

The Effects of Different Types of Experience Abroad in Higher Education on Global Skills

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Abstract

Several higher education curricula nowadays offer the options between international internships and study abroad. This research explores to what extent international internships within higher education (HE) influence students' global skills in comparison to those students studying abroad and non-mobile students¹. The relation between experience abroad and global skills with the emphasis on the comparison of the two different types of experience abroad - studying and interning - within a higher education curriculum was never particularly explored, to the best of my knowledge. First, a framework of global skills is established consisting of critical thinking, self-leadership and intercultural communication skills. Second, the differences between the three types of study experiences mentioned above and their influence on global skills are measured. A semi-experimental design was chosen to conduct the research due to the explorative nature of the research. Students of the three different groups were surveyed.

The main model did not show statistical significance. Therefore, a direct comparison of the different experiences abroad on global skills was not possible. The findings rather suggest different skills for different study experience. A positive relation between internships abroad and global skills under the condition that students have been mentored could be found. Study abroad influences intercultural communication skills positively.

Students as well as universities have to be aware of the different learning outcomes of the different types of experience abroad. Especially, when opting for an internship abroad mentoring is indispensable in order to gain global skills.

¹ Students who do not go abroad during their higher education program are called "non-mobile" students.

1.Introduction

Studying abroad is popular and many students leave their actual institute of higher education (HE) for an international experience, an internship or an academic exchange at another higher education institution. The benefits of such experience often focus on later employability and the need for international experienced employees (Bremer, 2006; European Union, 2014). This study focuses on the social benefits of this phenomenon of higher education internationalisation. A set of so called global skills is developed which seems most appropriate to gain within this social approach seeking for personal and societal growth. Under different terms (like global citizenship), the social impact of studying abroad has been researched upon and scholars claim that these stays abroad foster global citizenship² of the students (Gambino & Hashim, 2015; Perry et al., 2013; Wynveen, Kyle, & Tarrant, 2011). Nevertheless, “there is a lack of demonstrable evidence of the transformational change attributable to participation in fieldbased experiential study abroad programs, relative to [...] other study abroad programs lacking a structured experiential component [...]” (Perry et al., 2013, p. 191).

Not only studying abroad in a university, but interning in a company or social organization abroad has also become popular (European Union, 2014). Exchange programs now also exist for interning within the higher education program (Zheng et al., 2016). Nevertheless, evidence about the different impacts of studying versus interning abroad is missing, as Perry et al. (2013) suggests. Also the Erasmus program extended its cooperation to the area of internships. On the different websites, the main incentive given to promote these internships are economical ones, for example, better access to the job market after graduation (ErasmusProgramme, 2010; ESN-International, 2017). The focus lies on economic advantages again. Thus, what can an experiential study abroad program, an international internship contribute to global skills? The experience of students who participated in either international internships, “classical” studying abroad or simply stayed at their home campus is worth a comparison in order to find out which type of learning enhances which elements of global skills. It is argued that experiential learning can prepare the students better for an employment world after their graduation. The question arises whether experiential learning abroad also has an effect on global skills, even higher than when only studying abroad. The comparison between internships and study abroad is not only important from a scientific, but also from a social perspective. It is of high interest whether the recent promotion of internships abroad are a valuable option regarding basic global skills. The created framework of global skills could give students (and later graduates) the ability to independently make their choices with a profound set of skills.

² Perry et al. (2013) define global citizenship for example through three elements: *social responsibility, global awareness, and civic engagement* (Perry et al., 2013, p. 185).

Furthermore, the literature suggests some interacting variables like the degree of mentorship regarding the time abroad as well as previous experience abroad which matter when analysing the effect of experience abroad and global skills (Denney, Sánchez-Peña, & Main, 2015; Milstein, 2005). These aspects are important to be considered as well.

Finally, the research addresses the need for quantified evidence on the relation between study/internship abroad and global skills (Blanco Ramírez, 2013; Cai & Sankaran, 2015; Denney et al., 2015; Gambino & Hashim, 2015). The topic is discussed in various articles, but mainly through qualitative approaches. Lastly, most of the evidence on the topic comes from US-centred studies (Perry et al., 2013). This study will have its focus on an international Dutch campus and its students. Several conclusions and recommendations will be formulated.

In summary, this research project addresses three problems which occur in the literature: a holistic concept of globally needed skills, the different learning outcomes of internships abroad vs. study abroad vs. staying at the home campus and the need for quantitative evidence in this field.

At the core of this research stands the question: To what extent do international internships within higher education influence the development of a student's global skills in comparison to studying abroad and staying at the home campus?

The following sub-question specify the further research and ask for a deeper analysis of the single skills which global skills include as well as for the test of two interacting variables:

- Which global skills are developed by students going on an internship abroad within their HE curriculum?
- Which global skills are developed by students studying abroad within their HE curriculum?
- Can the differences be explained by the degree of mentoring or previous experience abroad?

In order to get a distinct picture of the different concepts connected to global learning implemented in this question, the theory part also tries to answer the sub-question of how global skills can be understood in the contemporary world.

2.Theory

This chapter provides an overview of concepts used in higher education to provide education towards global needs. The concepts- global citizenship, global competences and 21st century skills are introduced, benefits and shortcomings are added. Finally, the concept of global skills is derived from the former concepts and argued for as a measurable (and better) and a valid basic framework within higher education on a global scale. Three skills – critical thinking, self-leadership and intercultural communication – are defined as basic skills useful to be achieved within a higher education setting. After the three skills will have been described, the concept of global skills is linked to experience abroad of students. Literature suggests that these kind of skills are achieved abroad, especially within international internship experience. Lastly, interacting variables are added to the causal model to check for variations of the causal relation between study experience and global skills.

2.1 Citizenship, competences and skills in a global era

In the era of globalization, concepts like global citizenship, global competences and 21st century skills are discussed frequently. The underlying idea always is to adapt skills and competences of students to the requirements of the contemporary world. All three concepts (global citizenship, global competences and 21st century skills) will be discussed shortly in order to give a full picture of higher education for a global world, with their pro and cons.

2.1.1 Global citizenship

Global citizenship is a highly discussed concept from various perspectives (Oxley & Morris, 2013). The idea of global citizenship is driven by the decrease of nation states' importance in a globalising world. Nevertheless, global citizenship can be regarded from more perspectives than the political one. Oxley and Morris (2013) developed a useful framework for all the different notions of global citizenship circulating. According to them, eight different types can be split into cosmopolitan oriented and advocacy oriented approaches. Cosmopolitan types can be political, moral, economic or cultural whereby global citizenship in terms of advocacy can be categorized into social, critical, environmental and spiritual (Oxley & Morris, 2013). The variety of global citizenship definitions are contested and emphasis are set differently.

In order to be able to locate global citizenship in the connection with the classical idea of citizenship, the concept of cosmopolitan citizenship, *citizenship beyond the state* (Delanty, 2000, p. 67) will be shortly introduced. Delanty (2000) offers an overview of the different types of citizenships under the aspect of the global age. One major difference to former citizenship types lies in its ownership. Citizenship is not gained by birth anymore but rather determined by your place of residence as well as by the discourse around an identity as a citizen within the global context (Delanty, 2000). In the course

of globalization³ human rights and its regimes became provider of rights of citizens whereby the state acts rather *as regulator* (Delanty, 2000, p. 106) in the background. According to Delanty the big challenge of today is to link this type of citizenship to democracy. If cosmopolitan citizenship does not make that link, either civil society is not connected to democracy or citizenship will remain a private concern (Delanty, 2000). Delanty summarizes that *cosmopolitanism ends with the transnational [...] but has its roots in civic communities* (Delanty, 2000, p. 143). These communities have to be build, not least to take away the breeding ground for nationalism which uses the concept of community in an exclusive way (Delanty, 2000).

Delanty offered one perspective on cosmopolitan citizenship whereby there are many more notions behind global citizenship. Shultz (2007) analyses three different directions: the neoliberal, radical and transformative perspective. For global citizenship in the neoliberal sense, the global economic system and the success within it stands in the focus. The radical notion tries to approach the hegemony seen in the world and wants to create awareness for the Global North South divide and the interconnectedness of structures. The transformational notion wants to promote a more holistic view of the world with the concept of a common humanity at the centre (Shultz, 2007).

These wide range of global citizenship ideas raises the question- which one of them is ought to be taught and how. Thus, which notions are fostered in students. Along their framework, Oxley and Morris (2013) also analyse to what extend the concepts appear in education curricula under the criteria of intended antecedents, intended transactions and intended outcomes. Especially cultural and social global citizenship concepts are prevalent here including concepts like multicultural awareness and co-operation (Oxley & Morris, 2013).

In general as well as in the context of abroad experience (Dolby, 2007; Gambino & Hashim, 2015; Streitwieser & Light, 2009) Nussbaum is a frequently cited author (Banks, 2008; Sklad, Friedman, Park, & Oomen, 2015; Skrbiš, 2014). Nussbaum (2007) offers three different components for the cultivation of world citizenship: critical thought, the ability to be aware of oneself in a diverse world and the ability to think sympathetically about others' lives. This moral view on global citizenship education underpins human rights for instance (Oxley & Morris, 2013). She identifies arts education as one tool to foster these abilities (Nussbaum, 2007). One last example will be given to show one last global citizenship type, critical global citizenship by Andreotti (2006). The notion assumes that everyone is part of the problem of inequalities in the world which have to be addressed through critical literacy (Andreotti, 2006). Whereby, Nussbaum's definition falls under the moral version of global citizenship, Andreotti takes a critical approach (see Oxley & Morris, 2013). Thus, global citizenship regarded by different

³ Delanty identifies democracy and capitalism as driving forces behind globalization which are reflected in different notions of global citizenship as well (see Shultz, 2007).

people implies different concepts and thereby, demands different educational approaches. Nevertheless, or especially because of these indirect opinions within the concept lead to criticism.

The idea of global citizenship is ideological. Shultz (2007) outlined some possible ideologies underlying the concept. On the one hand, global citizenship follows an ideal which students are supposed to embrace. On the other hand, there is not something like a world government which promotes a legitimization of global citizenship through democratic elections. Therefore, it seems impossible to find a concept of global citizenship which is legitimized as “the one” to be taught. Furthermore, when choosing one of the approaches to global citizenship for a higher education curriculum the student does not have the choice himself or herself anymore to decide which aspects of global citizenship he or she wants to learn (within the HE). Nevertheless, a critical attitude of students seems beneficial to take from this approach as it allows the student to choose and learn about their own idea of being a global citizen if they wish to do so.

