

Study satisfaction according to students

*A comparative study of student satisfaction regarding higher education systems
between universities of Athens, Groningen and Leeds.*

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Summary

Many governments invest in what is called a knowledge economy. A knowledge economy requires a skilled workforce. To that extent, students ideally finish their (university) education prior to taking part in the society and hence in the economy.

Study satisfaction is essential for study completion and thus plays a key role in maintaining competitiveness among universities and nations. Therefore, this research focusses on student satisfaction and compares the student satisfaction from students from Dutch, Greek and United Kingdom universities in order to answer the main research-question: *are there differences in student satisfaction between students from Athens, Groningen and Leeds and if so, what variables influence student satisfaction?*

Data was collected from 159 Human Geography and Spatial Planning students from Athens, Leeds and Groningen through questionnaires. The questionnaires reflected questions regarding student characteristics, housing, parental/governmental financial support and statements regarding the university itself.

One-way ANOVA has been used in order to compare the means of overall student satisfaction among the three locations. Furthermore, linear regression was applied indicating significant findings. Governmental support for study equipment, current housing status and childhood residence appear to affect overall study satisfaction. Additionally, the content of the education and the student involvement in improving education gave significant results. There have been significant results on different topics among the three locations indicating a relation between characteristics of respondents and overall satisfaction, in combination with statements towards overall satisfaction.

Keywords: Student_satisfaction, Higher_education, University, Financial_support.

1. Introduction

The Dutch government provides, amongst other things, grants for students who finish their secondary education. This grant, in general cash money, can be allocated by students at their own preferences. They can use it for tuition, housing, leisure and more. The Rijksoverheid (2019) states that these grants will be turned into gifts after the students meet certain requirements, for example completing their tertiary education within a specific period of time. In addition, the Dutch government can facilitate low cost or free public transport and is able to grant loans to students. The Dutch government also supports universities: salaries for lecturers, new equipment, small-scale and intensive education, talent-programs, educational related research, study facilities and digitalization, specific stimulant of national priorities and many other goals (Ministry of Education, Culture and Science, 2018).

The Dutch government aims to increase educational intensity to maintain a competitive position in the knowledge economies of today (Ministry of Education, Culture and Science, 2011). Due to the competitive and dynamic environment, combined with multiple other challenges such as general public demanding accountability of tax money, universities are becoming more aware of the importance of student satisfaction as it drives students to finish their education (Brown, 2009; Elliot et al., 2002).

Elliot et al. (2002) state that student satisfaction has a positive impact on the motivation of the student and is correlated with the height of their grades. Since good grades drive motivation and motivation is essential for students to complete their studies, and completed studies are key to the knowledge economy, it is clear that student satisfaction is of key importance to the knowledge economy that governments strive for. Osfield (2008) indicated that both European universities and the facilitating European governments should have paid more attention to student satisfaction.

However, there is a change on the rise in recent years. Gradually, universities tend to pay more attention to student satisfaction (Houten, 2017; Richardson, 2005; Wiers-Jenssen, 2002). Furthermore, an increasing amount of student satisfaction surveys are conducted globally by governments, universities and other organizations (Houten, 2017). The Rijksuniversiteit Groningen (2015) states that student satisfaction monitors show room for improvement and act as an incentive for the University to make more of an effect in the areas concerned and have shown that these improvements are made (Rijksuniversiteit Groningen, 2019).

1.1 Research aim

This research investigates student satisfaction among three universities in three different countries to provide an overview of student satisfaction in Europe. The main research question is: *are there differences in student satisfaction between students from Athens, Groningen and Leeds and if so, what variables influence student satisfaction?*

The main research question will be answered by a synthesis of the answers to the following sub questions:

- *What is the description of higher educational systems?*
- *What variables influence student satisfaction in relation to their higher education?*
- *In what way do classes of variables like a) financial support (both governmental and parental), b) respondent characteristics and c) study experiences influence overall student satisfaction?*

1.2 Hypotheses

The null hypothesis states that there are no differences between student satisfaction in Athens, Groningen and Leeds, whereas the alternative hypothesis states that there are. This investigation will focus on independent variables related to financial support (both governmental and parental), student characteristics and study experiences. It is assumed that students from Athens will evaluate their overall satisfaction lower than students from Leeds and Groningen.

1.3 Thesis Structure

The thesis is structured along the lines of the research. In chapter 2. the theoretical framework is discussed based on relevant theories and concepts. Chapter 3. describes the methodology, where the approach towards data collection and the justification of the analysis is given. In chapter 4. the results of the statistical analysis are given which will be placed in context of the found literature. Chapter 5. describes the conclusion of this research with the additional limitations and recommendations.

2. Theoretical framework

2.1 Student satisfaction

Student satisfaction is not the same as student happiness. Dean et al. (2015) have concluded that there is a key difference in loci of control. Meaning that 'happier' students are more content with how they engage with beneficial experiences, while 'satisfied' students are more concerned about how things are done to and for them, rather than their engagement with the process (Dean et al., 2015). This would suggest that student happiness speaks more of emotion while satisfaction does not. As stated by Mangelaja et al. (2007), happiness and satisfaction are not the same, however the measurements to show these differences remain a challenge. In this study there will be a focus on student satisfaction, so the process of studying with higher education as a product. As has been stated by Fornell (1992), the satisfaction is measured as an overall feeling or as a satisfaction containing elements of transaction. This view is supported by Williams et al. (2007), who indicate that the tuition fees force universities to become 'service providers. Douglas et al. (2006), also state that the concept of customer orientation is increasing in higher education. In order for universities, governments and students to have a beneficial relation with one another it is important to take student satisfaction into account. However, caution is to be taken when applying this approach to higher education as a product measured against the utility value on the labor market (Wiers-Jensen et al., 2002).

As stated by Elliot et al. (2002), conventional student satisfaction surveys were measured by either simple yes or no questions, or with one question assessing the degree of overall satisfaction. As the analysis is rather simple, it does not accurately reflect the educational attributes students consider critically important towards their overall satisfaction or their perceived performance of one. Mai (2005) states that many institutions attempt to measure student satisfaction internally using feedback surveys and student evaluation to assess their quality delivery. Elliot et al. (2002) therefore implemented the Likert scales to show a deeper student satisfaction. Mangelaja et al. (2007) and Herdlein et al. (2015) also emphasize the need for Likert-scales in accessing student satisfaction through the years. As tested by Dean et al. (2015) age and gender can play a role in terms of happiness and satisfaction towards their study experience. As stated by Rijksoverheid (2019), financial support is given to Dutch students, indicating a possible influential factor towards satisfaction. Additionally, no research has been found on a possible relation between parental financial support and background, which could influence the overall satisfaction. However, these assumptions do seem interesting to find out.

According to Stichting Studiekeuze123 (2018), the Nationale Studenten Enquête uses a survey to construct the overall satisfaction of Dutch students. This survey is created by the Ministry of Education, Culture and Science, where Stichting Studiekeuze123 (2018) is a part of. Overall student satisfaction for Groningen University is 4.03 according to Stichting Studiekeuze (2018). Other questions were asked which could contain 'interpretation' where something is either too little or too much. During this survey multiple themes are used as independent variables, such as 'Content', 'Teacher', 'Study load' and more. This survey only relates to the university level of studying, so, everything inside the actual study. This is in correspondence to Elliot et al. (2002) who made a list of important educational attributes, such as 'Valuable course content', 'Knowledgeable advisor', 'Adequate computer labs' and more.

In the UK there is a National Student Survey. This national student survey is, in contrary to the Dutch survey which is established by the government, created by a cooperation of multiple institutes. The leading research institute is Ipsos MORI (2019) who aims to target final-year undergraduates to provide honest feedback on how they have perceived studying at their university/college. This influential source of public information grants students a powerful collective voice to help shape the future of their universities. Even though the government does not actually create the survey, Ipsos MORI (2019) is commissioned by the Office for Students on behalf of the Higher Education Funding Council for Wales, the Department for Economy Northern Ireland, the Scottish Funding Council, Health Education England and the participating private/alternative Higher Education providers. This survey uses Likert-scales as well on their questionnaire list, however, the student has to choose between 'disagree' or 'agree' instead of giving a state of satisfaction. Themes that are mentioned in the National Student Survey (2017) are: 'the teaching of the course', 'learning opportunities', 'assessment and feedback', 'academic support', 'organization and management', 'learning resources', 'learning community', 'student voice' and 'overall satisfaction'. Leeds was ranked 12th of the 154 universities in the UK with an overall rating of 88% in 2017 (National Student Survey, 2017).

