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**Determination of Factors Affecting Student Satisfaction of Lutsk
National Technical University**

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Abstract

Education is a key driver of economic growth, particularly the higher education sector. With the higher education sector becoming an increasingly competitive market, university student satisfaction has become an important component of quality assurance. In higher education, students are the main customers of universities. As such, providing quality services and satisfying students' needs as well as expectations are vital for universities to succeed from the increasing competitiveness of this industry.

This research focuses on the Determination of Factors Affecting Student Satisfaction of Lutsk National Technical University. To complete this purpose, the research question will be answered: which factors affect student satisfaction in Lutsk National Technical University?

Lutsk National Technical University is one of two big higher educational institutes in Volyn region, Ukraine. The students that participated in this study enrolled in the academic year, 2017/2018. In order to perform study, survey method applied to collect the data and number of received valid questionnaire were 200. Questionnaire used to collect demographic information of students, information about their study area, specifics about academic life and level of satisfaction with educational services provided by Lutsk National Technical University. Descriptive analysis used to identify profile of respondents, also find satisfaction level. To evaluate differences between groups, built association between variables, find relation between variables and answering to the research hypothesis inferential analysis applied.

The result showed that generally students are satisfied, with a low satisfaction level, with service quality offered by Lutsk National Technical University. In addition, research found that there are no differences in overall satisfaction by faculty and gender. However, it was found that there is negative correlation between age of respondents and overall satisfaction, also there are differences in overall satisfaction by style of management, type and style of teaching. In addition, research found the loyalty of students with the Lutsk National Technical University.

Keywords: Student satisfaction, Loyalty, Lutsk National Technical University, Ukraine.

Resumo

A educação é um motor essencial para o crescimento económico, particularmente no setor do ensino superior. Com o setor de ensino superior a tornar-se num mercado cada vez mais competitivo, a satisfação dos estudantes universitários tornou-se uma componente importante para a garantia da qualidade. No ensino superior, os estudantes são os principais clientes das universidades. Como tal, oferecer serviços de qualidade e satisfazer as necessidades dos estudantes, bem como corresponder às suas expectativas, são fatores importantes para as universidades obterem sucesso da crescente competitividade deste sector.

Esta investigação foca-se na determinação de fatores que afetam a satisfação do estudante da *Lutsk National Technical University*. Para completar este propósito, pretende-se dar resposta à seguinte questão: Quais fatores que têm um impacto mais afetivo na satisfação do estudante na *Lutsk National Technical University*?

A *Lutsk National Technical University* é uma das duas grandes instituições de ensino superior na região de Volyn, na Ucrânia. Os estudantes que participaram neste estudo inscreveram-se no ano letivo de 2017/2018. Para a realização do estudo, foram aplicados 200 inquéritos por questionários. O questionário foi utilizado para recolher informações demográficas dos estudantes, informações sobre a área de estudo, especificidades sobre a vida académica e o nível de satisfação com serviços educacionais oferecidos pela *Lutsk National Technical University*. A análise descritiva utilizada para identificar o perfil dos inquiridos permitiu obter o nível de satisfação. Avaliaram-se as diferenças entre os grupos, realizou-se uma associação entre variáveis, que pela análise inferencial deu-se resposta às hipóteses de investigação.

O resultado mostrou que, em geral, os estudantes estão satisfeitos, tendo-se encontrado uma baixa satisfação, com a qualidade dos serviços oferecidos pela *Lutsk National Technical University*. Além disso, a investigação permitiu observar que não há diferenças na satisfação global quanto ao grupo de docentes e por sexo. Verificou-se, ainda, a existência de uma correlação inversa entre a idade dos inquiridos e a satisfação global, também existem diferenças na satisfação global por estilo de gestão, tipo e estilo de ensino. Foi possível verificar a lealdade dos estudantes para com a *Lutsk National Technical University*

Palavras-chave: Satisfação do estudante, Lealdade, *Lutsk National Technical University*, Ucrânia.

Анотація

Освіта є ключовим чинником економічного зростання, особливо, сфера вищої освіти. У зв'язку з тим, що сектор вищої освіти стає все більш конкурентним ринком, задоволеність студентів університету стала важливим компонентом гарантії якості. У вищих навчальних закладах студенти є основними клієнтами університетів. Таким чином, надання високоякісних послуг та задоволення потреб студентів, а також їх очікувань є надзвичайно важливим для успіху університетів в умовах підвищення конкурентоспроможності даної галузі.

Це дослідження присвячено визначенню факторів, що впливають на задоволення студентів Луцького національного технічного університету. Для цього необхідно відповісти на питання даного дослідження: які фактори мають більш афективний вплив на задоволення студентів в Луцькому національному технічному університеті?

Луцький національний технічний університет - один з двох великих вищих навчальних закладів у Волинській області України. Студенти, які брали участь у цьому дослідженні, навчаються в навчальному році 2017/2018. Для проведення дослідження був використаний метод опитування, який застосовується для збору даних. Кількість отриманих дійсних анкет склала 200. Анкета використовувалася для збору демографічної інформації про студентів, відомостей про область їх навчання, специфіці академічного життя та рівня задоволеності освітніми послугами, наданими Луцьким національним технічним університетом. Описовий аналіз, використовуваний для визначення профілю респондентів, також допомагає визначити рівень задоволеності. Щоб оцінити відмінності між групами, побудувати зв'язок між змінними, знайти зв'язок між змінними та відповідати гіпотезі дослідження застосовується інферентний аналіз.

Результат показав, що загалом студенти задоволені якістю послуг, які пропонує Луцький національний технічний університет, однак на низькому рівні. Крім того, дослідження показали, що немає відмінностей в загальному задоволенні по факультетах та між гендерами. Проте було встановлено, що між віком респондентів та загальною задоволеністю існує негативна кореляція, також існують відмінності в загальній задоволеності за стилем управління, типом та стилем навчання. Крім того, дослідження виявило лояльність студентів з Луцьким національним технічним університетом.

Ключові слова: задоволення студентів; Лояльність; Луцький національний технічний університет; Україна.

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Acronyms

CPI – Corruption Perception Index

EU – European Union

GDP – Gross Domestic Product

GVA – Gross Value Added

H – Hypothesis

HDI – Human Development Index

HEI – High Education Institutes

LNTU – Lutsk National Technical University

M – Mean

MOU – Memorandum of Understanding

O – Objectives

OECD – Organization for Economic Cooperation and Development

SD – Standard Deviation

SET – Satisfaction of Teaching

SPSS – Statistical Package for the Social Sciences

UNIAN – Ukrainian Informational Agency

ZNO – independent external evaluation (in Ukrainian: *zovnishnie nezelezhne oziniuvannia*)

Df – Degrees of Freedom

Table of Contents

List of Figures	viii
List of Tables	ix
Introduction.....	1
1. Theoretical Framework.....	2
1.1. Satisfaction in the Higher Education	2
1.2 Student Satisfaction	4
1.3 Course Evaluation and Student Satisfaction	8
1.4 Conceptual model	10
2. Research Methodology	12
2.1 Objective of the Study and Research Hypotheses.....	12
2.2 Data Collection	14
2.3 Description of Data Analysis	15
2.4 Sample and sampling design	17
3. Analysis and findings.....	18
3.1 Students Profile	18
3.2 Predictors of Satisfaction.....	27
3.3. Implications for Practice	36
Conclusions, Limitations and Future Research Lines	39
References	41
Appendix.....	44

List of Figures

Figure 1. Distribution of students by gender.	19
Figure 2. Distribution of students by age.....	19
Figure 3. Distribution of students by study area.....	20
Figure 4. Distribution of students by last finished educational institute	21
Figure 5. Distribution of students by how many times they were abroad.	21
Figure 6. Distribution of students by experience of studying abroad.	22
Figure 7. Distribution of students by level of education expected.....	22
Figure 8. Distribution of students by their opinion considering usefulness of diploma.	23
Figure 9. Distribution of students by their opinion considering willingness to compete on labor market.	23
Figure 10. Distribution of students by their opinion considering teaching style.	24
Figure 11. Distribution of students by their opinion considering teaching type.....	24
Figure 12. Distribution of students by their opinion considering management style in LNTU.	25
Figure 13. Distribution of students by existence of private contact to their faculty's dean.	26
Figure 14. Distribution of students by their opinion considering boorishness.....	26
Figure 15. Absolute frequencies of loyalty.	35
Figure 16. Relative frequencies of loyalty.	36

List of Tables

Table 1. Research hypotheses of the study.....	14
Table 2. Reliability statistics.	15
Table 3. Data analysis techniques.	16
Table 4. Population and Sample.....	17
Table 5. Descriptive statistics of satisfaction items.....	27
Table 6. Detailed descriptive statistics of satisfaction items.	28
Table 7. Overall satisfaction.	28
Table 8. Overall satisfaction by faculties.....	29
Table 9. One-Sample T Test for overall satisfaction.....	30
Table 10. One-Sample Statistics for overall satisfaction.....	30
Table 11. Pearson correlation between overall satisfaction and age.....	30
Table 12. Kruskal Wallis Test to identify differences by faculties.	31
Table 13. Overall satisfaction by gender.....	31
Table 14. Student`s T Test and Levene`s Test to identify differences by gender.	31
Table 15. Distribution of overall satisfaction by style of management.....	32
Table 16. Kruskal Wallis Test to identify differences by style of management.....	32
Table 17. Distribution of overall satisfaction by style of teaching.....	33
Table 18. Student`s T Test and Levene`s Test to identify differences by style of teaching.	33
Table 19. Distribution of overall satisfaction by type of teaching.	34
Table 20. Kruskal Wallis Test to identify differences by type of teaching.....	34
Table 21. Results of main hypotheses.....	34
Table 22. Descriptive statistics of student`s loyalty.....	35
Table 23. Distribution of satisfaction by faculty and availability of private contact.....	38

Introduction

Modern Bologna system puts the student in the centre and offers transparency and quality. Comparison of the Ukrainian model of high education with it gives a chance to see their basic distinctions and development possibilities. Theoretical conceptualizations such as students' satisfaction as a multi-dimensional construct involving the interaction of personal, sociological and contextual factors such and processes affecting their development are addressed in this work.