2.1.2 Global competences

Jooste and Heleta (2017) belong to the scholars who see the term global citizenship much more critically and argue for the need of global competences rather than of global citizenship. Global citizenship would remain a rather abstract concept giving “fancy sounding titles” which does not hit the need of competences higher education graduates should have. Furthermore, the concept was and is rather used by the Global North. An inclusive dialogue about the concept is missing in higher education (Jooste & Heleta, 2017). Jooste and Heleta refer to Skrbiš (2014) in order to specify what global competences actually are. Skrbiš discusses the different outlooks of global competences. Global competence, he summarizes, consists out of three dimensions: attitude, knowledge and skills. Some of the concepts mentioned repetitively are an open attitude, knowledge about the world history and skills to interact across cultures. Skrbiš suggests the following four concepts as basic along the dimensions of global competences: responsibility, openness, commitment and compassion (Skrbiš, 2014).

Global competences hope to address global needed abilities in a practical way, whereby it is questionable whether particular attitudes, skills and knowledge are needed and logical to be taught in various contexts. Cho and Chi (2014) for instance suggest that attitude differs depending on the context students are grown up in. Sets of global competences remain various and contested (Jooste & Heleta, 2017; Skrbiš, 2014).

2.1.3 21st century skills

Another concept discussed in the frame of education in a global age are 21st century skills. Even though the concept itself implies “skills” only knowledge is integrated as well. Jerald (2009) suggests a categorization in foundational knowledge and skills, practical literacies and broader competences for instance. The emphasis lies on skills to an extent that the concept has a focus on the adaptability of

knowledge by students rather than the amount of knowledge (McComas, 2013). Dede (2010) compares different frameworks of 21st century skills as one particular definition does not exist. The Partnership for 21st Century Skills' Framework (P21) – one of the most accepted (Dede, 2010) – defines the following concepts: Learning and thinking skills (for example critical-thinking and problem-solving skills, communication skills), ICT literacy and life skills (for example Leadership) (Dede, 2010). 21st century skills are discussed extensively on the lower education levels within the classroom context (Larson & Miller, 2011) whereby the push towards 21st century skills on all levels of education has increased over the last years (McComas, 2013). The American Association of College and Universities (AACU) for example underlines the importance of fostering these skills also later on in higher education (Dede, 2010). When looking at the categories of skills once more one is actually wondering whether these skills are really special for the 21st century. Silva (2009) states that *21st-century skills[...] are not new, just newly important* (Silva, 2009, p. 631). In an ever faster changing environment it becomes especially necessary to have critical thinking or leadership skills for instance. Moreover, the demands of the labour market has changed which now requires much less routine skills but rather analytical and similar skills (Silva, 2009).

21st century skills frameworks not only include skills but a whole methodological concept mainly created for the schooling context. Basic literacy skills are included – like reading, writing and so on – which are not at focus in HE. Some of the skills are nevertheless very crucial in higher education as well, as the American Association of College and Universities (AACU) suggests (Dede, 2010). Thus, the framework of 21st century skills is promising as it excludes strong ideological tendencies and does not aim for fancy sounding titles. Moreover, the approach focuses on skills⁴ learnable by students across borders.

The following sub chapter will argue for three combined skills connected to the 21st century skill framework.

2.2 Global skills: A framework for global needs

All the above discussed concepts address the needs of the contemporary world and the importance to educate students so that they can be ready to take on these needs and the challenges attached to it. All three concepts have their reasoning for a particular structure and content. Whereby, the structure does not easily apply for higher education on a global scale (c.f. e.g. 21st century skills or global competences), the content has promising elements – for example critical thinking skills which have to be set together. Although, cautiousness is demanded so as to not include major biases (see e.g. global citizenship). Aiming at a concept which is likely to be applicable independently from the geographical

⁴ In the literature the terms skills and competences are sometimes confused. It is important to remember that skills are a part of competences. Some 21st century skill sets thus actually describe 21st century competences.

context I suggest to create a new framework, a set of skills – global skills. The framework argues for the three core skills: critical thinking, self-leadership and intercultural communication (see Figure 1). Before the concepts are described in detail the particular choice of these three skills will be reflected.

The three skills can be found in similar forms in the 21st century skill framework as well. Considering the critics above, only these three skills have been chosen as essential within higher education programs. In order to not implement any of the ideologies or narrow frameworks of global citizenship, the framework remains broad and focuses on skills as it appears rather difficult and critical to convey particular beliefs or attitudes (see Cho & Chi, 2014). As the 21st century framework suggested, rather than including knowledge itself ways to apply knowledge is included, thus skills. Moreover, it is necessary to focus on a small set of skills in order to not repeat and complicate the discussion about appropriate skills.

One of the central skills is the ability to think critically. Critical thinking allows one to judge situations (Hisako, 2000). In a world of fast changes and ever new challenges it seems even more important to be able to view issues critically. But at the same time critical thinking becomes more complex as well (Hisako, 2000). Moreover, critical thinking skills are demanded in different areas, in decision making, in working places, in the society as a whole (Yang & Chou, 2008). Thus, critical thinking skill has been important in education for a long time (Yang & Chou, 2008) and *has been included as one of the core learning outcomes of college students by many institutions* (O. L. Liu, Frankel, & Roohr, 2014, p. 1), now with new significance in the 21st century (Dede, 2010; Hisako, 2000; Silva, 2009). Additionally, skills in critical thinking are an element needed for global citizenship as mentioned above (see 2.1.1). Critical thinking supports the student in reflecting and choosing their ways of engaging as a global citizen (if wanted).

The next skill- self-leadership can be found with in the 21st century skill framework as well under the skill- leadership. Leadership often is defined as leadership of others. It can also include self-leadership (Zapalska, Jackson, & Zelmanowitz, 2016). Furthermore, self-leadership includes some elements of self-direction and self-management which are part of 21st century skills as well (Dede, 2010; Jerald, 2009). Thus, self-leadership is a skill which fosters self-direction on the one hand, and sets basic skills for developing further leadership skills. Self-leadership skills fall under the category of intrapersonal competencies which also the OECD regards as central as individuals have to be able to orientate themselves within a globalized world (Jerald, 2009).

Lastly, intercultural communication skills bring elements of intercultural competences and communication together. Kim (1999) argues for the need of intercultural communication skills as part of higher education for three reasons: the well-being of the economy, the adaption of students towards the (ever) changing labour market and in general the functioning of students within the 21st century world. Intercultural communication skills thus belong to the core skills are student needs today to interact in this complex world as *campuses, companies and communities* (T. R. Williams, 2005, p. 357)

are internationalizing. Intercultural situations do not only appear abroad but also at home through increased mobility of people. Therefore, intercultural communication skills seem eligible to everyone.

After benefits of each skills have been outlined, some more light will be shed on the combination of these three skills.

Firstly, scholars argue that anyway these three skills are necessary for employees at the labor market (e.g. Ay, Karakaya, & Yilmaz, 2015; Silva, 2009) (see 2.1.3).

Secondly, looking at individual and/or collective needs and benefits behind the skills shows why these three skills make sense. Critical thinking skills enable an individual to examine one's own situation. Especially in diverse contexts, it is necessary to be able to analyse oneself in order to be able to take a next step to interact with others (Nussbaum, 2006). Besides reflecting and analysing oneself and the environment, self-leadership skills adds the ability to find strategies to act. Self-leadership skills extend the capacities of an individual to take over responsibility for instance through self-awareness of his or her life. With self-leadership, one is then even better equipped to act on the individual level as well as on the team level (Stewart, Courtright, & Manz, 2011). The individual thus has the possibility to make use of these skills in a team as well. The skills mentioned so far seem to be helpful also for students who do not live in a globalized setting. According to Silva (2009) they became newly important (see 2.1.3). Through information flow nowadays the world has grown complex. Hence, almost everywhere these skills become especially significant for a stable good life (Larson & Miller, 2011). Intercultural communication skills offer one more set of abilities needed and beneficial in a collective context as it brings us together to exchange. Students abroad and at home may need these skills equally as intercultural spaces exist on a diverse campus (at home) as well.

Thirdly, a cognitive and social basis is built in the students through these skills which allows them to individually expand their views as well as their *capabilities* (Neuhäuser, 2013, p. 64). This freedom based idea allows the students to gain more freedom in their choices as they become able to reflect and interact better. It also gives them freedom in their further choices without dictating one specific idea of global competence or global skills.

Lastly, the detailed description of the individual skills will give another idea how these skills benefit the higher education student.



Figure 1: The Composition of Global Skills

2.2.1 Critical thinking – often combined with problem solving (see 2.1.3, 21st century skills) – is a skill which is promoted in different concepts. Following Tagore and Nehru, Nussbaum defines critical thinking as *the capacity for critical examination of oneself and one's traditions* (Nussbaum, 2006, p. 388).

This rather broad definition demands for some specific explanations. Profetto-McGrath (2003) summarizes the definition of Facione of critical thinking skills which includes analysis, inference, evaluation, deductive as well as inductive reasoning (Facione (1997) in Profetto-McGrath, 2003). A crucial distinction is described in this article between critical thinking skills and their disposition, thus their application. Thereby, the issue is that skills are not only learned but also used.

Siegel (1988) analyses in his book *Educating Reason* some influential authors in critical thinking and education from an abstract perspective which can broaden the perspective on critical thinking once more. Ennis has developed an extensive list of skill, including *1.judge the credibility of sources, 2.identify conclusion, reason and assumption, 3.judge the quality of an argument [...]* (Ennis, 1993, p. 180). After critics on only focusing on skills he extended his concept by emphasizing on the necessity to also make use of these skills (Siegel, 1988). Siegel argues for a stronger tendency in critical thinkers as they should regard critical thinking as a value itself which then is connected to further values like honesty, thus criticizes that this tendency (to use skills) is still underestimated by Ennis (Siegel, 1988). Another author reviewed by Siegel is Paul and his work *Teaching Critical Thinking in the Strong Sense*. Paul (1984) argues for a strong sense of critical thinking which not only teaches tools how to think critical but rather emphasis on the tendency to use them. Critical thinking in the strong sense to him is when students (of higher education) literally question their beliefs and not reject simple beliefs they were not close to anyway. The students rather have to understand that arguments exist in networks – also worldviews – which cannot easily be refuted (Paul, 1984). Critical thinking then focuses on “*global*” problems (Paul,

1984, p. 3) (not just what is in front of you) on the one hand and on the self (through critical confrontations with oneself) on the other hand (Siegel, 1988). The authors thus emphasize on the tendency to use the skills once more (see 2.1.3) and further highlight the importance of significant critical thinking rather than superficial one.

That critical thinking is a profound base for further learning and action shows Fairbrother (2003) in his study on how students in Hong Kong in comparison to those in the Mainland use their critical thinking skills and adaption to resist hegemonic nationalism. Nussbaum (2006) reasons that critical thinking is a skill which is crucial for life and communication in a crossing borders, a diverse context.