After an extensive search it has been noticed that Greece does not have a national student survey. As mentioned, the student surveys that already exist have their questions based on particular themes, as can be seen in Appendix 1.

2.2 Higher Educational Systems in Europe

The Netherlands, as the UK and Greece, has a binary higher educational system, comprising universities and vocational/professional colleges (Sá, 2007). Most of which are, to a considerable degree, publicly funded. The respondent group that has been targeted are students studying in the Spatial Planning and Social Sciences departments from the Panteion University in Athens, University of Groningen and University of Leeds. Since the Netherlands is a north-western EU-member it was decided to compare it with Greece, a south-eastern EU-member. To deepen the research and because of the actuality around Brexit, these two countries have been compared with the United Kingdom. Additionally, there are political differences in terms of government. The Netherlands and UK are parliamentary constitutional monarchies, whereas Greece is a parliamentary republic.

Some differences in higher educational systems between countries are clarified by the QS Higher Education System Strength (Topuniversities, 2018). Here, four criteria are mentioned which are used to compare different countries: system strength, access, flagship institution and economic context. Furthermore, The U21 Ranking of National Higher Education systems in 2018 uses criteria such as, resources, environment, connectivity and output to rank higher educational system (Universitas21, 2018). Some countries are being studied according to European Qualification Framework (EQF) levels, as stated by Houten (2017). However, Terry (2008) and Gruber et al. (2010) suggested that key efforts are still to be made in making a harmonized system of quality assurance in higher education across Europe in order to become competitive in the global economy. However, there are differences among countries and their higher education due to cultural, sociological, political and economic differences between the European Union member states.

2.3 Ranking criteria

As has been shown, Topuniversities (2018) and Universitas21 (2018) have used different types of ranking criteria to rank higher educational among countries. Universitas21 (2018) and Topuniversities (2018) use four different criteria, each split up in multiple variables, to rank higher education systems. Universitas21 (2018) states that a necessary condition for a well-performing higher education system is that it is adequately resourced whether by the private sector or government.

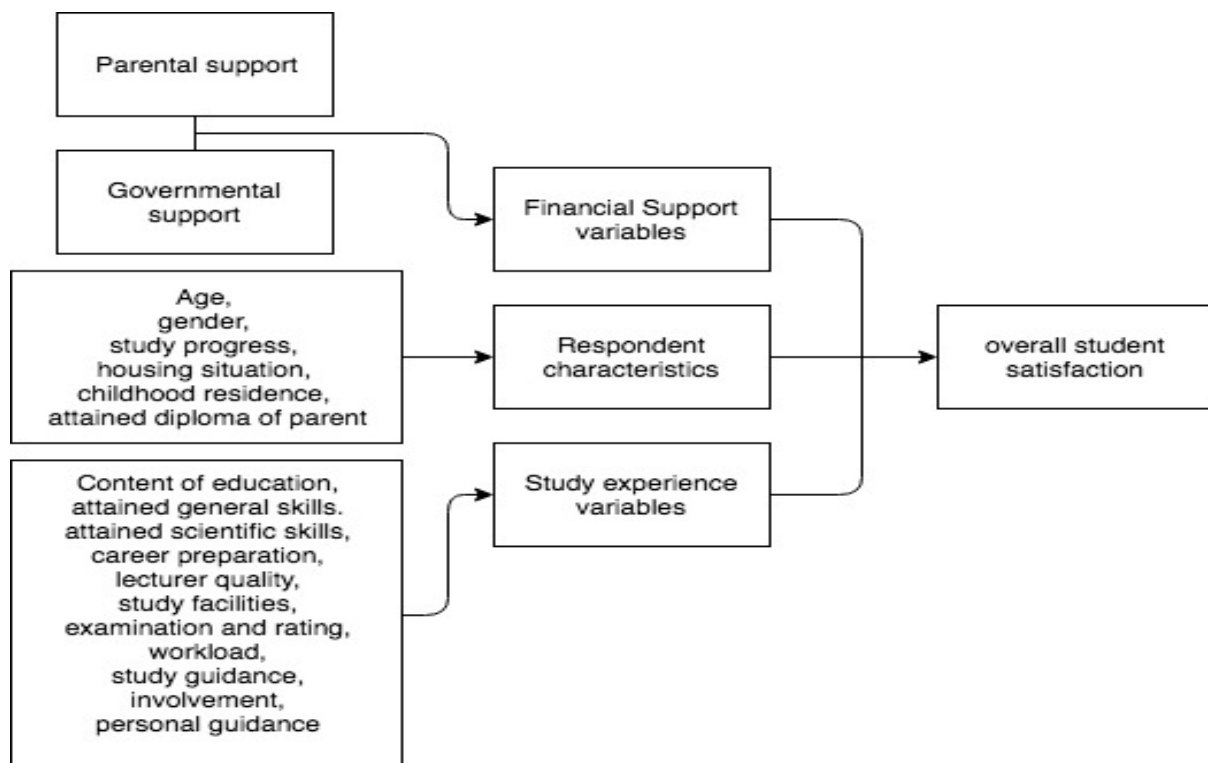
Universitas21 (2018) names a second criterion for the quality of higher education systems, which is the environment. This entails that institutions need financial autonomy, need an appropriate diversity, need competition between institutions and an external monitoring of performance. Topuniversities (2018) states a similar criterion named system strength, this is based on the number of its institutions which are ranked 700 or above in the WS World University Rankings, divided by the average position of those institutions. Both state the competition between institutions and an external monitoring of performance. Connectivity is named by Universitas21 (2018) as the third ranking criterion. A national higher education system is deemed enhanced if it is well connected with the rest of the nation's society and has linkage internationally in research and education. The last criterion is named output. According to Universitas21 (2018) research output and its impact, student throughput, national stockage of graduates and researchers and employability of graduates are relevant to this measure. According to these criteria the interview questions are constructed. Chan et al. (2005) has found significant explanatory variables that increase the student satisfaction at universities which are related to: satisfaction with academic work, build relationships, proper time management and provided resources by the university.

According to Universitas21 (2018) United Kingdom ranks no. 3, The Netherlands no. 6 and Greece no. 32, insinuating that the United Kingdom and the Netherlands are performing better than Greece. However, it is unknown what the actual contribution of the specific universities is. In the Topuniversities(2018) ranking Groningen is no. 113, Leeds is no. 101 and the Panteion university is not ranked. When looking at other universities, Athens is ranked no. 401-410, or 651-700 or 801-1000.

2.4 Conceptual model

Figure 1. shows the conceptual model that has been created to clarify the research. The conceptual model is to be read from the left to the right, illustrating the process of attaining the overall satisfaction. The variables in the first column on the left are the variables which are to be tested. The column in the middle is the overall theme which, brought together is influencing overall student satisfaction, according to the literature, shown on the right.

Figure 1. Conceptual model



3. Methodology

This research focuses predominantly on quantitative research in the forms of questionnaire surveys. Complementary qualitative research has been conducted.

3.1 Quantitative questionnaire

Questionnaire surveys have been used as a research method for gathering primary data and information about the characteristics, attitudes and/or behaviors of the student population. This has been done by administering a questionnaire, a standardized set of questions to a group of students (Clifford et al., 2010). It is assumed that the sample per country is representative of the whole university student population per country. The survey questions have been based on national surveys and previous attempts explained in scientific articles about the student satisfaction per country.

Questionnaires have been distributed among students from the three chosen universities. A total of 159 respondents have been reached by face-to-face meetings. Students of the University of Leeds and University of Athens gathered on a fieldtrip in Athens, the survey has been distributed there. With help of local professors and guides, the survey was distributed after lectures during the period of 1 April to 6 April 2019. Human Geography and Spatial Planning students of the University of Groningen have been targeted after an exam at the 9th of April.

There were two types of questions. Firstly, there were introductory questions, these questions have gained insight in the characteristics of the population group. Questions regarding age, location and gender have created the basis for subgroups, such as 'students in Athens' or 'students in Groningen'. Secondly, there were questions in the form of 5-point Likert-scales questions regarding satisfaction. The respondent had to choose between the numbers 1 up to 5 to indicate their position on given scales, such as 'agreement' or 'satisfaction'. However, to create a decent analysis, the scales are turned into ratio variables. The means per respondent group per question are used as comparison (Mai (2005)). The data were stored in an Excel file and eventually transferred to an SPSS file for the analysis.

