. Thomas, S. (2011): What drives student loyalty in universities: An empirical model from India. *International Business Research*, 4 (2), 183-192.
269. TPF (2021): Tempus Public Foundation, <https://tka.hu/37/about-us>, Downloaded at 2021.05.21.
270. Trivellas, P. & Geraki, A. (2008) *Investigating principals' leadership profile in secondary education*. Proceedings of ICMMS 2008 International Conference on Management and Marketing Sciences, Imperial College Press Conference Proceedings, Athens, 23-25 May, 599-602.
271. Tsinidou, M., Gerogiannis, V., Fitsilis, P. (2010): Evaluation of the factors that determine quality in higher education: An empirical study. *Quality Assurance in Education*, 18 (3), 227-244.
272. Tsoukatos, E., & G. K. Rand. (2007): 'Cultural Influences on Service Quality and Customer Satisfaction: Evidence from Greek Insurance. *Managing Service Quality*, 17 (4), 467-85. Available from: doi:10.1108/09604520710760571
273. Tylor B. E. (1871) *Primitive Culture*
274. UNESCO (2020): <http://uis.unesco.org/en/uis-student-flow>, Downloaded: 2021.02.27.
275. Vangelis T. & Hill C. (2019): A prospective model for aligning educational quality and student experience in international higher education, *Studies in Higher Education*, Available from: doi.org/10.1080/03075079.2019.1628203

276. Vansteenkiste, M., Zhou, M., Lens, W. and Soenens, B. (2005): Experiences of autonomy and control among Chinese learners: Vitalizing or immobilizing? *Journal of Educational Psychology*, 97(3), 468-483.
277. Venkatesh, V., Brown, S.A., Bala, H. (2013): Bridging the qualitative-quantitative divide: Guidelines for conducting mixed method research in information systems. *MIS Quarterly*, 37 (1), 21-54.
278. Wakefield, K.L. & Blodgett, J.G. (1999) Customer response to intangible and tangible service factors. *Psychology and Marketing*, 16 (1), 1-18.
279. Ward, C. & A. Kennedy. (1994) Acculturation strategies, psychological adjustment and sociocultural competence during cross-cultural transitions. *International Journal of Intercultural Relations* 18, 329-43.
280. Ward, C., & Kennedy, A. (1999): The measurement of sociocultural adaptation. *International Journal of Intercultural Relations*, 23, 659-677. Available from: doi:10.1016/S0147-1767(99)00014-0
281. Ward, C., S. Bochner & A. Furnham. (2001) *The psychology of culture shock*. 2nd ed. Hove: Routledge.
282. Weaver, G. R. (1993) *Understanding and coping with cultural adjustment stress*. In Paige, R. M. (Ed) *Education for the Intercultural Experience*, Yarmouth: ME: Intercultural Press, 137-167.
283. Weaver, T. (1976) What is good of higher education? *Higher Education Review*, 8, 3-14.
284. Webometrics (2020): Number of universities: https://www.webometrics.info/en/distribution_by_country, Downloaded at 2021.05.12.
285. Wilson, J. (2013). Exploring the past, present and future of cultural competency research: The revision and expansion of the sociocultural adaptation construct. Unpublished doctoral dissertation. Victoria University of Wellington
286. Wilson, J. K., Ward, C., and Fischer, R. (2013): Beyond culture learning theory: What can personality tell us about cultural competence? *Journal of Cross-cultural Psychology*, 44, 900-927. Available from: doi:10.1177/0022022113492889
287. Wold, H. (1985): Partial least squares. In S. Kotz and N. L. Johnson (Eds.), *Encyclopedia of statistical sciences*, New York: Wiley. 581–591
288. Wright, C. & O'Neill, M. (2002) Service quality evaluation in the higher education sector: An empirical investigation of students' perceptions. *Higher Education Research and Development*, 21 (1), 23-39.
289. Yang Y., Zhang Y. and Sheldon M. K. (2017): Self-determined motivation for studying abroad predicts lower culture shock and greater well-being among international students: The mediating role of basic psychological needs satisfaction. *International Journal of Intercultural Relations*, 63, 95-104. Available from: doi.org/10.1016/j.ijintrel.2017.10.005
290. Yang, R. P., Noels K. A. K. D. Saumure K. D. (2005) Multiple routes to cross-cultural adaptation for international students: Mapping the paths between selfconstruals, English