Critical thinking builds the base for all further learning as well as for the other two skills: self-leadership and intercultural communication. Critical thinking supports a person to analyse one's own situation and how to act within this situation (self-leadership) and it moreover helps to communicate in intercultural situations (see Nussbaum (2006)).

2.2.2 Self-leadership skill is listed as a part of 21st century skills in some definitions of the concept (Dede, 2010). Leadership might be perceived as the ability to lead others. In this research the definition puts self-leadership as part of leadership in the centre. Gandhi developed a theory called “enlightened anarchy” in which self-rule is the core element (Friedman, 2008). Only if a person takes over responsibility for his or her action it is possible to live a self-governed life. The leadership of a person is able to radiate, once self-leadership is gained. The emphasis of self-leadership (compared to self-management and so forth) lies in the *self-determined (rather than externally dictated) governing standards and a unique set of self-motivation techniques* (S. Williams, 1997, p. 139).

Wingenbach and Kahler (1997) address self-leadership including *decision making, getting along with others, learning, management of self [and] understanding self* (Wingenbach & Kahler, 1997, p. 25). This is a framework with many concepts and less details. Houghton and Neck (2002) with a rather managerial background split self-leadership into three categories related to strategies: *behavior focused strategies, natural reward strategies and constructive thought pattern strategies* (Houghton & Neck, 2002, p. 673). Whereby, the behaviour focused strategy is built around self-awareness including goal setting for instance, natural reward strategies describe to what extend one takes pleasure in tasks and the motivation towards it. Constructive thought pattern strategies comprise the way of how thinking process are evaluated and whether one does, for example positive self-talk (Houghton & Neck, 2002). Besides organisational benefits, self-leadership can take someone into a process of self-empowerment (Houghton & Neck, 2002).

2.2.3 Intercultural communication- the third skill - should not be confused with intercultural competences which are sometimes used interchangeably with global competences (Skrbiš, 2014). Intercultural communication is not just about the skill to be able to speak to each other across borders. Arasaratnam (2013) answers the question where and why intercultural communication is actually

needed. In so called *symbolic intercultural spaces* (Arasaratnam, 2013, p. 48) – moments when cultural differences influence the situation of communication – it is helpful to know the social expectations behind a situation of communication and moreover, have the appropriate skills to act in such a situation. Intercultural communication has been analysed under different frameworks and concepts, for example under the language aspect but also by the UNESCO including seven basic skills (Cots, Aguilar, Mas-Alcolea, & Llanes, 2016).

Williams (2005) offers a definition of such intercultural communication skills including two basic skills: intercultural adaptability and intercultural sensitivity. These two concepts summarize what other scholars have frequently wrote about using different terms, the empathy towards intercultural communication and the possibility to translate communication despite all its differences into practice (T. R. Williams, 2005). Williams (2005) also reviews the importance of *personal stability and strength* (T. R. Williams, 2005, p. 359) within intercultural communication which is analysed by different authors. This component connects to the skill of self-leadership outlined above. Self-awareness, for instance can increase personal stability and strength.

2.3 Global skills and Study abroad, Internship abroad or staying at the home campus

After establishing the concept of global skills this section is connecting the concept with experience abroad. First, some clarification towards the different types of stays abroad is needed. Whereby, study abroad refers to an experience abroad as a student signed in a higher education institution, an internship abroad (also international internship) describes a working experience in an organization of any kind in a foreign country. This distinction is not made by many authors and often when talking about study abroad or experience abroad, only the context of studying at a higher education institution is considered (see Dolby, 2007; Passarelli & Kolb, 2012; Van Hoof & Verbeeten, 2005). Nevertheless, with the increase of international internship opportunities within higher education curricula, the distinction appears more and more in the literature (Boni & Calabuig, 2017; Vandever & Menefee, 2006).

Many studies analyse the different advantages of study abroad: According to Dolby (2007) universities promoting study abroad claim that studying abroad does not only bring students advantages on the job market but also expand and question the students' world views. When asking students about their own experience they report for instance increased understanding of other cultures and learning processes about themselves (Van Hoof & Verbeeten, 2005). In a study about Spanish students working in organizations in Latin America during their higher education curriculum, students' reports were analysed. Students are highly curious to understand the culture and social issues from a critical perspective (Boni & Calabuig, 2017). Boni and Calabuig (2017) further outline that *contact with different Southern people and organizations leads to understanding and respecting other views, perspectives, and beliefs* (Boni & Calabuig, 2017, p. 33). These findings reflect some features of critical

thinking. Moreover, it seems that the working experience and the daily encounter with different (working) habits led especially to such realizations (see Boni & Calabuig, 2017) which suggests that internship situations even deepen the experience.

The last example of a study already highlighted the connection of experience abroad and one of the global skills. Cai and Sankaran (2015) studied how short-term study abroad⁵ impacts the students' critical thinking skills in detail. While emphasizing the immersion into the other cultural context they analyse a successful impact on critical thinking skills of the students through the study abroad (Cai & Sankaran, 2015).

Especially, intercultural skills, thus intercultural communication skill as well, demand a different setting to learn than just the classroom (Montgomery & Arensdorf, 2012). Intercultural communication skills live from intercultural encounters which can be intensively made abroad (T. R. Williams, 2005). Batey and Lupi (2012) show in their qualitative study that students who did an internship abroad report all abilities of cross-cultural adaptability (which is part of intercultural communication). Thus, intercultural communication is a crucial part learnt in international internships.

Within new communities abroad the student is challenged to understand how to interact there which is often described as a chance for personal development (Rosch & Haber-Curran, 2013). Looking closer into this situation it especially demands to develop self-leadership. In unknown situations one has to rely on oneself and one's own strategies. Another finding suggests that self-leadership can be developed in an open scope as an abroad experience without well-known structures. As personality and self-leadership correlate this demands an individual and open frame to gain those skills (S. Williams, 1997). Analysing Boni and Calabuig's study (2017), the special connection between international internships and global skills was already highlighted. Even though Passarelli and Kolb (2012) focus on study abroad only, it seems that these experiential learning⁶ opportunities can be analysed in an international internship too. Passarelli and Kolb (2012) analyse the relationship between studying abroad and experiential learning. They identify a campus abroad as a fruitful learning environment where the student can gain cultural competence. Various new relationship to advisors, roommates, friends, etc. in the foreign country offer these learning opportunities (Passarelli & Kolb, 2012). Campbell and Walta (2015) add that the immersion into the different environment abroad led to a change in the cultural understanding of the participants during their short-term working experience.

Moreover, the study of Campbell and Walta (2015) claims that internships with a high degree of immersion in the "other" cultural context can change students perspectives which could lead to an higher degree of global skills as well.

⁵ In this study the term "study abroad" is used in the sense of educational travel and not as studying within a foreign higher education institution (Cai & Sankaran, 2015).

⁶ Experiential learning is a way of learning which puts practical experience at the core (Passarelli & Kolb, 2012).

Considering the connection of global skills and study abroad and the special circumstances of internships, the following hypothesis is derived:

H1: Students who have done an internship abroad have a higher degree of global skills than students who studied abroad, than those who did not go abroad.

2.4 Interacting variables

Figure 2 illustrates the causal relations argued for above. Additionally, it visualizes how the possible interacting variables (in grey boxes) influence the causal model.

2.4.1 The influence of mentorship on experience abroad

Y. Liu, Xu, and Weitz (2011) define mentoring *as the degree to which the supervisor assigns challenging tasks to the intern, provides proper assistance in accomplishing the tasks, and purposefully helps build the intern's positive impression of the organization by establishing horizontal and vertical networks in the organization*. Denney et al. (2015) reason in their study that better advice of mentors before and during the time abroad can lessen the effect of negative experience due to high expectations which could not be satisfied. *Every student would benefit greatly from more mentorship and advice about the transition to living in another country, both before and during the transition* (Denney et al., 2015, p. 6). Certainly, a bad experience will also affect the learning of the students. Moreover, mentoring while doing an internship has been tested to support emotional stability and social activity of the interns which increased the overall learning (Y. Liu et al., 2011). Lastly, experiential learning argues in favour of an instructor who supports and challenges the learner in order to achieve high outcomes, for instance in critical thinking as Heinrich et al. (2015) argue. In order to do justice to findings in this research, the influence of mentorship on the relation between experience abroad and global skills will be tested.

Following interacting hypothesis is derived:

H2a: The effect of studying abroad on global skills is stronger for students who are mentored than for students who have not been mentored.

H2b: The effect of an internship abroad on global skills is stronger for students who are mentored than for students who have not been mentored.

2.4.2 The influence of previous experience abroad

Two weeks abroad can already have a significant impact on the student (Gambino & Hashim, 2015). The time abroad or at home during the undergraduate study and the achieved global skills might also be influenced by former stays abroad. Milstein's (2005) study suggests that students in her study who did

not report a change in their self-efficacy⁷ explained later that they had been abroad already. Therefore, previous experience abroad are included as an interacting variable. Stays abroad are considered when they not only had a leisure character and took place for two weeks or longer.

A second interacting hypothesis is created:

H3a: The effect of study abroad on global skills is stronger for students who do not have previous experience abroad than for students who have previous experience abroad.

H3b: The effect of internship abroad on global skills is stronger for students who do not have previous experience abroad than for students who have previous experience abroad.

H3c: The effect of non-mobility on global skills is stronger for students who do not have previous experience abroad than for students who have previous experience abroad.

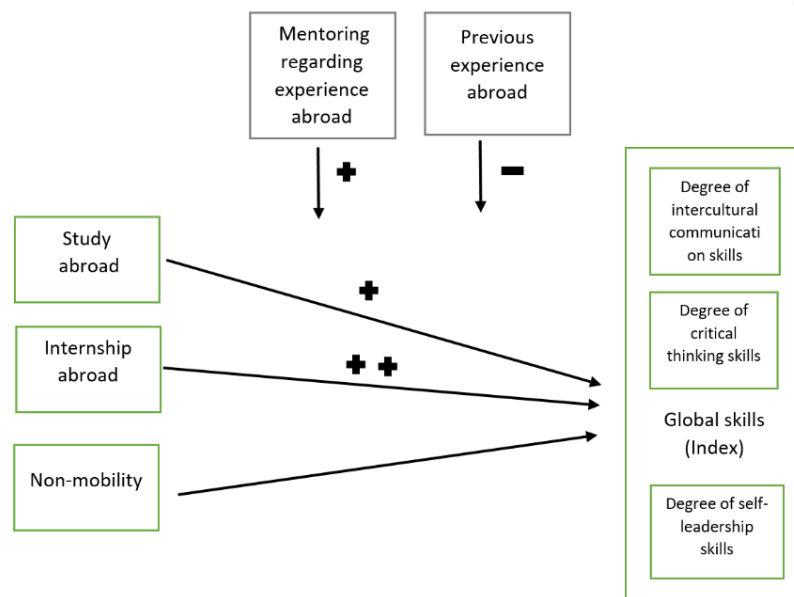


Figure 2: The causal model

⁷ Milstein (2005) analysed in her study to what extend staying abroad can foster personal growth, in particular self-efficacy.