3.2 Interviews

To complement the results from the questionnaire surveys, semi-structured interviews have been held as a qualitative research method. Of every university, two individuals were interviewed in a timespan of 20 minutes. In these interviews the feelings they have towards their universities and higher educational system were recorded. It is a general agreement that concentrating on participant viewpoints and the meaning individuals attach to educational issues is not only valid, but in some specific cases even preferred, over quantitative methodologies (Creswell, 2008). During the interview the students have been asked questions based on their time attending a university and their regards towards the higher educational system in their country. These questions can be found in the interview guidelines stated in Appendix 4. The answers that have been derived from the interview have been used for underlining quotes which strengthen or weaken statements made in the results of the research. These quotes have given an indication of quality and opinion towards the static survey results. The interviews were used to attain a deeper understanding of how a student perceived his or her university education. By means of these semi-structured interviews the underlying issues that seemed important to the respondent has been shown.

3.3 Statistical analysis

The collected and stored data were cleaned up and then analyzed using descriptive statistics, such as mean, median and standard deviation. Frequency tables per location and given satisfaction are shown. Initially, a one-way ANOVA was used to determine if there were any statistically significant differences between the means of the three independent groups. There are six assumptions that need to be met in order to use the one-way ANOVA.

1. The dependent variable should be at ratio level, the collected 5-scale data show that this assumption is met.
2. Independent variables should consist of two or more categorical, independent groups. Since this research focuses on the three universities, this assumption is met.
3. There should be an independence of observations, which is met since the participants from each group were not participating in another group.
4. There should be no significant outliers, this assumption is met since there were fixed numbers to be used.
5. The dependent variable should be approximately normally distributed for each category of the independent variable. To test this, the normality was tested by the Shapiro-Wilk test of normality. It indicated that the p-value was below Alpha level of 0,05, as suggested by Clifford et al. (2013), therefore rejecting the null hypotheses which states that the data are from a normal distribution, however, due to the 'robustness' of the test, it is acceptable to violate this assumption and still have valid results. In addition, the q-q plots, histogram with normality curve, skewness and kurtosis, all indicate a normal distribution.
6. There is a need for homogeneity of variance which is tested by the Levene's test, in this case the result is significant, therefore the assumption is violated, and a different approach has been taken.

Due to the violation of assumption six a Welch ANOVA was used as explained by Moder (2010). Afterwards, to indicate which groups are statistically significant from each other, a Games-Howell post hoc test was used, as shown in Table 9 in Appendix 4, to indicate which groups differ (Lee et al., 2018).

Linear regression modelling has been performed to see which variables influence student satisfaction. This was chosen over ordinal logistic regression for practical reasons. Dummies have been created in order to perform a linear regression analysis (Schepers, 2016).

Linear regression modelling has been performed to see which variables influence student satisfaction. This was chosen over ordinal logistic regression for practical reasons, as has been stated in under quantitative questionnaires. Dummies have been created in order to perform a linear regression analysis (Schepers, 2016). There are five assumptions that need to be met in order to use the linear regression.

1. All variables should be at ratio or categorical level and as can be seen from the collected 5-scale data ratio is used for the dependent variable. This assumption is met in combination with the creating of dummies to cover the categorical data. Indicating that homoscedasticity was found.

2. There should be a linear relationship among the tested variables. Dummy variables meet the assumption of linearity by definition, because they create two data points, and two points define a straight line.
3. Multicollinearity was checked among the variables according to the VIF measure. No VIF was found outside 1 to 10, indicating no multicollinearity.
4. There should be an independence of observations, which is met since the participants from each group were not participating in another group.
5. There should be no significant outliers. Due to the restricted amount of answer possibilities, there have been no outliers.

Statistical analyses were performed using IBM SPSS version 24.

3.4 Ethical considerations

Before the interviews commenced an informed consent by the respondents has been given, as can be seen in Appendix 3. The respondents have given permission to have the interview recorded, stating that those recordings are only to be used to transcribe. Also, the respondent had to confirm awareness that the attendance is voluntary, he or she can change their answers, can ask to stop the recordings and is able to retreat from the interview at any given time without a reason.

To safeguard the privacy of the questionnaire respondents, personal information that could have tracked them was not asked. In addition, an explanation was given beforehand, that if one did not want to fill in a particular part for whatever reason, he or she was not forced to do so. To prevent further harm, the answered questionnaires and transcriptions have been locked away, digitalized and saved on a password coded external hard drive.

4. Results

In this chapter the results of the statistical analyses are shown. Overall the questionnaire has been answered very well by the students. Only question 11, regarding postal code, has not been answered by the majority of respondents. The questions regarding government financial support (Q12-16) have not been answered by three respondents. Furthermore, respondents did not answer certain questions sporadically.

4.1 Descriptive statistics

In Table 1 the baseline characteristics of the overall respondent group are shown. It can be seen that the majority of the respondent group studies in Athens (75 vs. 34 and 50 in Leeds and Groningen respectively). Furthermore, gender is equally represented in the survey for all three universities. Most respondents are in the third year of their bachelor study (71.7% of the overall respondent group). Students from Greece live with their parents more often (67%) than students from Leeds and Groningen (6 and 24% respectively).

Table 1. Student characteristics of overall respondent group

STUDENT CHARACTERISTICS		ATHENS (%)	LEEDS (%)	GRONINGEN (%)	TOTAL (%)
N		75	34	50	159
AGE	19	7 (9)	0 (0)	0 (0)	7 (4.4)
	20	26 (35)	3 (9)	8 (16)	37 (23.3)
	21	25 (33)	16 (47)	19 (38)	60 (37.7)
	22	6 (8)	13 (38)	17 (34)	36 (22.6)
	23	6 (8)	2 (6)	4 (8)	12 (7.5)
	24	2 (3)	0 (0)	1 (2)	3 (1.9)
	25	1 (1)	0 (0)	1 (2)	2 (1.3)
	27	1 (1)	0 (0)	0 (0)	1 (0.6)
	39	1 (1)	0 (0)	0 (0)	1 (0.6)
GENDER	Male	31 (41)	18 (53)	29 (58)	78 (49.1)
	Female	43 (57)	16 (47)	21 (42)	80 (50.3)
	Other	1 (1)	0 (0)	0 (0)	1 (0.3)
STUDY PROGRESS	First year bachelor	2 (3)	0 (0)	0 (0)	2 (1.3)
	Second year bachelor	14 (19)	0 (0)	0 (0)	14 (8.8)
	Third year bachelor	40 (53)	30 (88)	44 (88)	114 (71.7)
	First year master	1 (1)	0 (0)	1 (2)	2 (1.3)
	Other	18 (24)	4 (12)	5 (10)	27 (17)
HOUSING STATUS	I live with my parents	50 (67)	2 (6)	12 (24)	64 (40.3)
	I live in a student flat or student accommodation from a student housing organization	2 (3)	15 (44)	9 (18)	26 (16.4)
	I live in a shared dormitory	0 (0)	2 (6)	11 (22)	13 (8.2)
	I live in my own house or apartment	12 (16)	0 (0)	5 (10)	17 (10.7)
	I rent an accommodation privately	11 (15)	15 (44)	13 (26)	39 (24.5)

In Table 2 the age of the respondents has been shown in a frequency table, indicating that the mean age of the respondents was 21.31. However, the group can be considered normally distributed (bell-shape is seen). Most respondents are 21 years old, although respondents from Athens are generally a little under 21 years old, while respondents from Leeds and Groningen are a little over 21 years old.

Table 2. Age characteristics of respondent group

CHARACTERISTICS	N	M	MODE	SD	MIN	MAX
AGE	159	21.31	21	1.87	19	39

In Table 3 is shown what the parental influences are of the overall respondent group. Respondents from Athens were most often raised in an urban area (51%), whereas Leeds respondents lived in sub-urban areas during childhood (56%) and Groningen respondents resided in rural areas (40%). Parents of Groningen respondents were generally a little higher educated than respondents from Athens and Leeds. The majority of respondents received financial support from their parents (83.6% in total), where most parents from respondents from Athens covered more than 50% of the costs, while in Leeds and Groningen it was mostly less than 50% of the costs. Interesting to see is that parents from Athens respondents covered more costs but earned less annual income compared to parents from Leeds and Groningen respondents.