- language confidence, and adjustment. *International Journal of Intercultural Relations*, 30, 487-506.
291. Yi, Y. (1990) *A critical review of customer satisfaction*. In Zeithaml, V. Ed. *Review of Marketing*, American Marketing Association, Chicago, IL, 68-123.
292. Yoo, S. H., Matsumoto, D. and LeRoux, J. A. (2006): The influence of emotion recognition and emotion regulation on intercultural adjustment. *International Journal of Intercultural Relations*, 30(3), 345-366.
293. Yu, B. (2010): Learning Chinese abroad: The role of language attitudes and motivation in the adaptation of international students in China. *Journal of Multilingual and Multicultural Development*, 31, 301-321. doi:10.1080/01434631003735483
294. Zajda, J. & Rust, V. (2016) *Research in globalization and higher education reforms*. In J. Zajda & V. Rust. *Globalisation and higher education reforms* 179-187. Switzerland: Springer International Publishing. Available from: https://doi.org/10.1007/978-3-319-28191-9_12
295. Zebal, M. & Goodwin, D. (2012) Market orientation and performance in private universities. *Marketing Intelligence & Planning*, 30, 339-357. Available from: doi: 10.1108/02634501211226302.
296. Zeithaml, V. A. (1981) *How Consumer Evaluation Processes Differ between Goods and Services*. In *Marketing of Services*, J. Donnelly and W. George, eds., Chicago: American Marketing, 186-190.
297. Zeithaml, V. A., Berry L. L. & A. Parasuraman (1991) The Nature and Determinants of Customer Expectations of Service. *Marketing Science Institute Research Program Series* (May), 91-113.
298. Zeithaml, V. A., Berry L. L., & A. Parasuraman (1996) The Behavioral Consequences of Service Quality. *Journal of Marketing*, 60 (2), 31-46.
299. Zeithaml, V.A. & Bitner, M.J. (2000), *Services Marketing: Integrating Customer Focus Across the Firm*. 2nd ed., McGraw-Hill Companies, Boston, MA.
300. Zeithaml, V.A. (2000) Service quality, profitability, and the economic worth of customers: what we know and what we need to learn. *Journal of the Academy of Marketing Science*, 28 (1), 67-85.
301. Zhou Y., Jindal D., Keith T.S. & Todman J. (2008) Theoretical models of culture shock and adaptation in international students in higher education. *Studies in Higher Education*, 33 (1), 63-75.

6. APPENDIX

Appendix 1: Qualitative interview thread

Warm-up questions

1. Study abroad program length: 2-12 months
2. Study abroad program end(ed): e.g. 2017 fall semester
3. Study abroad faculty: e.g. business, social studies, international relations
4. Nationality (*if dual, which one you consider primary*):
5. Host country: e.g. Hungary
6. Host university: e.g. Corvinus
7. English speaking skills: 1-10 (self-rating)

Open ended questions (with follow-up questions to dig deeper)