3. Methods

In Chapter 2 the framework of global skills has been discussed, thus answered the first sub-question. The framework which focuses on three global skills is an attempt at an unbiased approach as far as possible to basic high education skills in a global context. Moreover, the study wants to examine the relationship between experience abroad and global skills through quantitative data in order figure out how the above mentioned concepts correlate, if they do at all.

As mentioned above, data on global citizenship or comparable concepts in connection with study abroad as well as internships abroad in particular are rare. The Erasmus statistics offer an insight into variables connected to mainly study abroad, but few data on internships abroad. These data mainly focus on the economic and employment benefits of international experience and not on the skills or competences of students involved (European Union, 2014; EuropeanCommission, 2015). The European Social Survey also provides a huge data set on various social topics, but does not consider study abroad in higher education as a variable. Even though the big data sets of World Bank, UNESCO and others provide data on student mobility, they do not include a distinction between internships and study abroad. Private sources like i-graduate provides useful data⁸ but are publically accessible.

Therefore, the explorative character of the study demands own data collection in the form of a survey.

3.1 Research Design

Three groups of students will be addressed: (1) students who have been abroad for studying, (2) students who have been abroad on an internship and (3) students who remained at their home campus. In case students at home show a higher degree of global skills it might be possible that students going abroad actually lessens the skills, a reverse causation. If that is the case it can be useful to investigate in the issue in more depth. In order to address the problem of measurement validity, the survey was created along already existing and renowned studies (see operationalization). A further threat to the design which is difficult to exclude fully is spuriousness. To counter that threat, variables like previous experience abroad and degree of mentorship are tested as intervening variables besides several other control variables.

3.2 Case selection and Data collection

The study focuses on the students' experiences rather than on the institutional level. Therefore, the units of analysis are students of a higher education institution. As higher education institution the University of Twente (UT), Enschede has been chosen.⁹ The university offers different programs which give

⁸ <https://www.i-graduate.org/services/impact/> (accessed on 31/03/2017)

⁹ By choosing only one institution the setting the students studied in before the abroad experience is relatively similar and thus, excludes at least some reasons of spuriousness.

students the opportunity to go abroad and a focus lies on internationalization in general (University of Twente, 2017). The study comprises students who are still doing their undergrad degree at the UT. Importantly, the students must have concluded their fifth semester already as in some study programs the option to go abroad is included in the curriculum in this semester. The survey was spread via different mailing lists of the international office of the University of Twente. Students responded voluntarily. No particular selection was applied within the group of final year bachelor students. For the first group of students who studied abroad, the European Student Network (ESN) and the International office of the university were addressed to spread the survey. Mobility coordinators of the different faculties were a great help as well. In order to get students to fill the survey who have done an internship abroad, former students who participated in a “crossing borders” minor were addressed. The international office could help to reach out to former interns as they partly can receive funds through the Twente Mobility Fund (TMF) organized by the international office. The third group of students who did not go abroad during their higher education are addressed through private contacts (through social media and own mailing lists).

3.3 The survey

The survey used a self-reported approach (see appendix 1). Rather than conducting tests which examine whether the students really gained this skills, the survey asked the students themselves whether they feel and think that they developed certain skills.

The survey included statements formulated in the first person which can be agreed or disagreed on by the participant.¹⁰ The answer possibilities will range from strongly agree to strongly disagree on a five items Likert-scale. Where needed space for open-ended answers will be given for clarification or specifications.

Before the three skills are tested the survey asks for some demographic and study-related information. Some of the study-related questions then are customized and only asked for one or two of the three groups of participants. The following subchapter on operationalization focuses on the relevant variables for this research only.

3.4 Operationalization

The independent variable about the abroad experience within the curriculum of the higher education institution has been asked for in question five (see Appendix 1). Students could choose between three categories: internship abroad, study abroad and non-mobility whereby one could also opt for more

¹⁰ The survey still asked for the type of mentorship and the different type of phases of mentoring which could be included differently coded as well. Due to the limited scope of the research not all possible control variables included. The further information nevertheless are provided to the UT and the relevant offices in order to make use of these additional information.

answers (internship and study abroad). Each of the types of study experience has been coded as a dummy variable because a categorical variable with three variables can be included in the regression analysis only when coded that way.

At the core of the survey stand the three skills which are part of global skills: critical thinking, self-leadership and intercultural communication. The three concepts were asked for in blocks. Six to seven statements per skill the students had to respond to whereby a hypothetical case was given in the beginning in order to make sure that the students imagine the same situation when answering the statements.

Critical thinking skills are aligned along the concept used by Profetto-McGrath (2003) including the indicators- analysis, inference, evaluation, deductive and inductive reasoning. Moreover, the statements will be formulated in an active way. The statements not solely ask for the awareness of the skill but whether the students really make use of it in their everyday life. In that way the necessity to test the tendency of students to really use the skills is addressed. Two items are added in order to do justice to Paul's concept (1984) of the strong sense of critical thinking. The ability of perceiving and criticizing arguments in the perspective of worldviews is tested here.

The case used for the seven statements about critical thinking was the following: *Imagine that you are discussing in a class of your program at the UT about whether your area of study should contribute towards a (partial) solution of the refugee crisis* (see Appendix 1). The case was selected as it can be assumed that students know the situation of a discussion at the UT and moreover, the so called refugee crisis is a present topic in the media, everyone has heard about. The seven detailed statements which followed this case can be found in question six of Appendix 1. Out of these statements the critical thinking index (CTI) was computed by adding the scores of all statements (each with strongly disagree = 0 up to strongly agree = 6) and dividing the score by seven in order to get the average score in critical thinking. The lowest index score possible would be zero and the highest six.

Self-leadership will be reported by the students by taking position towards some statements out of the test revised by Houghton and Neck (2002). The sub-concepts of visualizing successful performance, self-goal setting, self-talk, self-reward, self-punishment, self-observation and focusing on natural reward will be included with one item each (Houghton & Neck, 2002). One sub-concept has been excluded – evaluation beliefs and assumption – as it overlaps with critical thinking. Thus, responses to seven items are asked for in this block (see Appendix 1, question 7).

The block of self-leadership was introduced by the following case: *You have held a presentation at the end of a module in front of your class about a scientific paper (e.g. your bachelor thesis) you wrote on your own. Now you are reflecting on how you normally act before, during and after a task like this presentation* (see Appendix 1). It can be assumed that every student in their final Bachelor year have experienced a similar situation or can imagine how it will be to present their bachelor thesis. This

concrete examples supports the respondent to reflect about their self-leadership skills. The seven statements have been coded to a self-leadership index (SLI) the same way as critical thinking. The only difference is that statement five of self-leadership skills was coded reversed as the statement is formulated negatively. Thus, for statement five the highest score 6 was received for strongly disagreeing and the lowest score 0 for strongly agreeing.

Intercultural communication skills was split into intercultural sensitivity and adaptability (see 2.2.2). Following Williams parts of the Intercultural Sensitivity Index (ISI) are used to measure ethnocentrism, ethnorelativism and intercultural communication awareness. Moreover, intercultural adaptability is divided into flexibility/openness, personal autonomy and perceptual acuity towards different circumstances in line with the Cross-Cultural Adaptability Inventory (CCAI) (T. R. Williams, 2005). In the actual CCAI the category emotional resilience is included as well whereby the definition resembles rather an attitude than an ability and thus was excluded here. All in all, Williams (2005) created a mix of reputed inventories which especially measure intercultural communication skills. Thus, this approach is suitable for this study even though the question set was reduced due to basic formulation and measurement of skills in this research. For the block of intercultural communication skills six statements were used only.

In this block (see Appendix 1, question 8) no case was put in front as the statements are formulated in such a way that they speak for themselves. A case was not necessary. Also these six statements were coded as index, the Intercultural communication index (ICI), in the same manner as the previous two indexes. Statement one of the intercultural communication statements has been formulated negatively and thus was recoded in the same way as statement five of the self-leadership skills.

Out of the three indexes the main dependent variable global skills index (GSI) was computed by adding the indexes and dividing them by three.

The two interacting variables mentoring and previous experience abroad have been coded as dummy variables. For mentoring regarding the experience abroad the definition of Y. Liu et al. (2011) has been used (see Appendix 1, question 9). Question 9 was recoded in mentored (=1) and not-mentored (=0). Previous experience abroad was defined as a learning experience with a minimum of two weeks (see Gambino & Hashim, 2015) and coded as previous experience abroad: yes=1, no=0.

The model moreover includes one control variable Dutch: Being Dutch (score=1) or not (score=0). With this dummy variable it is checked whether students study full-time abroad or within their home country. The effects might change when controlling for full-time mobility as students who anyway live and study abroad might have different learning experiences.

In sum, the categorical independent variable coded in three dummies (Internship abroad (yes=1, no=0), Study abroad (yes=1, no=0) and non-mobility (yes=1, no=0)), the four different dependent variables (CTI, SLI, ICI and GSI) coded on scales ranging from 0 to 6 and the dichotomous control variable Dutch (yes=1, no=0) will be included in the further data analysis.

4. Data analysis

In this chapter the collected data will be analysed. First, an overview of the data and its descriptive statistics will be given. Then the correlations and finally, further analysis are displayed.

The data set contains 57 respondents. 19 of these cases are surveys which have not been filled out completely, thus cannot be used in all parts of the analysis. 31 respondents wanted to fill in the survey but opted out as they did not belong to the unit of analysis. Further 24 respondents started the survey but chose to not participate after only very few answers which makes their data not usable.

4.1 Sample characteristics Representativeness of the data set

57 students of the University of Twente in their final Bachelor year filled out the survey completely. Table 4.1 displays the characteristics of the sample. The gender is spread almost equally with one male more than females in the sample. Moreover, two people did not like to share their gender and are listed as missing as three cases are less in order to make an own category which can be interpreted. No students identified with the option x. Interestingly, around 65 percent of the sample are not Dutch and 56 percent are German. In general, the University of Twente (UT) has a lot of German students enrolled. The high ratio of Germans in this research can be explained through the many European Public Administration students who participated (29 students, 50.9 percent of the sample) as this study program has a large proportion of German students. This study program includes students pursuing a joint degree with the Westfälische Wilhelms-Universität Münster in Germany which are mainly German. This group of the sample also explains why 68.4 percent study a program in the field of social science even though the UT focuses on technical programs (see Bachelor Programs in Appendix 1).