Table 3. Parental variables of overall respondent group

PARENTAL VARIABLES		ATHENS	LEEDS	GRONINGEN	TOTAL
N		75	34	50	159
AREA OF CHILDHOOD	Urban	38 (51)	8 (24)	14 (28)	60 (37.7)
	Sub-Urban	22 (29)	19 (56)	16 (32)	57 (35.8)
	Rural	12 (16)	7 (21)	20 (40)	39 (24.5)
	Other	3 (4)	0 (0)	0 (0)	3 (1.9)
	None	6 (8)	3 (9)	0 (0)	9 (5.7)
DIPLOMA ATTAINED BY PARENT	Highschool Diploma	24 (32)	10 (29)	10 (20)	44 (27.7)
	Somewhat college. degree	11 (15)	8 (24)	10 (20)	29 (18.2)
	Bachelor's degree	19 (25)	8 (24)	14 (28)	41 (25.8)
	Master's degree	14 (19)	5 (14)	12 (24)	31 (19.5)
	Doctorate	1 (1)	0 (0)	4 (8)	5 (3.1)
FINANCIAL PARENTAL SUPPORT	Yes	66 (88)	23 (68)	44 (88)	133 (83.6)
	No	9 (12)	11 (32)	6 (12)	26 (16.4)
PERCENTAGE OF MONTHLY COSTS COVERED BY PARENTS	0	4 (5)	11 (32)	6 (12)	21 (23.2)
	1 to 24	6 (8)	9 (26)	13 (26)	28 (17.6)
	25 to 49	8 (11)	4 (12)	15 (30)	27 (17)
	50 to 74	15 (20)	8 (24)	10 (20)	33 (20.8)
	75 to 99	19 (25)	1 (3)	5 (10)	25 (15.7)
	100	23 (31)	1 (3)	1 (2)	25 (15.7)
ANNUAL INCOME PARENTS	1 to 9.999	6 (8)	0 (0)	0 (0)	6 (3.8)
	10.000 to 24.999	29 (39)	2 (6)	5 (10)	36 (22.9)
	25.000 to 49.999	13 (17)	8 (24)	9 (18)	30 (19.1)
	50.000 to 74.999	2 (3)	5 (15)	10 (20)	17 (10.8)
	75.000 to 99.999	4 (5)	7 (21)	4 (8)	15 (9.6)
	over 100.000	0 (0)	6 (18)	4 (8)	10 (6.4)
	I do not know	17 (23)	6 (18)	18 (36)	41 (26.1)
Other	2 (3)	0 (0)	0 (0)	2 (1.3)	

In Table 4 the governmental financial support is shown. It shows that about half of the respondents is financially supported by the government for tuition fees (49.7%). The dataset, containing 159 respondents, has also been split in three groups regarding the location of study. So, if you zoom in to the different universities, you see that Groningen students are more than half of the time not supported by the government. It also shows that half of the Greek respondents has answered 'Yes' to the question, which raises questions. Since it is known that in Greece education is free it might have been that the question was not clear enough giving the impression that either; Yes, I am supported by the government since education is free, meaning that they pay for it or; No, I myself am not financially supported by the government since this has already been paid for by them. The same problems arise for Study Equipment, Study Loans and Public Transport. Nevertheless, most respondents from Leeds and Groningen do not receive financial support from the government for study equipment and housing. Yet they do receive financial aid in the form of study loans. In the Netherlands specifically, students receive a public transportation card to make use of the public transportation system for free under the condition that they finish their higher education within ten years.

Table 4. Answers to statements regarding governmental support

GOVERNMENTAL STATEMENTS		ATHENS (%)	LEEDS (%)	GRONINGEN (%)	TOTAL (%)
N		75	34	50	159
GOVERNMENTAL FINANCIAL SUPPORT OF TUITION FEES	Yes	30 (40)	30 (88)	17 (34)	77 (49.7)
	No	33 (44)	4 (12)	29 (58)	66 (42.7)
	Not applicable	9 (12)	0 (0)	3 (6)	12 (7.7)
GOVERNMENTAL FINANCIAL SUPPORT OF STUDY EQUIPMENT	Yes	33 (44)	2 (6)	3 (6)	38 (24.4)
	No	34 (45)	28 (82)	42 (84)	104 (66.7)
	Not applicable	6 (8)	4 (12)	4 (8)	14 (9)
GOVERNMENTAL FINANCIAL SUPPORT OF HOUSING	Yes	12 (16)	14 (41)	6 (12)	32 (20.5)
	No	53 (71)	20 (59)	39 (78)	112 (71.8)
	Not applicable	8 (11)	0 (0)	4 (8)	12 (7.7)
GOVERNMENTAL FINANCIAL SUPPORT OF STUDY LOANS	Yes	17 (23)	23 (68)	33 (66)	73 (46.8)
	No	52 (69)	11 (32)	12 (24)	75 (48.1)
	Not applicable	4 (5)	0 (0)	4 (8)	8 (5.1)
GOVERNMENTAL FINANCIAL SUPPORT FOR PUBLIC TRANSPORT	Yes	28 (37)	1 (3)	43 (86)	72 (46.2)
	No	42 (56)	31 (91)	4 (8)	77 (49.4)
	Not Applicable	3 (4)	2 (6)	2 (4)	7 (4.5)

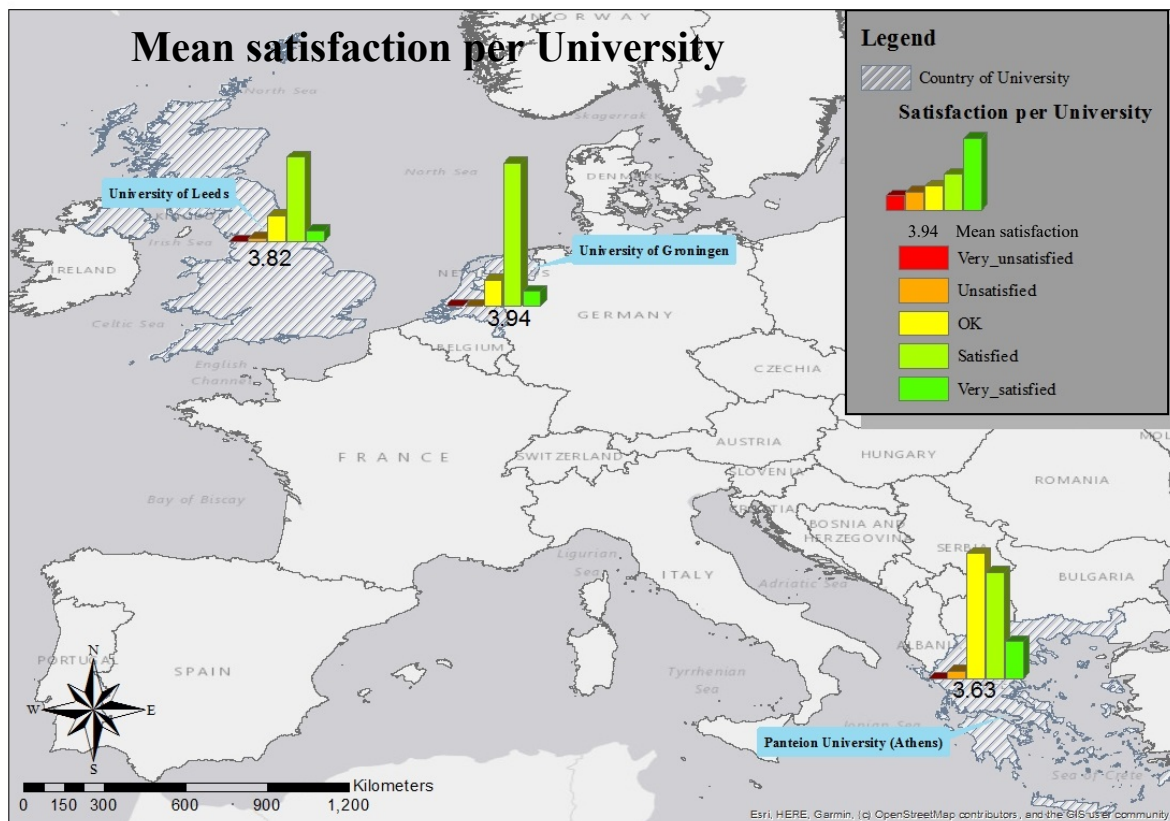


Figure 2. Geographical representation of overall satisfaction

4.2 Overall Satisfaction

Student satisfaction as dependent variable had six answer possibilities, however since the option 'not applicable' was not chosen by any of the 159 respondents only five are shown in Table 3. Table 3 grants an impression of the overall satisfaction of the followed study in general. The mean for all statements was greater than 3, indicating general satisfaction among students. Groningen represents the highest mean, indicating that they are the most satisfied with their study in general compared to students studying in Athens and Leeds. Also, as can be seen from the standard deviations (sd), Groningen (sd is 0.47) is less turbulent in their rating of their study in general compared to the respondents studying in Athens and Leeds (sds are 0.749 and 0.626 respectively).