1. Why did you decide to study abroad? (personal, professional motivations, long-term goals, why exactly this country)
2. Did you have any hard decisions to make before going abroad? (relationship, family, financial sacrifice, job offer or other promising opportunity). How did you resolve that?
3. How much have you prepared for your semester abroad? (budgeting, finding a flat, travel in the region, learn about the local culture and language, how much preparation is ideal)
4. How did you feel upon arriving to your host country? (happy, excited, stressed, isolated etc. and why, any specific examples, story)
5. Did this feeling change in the first 2 weeks, first 2 months? (stabilized or became an emotional rollercoaster, any specific examples, story)?
6. What were your most shocking experiences in the host country? (any positive or negative examples connected to people, culture, behavior, food, law, rules, lifestyle, stereotypes were true/untrue)
7. What was your most shocking experience at university? (any positive or negative examples connected to teaching methods, classes, professors, processes compared to what you expected)
8. Do you think you did well on coping with all these shocking experiences? (Why, why not/ how did you do it, what was your „strategy” or what skills you used to get over them?)
9. How did you spend most of your time abroad? (with people, at home, library, classes, traveling, other / any specific examples, story)
10. Do you think your cultural values differed from the experienced cultures? (compared to locals, other internationals differed more or less?) Why, why not? (examples, story)

11. From who have you got the most support? (home/ host university admin, profs, family, friends at home, friends abroad (local, international), other. Which kind of support was most needed or not needed at all? (emotional, financial, educational – examples, stories for each)
12. How did you perceive the local culture at the end of the program? (got closer to the local culture, understood better, didn't accept it, felt isolated) Why?
13. Overall were you satisfied with the host country? (specific example or story)
14. Would you recommend the host country to your best friend? Why or why not?
15. How did you perceive the image of the host institution? (what attributes would you use to describe it? did any of these encourage/discourage you?)
16. How did you perceive the reputation of the host institution and study program? Why?
17. How did you perceive the service quality of the host institution? Please bring stories or examples for the following:
 - building, classroom, dormitory, facilities, equipment, library services, class sizes
 - reliability, credibility, attitude, knowledge, approachability, communication of professors/program coordinators/student associations
 - ways of teaching, feedback for improvement, grading, fairness of treatment, understanding and caring about your personal and professional needs, level of proactive support, counseling services, freedom, administrative guidance
 - access to knowledge, information about the program, level of security
 - places/events to socialize, networking or future career opportunities
18. Overall were you satisfied with the host university? (specific example or story)
19. If you could start over, would you study again at the host institution? If you wanted to apply for a higher degree or a different program, would you consider the host institution? Why or why not?
20. Would you be willing to pay the full-tuition for the same program at the host institution? Why? (if no, what would need to change for you to do that?)
21. Would you recommend the host institution to your best friend? Would you recommend your (future) kid to apply for a program at the host institution? Why or why not?

Appendix 2: Quantitative research instrument

Survey intro for respondents

Welcome to our International Student survey!

The research is carried out within the framework of the Marketing doctoral program at Corvinus Business School. The aim of the research is to gain insights on how universities could provide a better study abroad experience for international students.

The questions are related to your personal experiences such as your initial study abroad motivations, cultural adjustment and satisfaction with the services you received at your host university during your most recent study abroad experience.

It will take approximately 20 minutes, please answer the questions honestly and to your best knowledge. The collected information will be handled anonymously and the results will be published only in an aggregated format, keeping your responses confidential.

Please use your desktop computer or laptop to fill in the survey.

Thank You for improving the experiences of future international students.

Let's get started!

Q1 What was your most important intercultural experience prior to your most recent study abroad program?

- I took courses with other international students in my home country (1)
- I took foreign language courses with native teachers (2)
- I lived abroad for a longer period of time (3)
- I had friends, partners or relatives from abroad or living abroad (4)
- I studied abroad before (5)
- I already knew local people from the host country (6)
- I was on vacation(s) abroad (7)
- I had no intercultural experiences prior to my most recent study abroad program (8)
- Other intercultural experience (9)

Q2 Was your host country your first choice when you decided to study abroad?

- Yes (1)
- No (2)

Q3 My age

- 18 (1)
- 19 (2)
- 20 (3)
- 21 (4)
- 22 (5)
- 23 (6)
- 24 (7)
- 25 (8)
- 26 (9)
- 26+ (10)

Q4 My gender

- Male (1)
- Female (2)

Q5 My home country (where I am a resident) is

- country list dropdown (Qualtrics inbuilt country list)

Q6 My host country where I study (studied) abroad is

- country list dropdown (Qualtrics inbuilt country list)

Q7 What is (was) the level of your study abroad program?