The countries of origin have been recoded into an extra dummy variable (Dutch and non-Dutch) in order to compare these groups later on in the analysis. Rather than checking for the nationality of the students, this variables reflects whether a student is studying in his or her home country or not. Dutch, thus is equal to the meaning that a student studies in his or her home country whereby non-Dutch means that a student studies at a foreign higher education institution (also called a full-degree mobile student). Table 4.1 shows that almost two third of the sample are non-Dutch, thus full-degree mobile students. Figures of the whole final year Bachelor population and their countries of origin could not be received which would make clear comparison with the sample possible. The figures of new incoming students though show a different ratio of Dutch and non-Dutch students. Of 2119 newly enrolled students 650 came from outside the Netherlands, thus around 30.7 percent (University of Twente, 2016a). This is still a noteworthy amount of non-Dutch students, whereby the sample includes a much larger percentage of non-Dutch students.

Looking at the mobility, a high percentage of 75.4 of the students were mobile. Figures about the overall mobility of UT students could not be found. The year report of the UT of 2015¹¹ (University of Twente, 2015) states though that 228 students in 2015 received financial support regarding their stays abroad, for instance Erasmus scholarships. Even though no other figures could be found it is likely that a few more students went abroad without funding. Compared to the overall student population of 9645 in 2015 (University of Twente, 2016a) it is unlikely though that the mobile part of UT students in their final Bachelor year as well as in the whole student population is somehow close to 72.8 percent when only a little more than 228 students went abroad. The sample, thus, includes a high amount of mobile students which is not representative for all final year Bachelor students.

These basic sample characteristics do not only help to get an overview of the sample but the dummy variable Dutch is used as control variable later on as well.

Table 4.1 Basic Sample Characteristics

	Intervals	Frequency	Percent	Std. Deviation
Gender	Male (0)	28	49.1	0.50
	Female (1)	27	47.4	
	Missing	2	3.5	
Country of Origin	Netherlands (1)	20	35.1	0.75
	Germany (2)	32	56.1	
	Other EU (3)	2	3.5	
	Outside EU (4)	3	5.3	
Dutch	No (0)	37	64.9	0.48
	Yes (1)	20	35.1	
Study Program in Social Science	No (0)	18	31.6	0.47
	Yes (1)	39	68.4	
Type of Study Experience	No Mobility (1)	14	24.6	0.80
	Study Abroad (2)	26	45.6	
	Internship Abroad (3)	15	26.3	
	Study and Internship Abroad (4)	2	3.5	

¹¹ Even though the year report of 2016 is already available as well (see University of Twente, 2016b) the one of 2015 has been used as it includes more detailed figures about students who go abroad.

4.2 Descriptive Statistics of the Data

The descriptive statistics are presented in order to give an overview of the different variables. The focus is on the independent and dependent variables.

Table 4.2. Descriptive statistics of all variables (N=57)

	Intervals	Frequency (Percent)	Minimum	Maximum	Mean	Std. Deviation
Internship Abroad	No (0)	40 (70.2)	0	1		0.46
	Yes (1)	17 (29.8)				
Study Abroad	No (0)	31 (54.4)	0	1		0.50
	Yes (1)	26 (46.5)				
Non-Mobility	No (0)	43 (75.4)	0	1		0.43
	Yes (1)	14 (24.6)				
Critical Thinking Index	No skills (0) until Very high skills (6)		2.00	6.00	4.72	0.62
Self Leadership Index	No skills (0) until Very high skills (6)		1.43	4.86	3.81	0.65
Intercultural Communication Index	No skills (0) until Very high skills (6)		2.33	5.50	4.34	0.62
Global Skills Index	No skills (0) until Very high skills (6)		2.21	5.01	4.29	0.45
Mentored regarding the time abroad	No (0)	28 (49.1)	0	1	0.51	0.50
	Yes (1)	29 (50.9)				
Previous Experience Abroad	No (0)	34 (59.6)	0	1	0.40	0.49
	Yes (1)	23 (40.4)				

Table 4.2 first displays the independent and the dependent variables. The different types of study experience have been recoded as dichotomous variables. Coded as dummy variables the analysis of these three types of study experience will be comparable later on. The two students who had study and internship experience abroad have been put into the category of internships abroad as internships abroad are expected to have a bigger impact on the students. In the survey the respondents answered various statements about their self-perceived skills with their degree of agreement, from strongly disagree to strongly agree. The statements were grouped along the three skills critical thinking, self-leadership and intercultural communication. Out of each statement group an index has been created, by adding the scores together and dividing it through the number of statements (critical thinking index (CTI), self-leadership index (SLI) and intercultural communication index (ICI)). The individual values of each index show the average score of the respondents of the skill. As most of the statements were formulated

positively the higher the agreement in general is the higher the score of this skill is. Two statements (one of SLI and one of ICI) were written negatively, thus were recoded as the stronger one disagreed the higher one's skills were.

Self-leadership skills seem to be not as much developed as critical thinking skills and intercultural communication skills. The mean of the Self Leadership Index is 3.81 whereby the Critical Thinking and Intercultural Communication Index have means of 4.68 and 4.34.

Accordingly, the Global Skills Index (GSI) has its mean in the middle with 4.29 compared to the other indexes as the index was calculated through the sum of the other three indexes divided by three.

The two last variables of Table 4.2 give an overview of the interacting variables. Previous educational experience abroad as well as mentorship connected to the experience abroad could have an impact on the degree to which global skills are achieved through experience abroad during one's higher education. More than one third of the sample had experience abroad before their study experience (40.4 percent). The distribution makes it possible to use this variable in the analysis later on. Out of the 57 students 29 students who went abroad state to have been mentored. As also 28 students have not been mentored a comparison will be possible here as well. The further data show that only three of the 29 mentored students feel that they have not benefited from the mentorship. This high percentage of students who benefited from mentorship strengthens the variable mentorship as it had a positive impact for most of the students.

4.3 Bivariate correlations between the variables

Table 4.3.1 Means of Global Skills Index by Experience abroad (N= 57)*

	Mean	N
Non Mobility	4.29	14
Internship Abroad	4.25	17
Study Abroad	4.29	26

* No significance at a p-value of 0.05

First of all, the means of global skills are compared among different groups of the sample. Table 4.2.1 displays the means of the global skills index by grouping the students along their study experience. One can see that students who did an internships abroad have a lower mean of global skills with 4.25 than those who went abroad or stayed at the home campus (both 4.29). The figures indicate also that there are no big differences between the groups. This small and non-significant difference is not in line with the expectation of the hypothesis H1.

Table 4.2.2 compares the global skills of mentored and not mentored students. Students who have been mentored regarding their experience abroad show a slightly higher mean of global skills (4.33) than those who have not been mentored (4.24). That is an indicator for the interacting variable mentoring to have an influence on (indirect) global skills. Nevertheless, also this comparison does not show

significance and the interpretation remains a mere indication for further relations which are going to be tested.

In Table 4.2.3 the second interacting variable is put in relation with global skills and its means. The group of students who stayed abroad previously already show a global skills index mean (4.40) which is higher with about .20 than the one of the group

Table 4.3.3 Means of Global Skills Index by Previous Experience Abroad (N= 57)*

	Mean	N
Previous Experience abroad	4.40	23
No Previous Experience abroad	4.21	34

* No significance at a p-value of 0.05

Table 4.3.2 Means of Global Skills Index by Mentoring (N= 57)*

	Mean	N
Mentored	4.33	29
Not Mentored	4.24	28

* No significance at a p-value of 0.05

who did not had previous experience abroad (4.21). Although, also this means comparison is insignificant it indicates that students who went abroad previously for a learning purpose have a little bit higher global skills in average than those who did not go abroad previously.

The following paragraph tests the bivariate correlations between the different variables using the Pearson coefficient (Dooley, 2001).

Table 4.3 Correlations of all variables (N=57)

	CTI	SLI	ICI	GSI	Internship Abroad	Study Abroad	Non Mobility	Mentoring	Previous Experience Abroad	Dutch
CTI	1									
SLI	.37**	1								
ICI	.30*	.16	1							
GSI	.77**	.72**	.67**	1						
Internship Abroad	-.14	.11	-.10	-.05	1					
Study Abroad	-.02	-.12	.25*	.05	-.60**	1				
Non Mobility	.17	.02	-.19	-.00	-.37**	-.52**	1			
Mentoring	-.09	.13	.17	.10	.41**	.18	-.58**	1		
Previous Experience abroad	.06	.30*	.07	.21	-.06	.11	-.05	.16	1	
Dutch	.10	-.32**	-.03	-.12	-.16	-.08	.26*	-.31*	-.46**	1

** . Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed)

Table 4.3 shows the correlations between all the different variables of the model. The correlations between the independent variables, the different study experience and the main dependent variable, the

Global Skills Index (GSI), are very low and not significant. Also when looking at the individual skill indexes the correlations are not significant. One correlation could be found significant though. Study abroad is

Table 4.3.4 Correlation of independent and dependent variables by Mentoring

Mentoring		GSI	CTI	SLI	ICI	Internship Abroad	Non Mobility	Study Abroad
No N=28	GSI	1						
	CTI	.82**	1					
	SLI	.74**	.43*	1				
	ICI	.68**	.39*	.17	1			
	Internship Abroad	-.46**	-.49**	-.32*	-.20	1		
	Non Mobility	.08	.17	.13	-.15	-.35*	1	
	Study Abroad	.21	.14	.07	.28	-.28	-.80**	1
Yes N=29	GSI	1						
	CTI	.69**	1					
	SLI	.66**	.27	1				
	ICI	.66**	.17	.09	1			
	Internship Abroad	.24	.24	.46**	-.20	1		
	Non Mobility	-	-	-	-	-	-	
	Study Abroad	-.24	-.24	-.46**	.20	-1.00**	-	1

** Correlation is significant on the 0.01 level (1-tailed)

* Correlation is significant on the 0.05 level (1-tailed)

associates with intercultural communication skills positively on a medium level¹².

The relations among the skills as well as among the study experience show significance as they overlap the way the variables are coded or created. Therefore, these significant relations were not highlighted in Table 4.3.

Looking at the correlations of the interacting variables one can see some more significant correlations though. Mentoring indicates a positive medium correlation with internship abroad (.41) and a negative strong correlation with non-mobility. Previous experience abroad has a positive medium correlation with self-leadership skills (.30).