In figure 2. the means of overall satisfaction are placed in a geographical comparison to each other, showing multiple findings. Firstly, Panteion University has more respondents than the University of Groningen and University of Leeds, as is confirmed by Table 5. Secondly, no answers have been given for the answer possibilities 'very unsatisfied' or 'unsatisfied' in the Groningen respondent group. The Welch's p-value replaces the ANOVA p-value and came out at 0.02, which is statistically significant, indicating that there are statistically significant differences between the universities. Therefore, the null hypothesis that the mean of the student satisfaction between the three universities is the same, is to be rejected since a significant result has been found. Games-Howell post hoc test then shows that this difference can be ascribed to between Athens and Groningen at 0.013.

Table 5. Overall satisfaction (S1)

OVERALL SATISFACTION	ATHENS	LEEDS	GRONINGEN	TOTAL (%)	CUMULATIVE (%)
VERY UNSATISFIED	0	0	0	0 (0)	0
UNSATISFIED	2	1	0	3 (1.9)	3 (1.9)
OK	34	7	7	48 (30.2)	51 (32.1)
SATISFIED	29	23	39	91 (57.2)	142 (89.3)
VERY SATISFIED	10	3	4	17 (10.7)	159 (100)
TOTAL	75	34	50	159 (100)	-
MEAN	3.63	3.82	3.94	3.77	-
STANDARD DEVIATION	0.749	0.626	0.47		-

Universitas21(2018) stated that the UK ranks higher than the Netherlands and Greece, however these results show that the mean overall satisfaction is higher in Groningen in comparison to Leeds and Athens. Furthermore, in the ranking of Topuniversities (2018) Leeds stands higher than Groningen and Athens, in contrast to the results. Stichting Studiekeuze123 (2018) concluded that the University of Groningen scored a mean of 4.03, however this research concludes a mean of 3.94. This is partly due to the low number of respondents, 50, in comparison to nearly 9.000 of the Nationale Studenten Enquete. Furthermore, according to the National Student Survey (2017) Leeds scored an overall rating of 88%. When put into a 5-point scale, this would mean a 4.4 overall satisfaction, however the research shows that the University of Leeds scores a 3.82.

4.5 Characteristics in relation with satisfaction

Location was used as the independent (grouping) variable and overall student satisfaction (Y) as the dependent variable. The mean ranks are 70.16, 84.66 and 91.59 respectively for Athens, Leeds and Groningen. The test-statistic is 8.857 with a p-value of 0.012. This shows that there is a significant difference ($p < 0.05$) in student satisfaction based on location among the respondents.

Before the tests were run, the cases had been split in terms of location. Gender shows non-significant results. Male gender was chosen as a reference category, even though, it seems that women would give a higher satisfaction to their study in general over men (Appendix 4, Table 10). In contrast to the study of Dean et al., there does not seem to be a statistical significant relation in this research.

Since most students answered to be third year bachelor students, the reference category was set at third year bachelor. The coefficients table shows that the categories 'second year master' was deleted from the table. Additionally, as for Leeds and Groningen, more categories have been removed due to the fact that they were non-existent. In conclusion, 'Study progress' shows no significant results (Appendix 4, Table 11).

The majority of the students answered to be living with their parents, therefore it has been set as the reference category for the variable 'Housing situation'. In Athens there is no statistically significant result, however, the option 'I live in a student flat or student accommodation from a student housing organization' is close to significance and would indicate a higher satisfaction. In Leeds there seems to be a significant result for respondents renting an accommodation privately, indicating an increase in one full degree in satisfaction.

This would mean that people who are OK with their study in general would turn into satisfied, when they would live in an accommodation privately rented instead of living with their parents. In Groningen there are no statistically significant results. The option 'I rent an accommodation privately' seems to have the same effect as it has in Leeds (leading to greater student satisfaction), however, here it is not significant (Appendix 4, Table 12).

For the variable 'Area', the option 'Urban' has been set as reference category due to its largest presence. In Athens there is a statistically significant result for the option 'suburban'. This would indicate that the respondents who grew up in suburban areas are generally 0,409 more satisfied than respondents in urban areas. No further significance has been found (Appendix 4, Table 13). Since the option 'High school diploma' has been chosen the most, it is therefore used as the reference group. No significant results were found (Appendix 4, Table 14). The option 'Yes, I receive financial support from my parents' has been set as reference category. No significant results were found, however, in Athens it seems almost significant that having no support, would indicate a lower satisfaction degree (Appendix 4, Table 15). The options 'Combined parental annual income between 10.000 to 24.999' has been set as reference category. No significant results were found (Appendix 4, Table 16). The statements about the government support created complications due to the option 'not applicable' (Appendix 4, Table 17-21).

Table 6. Statement scores (means)

STATEMENT	ATHENS (N=75)	LEEDS (N=34)	GRONINGEN (N=50)
S1: 'YOUR STUDY IN GENERAL'	3.63	3.82	3.94
S2: 'THE CONTENT OF THE EDUCATION'	3.52	3.71	3.82
S3: 'THE ATTAINED GENERAL SKILLS WITHIN THE EDUCATION'	3.31	3.94	3.64
S4: 'THE ATTAINED SCIENTIFIC SKILLS WITHIN THE EDUCATION'	3.23	3.09	3.84
S5: 'THE PREPARATION FOR THE PROFESSIONAL CAREER'	2.93	3.41	3.04
S6: 'THE EDUCATIONAL QUALITY OF THE LECTURERS'	3.69	4.00	3.70
S7: 'THE STUDY FACILITIES (LIBRARY, (COMPUTER)LAB, ETC.)'	3.41	4.41	4.02
S8: 'THE EXAMINATION AND RATING'	3.07	3.53	3.70
S9: 'THE WORKLOAD'	3.36	3.68	3.51
S10: 'THE ABILITY TO GET STUDY GUIDANCE (HELP MASTERING CONTENT OF A COURSE, ETC.)'	3.23	3.41	3.24
S11: 'THE EXTENT TO WHICH YOU ARE INVOLVED IN IMPROVING YOUR EDUCATION'	3.31	3.29	2.92
S12: 'THE ABILITY TO GET PERSONAL GUIDANCE (TUTORING, PROFESSIONAL PATH, ETC.)'	3.08	3.56	3.00
AMOUNT OF BEST PERFORMING FIELDS	1	7	4

It can be seen from Table 6 that the University of Leeds is outclassing the other universities in seven fields in terms of mean scores. These mean scores indicate how well a university is doing in comparison to others in a particular field, however it is not a representation of the population since there are many constraints.

The statements S2 to S12 have been tested in a multiple linear regression analysis to see if there was a linear relation with the overall satisfaction scores, see Appendix 4, Table 22. Before this regression took place, the data had been split into three files, each representing the data of a university. In Athens 'the content of education' had a statistically significant relation with overall student satisfaction. Meaning that when respondents score higher on 'the content of the education', their overall satisfaction will increase by 0.356. Additionally, 'The extent to which you are involved in improving your education' has been statistically significant with a p-value of 0.007, which is smaller than the alpha-level of 0.05. It can therefore be said that when the score of 'The extent to which you are involved in improving your education' goes up, the overall satisfaction will increase with 0.239. In the Leeds model, 'The content of the education' has shown a statistically significant result, with a p-value of 0.005. Therefore, when 'The content of the education' increases, the overall satisfaction will increase with 0.439. No statistically significant results have been found for the Groningen model.