- Bachelor (1)
- Master (2)
- PhD (3)

Q8 What is (was) your major subject at your host university?

- Arts (1)
- Humanities (2)
- Engineering (3)
- Computer sciences (4)
- Life sciences and medicine (5)
- Natural sciences (6)
- Social sciences (7)
- Management (8)
- Agriculture (9)
- Other (10)

Q9 Are (were) you a part-time or full-time student at your host university?

- Part-time (1)
- Full-time (2)

Q10 Do (did) you receive any grants or scholarships to study abroad?

- Yes (1)
- No (2)

Q11 When did you start your study abroad program?

- 2018 Autumn (1)
- 2019 Spring (2)
- 2019 Autumn (3)
- 2020 Spring (4)
- 2020 Autumn (5)
- 2021 Spring (6)
- Other (7)

Q12 How long is (was) your study abroad program?

- 1 semester (1)
- 2 semesters (2)
- 3 semesters (3)
- 4 semesters (4)
- 5 semesters (5)
- 6 semesters (6)
- 7 semesters (7)
- 8 semesters (8)
- 9 semesters (9)
- 10 semesters (10)
- 11 semesters (11)
- 12 semesters (12)
- 12 + semesters (13)

Q13 How much time have (had) you spent studying abroad already?

- 1 semester (1)
- 2 semesters (2)
- 3 semesters (3)
- 4 semesters (4)
- 5 semesters (5)
- 6 semesters (6)
- 7 semesters (7)
- 8 semesters (8)
- 9 semesters (9)
- 10 semesters (10)
- 11 semesters (11)
- 12 semesters (12)
- 12 + semesters (13)

Q14 How are (were) your grades compared to other students?

- Much above average (1)
- A little above average (2)
- Average (3)
- A little below average (4)
- Much below average (5)

Q15 How is (was) your own financial situation compared to other students?

- Much above average (1)
- A little above average (2)
- Average (3)
- A little below average (4)
- Much below average (5)

Q16 Personal factors related to your most recent study abroad program

<i>Strongly disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly agree (5)</i>
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- I am (was) very committed to achieving my study abroad goals (1)
- I have (had) the ability to succeed in my study abroad program (2)
- My intercultural skills improved a lot during my study abroad program (3)
- I broadened my academic knowledge during my study abroad program (4)
- Prior to starting my study abroad program, I was aware of the differences in teaching style between my home country and the host country (5)
- Prior to starting my study abroad program, I collected an adequate amount of useful information about the host university (7)
- Prior to starting my study abroad program, I collected an adequate amount of useful information about the host country culture (8)

- My learning style was well-suited to being successful in the academic system of my host university (9)
- Prior to starting my program abroad, I received an adequate level of cross-cultural training (10)
- Prior to enrolment, I only had positive experiences when I interacted with the faculty members and coordinators of my host university (11)

Q17 I see myself as someone who

<i>Doesn't apply at all (1)</i>	<i>Somewhat doesn't apply (2)</i>	<i>Neutral (3)</i>	<i>Somewhat applies (4)</i>
<i>Applies perfectly (5)</i>			

- is original, comes up with ideas (1)
- values artistic, aesthetic experiences (2)
- has an active imagination (3)
- does a thorough job (4)
- tends to be lazy (5)
- does things efficiently (6)
- is talkative (7)
- is outgoing, sociable (8)
- is reserved (9)
- is sometimes rude to others (10)
- has a forgiving nature (11)
- is considerate and kind (12)
- worries a lot (13)
- gets nervous easily (14)
- is relaxed, handles stress well (15)

Q18 Why did you decide to study abroad?