The control variable Dutch has a negative medium strong correlation (-.32) with the Self Leadership Index. The correlation predicts that studying in one's home country influences one's Self Leadership Index negatively. The idea behind being Dutch in this model does not focus on the nationality itself but rather compares whether a student has stayed in the home country for their studies (Dutch) or went abroad for their whole bachelor degree (non-Dutch). More precisely, the correlation then predicts that studying the full degree in one's country of origin influences one's Self Leadership Index negatively.

Table 4.3.1 compares the correlation matrixes of the skill indexes and the types of experience abroad by taking the interacting variable of mentoring into consideration as well. The first half of the table shows the correlation matrix of those who did not receive any mentoring. For the independent variable internship abroad three significant relations are found, in correlation with global skills index (-.46), self-leadership index (-.32) and critical thinking index (-.49). Internship abroad associates with each of the three indexes with a negative medium correlation.

The second half of the table displays the correlations among the group of those who have been mentored regarding their time abroad. Here only two relevant and significant correlations can be found. Internship abroad correlates also for this group with self-leadership skills with a major difference though: the two variables associate positively (not negatively as in the first half) with a medium strength (.46). This finding indicates that mentoring indeed influences the relationship between the independent variable internship abroad and self-leadership skills through an interacting effect. The second significant correlation of interest exists between study abroad and self-leadership skills. The negative medium correlation hints at negative effect of study abroad on self-leadership in case one is mentored regarding the time abroad. Non-mobile students have not been asked whether they have been mentored as no special mentoring when staying at the home campus was expected. Therefore, the row of non mobility does not have any values.

¹² Diaz-Bone (2006) provides a description of when correlations are not valued ($0.00 \leq r \leq 0.05$), weak ($0.05 < r < 0.20$), medium ($0.20 < r < 0.50$), strong ($0.50 < r < 0.70$) and very strong ($0.70 < r < 1.00$). These terms are used in this analysis as well.

The same split table was created for the interacting variable previous experience abroad (see Appendix 3). The only relevant significant correlation could be found between study abroad and intercultural communication skills among the group of students who do not have previous experience abroad. The correlation is positive with a medium strength (.30) which shows that intercultural communication skills could increase through study abroad in case one did not go abroad previously. Unfortunately, no proper comparison is possible as the same correlation (.16) for the group who have been abroad previously is not significant.

4.4 Multivariate regression analysis

The bivariate correlations gave an overview on how the different variables connect. Even though some variables which are expected from the causal model to correlate did not do so. Nevertheless, further regression analyses will be conducted as relation can show a significant correlation when influenced by third variables for instance. Through these regression analyses the main research question *To what extent do international internships within higher education influence the development of a student's global skills in comparison to studying abroad and staying at the home campus?* as well as three of the sub-questions are going to be answered: *Which global skills are developed by students going on an internship abroad within their HE curriculum?*, *Which global skills are developed by students studying abroad within their HE curriculum?* and *Can the differences be explained by the degree of mentoring or previous experience abroad?*. In order to answer sub-question one and two the different regression analysis are not only conducted with the global skills index as dependent variable but also with single indexes of critical thinking, self-leadership and intercultural communication.

Before conducting the regression analysis a sensitivity test was run in order to check the data set for influential cases and their impact on the model. Influential cases were determined through Cook's distance which is calculated by 4 divided through $n-k-1$ whereby n displays all cases before excluding the influential ones and k the amount of independent variables. In this sample one case was influential by a Cook's Distance of 0.07 (see Appendix 2). Nevertheless, the case was not excluded as the sensitivity analysis showed that the case did not change the outcomes.

4.4.1 Hypothesis 1

The main hypotheses (*H1*):

Students who have done an internship abroad have a higher degree of global skills than students who studied abroad, than those

Table 4.4. Simple Regression: Global Skills Index ^{ab}

	Unstandardized Coefficients B	Standardized Coefficients Beta	Sig.
(Constant)	4.29		.000
Internship Abroad	-.04	.17	.83
Study Abroad	-.03	.15	.86

^a Dependent Variable: Global Skills Index

^b Adjusted R²= -.03

who did not go abroad.) consists of the two main variables: Global Skills Index and the type of study experience. As study experience is a categorical variable it was split into three dummy variables: Internship abroad, Study abroad and Non Mobility. In order to analyse this relation a simple linear regression has been chosen as the independent variable is a categorical and the dependent variable a metric one (University of Southampton, 2017). Even though the relation in first place seems to be a bivariate one it became a multivariate one as the independent variable was split into three dummy variables. In the analysis only two independent categorical variables are included as the third one serves as the reference category.

The main hypotheses H1 was not tested significant as the p-values are .83 and .86 (see Table 4.4).

Model 1 of Table 4.4.1 shows the test of the main hypothesis when also including the control variable Dutch. Also here no significance could be found.

When testing each of the other dependent variables (CTI, SLI and ICI) two significant relations could be found. Model 1 in Table 4.4.3 shows that ‘being Dutch’, thus studying in the home country, has a negative medium impact (-.46) on self-leadership skills. This association predicts that full-degree mobile students have more self-leadership skills. Rather than by the type of study experience this finding indicates that self-leadership can be explained by full-degree mobility.

In Table 4.4.4 with intercultural communication skills as dependent variable one can observe in Model 1 a significant relation between study abroad and the same (ICI). Being abroad to study influences intercultural communication skills positively at a medium level (.38) compared to those staying at home. The variance of the model explained nevertheless is very low with 2 percent. Moreover, internship abroad is not significant in the same model which makes a comparison impossible.

In sum, the main hypothesis H1 has to be rejected.

Table 4.4.1 Regression analysis. Dependent variable: GSI

Coefficients	Model 1	Model 2	Model 3	Model 4	Model 5
(Constant)	4.36	4.35	4.36	4.25	4.26
Internship Abroad	-.08	-.18	-.80**	-.05	-.14
Study Abroad	-.00	-.08	.09	.00	.05
Dutch	-.13	.14	-.13	-.04	-.05
Mentoring		.16	-.16		
Mentoring*Internship Abroad			1.04**		
Previous Experience abroad				.17	.15
Previous Experience abroad*Internship abroad					.24
Previous Experience abroad*Study abroad					-.11
R ²	.02	.03	.20	.05	.07
Adj. R ²	-.04	-.04	.12	-.03	-.04

* significant on the .05 level

** significant on the .01 level

4.4.2 Remarks on the interacting hypotheses

In Subchapter 4.3 the correlations have been analysed, also under the effect of the interacting variables. Model 2 to 5 in each of the regression Tables

(4.4.1, 4.4.2, 4.4.3 and 4.4.4) show the effects of interacting variables mentoring and previous experience abroad for all possible relations between independent and dependent variables. When computing the interacting effect of interacting variables within multiple regression which is used here one has to multiply all the independent variables with the interacting variable and include them in the analysis. The interacting variable mentoring has been recorded for mobile students only. Thus, the whole non-mobile group did not receive any mentoring. The interacting variables thus only influences the two variables internship abroad and study abroad. In model 3 of all the regression tables one can observe that only internship abroad has been multiplied with the interacting variable mentoring and added as a variable. Study abroad and mentoring do not have to be computed as an interacting effect variable as the variable mentoring already fulfils the same purpose as the reference group non mobility does not include any mentored students. For the second interacting variable previous experience abroad both interacting effects have been computed. The complete model with the interacting variable previous experience abroad (Model 5 in the 4.4.x Tables) then includes 6 variables taking in the independent variables and the control variable on top. The thumb rule for multiple regression analysis though is that 10 cases (in this case respondents) are needed for each variable added to the model. The sample of this study includes 57 respondents. Even though three more respondents would

be actually needed the variables will be included as the proper comparison between the models is possible then.

Table 4.4.2. Regression analysis. Dependent variable: CTI

Coefficients	Model 1	Model 2	Model 3	Model 4	Model 5
(Constant)	4.86	4.85	4.87	4.77	4.77
Internship Abroad	-.29	-.34	-1.17**	-.26	-.38
Study Abroad	-.18	-.22	.00	-.17	-.08
Dutch	.07	.08	.05		.13
Mentoring		.07	-.32		
Mentoring*Internship Abroad			1.39**		
Previous Experience abroad				.14	.15
Previous Experience abroad*Internship abroad					.32
Previous Experience abroad*Study abroad					-.20
R ²	.04	.04	.20	.05	.08
Adj. R ²	-.02	-.03	.12	-.03	-.03

* significant on the .05 level

** significant on the .01 level

4.4.2 Hypothesis 2

First the different dependent variables and model are analysed regarding the interacting hypothesis mentoring (*H2a: The effect of studying abroad on global skills is stronger for students who are mentored than for students who have not been mentored.*

H2b: The effect of an internship abroad on global skills is stronger for students who are

mentored than for students who have not been mentored). Model 2 and 3 of the four regression tables show these analyses. Analysing the interacting variable mentoring with global skills as the dependent variable (Table 4.4.1) a relation of interest is delivered in model 3. Internships abroad shows a negative unstandardized B coefficient of -.80, significant on a .01-level and the interacting effect variable mentoring*internship abroad has a positive coefficient of 1.04 on a significance level of .01 as well.

These findings thus suggest that internships abroad only have a positive effect on global skills in case a student was mentored. Adding both coefficients together it can be predicted that an internship abroad increases the global skills of a student by .24 in case the intern was mentored. Regarding the relation between the internship and global skills the interacting hypothesis H2b thus could be confirmed. Study abroad does not increase global skills under this condition as this relationship still could not be found significant which rejects H2a. The model explains a variance of 12 percent in comparison to other models which not much but not uncommon in social science (see Diaz-Bone, 2006).

When looking at mentoring as an interacting variable and taking the critical thinking index as the dependent variable a similar effect as for global skills is visible (see Table 4.4.2). Whereby in model 2 again no significant relations exist, model 3 shows significant unstandardized B coefficients for internship abroad (-1.17) and mentoring*internship (1.39) abroad. The effect on internship abroad on critical thinking skills is negative. After computing the effect it can be interpreted that students who have been abroad for an internship increase their critical thinking skills by .22 when being mentored compared to those students who did not go abroad. The model explains 12 percent of the variance of

critical thinking.