5. Conclusions

The main research question is: *are there differences in student satisfaction between students from Athens, Groningen and Leeds and if so, what variables influence student satisfaction?*

In short, the answer to this question is that indeed differences appear to exist in student satisfaction among the three universities. More particular, students in Groningen seem to be most satisfied overall with their education. The variables that influence student satisfaction differ however per location. In the following paragraphs this key conclusion is illustrated and supported.

This research has given insight in the student satisfaction in three different countries across Europe. To maintain competitiveness among countries and universities, student satisfaction is deemed to play a key factor (Brown, 2009). In order to influence student satisfaction accordingly, multiple variables play an important role. 159 respondents were reached; however, this is a far smaller number than nationally conducted surveys.

Questionnaires were conducted among students from Universities of Athens, Groningen and Leeds. The questionnaires were predominantly focused on student satisfaction related to, a) financial support, b) respondent characteristics and c) study experiences. The data from this survey based on questionnaires was used to research a relation between the variables aforementioned and overall student's satisfaction across the three locations. Consecutively, differences between student satisfaction over the three locations were investigated.

The descriptive statistics in Table 5 showed that the majority of the student were satisfied with their study in general. The statistical analysis showed a significant difference between the statistical means of Groningen and Athens in terms of overall satisfaction. An attempt was made to find the explanatory variables in a linear regression analysis among the characteristics of the respondent group and among the statements in relation to the overall satisfaction.

For the characteristics of the respondent group, almost no significant relations were found. For Groningen, a statistically significant result was given indicating that a respondent who was supported by the government for study equipment, would gain an overall satisfaction of 0.500 if they were not supported. For Leeds, there appeared to be a significant result for respondents renting an accommodation privately, meaning that people who are 'OK' with their study in general would turn into 'satisfied', when they would live in an accommodation privately rented instead of living with their parents. For Athens, a statistically significant result for the option 'suburban' appeared meaning the respondents who grew up in suburban areas are generally 0,409 more satisfied than respondents in urban areas.

The statements that, according to the literature, would create the overall satisfaction, were tested. For Athens, 'the content of education' had a statistically significant relation with overall student satisfaction meaning that when respondents score higher on 'the content of the education', their overall satisfaction will increase by 0.356. Additionally, the 'extent to which you are involved in improving your education' has been statistically significant, indicating when the score goes up, the overall satisfaction will increase with 0.239. The last significant result was shown in the Leeds model, 'The content of the education', suggesting that there will be an increase of 0.439 in overall satisfaction if scored higher. No statistically significant results have been found for the Groningen model.

Student satisfaction is deemed to be evaluated on many themes in different ways, however with the same goal in mind: to improve the current situation of the product called higher education. The Netherlands and the UK have a national student survey to get information from their population (Stichting Studiekeuze123, 2018; National Student Survey, 2017). Greece did not have such a survey making the found results less reliable. The differences between the three groups has brought forth interesting insights. Even though Groningen scored higher on the overall satisfaction, Leeds appeared to score better in more fields.

5.1 Limitations and recommendations

Although the limited research done shows some significant results, certain issues are to be taken into account in order to have a valid say about an entire student population.

Firstly, the research should be repeated on a larger scale. In order to make a legitimate statement about countries and universities, more universities should be tested, along with a significantly larger respondent group.

Secondly, the gathered cases of the university of Athens should be of equal proportion in comparison to other universities.

Thirdly, in the given questionnaire a detailed elaboration of the statements is missing causing some variation in perceived terminology, interpretation and meaning of the statements.

Fourthly, the use of satisfaction ratios could be increased in order to get a stronger explanation power instead of the 'one up to five' ratios.

Fifthly, in subsequent questionnaires, the answer possibilities such as 'not applicable' or 'I don't know' should be excluded since the researcher should know what these should imply from a pilot.

Furthermore, in order to gain predictive power, more cohesion among the differences between higher education and to maintain their competitiveness amongst each other, a European Student Survey could be constructed with the above limitations taken into account.

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Appendices

Appendix 1. Survey questionnaire

Hello, my name is Peter-Jan Reinders and I am a student at the University of Groningen (NL). I am doing my bachelor thesis on student satisfaction about the university life among students from Athens, Leeds and Groningen. I would like to ask a few questions. All your answers will be handled with care, processed anonymously and will not be used for anything other than this research. This survey will take you less than five minutes. Thank you for your participation!

Introductory questions:

1. Where do you study?
 - University of Athens
 - University of Leeds
 - University of Groningen

2. What age are you?
 - ...

3. What is your gender?
 - Male
 - Female
 - I rather not say

4. How far are you in your study?
 - First year Bachelor
 - Second year Bachelor
 - Third year Bachelor
 - First year Master
 - Second year master
 - Other

5. What is your current housing situation?
 - I live with my parents
 - I live in a student flat or student accommodation from a student housing organization
 - I live in a shared dormitory
 - I live in my own house or apartment
 - I rent an accommodation from the university
 - I rent an accommodation privately

6. How would you describe the area you grew up in?
 - Urban
 - Sub-Urban
 - Rural
 - Other

7. What is the highest educational diploma one of your parents attained?
 - None
 - Highschool Diploma
 - Somewhat college, no degree
 - Bachelor's degree

- Master's degree
 Doctorate
8. Do your parents support you financially?
 Yes / No
9. What is the percentage of monthly costs, covered by your parents?
 0%
 1% to 24%
 25% to 49%
 50% to 74%
 75% to 99%
 100%
10. What do you estimate your parent's combined annual income, after tax, is? (€ can also mean £)
 €1,- to €9.999,-
 €10.000,- to €24.999,-
 €25.000,- to €49.999,-
 €50.000,- to €74.999,-
 €75.000,- to €99.999,-
 over €100.000,-
 I don't know
 Other
11. What is the postal code of (one of) your parents?
 ...

Main questions:

The next questions will be about your overall study experience. You are asked to state how satisfied you are: (1 until 5; 1 = very unsatisfied; 5 = very satisfied; 0 = not applicable). Please encircle the number corresponding to your feeling.

Statement	Very unsatisfied	Unsatisfied	OK	Satisfied	Very satisfied	Not applicable
Your study in general	1	2	3	4	5	0
The content of the education	1	2	3	4	5	0
The attained general skills within the education	1	2	3	4	5	0
The attained scientific skills within the education	1	2	3	4	5	0
The preparation for the professional career	1	2	3	4	5	0
The educational quality of the lecturers	1	2	3	4	5	0
The study facilities (library, (computer) lab, etc.)	1	2	3	4	5	0

The examination and rating	1	2	3	4	5	0
The workload	1	2	3	4	5	0
The ability to get study guidance (help mastering the content of a course, etc.)	1	2	3	4	5	0
The extent to which you are involved in improving your education	1	2	3	4	5	0
The ability to get personal guidance (tutoring, professional path, etc.)	1	2	3	4	5	0

The next questions are expected to be filled with either: yes, no or not applicable. If filled in 'yes', state an estimated number.

I am financially supported by the government for:

12. Tuition fees

- Yes, please specify a number:
- No
- Not applicable

13. Study equipment

- Yes, please specify a number:
- No
- Not applicable

14. Housing

- Yes, please specify a number:
- No
- Not applicable

15. Study loans

- Yes, please specify a number:
- No
- Not applicable

16. Public transport

- Yes, please specify a number:
- No
- Not applicable

The next open space is for you to share ideas on the questionnaire, have additional comments on the questions and to share further insights of the subject. Thank you for your participation.

Thank you

Appendix 2. Form of Consent

Hereby I declare to:

- Have the interview recorded;
- Recordings being used for transcriptions.

Hereby I declare to have knowledge of:

- Participation being voluntary;
- Having the ability to change or retract answers;
- Having the ability to stop the recording;
- Having the ability to retract from the interview without given reason.

I agree to participate in this interview:

Name of participant:

Signature: _____ Place:Date: __/__/2019

.....

I hereby declare that I have fully informed the participant about the aforementioned study and what I will do with the results. If information becomes known during the investigation that could influence the consent of the participant, I will inform him / her in good time.

Name researcher: Peter-Jan Reinders

Signature: _____ Place:Date: __/__/2019

.....

Appendix 3. Semi-structured interview guidelines

Interview questions:

- Opening questions:
 - What is your name?
 - How old are you?
 - Where do you study?
 - What do you study?
 - What year of study are you in?