Active students should be asked to evaluate each course they have attended during the term of education. The main goals of course evaluations are to obtain student feedback regarding courses and teaching for improvement purposes and to provide a defined and practical process to ensure that actions are taken to improve courses and teaching. This work is dedicated to feedback collection and analysis in case to find the way to improve educational services provided in LNTU.

The main objectives of the study are: to determine student's satisfaction according to different aspects; to reach overall satisfaction of student's within the given service in terms of different aspects; identifying satisfaction dissimilarities in students' perceptions of service across different departments; to give suggestions to the management of university to improve service quality provided to students; to identify loyalty of students.

The main research question to be answered is to evaluate which factors affect student satisfaction in LNTU.

The research is based on the online survey made in university. The sample consists of 200 students from different age and study area. Then data was analysed due to research hypotheses and conclusions were made.

This work is divided into 3 parts. The first section is dedicated to understanding the concept of satisfaction in high education sector and factors that can affect it. At the beginning it was described the specifics of marketing in high educational institutes, particularly perception of student like the main customer of university. It was presented the comparison of Ukrainian educational system and Bologna model. It was decided to learn how course evaluation affects student satisfaction. In the end of first part the conceptual model of analysis was described.

Second section covers the methodology of research. The survey related to the satisfaction level and factors that can affect it was described. There was also presented main objectives of the study and research hypotheses.

In the third part analysis and results of the survey was presented. Inferential analysis and descriptive statistics were presented. This chapter refers to the research about estimating the level of student satisfaction in LNTU. The last section will be dedicated to the presentation of the main findings.

1. Theoretical Framework

1.1. Satisfaction in the Higher Education

According to euro integration process in Ukraine, we will talk about higher education from the European point of view. By the way, Ukraine is full member of the Bologna Process since 2005. The Bologna Process is the name for the reform of higher education in Europe which basic objective is promotion of students' and teachers' mobility by establishment so-called European Higher Education Area (Denson, Loveday & Dalton, 2010). Bologna system provides creation of common European Higher Education Area which assure mobility and transparency of education and establishment of quality assurance system of higher education. Such system puts the student in its centre, and it offers transparency and quality, and simultaneously provides the conversion of society into the knowledge society (Capello, Olechnicka & Gorzelak, 2013). The main goal of Ukraine participation in integration process in sphere of educational services is increasing of Ukrainian high education competitiveness on the basis of integration to European educational space under conditions of preserving best traditions of national educational system (Morska, 2010). In Europe, it is becoming clear that institutions must make efforts to find their niche in order to establish their identity and do what they do best (Wawak, 2014). Theoretical conceptualizations such as students' satisfaction as a multi-dimensional construct involving the interaction of personal, sociological and contextual factors such and processes affecting their development are addressed in this work. Priority objective of education system is developing logical and creative abilities of the individual and its ability for changing and innovating current situation (Astin, Oseguera, Sax & Korn, 2002). Also, one of the main objectives is adopting a part of general and specialized contents needed for inclusion in the work process. In education it is necessary to develop qualitative detrimental quantitative component. The basic characteristics of education:

- it expands the cultural horizon of the individual and it provides him better life opportunities,
- it contributes to the elastic adaptation to changes which is brought by technological progress,

- it provides active participation in the process of making different decisions at the operational, tactical and strategic level depending on the characteristics of socio-economic relations,
- it increases interest for social cohesion, and it facilitates realization of broader social objectives,
- it provides rational utilization of free time (Dolinsky, 1994).

Higher education institutions must have maximum respect to the current and future needs of the society in order to educate professionals of certain profiles. Concerning that there are three basic tasks higher education institutions have to do:

- scientific-teaching (studying, implementing and promoting the latest scientific and educational achievements),
- commercial (meeting the needs of the economy for the human resources),
- social (accomplished through the synthesis of two previously mentioned items) (Chadwick & Ward, 1987).

Facing a downfall in the enrollment of new participants, facing increased costs of functioning, nowadays universities started to use marketing to attract students and funds (Andrilic, Budic & Pismis, 2013). Now they define better their target markets, wherewith improving communication and promotion and appropriately meeting the needs and desires of students.

Marketing mix for services of higher education includes the following elements:

- product/service (subjects, directions, additional services),
- price (registration fee, school fee, other costs),
- promotion (publicity, public relations, advertising, personal selling),
- place/distribution (location of space, layout),
- people (contactibility),
- process (logistics of services delivery) (Dolinsky, 1994).

According to Kotler and Clarke (1987) satisfaction is a state felt by a person who has experienced a performance or an outcome that fulfil his or her expectation. Devasagayam, Stark and Watroba (2013, p. 3) state that "satisfaction is an ongoing, dynamic process". To understand deeply the meaning of satisfaction, we need to talk about perception of service quality in higher education. Due to Johnson and Winchell (1988, p. 9) service quality is "the totality of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs". A second definition explains service quality as the sum of perceived quality minus expected quality, which in turn, if positive, leads to satisfaction (Grönroos, 1984; Lewis & Booms, 1983; Parasuraman, Zeithaml & Berry, 1985). However, Theodorakis, Kambitsis, Laios and Koustelios (2001, p. 434) establish that "even quite satisfied spectators can rate service quality generally lower". Also, "individuals are often driven by the I-have-high-expectations social norm and this creates a bias towards social desirability" (Brandon-Jones & Silvestro, 2010, p. 1295). It means that even when the difference between

perceived quality and expected quality may be negative, the customer may still be satisfied with the service.

While talking about student's expectations of service quality, we need to assume that students consider their past experiences into account when they evaluate their expected service quality. That's why the results of our research can vary.

1.2 Student Satisfaction

Comparison of the Ukrainian model of higher education with Bologna model gives a chance to see their basic distinctions and development possibilities. Construction of the Ukrainian model of higher education is based on orientation to requirements of society (Wawak, 2014). Satisfaction of development requirements of a society by targeted well-being and preparation of executors, manufacture of labour for a certain sectors of public life (Brandon-Jones & Silvestro, 2010). Bologna model accents on personal requirements, satisfaction of requirements/desires of the person to unite their own well-being with serving to a society: formation of people, competitive in the world labour market (Denson et al., 2010). Approaches to management and higher education financing essentially differs. In the Ukrainian model there is a high regulatory and control pressure from the higher administrative authorities: Verkhovna Rada, Cabinet of Ministers etc; cruelty and monotony of methods of administration with orientation to requirements of the higher directing authorities. Educational plans are determining and standardizing by the higher directing authorities by the higher directing authorities with orientation to satisfy requirements of the society established by the government, the minimum quantity of satisfaction courses. Financing is carrying out from the state budget or private funds: support of institutes instead of separate persons: there is no tradition of existence of a charity payments or grants (Wawak, 2014). Bologna model offers autonomy of universities and partnership with regulations: conditions of development; variety and flexibility of management methods with orientations to satisfy needs of client. Financing has various sources (Elliot & Shin, 2002, p. 198).

Also it's necessary to notice that in Ukrainian model there is an ideological shift, paternalistic methods, instead of on self-sufficient development of the person is observed; democratic institutes is not developed yet; authoritative traditional style of teaching where storing prevails over critical thinking: the limited access to world resources; discrepancy of experts preparation level in system of the higher professional training to requirements of an innovative way of manufacture development (Wawak, 2014).

Notwithstanding the foregoing Ukraine scores highly in many indicators that characterize its human capital. For example, it remains one of the most educated nations according to the UN Human Development Index (HDI); in 2010 it was twenty-seventh in the global education ranking (UN 2010) while its overall HDI ranking was sixty-ninth among 169 nations (Capello et al., 2013). Ukraine's literacy rates are close to 100 percent and on average Ukrainians have 11.3 years of education. Participation in higher education in Ukraine has increased dramatically over the last twenty years

and currently there are 2.7 million students in Ukrainian universities and institutes (Morska, 2010). Their number is continuously growing.

The formal characteristics of the Ukrainian education system also look good compared to the developed economies. Ukraine spends a healthy 5.3 percent of its GDP on education, which is comparable with France, the United Kingdom, Germany or the US. However, around 90 percent of the education budget is being spent on the payroll and supporting the existing infrastructure – there is very little investment going into the advancement and modernization of schools` and universities` infrastructure, and enhancing the quality of the curriculum (Capello et al., 2013). Moreover, the entire administrative and assessment system in education is based on quantitative indicators rather than qualitative.