Table 4.4.3. Regression analysis. Dependent variable: SLI

Coefficients	Model 1	Model 2	Model 3	Model 4	Model 5
(Constant)	4.09	4.08	4.09	3.91	3.92
Internship Abroad	-.06	-.17	-.94**	-.02	-.06
Study Abroad	-.22	-.29	-.09	-.22	-.20
Dutch	-.46**	-.44*	-.46**	-.32	-.32
Mentoring		.13	-.23		
Mentoring*Internship Abroad			1.29**		
Previous Experience abroad				.28	.26
Previous Experience abroad*Internship abroad					.23
Previous Experience abroad*Study abroad					-.04
R ²	.12	.13	.25	.16	.16
Adj. R ²	.07	.06	.18	.09	.06

* significant on the .05 level

** significant on the .01 level

The next models analysed have self-leadership skills as the dependent variable (see Table 4.4.3). For this dependent variable model 2 has a significant coefficient as well. Studying in one's home country influences self-leadership skills also when including mentoring as a variable in a negative way (-.44). Nevertheless, the other coefficients remain non-significant and therefore, further interpretation is not

Table 4.4.4. Regression analysis. Dependent variable: ICI

Coefficients	Model 1	Model 2	Model 3	Model 4	Model 5
(Constant)	4.13	4.11	4.11	4.08	4.10
Internship Abroad	.12	-.03	-.29	.13	.02
Study Abroad	.38*	-.27	.34	.38*	.42
Dutch	.00	.04	.03	.05	.04
Mentoring		.19	.07		
Mentoring*Internship Abroad			.43		
Previous Experience abroad				.08	.03
Previous Experience abroad*Internship abroad					.30
Previous Experience abroad*Study abroad					-.07
R ²	.07	.08	.10	.07	.09
Adj. R ²	.02	.01	.01	.00	-.02

* significant on the .05 level

** significant on the .01 level

possible. Model 3 though shows three significant coefficients. Similarly, as for the two previous dependent variables also self-leadership skills are influenced by internship abroad (-.94) (and the interacting effect variable (1.29)) when having been mentored. The computed effect then indicates that students who have been abroad to intern increase their self-leadership skills by .35 in case they have been mentored and the previous negative effect without mentoring becomes positive. The variable Dutch does not change its value compared to the

first model and remains significant. Thus, also under the mentoring aspect on the relation between internship abroad and self-leadership skills full-degree mobile students gain more self-leadership skills than those who study their Bachelor in their home country.

Lastly, the dependent variable intercultural communication index and its models in table 4.4.4 have to be viewed regarding mentoring. Neither in model 2 nor in model 3 any significant coefficients can be detected. Intercultural communication skills thus are not influenced by mentoring. Even the previously significant influence of study abroad on ICI becomes insignificant in both the models.

Summing up, hypothesis H2a, the interacting effect of mentoring on study abroad to global skills, was rejected, whereby hypothesis H2b, the interacting effect of mentoring on internship abroad to global skills, was confirmed.

4.4.3 Hypothesis 3

The second set of interacting hypotheses of the model is connected to previous experience abroad (*H3a: The effect of study abroad on global skills is stronger for students who do not have previous experience abroad than for students who have previous experience abroad. H3b: The effect of internship abroad on global skills is stronger for students who do not have previous experience abroad than for students who have previous experience abroad. and H3c: The effect of non-mobility on global skills is stronger for students who do not have previous experience abroad than for students who have previous experience abroad*). The correlation matrix split in two groups (those who have previous experience

abroad and those who do not have this experience) only showed one relevant correlations between study abroad and intercultural communication skills for those who did not go abroad previously (see Appendix 3). Indeed, this is the only relationship which remains significant in the regression analysis as well (Table 4.4.4, model 4). The interacting variable previous experience abroad stays insignificant though (as in the correlation matrix also only one of the groups showed significance). Also model 5 does not show significance and therefore, it can be concluded that previous experience abroad does not have an influence on the relation between study abroad and intercultural communication skills like it has now influence on the other relations either.

Hypothesis H3a, H3b and H3c has been rejected.

5. Conclusion

This research explored the main research question *to what extent international internships within higher education influence the development of a student's global skills in comparison to studying abroad and staying at the home campus* and four sub-questions.

Before reflecting upon the research questions an overview of the study will be given and the sub-question will be answered. Further relevant outcomes of the study will be analysed. The different outcomes then will be interpreted. From these outcomes some recommendations for the practical implication will be derived. As this study is not free from limitations which are outlined in the following as well. Finally, some suggestions for further research will be given.

5.1 Reflections

The variety of theory about global citizenship, competences and skills made it a challenge to arrive at a concept of global skills which is relevant for the higher education context. After excluding some shortcomings of the former concepts three skills were derived from the 21st century skills framework: critical thinking, self-leadership and intercultural communication skills. These basic skills equip students for a life in a globalized world and answer the sub-question how global skills can be understood in the contemporary world. Several authors (e.g. Batey & Lupi, 2012; Boni & Calabuig, 2017; Cai & Sankaran, 2015; Rosch & Haber-Curran, 2013) connect these skills to experience abroad during the higher education studies whereby internships seem to foster these global skills even more than studying abroad at another higher education institution. Thus, the following hypothesis was created: *Students who have done an internship abroad have a higher degree of global skills than students who studied abroad, than those who stayed at the home campus* (H1). Additionally, two interacting variables – mentorship regarding the time abroad (Y. Liu et al., 2011) and previous experience abroad (Milstein, 2005) – were added. Moreover, one control variable being Dutch or not, thus studying in the home country or not, was tested. Through correlation analysis and simple and multiple regression analysis the sample of 57 students of the University of Twente, Netherlands in their final Bachelor year have been analysed.

The results show no statistical significance for the hypothesis 1. Consequently, no causal relation or correlation thus could be found between the type of study experience and the combined index of global skills. Previous studies that report an increase in one of the global skills because of the experience abroad – either a study or an internship-, cannot be confirmed. However, explained variance was found on global skills when considering the interacting effect of mentoring and on the individual indexes. The intercultural communication skills, showed a significant relation in connection with study abroad. Study abroad thus is positively associated with intercultural communication skills which increase for .30 compared to non-mobile students. Moreover, the control variable Dutch indicates a direct effect on self-leadership skills.

The correlations already indicated that the interacting variable mentoring has an effect on internship abroad which only was positive when the intern had been mentored. The further regression analysis revealed that hypothesis 2b could be confirmed. Even though study abroad experience does not become significant with the interacting variable H2a, internship abroad does. Global skills of a student increase by .24 when the student has done an internship abroad but only when the student was mentored. The interacting effect of mentoring in H2b can be confirmed not only for global skills, but also critical thinking skills as well as self-leadership skills are higher for former interns abroad who have been mentored. Intercultural communication skills are not influenced by the interacting variable mentoring. The interacting variable, previous experience abroad and its expected influence could not be confirmed. The unstandardized B coefficients of previous experience abroad are not significant in all the models. Thus, the hypotheses H3a,b and c (*The effect of each of the types of study experience on global skills is stronger for students who do not have previous experience abroad than for students who have previous experience abroad*) has been rejected. The only significant coefficient remained between study abroad and intercultural communication skills with the same value of .38. Previous experience abroad does not have an impact on this relation.

The outcomes show that global skills are not simply fostered by different types of study abroad. First of all, the findings could not find a difference in skills achievement between internship abroad, study abroad and non-mobile students. The answer to the main research question is that they do not differ to any extent as the study experience in a simple regression does not influence global skills. One reason could be that these different types of experience enhance different skills in the students. Study abroad enhances the intercultural skills of a student. Internships abroad foster global skills, critical skills and self-leadership skills in case one is mentored. Two of the sub-questions (*Which global skills are developed by students going on an internship abroad within their HE curriculum? and Which global skills are developed by students studying abroad within their HE curriculum?*) can be answered with these findings as well. Internships abroad foster a broader range of skills than study abroad.

The former relation of study abroad and intercultural skills could be explained by the diverse environment students experience when studying abroad at another higher education institution. The high diversity of people around them could have increased their intercultural communication skills. The later relations show clearly that students gain more skills through their internship when they have been mentored. Normally, a student who goes abroad for an internship is left on his or her own as no other fellow students or familiar structures are around them in the new work environment. This rather isolated circumstances might explain that former interns especially enhance their critical thinking skills and self-leadership skills (compared to those who stayed at home). These kind of skills are necessary to develop when being abroad on one's own.

The same reason – of the rather isolated situation – could explain also why for interns abroad mentoring is crucial but not for those who went to a higher education institution abroad. Having a mentor thus can give confidence and positively influence their learning experience. When studying abroad often more international students are around, thus people in the same situation as oneself. Therefore, mentoring by an external mentor might rather hinder the student's learning experience by limiting the independence a student needs in the different studying context.

Previous experience abroad did not show influence and therefore, the argumentation of Milstein (2005) could not be confirmed. It seems that previous experience abroad is an indicator which is not strong enough to influence the learning during an experience abroad.

Finally, the control variable Dutch indicated that non-Dutch students, thus full-degree mobile students, have higher degrees of self-leadership skills, also when including the interacting effect mentoring. It might be that students who stay abroad for their whole Bachelor develop more self-leadership skills than those who study in their home country as they encounter many unfamiliar situations which make them reflect more upon themselves. They might learn to lead oneself more intensely through these constant new situations which are very familiar to students who are in their home country.

5.2 Practical implication

The findings discussed in the reflection are valuable for the praxis as well, not only theoretically. In the following, some recommendations for the different stakeholders: students, universities and others will be given.

5.2.1 For students

Students who are thinking of going abroad can consider the different skills they want to learn. The findings suggest that intercultural communication skills can be learned best during a study abroad, whereby self-leadership skills and critical thinking skills are especially fostered through internships abroad. A student as to be aware that internships abroad only have learning effect when being mentored. In case a student chooses an internship abroad, it is recommendable to ask for mentorship. It might even help to choose the mentor oneself (if possible), thus ensure a beneficial mentorship.

Finally, students can consider a full degree abroad after their graduation from (high) school in case they want to especially enhance their self-leadership skills.

5.2.2 For universities

According to the findings, universities can promote mentored internships abroad when seeking for increased global skills. In case a university provides internships abroad one has to ensure that students are provided with mentoring as mentoring is the decisive factor which makes the learning experience in global skills work. Study abroad can be promoted when intercultural communication skills are a desired learning outcome.

Moreover, non-Dutch students at the UT seem to have higher degrees of self-leadership skills which suggests that full degree mobility is a decisive factor. Universities who have or want more foreign students studying the whole program at their university could promote increased self-leadership skills as this skill especially increases when going abroad for the whole study program, not just for some month.

5.3 Limitations of the research

This explorative study first of all wants to examine whether a difference between interning and studying abroad can be found at all which could not be confirmed as the main hypotheses could not be accepted. Potentially this is because of the limitations in the applied methodology.

As the descriptive statistics have shown, the sample does not represent the population of final year bachelor student of the University of Twente quite well. More participants across different Bachelor programs would have increased the representativeness of the sample.