- Main questions:
 - What do you perceive as a higher education system?
 - How do you think this is constructed in your country?
 - Does the government help you financially or does it help institutions more?
 - If yes, ask: How is this done?
 - If no, ask: Why do you think so?
 - Is higher education publicly funded?
 - Does the government help you in other ways imaginable?
 - How would you describe the diversity within your university and higher education system?
 - How well does the higher education system in your country meet the needs of a competitive economy?
 - As a student, do you feel well connected to the nation's society?
 - Are there many international students around, could you give an indication of how many?
 - How would you define the quality of your university in the higher education system?
 - Does the employability in your country guarantee a job after your study?

- Finalizing questions:
 - Are there additions you would like to make tot his interview?
 - Do you have any questions towards me?

- Thank respondent

Appendix 4. Tables

ANOVA

Table 7. ANOVA assumptions

		Tests of Normality					
		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
Q1: location		Statistic	df	Sig.	Statistic	df	Sig.
S1: 'Your study in general'	Athens	.279	75	.000	.825	75	0.000
	Leeds	.376	34	.000	.759	34	0.000
	Groningen	.411	50	.000	.640	50	0.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

S1: 'Your study in general'

Levene Statistic	df1	df2	Sig.
15.926	2	156	.000

Robust Tests of Equality of Means

S1: 'Your study in general'

	Statistic ^a	df1	df2	Sig.
Welch	4.092	2	85.240	.020

Table 8. ANOVA (S1, Overall satisfaction)

S1: 'Your study in general'

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.082	2	1.541	3.681	.027
Within Groups	65.308	156	.419		
Total	68.390	158			

Table 9. Location comparison

Multiple Comparisons

Dependent Variable: S1: 'Your study in general'

Games-Howell

(I) Q1: location	(J) Q1: location	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Athens	Leeds	-.197	.138	.332	-.53	.13
	Groningen	-.313*	.109	.013	-.57	-.05
Leeds	Athens	.197	.138	.332	-.13	.53
	Groningen	-.116	.126	.629	-.42	.19
Groningen	Athens	.313*	.109	.013	.05	.57
	Leeds	.116	.126	.629	-.19	.42

Linear Regression models

Table 10. Linear regression model (location and gender)

Q1: location		Model	Coefficients ^a		Standardized Coefficients Beta	t	Sig.
			Unstandardized Coefficients B	Std. Error			
Athens	1	(Constant)	3.516	.135		26.137	.000
		Female	.205	.176	.136	1.160	.250
		Other (Gender)	-.516	.761	-.080	-.678	.500
Leeds	1	(Constant)	3.778	.149		25.282	.000
		Female	.097	.218	.079	.446	.658
Groningen	1	(Constant)	3.862	.086		44.680	.000
		Female	.186	.133	.197	1.391	.171

a. Dependent Variable: S1: 'Your study in general'

Table 11. Linear regression model (location and study progress)

Q1: location		Model	Coefficients ^a		Standardized Coefficients Beta	t	Sig.
			Unstandardized Coefficients B	Std. Error			
Athens	1	(Constant)	3.625	.120		30.295	.000
		First year Bachelor	-.125	.548	-.027	-.228	.820
		Second year bachelor	.232	.235	.122	.988	.327
		First year master	-.625	.766	-.096	-.816	.417
		Other	-.125	.215	-.072	-.582	.562
Leeds	1	(Constant)	3.800	.115		32.909	.000
		Other	.200	.337	.104	.594	.557
Groningen	1	(Constant)	3.932	.072		54.419	.000
		First year master	.068	.485	.021	.141	.889
		Other	.068	.226	.044	.301	.764

a. Dependent Variable: S1: 'Your study in general'

Table 12. Linear regression model (location and housing status)

		Coefficients ^a					
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
Q1: location	Model	B	Std. Error	Beta			
Athens	1	(Constant)	3.600	.105		34.138	.000
		I live in a student flat or student accommodation from a student housing organization	.900	.538	.195	1.674	.099
		I live in my own house or apartment	.150	.240	.074	.626	.533
		I rent an accommodation privately	-.145	.248	-.069	-.586	.560
Leeds	1	(Constant)	3.000	.427		7.028	.000
		I live in a student flat or student accommodation from a student housing organization	.733	.454	.590	1.614	.117
		I rent an accommodation privately	1.000	.454	.805	2.200	.036
		I live in a shared dormitory	1.000	.604	.381	1.656	.108
Groningen	1	(Constant)	3.750	.134		27.982	.000
		I live in a student flat or student accommodation from a student housing organization	.361	.205	.298	1.764	.085
		I live in my own house or apartment	.250	.247	.161	1.012	.317
		I rent an accommodation privately	.327	.186	.308	1.759	.085
		I live in a shared dormitory	.068	.194	.061	.352	.727

a. Dependent Variable: S1: 'Your study in general'

Table 13. Linear regression model (location and area of childhood)

		Coefficients ^a					
		Unstandardized Coefficients		Standardized Coefficients			
Q1: location	Model	B	Std. Error	Beta	t	Sig.	
Athens	1	(Constant)	3.500	.120		29.148	.000
		Suburban	.409	.198	.250	2.063	.043
		Rural	.083	.245	.041	.340	.735
		Other (Area)	-.167	.444	-.044	-.375	.708
Leeds	1	(Constant)	3.625	.224		16.211	.000
		Suburban	.217	.267	.175	.814	.422
		Rural	.375	.327	.246	1.146	.261
Groningen	1	(Constant)	3.929	.128		30.642	.000
		Suburban	.009	.176	.009	.051	.960
		Rural	.021	.167	.023	.128	.899

a. Dependent Variable: S1: 'Your study in general'

Table 14. Linear regression model (location and parent education)

			Coefficients ^a				
Q1: location	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Athens	1	(Constant)	3.667	.156		23.574	.000
		No diploma	-.167	.348	-.061	-.479	.633
		Somewhat college, no degree	.152	.277	.072	.546	.587
		Bachelor degree	-.193	.234	-.113	-.825	.412
		Master degree	.048	.256	.025	.186	.853
		Doctorate	-.667	.778	-.103	-.857	.394
Leeds	1	(Constant)	3.600	.204		17.642	.000
		No diploma	.400	.425	.184	.942	.354
		Somewhat college, no degree	.400	.306	.275	1.307	.202
		Bachelor degree	.275	.306	.189	.898	.376
		Master degree	.200	.353	.115	.566	.576
		Doctorate	-.200	.306	-.172	-.929	.358
Groningen	1	(Constant)	4.100	.152		26.929	.000
		Somewhat college, no degree	-.200	.215	-.172	-.929	.358
		Bachelor degree	-.243	.199	-.234	-1.218	.229
		Master degree	-.183	.206	-.168	-.889	.379
		Doctorate	-.100	.285	-.058	-.351	.727

a. Dependent Variable: S1: 'Your study in general'

Table 15. Linear regression model (location and parental financial support)

			Coefficients ^a				
			Unstandardized Coefficients		Standardized Coefficients		
Q1: location	Model		B	Std. Error	Beta	t	Sig.
Athens	1	(Constant)	3.682	.091		40.472	.000
		No financial support	-.460	.263	-.201	-1.750	.084
Leeds	1	(Constant)	3.870	.132		29.353	.000
		No financial support	-.142	.232	-.108	-.614	.544
Groningen	1	(Constant)	3.932	.071		54.995	.000
		No financial support	.068	.206	.048	.330	.743

a. Dependent Variable: S1: 'Your study in general'

Table 16. Linear regression model (location and parental annual income)

			Coefficients ^a				
			Unstandardized Coefficients		Standardized Coefficients		
Q1: location	Model		B	Std. Error	Beta	t	Sig.
Athens	1	(Constant)	3.613	.138		26.231	.000
		Annual income combined between 1 to 9.999	.054	.342	.020	.157	.876
		Annual income combined between 25.000 to 49.999	-.151	.253	-.077	-.597	.552
		Annual income combined between 50.000 to 74.999	-.113	.559	-.024	-.202	.841
		Annual income combined between 75.000 to 99.999	-.113	.407	-.034	-.277	.783