<i>Doesn't apply at all (1)</i>	<i>Somewhat doesn't apply (2)</i>	<i>Neutral (3)</i>	<i>Somewhat applies (4)</i>
<i>Applies perfectly (5)</i>			

- Because studying abroad is interesting (1)
- Because it is a pleasure to study abroad (2)
- Because studying abroad is fun (3)
- Because I enjoy studying abroad (4)
- Because studying abroad is meaningful to me (5)
- Because it is my personal choice to study abroad (6)
- Because studying abroad is personally important to me (7)
- Because I strongly value studying abroad (8)
- Because I want to feel good about myself (9)
- Because studying abroad boosts my self-esteem (10)
- Because I want to prove to myself that I am capable (11)
- Because I want to feel proud of myself (12)
- Because I don't want to feel bad about myself (13)
- Because I would feel like a failure if I didn't study abroad (14)
- Because I would feel ashamed if I didn't study abroad (15)
- Because I would feel guilty if I didn't study abroad (16)
- Because I don't have any choice but to study abroad (17)
- Because I'll get in trouble if I don't study abroad (18)
- Because if I don't study abroad, others will get mad (19)
- Because important people (i.e., parents, professors) will like me better if I study abroad (20)
- I used to know why I chose to study abroad, but I don't anymore (21)

- I'm not sure, I wonder whether I should continue studying abroad (22)
- Honestly, I don't know why I chose to study abroad (23)
- I once had good reasons for studying abroad, but now I don't (24)

Q19 The following items ask about your cultural experiences in your host country (related to your most recent study abroad experience).

<i>Definitely not (1)</i>	<i>Probably not (2)</i>	<i>Neutral (3)</i>	<i>Probably yes (4)</i>	<i>Definitely yes (5)</i>
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- Do (did) you feel stressed from the effort to adapt to a new culture? (1)
- Have (had) you been missing your family and friends back home? (2)
- Do (did) you feel generally accepted by the local people in the new culture? (3)
- Do (did) you ever wish to escape from your new environment altogether? (4)
- Do (did) you ever feel confused about your role or identity in the new culture? (5)
- Have (had) you found things in your new environment shocking or disgusting? (6)
- Do (did) you ever feel helpless or powerless when trying to cope with the new culture? (7)
- Do (did) you feel anxious or awkward when meeting local people? (8)
- When talking to people, can (could) you make sense of their gestures or facial expressions? (9)
- Do (did) you feel uncomfortable if people stare(d) at you when you go (went) out? (10)
- When you go (went) out shopping, do (did) you feel as though people may be trying to cheat you? (11)
- Are (were) you finding it an effort to be polite to your hosts? (12)

Q20 People experience change when moving to a new culture. Such change often involves learning new skills and behaviors. Please rate how competent you are (were) at each of the following behaviors in your host country (related to your most recent study abroad experience).

<i>Not at all competent (1)</i>	<i>Somewhat competent (2)</i>	<i>Moderately competent (3)</i>	<i>Very competent (4)</i>	<i>Extremely competent (5)</i>
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- Interacting at social events (1)
- Interacting with members of the opposite sex (2)
- Accurately interpreting and responding to other people's gestures and facial expressions (3)
- Building and maintaining relationships (4)
- Adapting my speaking style in a culturally appropriate way (5)
- Changing my behavior to suit social norms, rules, attitudes, beliefs, and customs (6)
- Accurately interpreting and responding to other people's emotions (7)
- Managing my academic/work responsibilities (8)
- Working effectively with other students/work colleagues (9)
- Gaining feedback from other students/work colleagues to help improve my performance (10)
- Expressing my ideas to other students/work colleagues in a culturally appropriate way (11)
- Maintaining my hobbies and interests (12)
- Obtaining community services, I require (e.g. accommodation, healthcare, banking) (13)
- Dealing with the bureaucracy (14)
- Attending or participating in community activities (15)
- Adapting to the noise level in my neighbourhood (16)
- Adapting to the population density (17)

- Finding my way around (18)
- Adapting to the pace of life (19)
- Understanding and speaking the host country's language (20)
- Reading and writing in the host country's language (21)