Moreover, the survey used a post-test only. Therefore, the time order threat could not be excluded. It might be that students who had intercultural communication skills before are likely to do go abroad in order to study for instance. Furthermore, in order to make it possible to determine to which degree study and internship abroad change global skills a pre and post-test would have been necessary. In the frame of the bachelor thesis it is not possible to conduct such a longitudinal study though. This disadvantage is not as severe as it might seem at first hand though due to the explorative character of the study.

Another limitation could be seen in the way the survey was conducted. Students reported their skills themselves rather than being tested. Arasaratnam (2013) explains that everyone has skills one is unconscious about. Nevertheless, the self-reported approach seems convincing for this research because the perception of the students of what they have actually learned, thus the skills they are aware of is included. (Learning) experience happen individually (Killick, 2012) and therefore, it is difficult to conclude that an equally high degree of a skill achieved has the same effect for different students. In this social research, the self-reported approach could have led to a more holistic insight about global skills. In general, the explained variance of the models with significant values remains low and therefore, an interpretation has to be taken into account carefully.

5.4 Future research: overcoming the limitations

The limitations of this study but also the findings show that further research is needed.

First of all, the research should be conducted with a different research design which includes a pre- and post-test in order exclude the time order threat as well.

Moreover, a larger sample would be beneficial which also would make it possible to compare different universities and the outcomes of the students there. Killick (2012) – one of the scholars who criticizes experience abroad – seeks for an alternative concept to achieve global citizenship at the home campus.

His outcomes show that a diverse campus at home can result in global citizenship for these students as well as *encountering difference does not depend on the crossing of national cultures but on recognizing Otherness in all we may engage with and in ourselves* (Killick, 2012, p. 372). Accordingly, the degree of diversity at a campus might play a crucial role for the effects on global skills as well. Other factors of internationalization at higher education intuition like the diversity and amount of international staff could influence global skills learning at the home campus as well. A larger sample also allows to include more control variables which had to be excluded here (see Appendix 1).

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Appendix

Appendix 1: Parts of the Survey

Remark:

The following survey includes many more control variables which did not appear in the analysis. The reason is that only 57 respondents filled out the complete survey. When testing a regression model the thumb rule is that per variable included in the model the sample must have 10 cases/respondents more. Therefore, this sample only allows 5, maximum 6 variables included in the model.

The survey

Q0 Welcome to the survey about study experience abroad and at the home campus! Thank you for participating! The survey will take around 5 to 10 minutes to complete. After some background question, you will be asked to reflect on statements. To do so, please read the instructions carefully and answer the statements taking the instructions into account. To get started please answer the question below.

Q1 Are you studying at the University of Twente in a bachelor programme and are you in the final year of the study?

- ☐ Yes (1)
- ☐ No (2)

Display This Question:

If Are you studying at the University of Twente in a bachelor programme and are you in the final year of the study? No Is Selected

Q1x Unfortunately, that means that you do not belong to the target group of the study. I thank you very much for your interest.

Condition: Unfortunately, that m... Is Displayed. Skip To: End of Survey.

Q2 The following questions are about you and your studies: Gender

- ☐ Male (1)
- ☐ Female (2)
- ☐ x (3)
- ☐ wish not to say (4)

Q3 Current BA Study Program at the UT (multiple answers possible)

- ☐ University College ATLAS (1)
- ☐ Applied Mathematics (2)
- ☐ Advanced Technology (3)
- ☐ Applied Physics (4)
- ☐ Biomedical Technology (5)
- ☐ Business & IT (6)
- ☐ Civil Engineering (7)
- ☐ Chemical Engineering (8)
- ☐ Communication Science (9)
- ☐ Creative Technology (10)
- ☐ Electrical Engineering (11)
- ☐ European Public Administration (12)
- ☐ Health Science (13)
- ☐ Industrial Design (14)
- ☐ Industrial Engineering and Management (15)
- ☐ International Business Administration (16)
- ☐ Mechanical Engineering (17)
- ☐ Psychology (18)
- ☐ Technical Computer Science (19)
- ☐ Technical Medicine (20)
- ☐ Other (21)

Q4 Where are you originally from?

- ☐ Netherlands (1)
- ☐ Germany (2)
- ☐ other EU (3)
- ☐ outside EU (4)

Q5 Experience during my studies at the UT

- ☐ I have been abroad during the study programme to follow education at another higher education institution (not the UT) (1)
- ☐ I have been abroad during the study programme to do an internship (not in the Netherlands) (2)
- ☐ I did not go abroad for study purposes during the study programme (continued studying at the UT) (3)

Display This Question:

If Experience during my studies at the UT I did not go abroad for study purposes during the study programme (continued studying at the UT) Is Not Selected

Q5x How long have you been abroad (in month)?

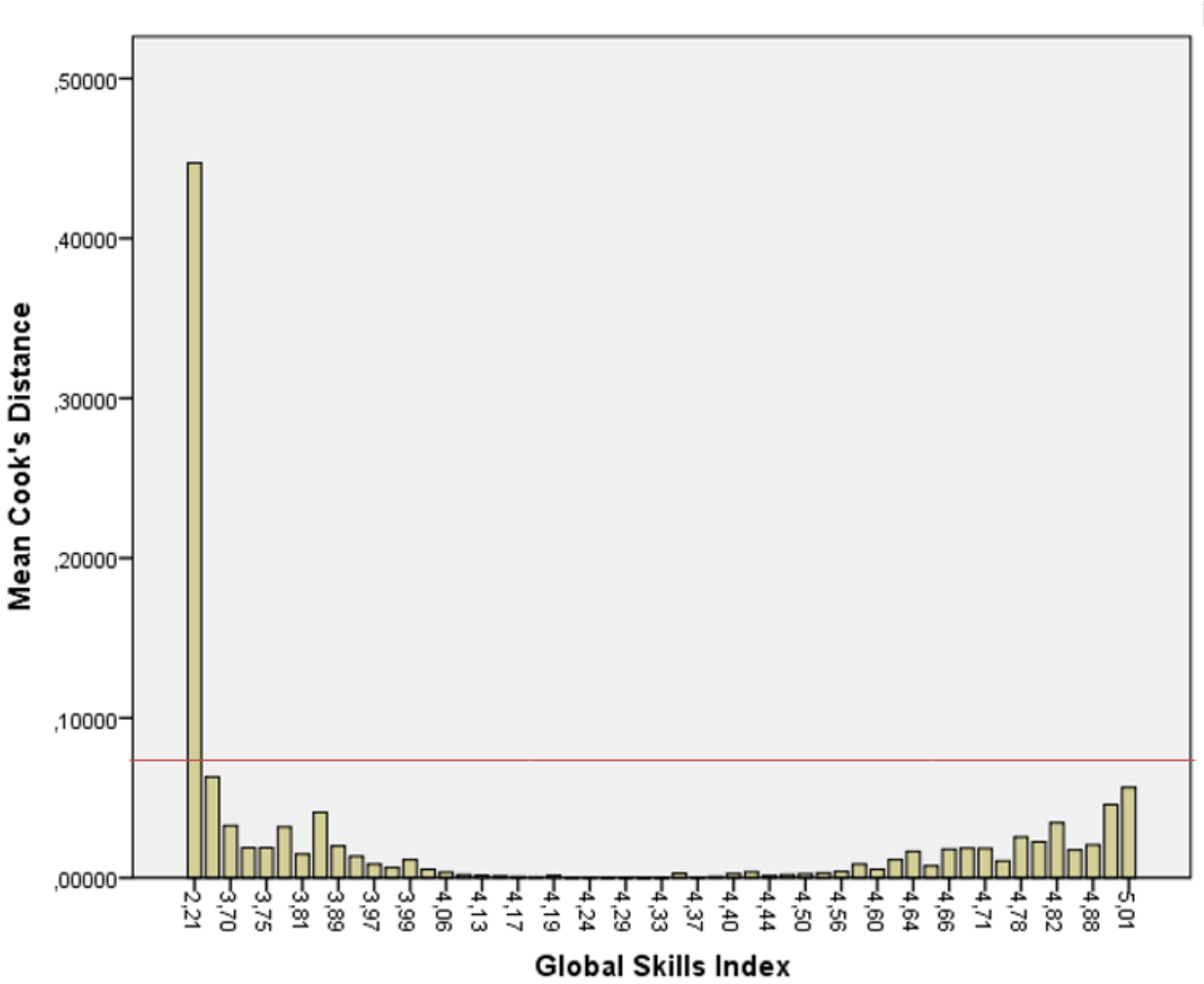
- ☐ less than 1 (1)
- ☐ 1 (2)
- ☐ 2 (3)
- ☐ 3 (4)
- ☐ 4 (5)
- ☐ 5 (6)
- ☐ 6 (7)
- ☐ 7 (8)
- ☐ 8 (9)
- ☐ 9 (10)
- ☐ 10 (11)
- ☐ 11 (12)
- ☐ 12 (27)
- ☐ 12-18 (28)
- ☐ 18-24 (29)
- ☐ more than 24 (30)

Q6 The following set of statements asks for your understanding how to think critically. While reflecting upon the statements relate them to the following setting. Imagine that you are discussing in a class of your program at the UT about whether your area of study should contribute towards a (partial) solution of the refugee crisis. Different arguments of students for and against are exchanged. When thinking of this context to what extent would you then agree or disagree with the following statements?

	Strongly disagree (0)	Disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Agree (5)	Strongly agree (6)
When I encounter an argument I analyse its significance and meaning. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I consider different approaches towards a cause before/when I draw a conclusion. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use different elements – for example the source- to check	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

whether an argument is valid. (3)							
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Appendix 2: Cook’s Distance of the Global Skills Index



Appendix 3:

Table 4.3.5 Correlation of independent and dependent variables by Previous Experience Abroad

Previous Experience Abroad		GSI	CTI	SLI	ICI	Internship Abroad	Non Mobility	Study Abroad
No N=34	GSI	1						
	CTI	.79**	1					
	SLI	.69**	.35*	1				
	ICI	.68**	.35*	.12	1			
	Internship Abroad	-.15	-.26	-.10	-.17	1		
	Non Mobility	.02	.17	.02	-.16	-.42**	1	
	Study Abroad	.13	.09	-.11	.30*	-.58**	-.50**	1
Yes N=23	GSI	1						
	CTI	.74**	1					
	SLI	.74**	.41*	1				
	ICI	.67**	.19	.22	1			
	Internship Abroad	.18	.10	.23	0.06	1		
	Non Mobility	-.00	.18	.07	-.25	-.31	1	
	Study Abroad	-.15	-.24	-.26	.16	-.62**	-.55**	1

** Correlation is significant on the 0.01 level (1-tailed)

* Correlation is significant on the 0.05 level (1-tailed)