At the same time, the productivity of Ukrainian educational sphere is low. According to expert assessments in 2009, the GVA per one employee in the education sector was 3,625 USD which is three times less than overall economic productivity (10,735 USD). This is especially surprising since 70 percent of employees in educational sector have a higher education, compared to 55 percent for the economy in general (Capello et al., 2013). This demonstrates that the higher level of skills, or at least formal attributes of such skills, is not being converted into higher labour productivity.

The problems of Ukrainian education sector are better illustrated not so much by the formal participation rates, years in education and skills proliferation, but by the level of satisfaction by education services. According to a Gallup World Survey, only 38 percent of Ukrainians responded positively to the question ‘Are you satisfied with the quality of education in your city/locality?’ (Capello et al., 2013). This is a very low indicator compared to the 70 percent satisfaction rate in the USA and the UK, 59 in Germany, 42 in Russia or 66 in Poland (Wawak, 2014). So despite high spending and participation rates, Ukrainians are unsatisfied with their country`s education system.

Skills and qualifications of educational institution`s staff are notarized in educational certificates. However, the statistics of Ukrainian students` unsatisfaction shows it`s increase in the last few years. So what if certificates are fake, qualifications are overestimated or institutions exist only on paper? This raises the issue of corruption in higher education. Corruption, rampant in Ukrainian higher education institutions (HEIs), undermines the quality of education and its status in the educational services market (Osipian, 2009).

Internationalization in education touches on the issue of immigration and the international labour market. The immigration flow from Ukraine is mostly directed to the Russian Federation, European Union, the USA, and Canada Educational credentials of Ukrainians in other countries are not well received (UNIAN, 2018). First, the language is a natural barrier, but more importantly, solid modern knowledge is often lacking. The Bologna Declaration and Lisbon Convention adopted by Ukraine are intended to integrate the nation`s education sector into the larger European community (Wawak, 2014). However, if the situation with corruption does not change drastically, international credential recognition will not be possible. This problem is common for the former Soviet republics. Heyneman, Anderson and Nuraliyeva (2008, p. 1) point out that “Whether experienced or perceived, universities or university systems with reputations for corruption will likely end the Bologna process. Were this

process to actually take effect it would constitute the educational equivalent in the EU of unilateral disarmament.” Countries with a high level of credibility and low level of corruption are unlikely to recognize educational credentials from the countries where degrees are bought and sold. This may lead to the collapse of the initiative of creating a common educational space within the larger Europe.

According to UNIAN information agency Ukraine ranked 130th among 180 countries in the CPI 2017. The index, which ranks 180 countries and territories by their perceived levels of public sector corruption according to experts and businesspeople, uses a scale of 0 to 100, where 0 is highly corrupt and 100 is very clean. Ukraine improved its last year result by one point and got 30 points out of 100 possible. Next to Ukraine stand Gambia, Iran, Myanmar and Sierra Leone. Meanwhile, Russia scored one point less and ranks 135th (29 points), Belarus - 68th (44 points), Poland – 36th (60 points). Thus, the CPI claims Ukraine is Europe's most corrupt country after Russia.

Corruption in higher education institutions is perceived as a major problem in Ukraine, as in most of the rest of the post-Soviet states. In many cases, informal payments are seen as the norm rather than the exception. In 2012 OBC Transeuropa commissioned a survey from the Kiev International Institute of Sociology. It exposed a negative attitude towards informal payments in higher education. Only 3% of respondents considered informal payments to teaching staff as necessary, while 28.7% had a more fatalistic position, considering them as “part of the system”. Negative attitudes, however, were prevalent. Only 9.3% of respondents considered informal payments as the only survival option for university teaching staff and 59% saw it as a sign of national degradation. In a subsequent question, informal payments were also associated with shame in 44.1% of the responses. Beyond the university environment they were, however, considered by 38% as part of the system that helps survival (Polese & Stepurko, 2016).

Some efforts have been made to fight these tendencies. The creation of the external independent evaluation - ZNO was aimed at changing admission procedures so that they are more transparent. However, if these changes have not produced tangible improvements perhaps the phenomenon has its roots elsewhere.

Teachers are not always interested in student-originated income. Notwithstanding this, they might still face pressure from the administration not to fail students. As a result, as one teacher reported: "There are students who need to pass an exam that is needed to complete a degree. I know that, sooner or later, he will pass and I also know that it is not his fault if he is obliged to get a degree to work afterwards, since in Ukraine it is unthinkable to get a job without university education. I will eventually pass the student and I won't feel bad if he or she comes to me the next day with a box of chocolate or a bottle of brandy (kon'yak)" (Heyneman et al., 2008, p. 11).

Dramatic political and military events since 2014 that have shaken the country, along with slow attempts at a radical reform of higher education that have continued since 1990, make Ukraine an interesting case, worthwhile of scholars' attention (Osipian, 2009). The struggle for the country's true sovereignty goes hand-in-hand with a less-apparent struggle for university's autonomy. Drastic changes in the external environment, called to life by such dramatic events as the regime change

and the war, urged HEIs and the educational authorities to turn to fundamental question (Osipian, 2017).

After all political turmoil - Revolution of Dignity of 2013, and the war that followed, Ukraine started big anti-corruption process. In November 2014 in line with the Memorandum of Understanding (MOU) between the OECD and Ukraine, the OECD launched a country-specific project to support Ukraine in its anti-corruption agenda (Polese & Stepurko, 2016). The project aims to strengthen legal and institutional capacity to effectively detect, investigate and prosecute high-profile and complex corruption in Ukraine. Specifically:

- to provide tailor-made assistance to the Ukrainian authorities for the establishing of the National Anti-Corruption Bureau;
- to provide capacity building assistance to the specialised unit within the General Prosecutor's Office that will work with the National Anti-Corruption Bureau to ensure effective detection and investigation of corruption cases;
- to develop a joint training programme on selected aspects of detection, investigation, prosecution and adjudication of complex corruption cases, including financial investigations, for law enforcement and judicial bodies;
- to help guide Ukraine towards a closer compliance with OECD standards on foreign bribery with the focus on liability of legal persons for corruption offences, confiscation, international cooperation and asset recovery (OECD, 2016).

In response to international pressure, President of Ukraine Petro Poroshenko submitted a new draft anti-corruption law to parliament in December. The newspaper *Ukrainska Pravda* reported: `The International Monetary Fund has told the Ukrainian authorities that it does not support a draft law to create an anti-corruption court because the bill does not guarantee its independence` (Reuters, 2018)

Sometimes misunderstanding with leadership in Ukrainian universities cause too big influence on student's mental health. Management staff feels too much power and authority in this system. It's obvious that when boorishness is considered by university's management as a part of mentality, professors are allowed to raise voice while talking to students.

20th February 2018, Interfax-Ukraine reported: `Bogomolets University Deputy dean suspended from office due to student's suicide`. Prosecutors say the student, Mukkadas Nasyrlaeva, jumped to her death off a bridge in Kyiv on January 30. In a statement on February 19, the Kyiv City Prosecutor's Office said it was investigating whether anyone had incited Nasyrlaeva, a student at the National Medical University, to commit suicide (KyivPost, 2018). The statement cited media reports as saying that her decision "might have been caused by difficulties that appeared during her studies at the university, namely misunderstandings with its leadership." A lawyer for Nasyrlaeva's family, Rovshanbek Rozmetov, wrote earlier on Facebook that Nasyrlaeva committed suicide after a talk with the university's deputy dean for work with foreign students. He said the deputy dean refused to sign papers requested by the Turkmen Embassy in Kyiv that would have enabled Nasyrlaeva to extend her visa without leaving Ukraine (RadioFreeEurope, 2018).

It is important to prevent such situations by setting the strict rules in communication between student and university. There should be created system of collecting feedback about all the services provided by university. That`s why determining level of student satisfaction and working on its improvement is so important. In the next subparagraph we will take a closer look on the parameters of students` satisfaction.

1.3 Course Evaluation and Student Satisfaction

In many educational fields students are required to pay tuition fees and this places a greater focus on the value and the quality of the education they receive. In this competitive framework, only those institutions which provide high quality educations and environments for their students can survive (Brandon-Jones & Silvestro, 2010). These effects can be measured by assessing overall student satisfaction. Student satisfaction is about evaluating the educational services provided by institutions that frame their academic life (Alves & Raposo, 2007). Student satisfaction surveys are commonly used as feedback to determine the delivery of education. Rowley summarized four reasons for collecting student feedback:

- to provide students with the opportunity to offer their opinion regarding the courses in order to lay the foundation for improvements;
- to express their level of satisfaction with teaching and learning;
- to encourage students to give feedback and to use the results as benchmarks;
- to provide indicators that have an impact on the reputation of the institution in the marketplace and in the labour market (Denson et al., 2010).

Active students should be asked to evaluate each course they have attended during the term of education. The main goals of course evaluations are to obtain student feedback regarding courses and teaching for improvement purposes and to provide a defined and practical process to ensure that actions are taken to improve courses and teaching (Elliot & Shin, 2002, p. 203). Of the items on course evaluation forms, the one that receives the most attention and consequently the most weight is the question, 'Overall, I was satisfied with the quality of this course.' However, no attention has been placed on examining the predictors of students being 'satisfied with the quality of this course' overall (Denson et al., 2010).