Q21 Quality of services at the host university

<i>Strongly disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly agree (5)</i>
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- Teachers have (had) the knowledge to answer my questions relating to the course content (1)
- Teachers treat(ed) me in a polite way (2)
- When I have (had) a problem, teachers showed a sincere interest in solving it (3)
- Teachers show(ed) a positive attitude toward students (4)
- Teachers communicate(d) well in the classes (5)
- Teachers provide(d) feedback about my progress (6)
- Teachers are (were) highly educated in their respective field (7)
- Teachers adequately provide(d) the materials discussed in the class (8)
- Teachers adequately provide(d) documentations I require(d) (9)
- When I had a problem, the administrative staff show(ed) a sincere interest in solving it (10)
- Administrative staff provide(d) caring attention (11)
- Administrative requests are (were) dealt with efficiently (12)
- Administrative staff keep (kept) accurate and retrievable records (13)
- When the administrative staff promise(d) to do something by a certain time, they do (did) so (14)
- Administrative staff show(ed) a positive work attitude toward students (15)
- Administrative staff communicate(d) well with students (16)
- Administrative staff have (had) good knowledge of the university systems (17)
- Administrative staff respect(ed) the terms of confidentiality when I disclose(d) information to them (18)
- Teachers are (were) willing to respond to my request for assistance (19)
- Teachers allocate(d) sufficient time for consultation (20)
- Teachers and the administrative staff ensure(d) that they are (were) easily contacted (21)
- Teachers are (were) knowledgeable when responding to my request (22)
- The university have (had) excellent quality programs (23)
- The university offer(ed) a wide range of programs with various specializations (24)
- The university operates an excellent counselling service (25)
- The university offers programs with a flexible structure (26)
- The university has a professional image (27)
- The academic program run by the university is reputable (28)
- The university's graduates are easily employable (29)
- The university has a good image (30)

Q22 Satisfaction with the host university

<i>Strongly disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly agree (5)</i>
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- I am (was) satisfied with my decision to register at this university (1)
- My choice to choose this university was a wise one (2)
- I think I did the right thing when I chose to study at this university (3)
- I feel (felt) that my experience with this university has been enjoyable (4)
- Overall, I am (was) satisfied with this university (5)
- I am (was) very satisfied with the services provided by my host university (6)

- I am (was) very satisfied with my life in the host country (7)
- I will continue at the same university if I want to start a new course (8)
- I will continue at the same university if I want to further my education (9)
- I will recommend this university to my friends and family (10)
- I take pride in the fact that I study (studied) at the host university (11)

Q23 Finishing up

I could understand the questions in the survey with...

- Extreme difficulty (1)
- Great difficulty (2)
- Moderate difficulty (3)
- Slight difficulty (4)
- No difficulty (5)

Q24 Please provide any additional detail or share your feedback about the questionnaire.

Q25 What is your favourite animal?

Appendix 3: Top international student sender countries of the quantitative sample of the dissertation (full list)

Home country	Number of respondents	Ratio (%)
Syria	31	7,3%
Jordan	23	5,4%
Pakistan	23	5,4%
India	20	4,7%
Kenya	19	4,5%
Brazil	18	4,2%
China	17	4,0%
Mongolia	15	3,5%
Tunisia	15	3,5%
Viet Nam	15	3,5%
Kazakhstan	12	2,8%
Laos	12	2,8%
South Africa	12	2,8%
Azerbaijan	11	2,6%
Indonesia	11	2,6%
Iraq	11	2,6%
Morocco	11	2,6%
Russian Federation	11	2,6%
Nigeria	9	2,1%
Angola	8	1,9%
Iran	8	1,9%
Albania	6	1,4%
Bangladesh	6	1,4%
Colombia	6	1,4%
Ghana	6	1,4%
Lebanon	6	1,4%
Ukraine	6	1,4%
Ethiopia	5	1,2%
Kyrgyzstan	5	1,2%
<i>Not answered</i>	5	1,2%
Serbia	5	1,2%
Bosnia and Herzegovina	4	0,9%
Japan	4	0,9%
Mexico	4	0,9%
Republic of Moldova	4	0,9%
Algeria	3	0,7%
Egypt	3	0,7%
South Korea	3	0,7%
Thailand	3	0,7%