		I don't know Annual income combined + Other	.177	.223	.103	.790	.432
Leeds	1	(Constant)	3.500	.457		7.654	.000
		Annual income combined between 25.000 to 49.999	.125	.511	.086	.245	.809
		Annual income combined between 50.000 to 74.999	.500	.541	.287	.924	.363
		Annual income combined between 75.000 to 99.999	.500	.518	.328	.964	.343
		I don't know Annual income combined + Other	.167	.528	.103	.316	.755
		Annual income combined over 100.000	.500	.528	.309	.947	.352
Groningen	1	(Constant)	4.000	.204		19.614	.000
		Annual income combined between 25.000 to 49.999	-.222	.254	-.184	-.874	.387
		Annual income combined between 50.000 to 74.999	.100	.250	.086	.400	.691
		Annual income combined between 75.000 to 99.999	-.500	.306	-.292	-1.634	.109
		I don't know Annual income combined + Other	-.056	.231	-.057	-.241	.811
		Annual income combined over 100.000	.250	.306	.146	.817	.418

a. Dependent Variable: S1: 'Your study in general'

Table 17. Linear regression model (location and governmental support tuition fees)

			Coefficients ^a				
Q1: location	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Athens	1	(Constant)	3.455	.129		26.692	.000
		Not Supported by Government for Tuition fees	.303	.183	.202	1.656	.102
		'not applicable' Tuition fees	.323	.280	.141	1.156	.251
Leeds	1	(Constant)	3.800	.115		32.909	.000
		Not Supported by Government for Tuition fees	.200	.337	.104	.594	.557
		'not applicable' Tuition fees					
Groningen	1	(Constant)	3.944	.113		34.900	.000
		Not Supported by Government for Tuition fees	-.013	.144	-.014	-.093	.926
		'not applicable' Tuition fees	.056	.299	.028	.186	.853

a. Dependent Variable: S1: 'Your study in general'

Table 18. Linear regression model (location and governmental support study equipment)

			Coefficients ^a				
Q1: location Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Athens	1	(Constant)	3.600	.128		28.107	.000
		Not Supported by Government for Study Equipment	.076	.182	.051	.419	.676
		'not applicable' Study Equipment	-.100	.335	-.036	-.299	.766
Leeds	1	(Constant)	4.000	.455		8.784	.000
		Not Supported by Government for Study Equipment	-.179	.471	-.110	-.379	.707
		'not applicable' Study Equipment	-.250	.558	-.131	-.448	.657
Groningen	1	(Constant)	3.500	.228		15.369	.000
		Not Supported by Government for Study Equipment	.500	.238	.394	2.098	.041
		'not applicable' Study Equipment	.250	.322	.146	.776	.441

a. Dependent Variable: S1: 'Your study in general'

Table 19. Linear regression model (location and governmental support housing)

			Coefficients ^a				
Q1: location Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Athens	1	(Constant)	3.600	.240		15.026	.000
		Supported by Government for Housing	.150	.324	.074	.462	.645
		Not Supported by Government for Housing	.004	.261	.002	.014	.989

Leeds	1	(Constant)	3.643	.165		22.107	.000
		Not Supported by Government for Housing	.307	.215	.245	1.430	.163
Groningen	1	(Constant)	3.800	.213		17.811	.000
		Supported by Government for Housing	.200	.289	.140	.692	.492
		Not Supported by Government for Housing	.149	.227	.132	.656	.515

a. Dependent Variable: S1: 'Your study in general'

Table 20. Linear regression model (location and governmental support study loans)

			Coefficients ^a				
			Unstandardized Coefficients		Standardized Coefficients		
Q1: location Model			B	Std. Error	Beta	t	Sig.
Athens	1	(Constant)	3.632	.174		20.856	.000
		Not Supported by the Government for Study Loans	-.016	.203	-.010	-.080	.937
		'not applicable' Study Loans	.118	.418	.036	.284	.778
Leeds	1	(Constant)	3.957	.126		31.402	.000
		Not Supported by the Government for Study Loans	-.411	.222	-.312	-1.856	.073
Groningen	1	(Constant)	3.941	.082		47.943	.000
		Not Supported by the Government for Study Loans	-.025	.161	-.023	-.152	.880
		'not applicable' Study Loans	.059	.253	.034	.232	.817

a. Dependent Variable: S1: 'Your study in general'

Table 21. Linear regression model (location and governmental support for public transport)

			Coefficients ^a				
Q1: location Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Athens	1	(Constant)	3.667	.137		26.841	.000
		Not Supported by Government for Public Transport	-.024	.179	-.016	-.133	.894
		'not applicable' Public Transport	-.667	.453	-.176	-1.471	.146
Leeds	1	(Constant)	4.000	.640		6.251	.000
		Not Supported by Government for Public Transport	-.161	.650	-.074	-.248	.806
		'not applicable' Public Transport	-.500	.784	-.191	-.638	.528
Groningen	1	(Constant)	3.932	.072		54.419	.000
		Not Supported by Government for Public Transport	.068	.250	.040	.272	.786
		'not applicable' Public Transport	.068	.347	.029	.197	.845

a. Dependent Variable: S1: 'Your study in general'

Table 22. Linear regression model (location and statements)

			Coefficients ^a				
Q1: location Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Athens	1	(Constant)	.751	.533		1.409	.164
		S2: 'The content of the education'	.356	.108	.353	3.306	.002

		S3: 'The attained general skills within the education'	.112	.102	.130	1.092	.279
		S4: 'The attained scientific skills within the education'	-.001	.108	-.001	-.008	.994
		S5: 'The preparation for the professional career'	-.009	.074	-.013	-.122	.903
		S6: 'The educational quality of the lecturers'	.107	.092	.118	1.156	.252
		S7: 'The study facilities (library, (computer) lab, etc.)'	-.052	.081	-.065	-.648	.519
		S8: 'The examination and rating'	.126	.090	.150	1.395	.168
		S9: 'The workload'	-.120	.126	-.101	-.952	.345
		S10: 'The ability to get study guidance (help mastering content of a course, etc.)'	.034	.101	.041	.335	.739
		S11: 'The extent to which you are involved in improving your education'	.239	.085	.310	2.806	.007
		S12: 'The ability to get personal guidance (tutoring, professional path, etc.)'	.064	.085	.088	.763	.448
Leeds	1	(Constant)	1.528	.778		1.963	.062
		S2: 'The content of the education'	.439	.140	.560	3.130	.005

		S3: 'The attained general skills within the education'	.286	.147	.420	1.946	.064
		S4: 'The attained scientific skills within the education'	-.088	.132	-.100	-.671	.509
		S5: 'The preparation for the professional career'	-.019	.122	-.027	-.156	.877
		S6: 'The educational quality of the lecturers'	-.108	.118	-.158	-.910	.373
		S7: 'The study facilities (library, (computer) lab, etc.)'	-.070	.165	-.068	-.422	.677
		S8: 'The examination and rating'	-.069	.110	-.113	-.626	.538
		S9: 'The workload'	.218	.150	.238	1.456	.159
		S10: 'The ability to get study guidance (help mastering content of a course, etc.)'	-.147	.088	-.265	-1.667	.110
		S11: 'The extent to which you are involved in improving your education'	.054	.106	.108	.513	.613
		S12: 'The ability to get personal guidance (tutoring, professional path, etc.)'	.107	.106	.169	1.006	.325
Groningen	1	(Constant)	1.828	.723		2.527	.016
		S2: 'The content of the education'	.237	.127	.307	1.865	.070

S3: 'The attained general skills within the education'	-.161	.109	-.235	-1.478	.148
S4: 'The attained scientific skills within the education'	.126	.103	.163	1.217	.231
S5: 'The preparation for the professional career'	.060	.104	.103	.583	.564
S6: 'The educational quality of the lecturers'	-.068	.088	-.105	-.778	.441
S7: 'The study facilities (library, (computer) lab, etc.)'	.143	.080	.250	1.790	.082
S8: 'The examination and rating'	.127	.108	.164	1.175	.248
S9: 'The workload'	-.004	.093	-.007	-.047	.963
S10: 'The ability to get study guidance (help mastering content of a course, etc.)'	-.038	.097	-.073	-.392	.698
S11: 'The extent to which you are involved in improving your education'	-.005	.052	-.014	-.104	.918
S12: 'The ability to get personal guidance (tutoring, professional path, etc.)'	.170	.108	.334	1.583	.122

a. Dependent Variable: S1: 'Your study in general'