Student satisfaction surveys can serve two purposes. First, they can serve as a tool for planning and implementing continuous improvement activities. Second, they can be considered as managerial tools, guiding higher education institutions to adapt to the changing circumstances of this market (Keblawi, Johansson & Svensson, 2013).

For instance, according to Tóth and Jónás (2014) the student is now recognized as the principal 'stakeholder' of the higher education in Hungary. Student feedback of some sort is usually collected by most institutions, though there is little standardization on how this is collected and what is done with it. There is still little understanding of how to use and to act upon the collected data.

To start course evaluation, we need to begin with student satisfaction of teaching (SET). Typically, SET have been used for the following purposes:

- as a developmental tool for providing feedback to staff about their teaching;
- as a measure of teaching effectiveness to make personnel decisions;
- to assist students in selecting courses and teaching staff;
- as a source of data for research on teaching (Ginns, Prosser & Barrie, 2007, p. 607).

In a teaching-focused evaluation, the course components that are evaluated are the teacher and the teaching process. In contrast, if the evaluation is learning and curriculum-focused, possible objects to evaluate are the quality of learning outcomes or processes and even sustained knowledge transfer from other courses undertaken (Hanzhar, 2015).

Evaluation questionnaires always include ratings of teachers and teaching activities, students are rarely asked to assess their own learning or to consider their own work – despite the fact that such information could be used to improve the curriculum in order to better support the desired learning outcomes (Ruth & Houston, 1982, p. 61).

Whilst student satisfaction is an increasingly popular construct within SET, some researchers have noted that satisfaction remains at this time a complex and poorly articulated concept, influenced by a wide variety of contextual factors (Hanzhar, 2015). Further, it isn't universally accepted that satisfaction is even a desirable outcome of university education.

Elliot and Shin (2002) identified that, at the institution level, the majority of factors that predicted student satisfaction related to course and teaching quality:

- excellence and quality of instruction;
- knowledgeable, fair and unbiased staff;
- clear and reasonable requirements for each major; access to information;
- ability to get to classes (or convenient timetabling).

Ginns et al. (2007) identified five factors that predicted overall student satisfaction with their degree:

- good teaching (which incorporates providing feedback);
- clear goals and standards;
- appropriate assessment;
- appropriate workload;
- generic skills.

One of the main aspects of course and teaching evaluating is an individual approach provided by the teacher. For my opinion, this question needs to be considered more seriously. Using the speech of the President of the Republic of Uzbekistan: `It is possible to achieve success only if competence and an individual approach in education are provided, which means that the educational process should be based on taking into account the individual characteristics of each student, development of his/her personal identity, development of his/her capabilities, uniqueness and individual style of activity (Hanzhar, 2015). At the same time, it's necessary to develop an individual path of education,

which means a system of individualized knowledge, amended standard programs, adjustment of curriculum for each individual student, and understanding of the way to unlock each student's potential (Machado, Brites, Magalhães & Sá, 2011). The creation of an individual educational trajectory is largely dependent on the competence approach in education, aimed at the orientation of education to achieve a sufficiently high level of knowledge, experience and communication in various fields and areas (Theodorakis et al., 2001).

Nowadays, it will be distinguishing the informational, psychological, health-preserving and other competencies that enhance the effectiveness of the educational process (Hanzhar, 2015). Individual work of highly professional teachers, carried out `face to face`, is an opportunity for a teacher to solve personal, social and methodological questions of students, in particular:

- identification of problems of a theoretical or practical character, which are relevant for a particular student
- determining the sequence of the emerged problems and the approximate timing of their solving
- involvement of other professionals to address the health improving nature of physical education
- the choice of methods or athletic and sports training etc.

Thus, individualization in education is an urgent task, as the more individual the approach is, the more likely it is that each student will reach the desired learning outcomes and will master all subjects more successfully, and will acquire knowledge and skills in a larger volume and accordingly will be more satisfied.

1.4 Conceptual model

Despite organizations being subsidized by the state having the tendency to ignore the needs of its targets publics, which is the case of Universities, facing this new and more competitive context, these institutions need to incorporate a better orientation to the market, seeking to obtain competitive advantages over its competitors, as well as the construction of a positive image close to its target market (Machado et al., 2011).

A long term relationship with students can provide an institution with a type of competitive advantage, particularly at a positive word of mouth level concerning potential, present and future students, as well as through the possible collaboration with the institution, especially after graduation, contributing to the (work) placement of recent graduates. The dissatisfaction of students, on the contrary, could have ominous consequences for both the university and the student, namely unsuccessful students (Wiese, Willis & Hutchins, 1994; Walther, 2000), quitting or transferring (Thomas et al., 1996; Astin et al., 2002) and negative word of mouth being harmful to future applications (Walther, 2000).

Summing up all the above, we will talk about such factors, that affects satisfaction, as:

- student`s expectations: students consider their past experiences into account when they evaluate their expected service quality;
- corruption in higher educational institutes: do students believe that correspondence of grades with real knowledge is fair?;
- approach to management of the university: style of management, relationships between professors and students and availability of an individual approach to everyone.

2. Research Methodology

After literature review related to student`s satisfaction in higher education, in this part the review of instruments used in analysis is presented. This section is divided into four parts. First part is dedicated to the main goal and objective of the study and research hypothesis that have been made. Next questions should be answered: What is the main research question? What is going to be done in this work? What is the objective of the study? What research hypothesis have been made? In the second part, there will be presented and explained the process of data collection and reliability of the instrument will be checked. Later, in third part, there will be described the techniques of analysing data. In the end, population and final sample will be shown and explained.

2.1 Objective of the Study and Research Hypotheses

This study examines the relationship between level of student`s satisfaction and factors that can affect is: expectations, studying environment and corruption. Evaluation of student satisfaction of internal performance of universities helps higher education Institutions to meet student expectations. To answer the main research question if the students of Lutsk national university satisfied and what affects their satisfaction, survey was applied and descriptive and inferential analysis was made in order to draw inferences regarding the association between the variables and testing the truthfulness of the hypothesis. Does the students' satisfaction varies based on different aspects or not? Additionally, study examined whether there is a relation between different demographic factors and aspects. Further, the main research question it was purposed to understand how much the other variables could influent the total satisfaction of the students.

Research is based on LNTU, located in Volyn region, Ukraine. It is one of two biggest higher education institutes in region. The university includes 36 specialties according to the educational-qualification level of the bachelor's degree and 24 specialties according to master degree. There are

7 faculties, which works both for full-time and external forms of education. Faculties are divided into 30 departments.

LNTU mainly provides educational services. Control and organization of educational services is made by Educational Department. In addition, this department includes Center of Business Student which cooperates with the Employment Service and offers vacancies for students. Students are provided with opportunities to go abroad to study, to work or to find internship by Information and Publishing Department. University cooperates with many other HEI from Poland, Germany, Turkey, Lithuania, Belarus, Azerbaijani, Bulgaria, UK, Georgia, Spain, Latvia, Moldavia, Czech Republic and Portugal. In addition, there was implemented Strengthening Academic Integrity in Ukraine Project by American Council and Active Citizens Project by British Council. Main source of information for students is the official website of university: lutsk-ntu.com.ua. Also, it is important to mention social media marketing of LNTU provided by Informational Department of Students Council. There are official pages of university in Facebook and Instagram, named `Typical LNTU`, which are targeted to make connection between students and Administration easier.

Department of Organization of Educational Activities provides leisure activities for students. There was made Club of poetry lovers, Folk ensemble, School of Gopak, Club of guitar players, Theatre studio and Voluntary organization. The above information gives an image of marketing complex of LNTU and it is main services.

After understanding the main goals of the study, the objectives of the study were defined. Specific objectives of the research are the following:

- O₁: To determine student`s satisfaction according to different aspects;
- O₂: To reach overall satisfaction of student`s within the given service in terms of different aspects;
- O₃: Identifying satisfaction dissimilarities in students` perceptions of service across different departments;
- O₄: Identify loyalty of students.

Based on the objectives of the study, the research hypotheses were developed (Table 1).

Table 1. Research hypothesis of the study.

Label	Hypothesis
H ₁	Everybody is satisfied with LNTU.
H ₂	There is negative correlation between age of respondents and overall satisfaction.
H ₃	There are differences in overall satisfaction by faculties of LNTU.
H ₄	There are differences in overall satisfaction by gender.
H ₅	There are differences in overall satisfaction by style of management.
H ₆	There are differences in overall satisfaction related to style of teaching.
H ₇	There are differences in overall satisfaction related to type of teaching.

2.2 Data Collection

For the primary data collection questionnaire method was used. A target of the study is LNTU, located in Lutsk, Ukraine. Responses were collected from students during April and May of 2018, in the second semester of 2017/2018 academic year. The sample size consists of 200 students. To collect data there were two possible ways to choose: online data collection or paper-based data collection. Paper-based way could cause too many troubles, because of the distance and problems with controlling all the processes. Therefore, online data collection way was chosen.

Survey was applied online using google forms and was distributed to all seven faculties of LNTU by Department of information of Student Council.