Turkey	3	0,7%
Turkmenistan	3	0,7%
United States of America	3	0,7%
Cambodia	2	0,5%
Ecuador	2	0,5%
Georgia	2	0,5%
Malaysia	2	0,5%
Uzbekistan	2	0,5%
Yemen	2	0,5%
Argentina	1	0,2%
Belgium	1	0,2%
Israel	1	0,2%
Montenegro	1	0,2%
Myanmar	1	0,2%
Peru	1	0,2%
Philippines	1	0,2%
Sudan	1	0,2%
Switzerland	1	0,2%

Source: own research, own construction

7. LIST OF PUBLICATIONS

In this section the journal publications and conferences proceedings related to the dissertation topic are listed.

Journal articles

In Hungarian

1. Mucsi A., Malota E. and Török A. (2020): Kulturális sokk és pozitív szájreklám – a felsőoktatásban tanuló külföldi hallgatók körében. *Vezetéstudomány*, 51(2), 23-31.
2. Mucsi A., Malota E. and Török A. (2020): A külföldi tanulási motivációk és a felsőoktatással való elégedettség összefüggései. *EDUCATIO*, 29(1), 116-124.
3. Bifkovic B., Malota E., Mucsi A. (2020): A külföldi cserhallgatók egyetemi támogatásának lehetőségei az oktatásturizmus és a nemzetköziesedés tükrében. *Turizmus Bulletin*, 20(1), 35-43.
4. Mucsi A. (2021): Külföldi hallgatók paradicsoma: az akadémiai szolgáltatás-minőség és az akkulturáció szerepe a magyar oktatásturizmusban. *Turizmus Bulletin*, 21(4), xx-xx.
5. Malota E. and Mucsi A. (2019): Sok(k) meglepetés Magyarországon: Kultúrsokk és országimázs magyar és külföldi hallgatók szemével. *JEL-KÉP: Kommunikáció Közvélemény Média*, 8(1) 53-62.

Participation at conferences with publication of the full paper submitted:

In Hungarian

6. Mucsi A., Malota E. and Török A. (2019): Külföldi hallgatók motivációi és elégedettség a külföldi tanulmányi programmal. In: Veres, Zoltán; Sasné, Grósz Annamária; Liska, Fanny (ed.) *Ismerjük a vevőt? A vásárlás pszichológiája: Az Egyesület a Marketingoktatásért és Kutatásért XXV. Országos konferenciájának előadásai* Veszprém, Magyarország: Pannon Egyetem, 12. ISBN: 9786150058603
7. Mucsi A., Malota E. and Török A. (2019): Kulturális sokk és pozitív szájreklám a felsőoktatásban tanuló külföldi hallgatók körében In: Veres, Zoltán; Sasné, Grósz Annamária; Liska, Fanny (ed.) *Ismerjük a vevőt? A vásárlás pszichológiája: Az Egyesület a Marketingoktatásért és Kutatásért XXV. Országos konferenciájának előadásai* Veszprém, Magyarország: Pannon Egyetem, 10. ISBN: 9786150058603

In English

8. Mucsi A., Malota E. and Török A. (2019): International Student Motivations and Satisfaction With the Study Abroad Program. In: L., Gómez Chova; A., López Martínez; I., Candel Torres (ed.) EDULEARN19 Proceedings Palma de Mallorca, Spain: IATED Academy, 3175-3179. ISBN: 9788409120314
9. Mucsi A., Malota E. and Török A. (2019): Culture Shock and Subsequent Word of Mouth in Higher Education. In: L., Gómez Chova; A., López Martínez; I., Candel Torres (ed.) EDULEARN19 Proceedings Palma de Mallorca, Spanyolország: IATED Academy, 3180-3184. ISBN: 9788409120314