As a base for the questions, the literature review was used. Questionnaire consists of 3 parts. First part consists of demographic questions (See appendix).

Second part of survey was based on analogous one, described in article "Student satisfaction in higher education: a Portuguese case study" written by De Marie, Cono and Fernandes (2016). It comprised questions related to the students' satisfaction measured on a 5-point Likert scale (1 - 'Strongly Disagree', 2 - 'Disagree', 3 - 'Neutral', 4 - 'Agree' and 5 - 'Strongly Agree'):

- First expression of LNTU;
- Satisfaction with the choice of high educational institute;
- If there was a chance, student would choose LNTU again;
- Students' choice of LNTU – right decision;
- Student is happy because of choosing LNTU;
- Student considers his choice of LNTU right;
- Student's happy to attend LNTU;
- Student likes to tell about LNTU his friends;

- Student likes to help future students by giving information about LNTU and its` programs;
- People ask student about programs and studying in LNTU;
- LNTU meets student`s expectations.

Third part of survey consists of questions that could help to understand the environment of studies (See the appendix).

Before completing the questionnaire, respondents were informed about the aim of it and why the data is required. After all the answers were collected, data was coded and a database was created using the SPSS Statistics.

2.3 Description of Data Analysis

The main purpose of the study is to estimate the level of student`s satisfaction of LNTU and how much the other variables could influent the total satisfaction. To answer this question, if the students of LNTU are satisfied or not, it has been made a descriptive analysis and an inferential analysis in order to draw inferences regarding the association between the variables and testing the truthfulness of the hypothesis.

The structure of the survey was described above. To calculate the reliability of it, the Cronbach's Alpha(α) was used. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. If Cronbach`s alpha:

- $\alpha > 0.9$ it can concluded that internal consistency is excellent;
- $0.9 > \alpha > 0.8$ it can concluded that internal consistency is good;
- $0.8 > \alpha > 0.7$ it can concluded that internal consistency is acceptable;
- $0.7 > \alpha > 0.6$ it can concluded that internal consistency is questionable;
- $0.6 > \alpha > 0.5$ it can concluded that internal consistency is poor;
- $0.5 > \alpha$ it can concluded that internal consistency is unacceptable (Tavakol & Dennick 2011, pp. 53-55).

In the present study it was achieved a Cronbach's Alpha of 0.943 (Table 2). If $\alpha \geq 0.9$, it means that internal consistency is 'excellent'. While analysing item statistics, it can see than mean of each item doesn`t differ much through all. More we can estimate that the influence of deleting any of items is not significant. In conclusion, the result showed that the score of the Cronbach's Alpha indicate that the measurement scale of the satisfaction construct was stable and consistent.

Table 2. Reliability statistics.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N.º of Items
0.943	0.944	11

The responses were analysed by using different statistical approaches using IBM SPSS Statistics 23. After, completing questionnaire, all questionnaires have been coded and were entered into an SPSS spreadsheet for analysing. In respondent profile questions, “yes” and “no” answers questions as coded “1” and “2” respectively. Also other closed questions type coded with the numbers and added to SPSS.

In the Table 3 objectives, research hypothesis, and the techniques were used to analyse the data are presented:

Table 3. Data Analysis Techniques.

Label	Objectives or Research Hypothesis	Data analysis technique
H₁	Everybody is satisfied with LNTU.	t-Student test
H₂	There is negative correlation between age of respondents and overall satisfaction.	Pearson correlation
H₃	There are differences in overall satisfaction by faculties of LNTU.	Kruskal-Wallis test
H₄	There are differences in overall satisfaction by gender.	t-Student test
H₅	There are differences in overall satisfaction by style of management.	Kruskal-Wallis test
H₆	There are differences in overall satisfaction related to style of teaching.	t-Student test
H₇	There are differences in overall satisfaction related to type of teaching.	Kruskal-Wallis test
O₁	To determine student`s satisfaction according to different aspects.	Frequency tables
O₂	To reach overall satisfaction of student`s within the given service in terms of different aspects.	Mean and Standard Deviation
O₃	Identifying satisfaction dissimilarities in students` perceptions of service across different departments.	Mean and Standard Deviation
O₄	Identify loyalty of students.	Graph with relative and absolute frequencies

An exploratory descriptive statistics and inferential techniques to study the behaviour of the attributes under study, as well as the existence of correlation or differences between variables will be made. In addition, mean and standard deviation will be calculated for each variables of satisfaction.

Some inferential statistics will also be used, with associated hypotheses tests, to help in the deductions to be made from the data collected. The Student’s t-test or Kruskal-Wallis will be used to assess differences between groups. For application the Student’s t-test there is a need of each independent sample size to be greater or equal than 30 elements or to verify that it follows the normal distribution and confirm that the variances are homogeneous for each independent sample using the

Levene test. In order to provide a measure of how closely two variables are the Pearson's correlation coefficient it will be used.

To decide about corroboration of the research hypotheses it will be assumed a 5% level of significance.

2.4 Sample and sampling design

The research survey was made in LNTU, Lutsk, Ukraine. This is one of two big high educational institutes, located in Lutsk. At the same time, this is my home university and satisfaction of its' students is my direct interest. Population consist of students from all seven faculties (Table 4).

In the Table 4 there is presented the population of 3958 students from different study areas.

Table 4. Population and sample.

Faculty	Population		Sample	
	N	%	n	%
Business faculty	672	17.0	78	39.0
Faculty of Computer Sciences and Information Technologies	555	14.0	15	7.5
Technological faculty	658	16.6	17	8.5
Faculty of Construction and Design	498	12.6	16	8.0
Faculty of Ecology and Instrumentation and Energy Systems	550	13.9	29	14.5
Faculty of Accounting and Finance	325	8.2	21	10.5
Machine-building faculty	700	17.7	23	11.5

3. Analysis and findings

This part presents the findings from the survey related to students` satisfaction applied in all seven faculties of LNTU. This section consists of three parts. The first part (3.1) examines the profiles of respondents. Specifically, age, gender, study area, last finished school, experience of travelling and studying abroad and expectations. In order to classify the single variables, frequency tables have been used. Second part (3.2) is dedicated to examine other predictors of satisfaction: factors that affect environment of studies. For that descriptive statistics where used.

3.1 Students Profile

While analysing students profile, there was found that gender structure respondents is balanced. On the Figure 1 it is shown that number of female students is a bit bigger than a male one. 56.28% of the sample is female students, which consists of 112 students and other 43.72% is male students – 87 students.

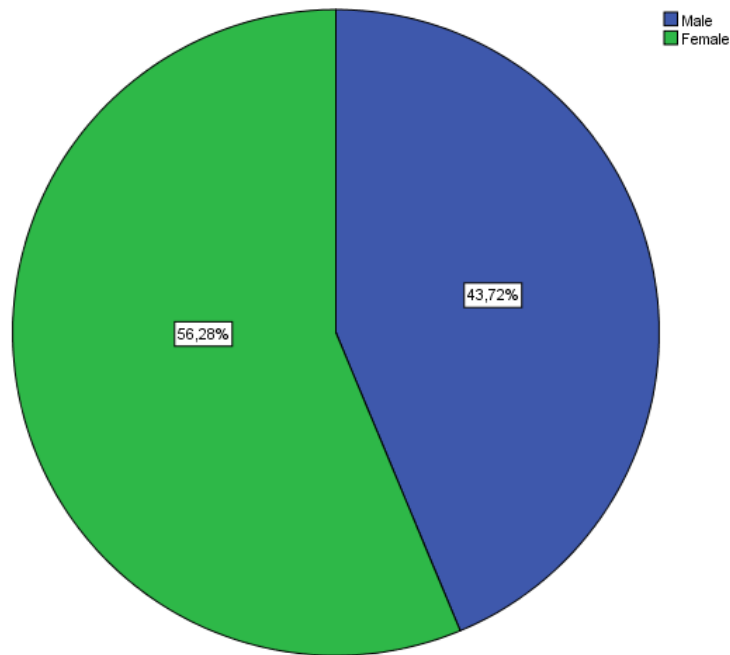


Figure 1. Distribution of students by gender.

This sample is dominated by 18-years old students which make up 32.5% of the sample (65 students) and 20-years old – 20.5% of the sample (41 students). Students, whose age is 19 consists 15.5% of the sample (31 students), 21 – 14.5% (29 students), 17 – 6.5% (13 students), 22 – 5.5% (11 students), 23 – 2.5% (4 students) and only one 25-years old person. All distribution can be seen at the Figure 2.

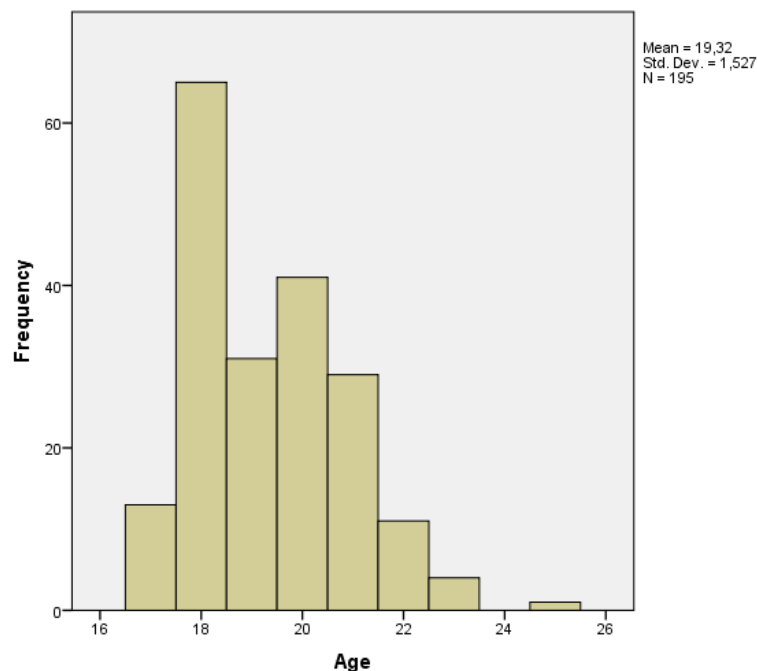


Figure 2. Distribution of students by age.

Respondents who participated in this study belong to different study areas. As highlighted in Figure 3, the main part of students is from Business Faculty – 39.20% (78 students). The second most

significant group belongs to the Faculty of Ecology and Instrumentation and Energy systems – 14.57% (29 students). Machine-building faculty contains of 11.56% of respondents (23 students), Faculty of Accounting and Finance – 10.56% (21 students), Technological faculty – 8.54% (17 students), Faculty of Construction and Design – 8.04% (16 students) and Faculty of Computer Sciences and Information Technologies – 7.54% (15 students).

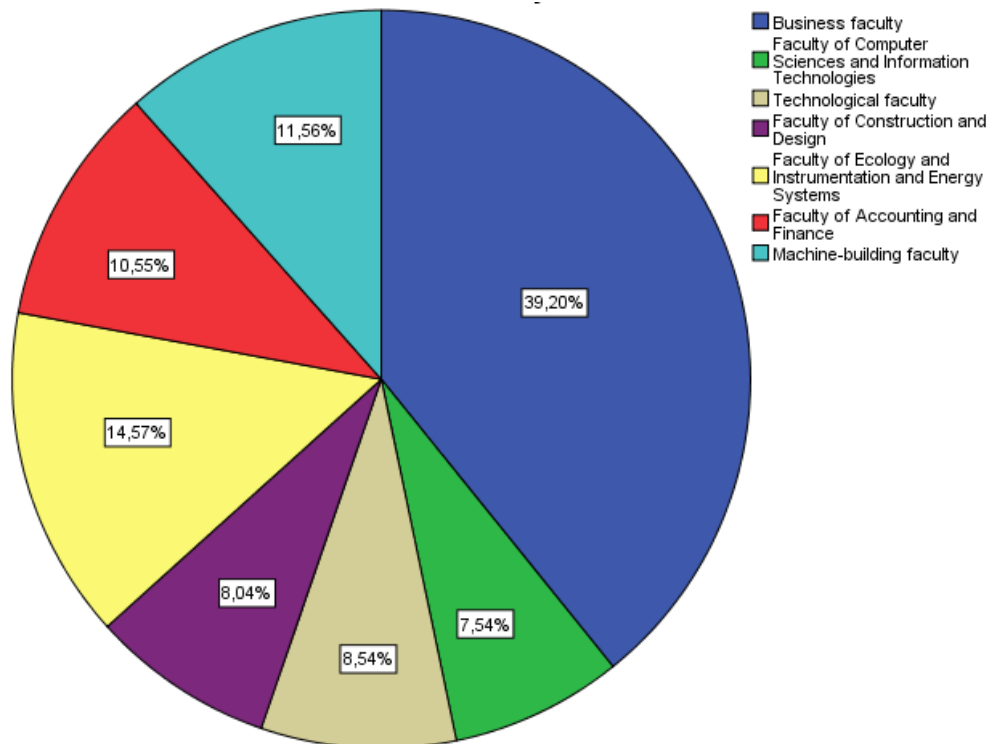


Figure 3. Distribution of students by study area.

Asked from students` their last finished educational institute. The questionnaire included four answers, as shown in Figure 4:

- School: 63.32% (126) of respondents came to LNTU just after school.
- Gymnasium: 11.56% (23) of respondents finished gymnasium before coming to LNTU.
- College: 12.06% (24) of students have additionally finished college.
- University: 13.07% (26) of respondents have already finished university once.

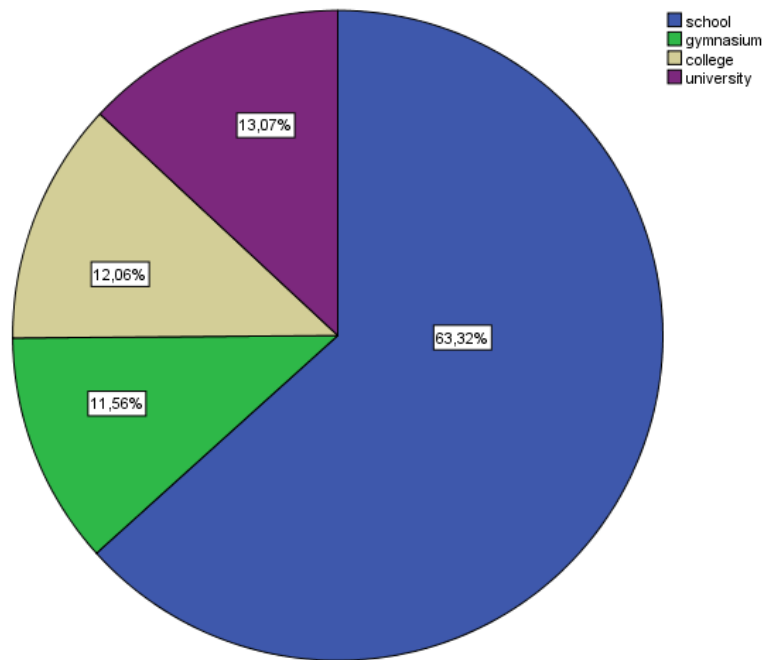


Figure 4. Distribution of students by last finished educational institute.

Next questions are related to abroad experience of students. First they needed to estimate how many times they were abroad. As shown at the Figure 5, 44.44% (88) of students have never left the country. 37.37% of students (74) were abroad up to five times. Only 18.18% (36) of respondents have been abroad more than five times.

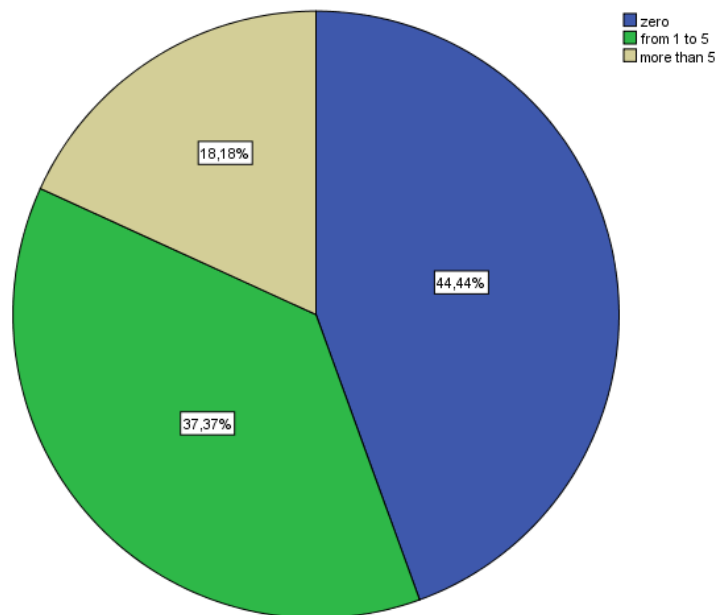


Figure 5. Distribution of students by how many times they were abroad.

Secondly students were asked if they have experience of studying abroad. On the Figure 6 it is shown that 90, 45% of students (180) have never been studying abroad and only 9.55% (19) responded "yes".

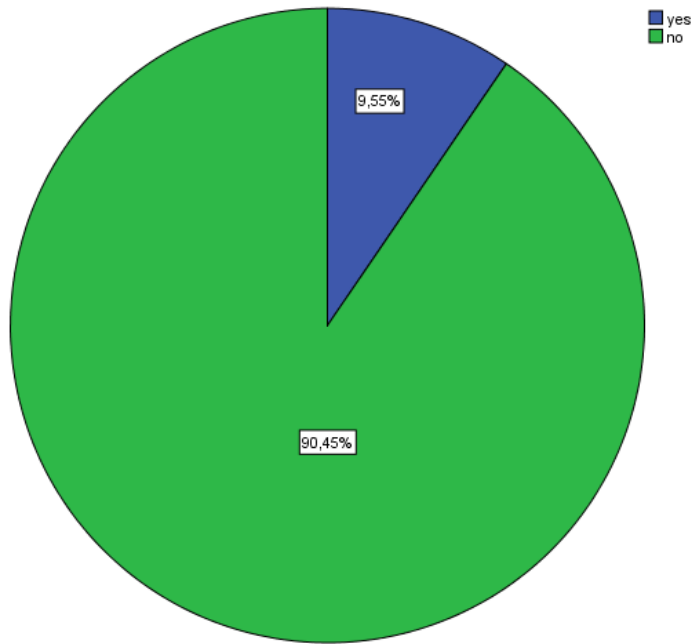


Figure 6. Distribution of students by experience of studying abroad.

Level of education expected was reviewed in the next question. 64.14% of respondents (127) require European level of education and 35.86% of students (71) has no specific level expected. The results are shown at Figure 7.

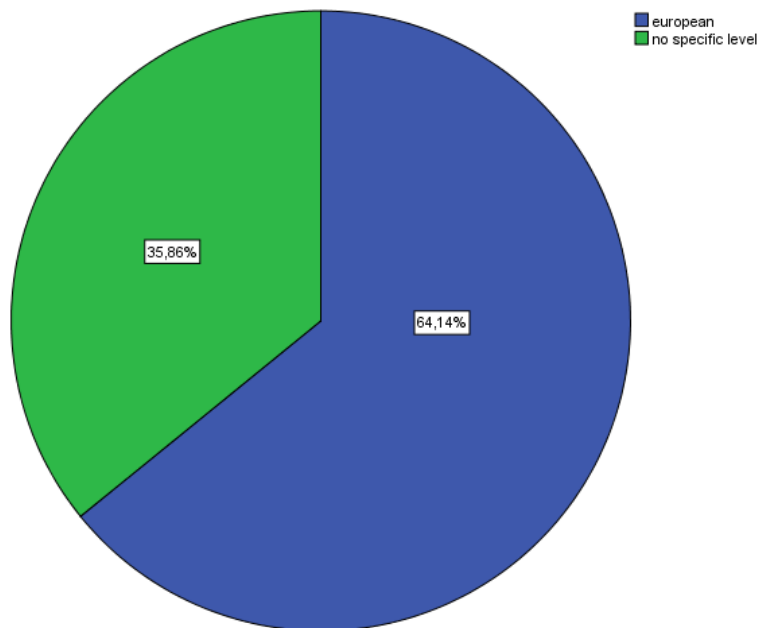


Figure 7. Distribution of students by level of education expected.

It was important to ask how students consider usefulness of their knowledge and diploma in the future. As shown at Figure 8, 66.33% of students (132) consider their future diploma useful. However, 33.67% of students (67) think that probably they will not use their diploma in future.

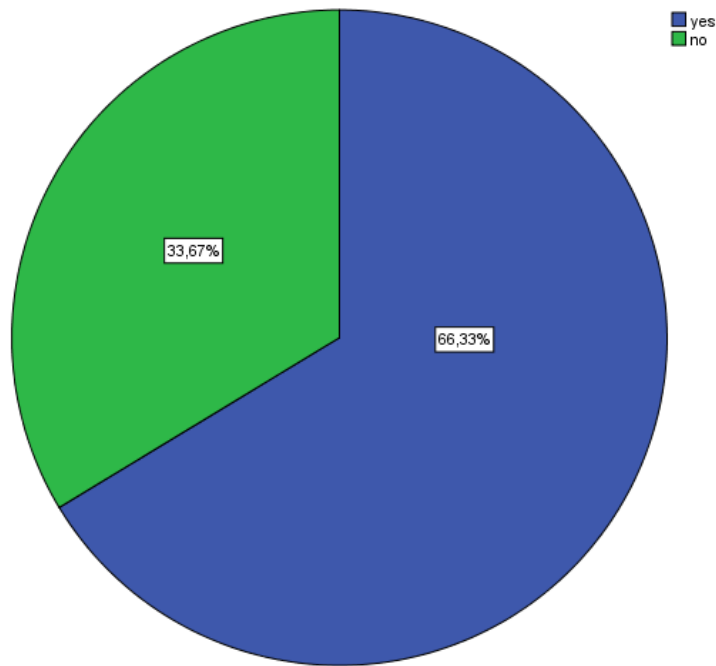


Figure 8. Distribution of students by their opinion considering usefulness of diploma.

Next question was related to the students` willingness to compete on labour market. On Figure 9 it is shown that 61.93% of respondents (122 of students) consider themselves not ready to labour market competition and 38.07% of students (75) responded "yes".

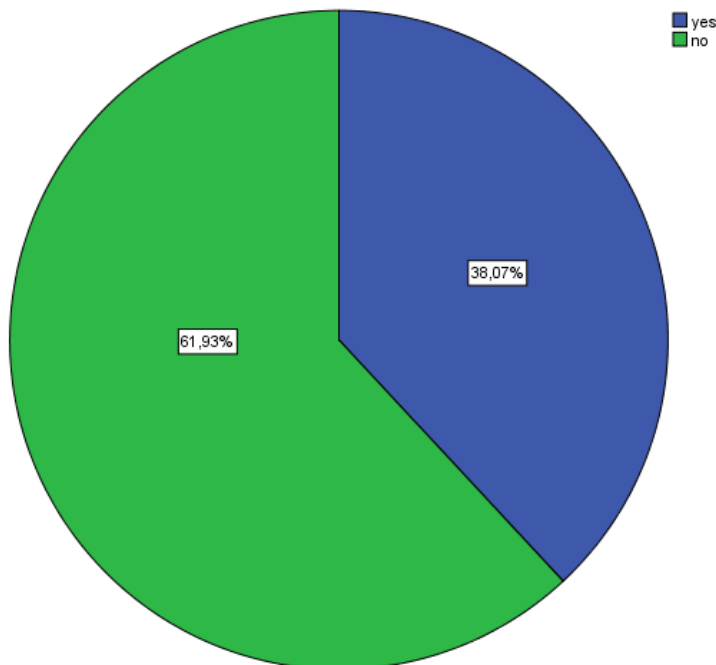


Figure 9. Distribution of students by their opinion considering willingness to compete on labour market.

Respondents, who participated in this study were asked about special features of the university's environment. Figure 10 represents responses considering teaching style in LNTU. 82.91% (165) of respondents consider its as traditional and only 17.09% (34) of respondents – as innovative.

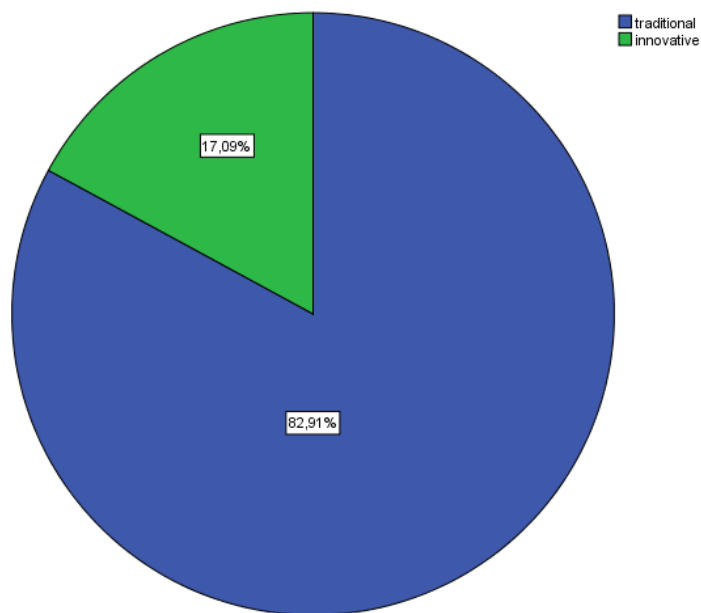


Figure 10. Distribution of students by their opinion considering teaching style.

Concerning teaching type (Figure 11), respondents receives three options to choose:

- Theoretical: 46.46% of respondents (92 of students) consider teaching type in LNTU as theory-based.
- Practical: 2.53% of respondent (5 of students) consider teaching type in LNTU as practice-based.
- Balanced 50/50: 51.01% of respondents (101 of students) consider teaching type in LNTU as balanced between theory and practice 50/50.

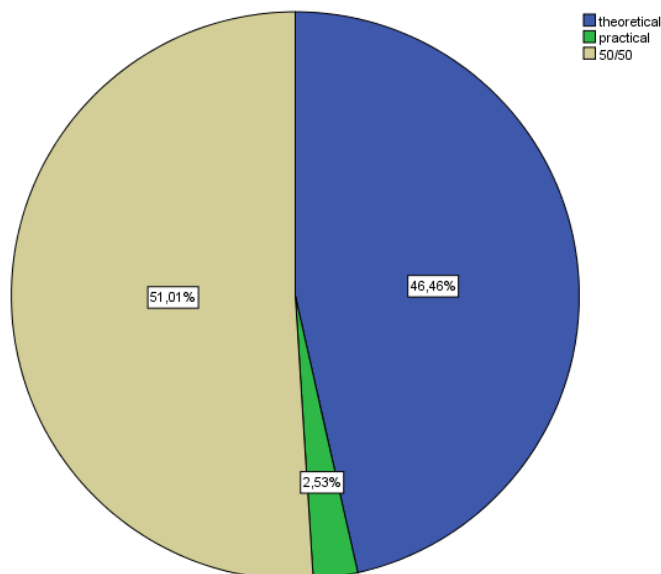


Figure 11. Distribution of students by their opinion considering teaching type.

Respondents were asked to estimate the style of management in LNTU. 6 management styles according to Hay-McBer were presented and respondent were asked to choose which one matches the most with LNTU`s reality. The results of the questionnaire are shown on the Figure 12:

- Directive (“do it the way I tell you” manager): 29.95% of respondents (59 of students).
- Authoritative (“firm but fair” manager): 2.03% of respondents (4 of students).
- Affiliative (“people first, task second” manager): 20.30% of respondents (40 of students).
- Democratic (“everyone has input” manager): 23.86% of respondents (47 of students)
- Pacesetting (“do it myself” manager): 6.09% of respondents (12 of students).
- Coaching (“developmental” manager): 17.77% of respondents (35 of students).

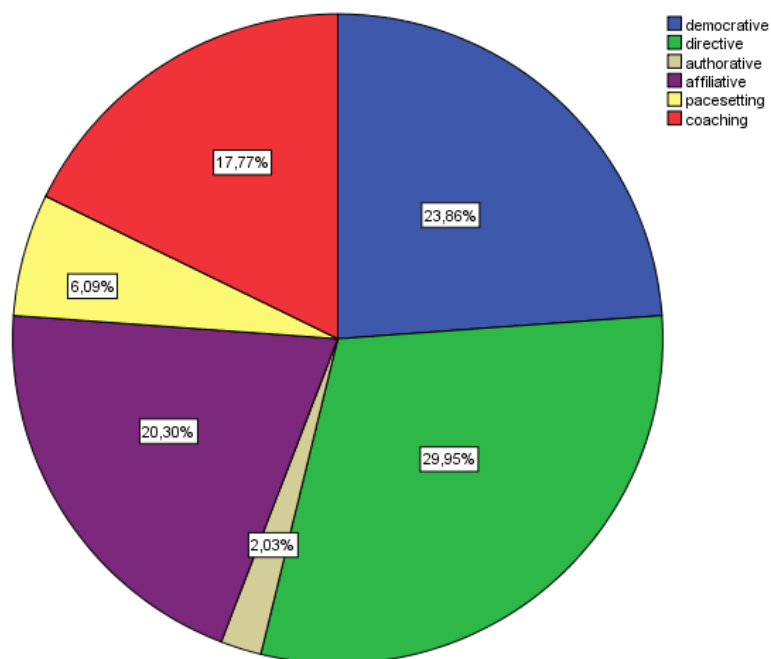


Figure 12. Distribution of students by their opinion considering management style in LNTU.

Next question states if students have private contact to the dean of their faculty. At the Figure 13 it is shown that only 51,26% of respondents answer “yes” to this question (102 of students). Other 48,74% of students (97) do not have a private contact.

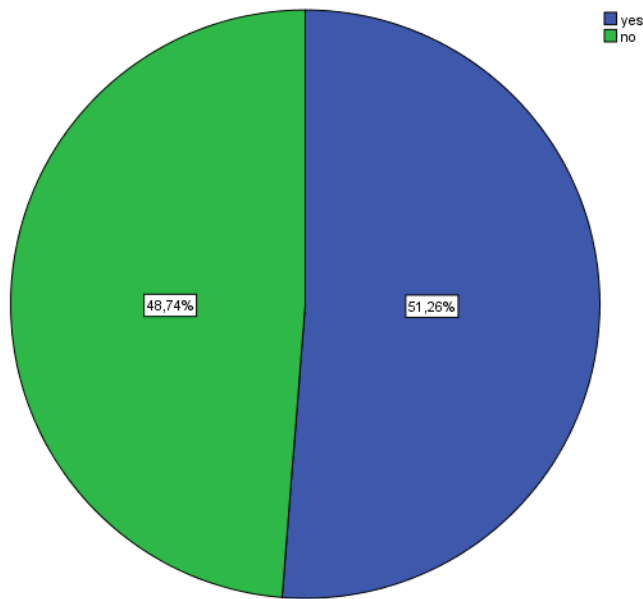


Figure 13. Distribution of students by existence of private contact to their faculty's dean.

Last question related to students' profile was related to understanding students' opinion about boorishness. Respondents were asked to estimate if they consider boorishness as a part of Ukrainian mentality. As it is presented on the Figure 14, 70.71% of respondents (140 of students) responded "no" and 29.29% of respondents (58 of students) responded "yes".

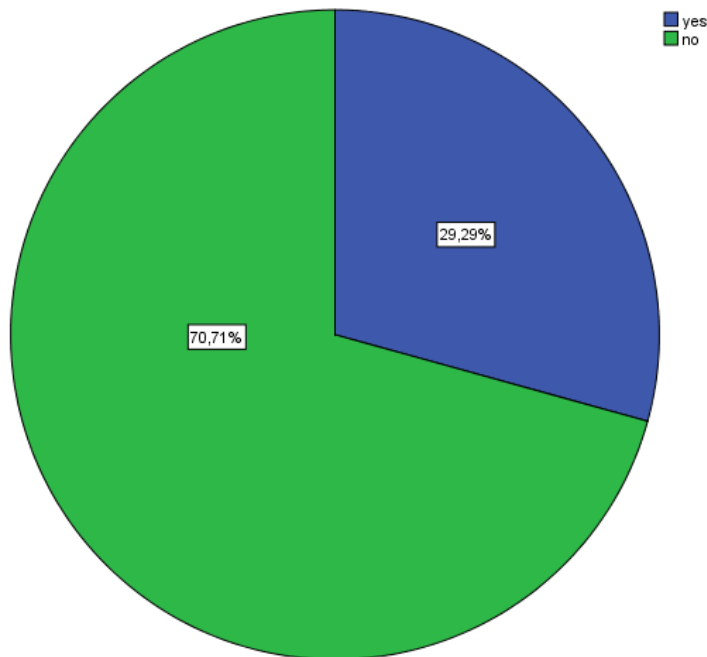


Figure 14. Distribution of students by their opinion considering boorishness.

3.2 Predictors of Satisfaction

To answer the O₁ “To determine student`s satisfaction according to different aspects”, mean (M) and standard deviation (SD) were calculated. The results of calculations are presented in the Table 5.

For all the attributes, mean score is close to 3.50 (except item “People ask student about LNTU”, it`s mean is 2.90 pints, SD is 1.271). According to the result, it is concluded that satisfaction level is considered as normal.

Table 5. Descriptive statistics of satisfaction items.

Item	n	Mean	Std. Deviation
First expression of LNTU	198	3.48	0.938
Satisfaction with choosing LNTU	198	3.62	1.092
If there would be a chance, will choose one more time	198	3.28	1.278
Choose LNTU - right decision	199	3.52	1.180
Happy with choosing LNTU	198	3.49	1.200
I did right decision with choosing LNTU	197	3.51	1.168
Happy to attend LNTU	199	3.34	1.195
Like to tell friends about LNTU	198	3.40	1.313
Like to help future students and tell them about LNTU and it is programs	199	3.38	1.361
People ask me	199	2.90	1.271
Meets expectations	199	3.36	1.168

In the Table 6 there is presented more detailed analysis of responses to each satisfaction item. To form the information presented in Table 6, the frequency tables of each item were used. It is summed up the information about how many respondents have chosen each point of Likert scale for every question related to satisfaction.

Table 6. Detailed descriptive statistics of satisfaction items.

Item	1	2	3	4	5
	n (%)	n (%)	n (%)	n (%)	n (%)
First expression of LNTU	7 (3.5)	15 (7.5)	78 (39.0)	72 (36.0)	26 (13.0)
Satisfaction with the choice of high educational institute	9 (4.5)	22 (11.0)	50 (25.0)	72 (36.0)	45 (22.5)
If there was a chance, student would choose LNTU again	24 (12.0)	28 (14.0)	56 (28.0)	49 (24.5)	41 (20.5)
Students` choice of LNTU – right decision	15 (7.5)	21 (10.5)	56 (28.0)	60 (30.0)	47 (23.5)
Student is happy because of choosing LNTU	16 (8.0)	22 (11.0)	56 (28.0)	57 (28.5)	47 (23.5)
Student considers his choice of LNTU right	15 (7.5)	19 (9.5)	59 (29.5)	59 (29.5)	45 (22.5)
Student`s happy to attend LNTU	15 (7.5)	34 (17.0)	58 (29.0)	52 (26.0)	40 (20.0)
Student likes to tell about LNTU his friends	19 (9.5)	32(16.0)	55 (27.5)	35 (17.5)	57 (28.5)
Student likes to help future students by giving information about LNTU and its` programs	25 (12.5)	28 (14.0)	49 (24.5)	40 (20.0)	57 (28.5)
People ask student about programs and studying in LNTU	32 (16.0)	48 (24.0)	54 (27.0)	38 (19.0)	27 (13.5)
LNTU meets student`s expectations	15 (7.5)	29 (14.5)	62 (31.0)	55 (27.5)	38 (19.0)

Note: 1 - 'Strongly Disagree', 2 - 'Disagree', 3 - 'Neutral', 4 - 'Agree' and 5 - 'Strongly Agree'.

To find out the answer to the O₂ “*To reach overall satisfaction of student`s within the given service in terms of different aspects*” calculated mean and standard deviation of overall satisfaction. From the Table 7, it was concluded that overall, students of LNTU are satisfied with the service quality provided.

Table 7. Overall satisfaction

	n	Mean	Std. Deviation
Overall Satisfaction	199	3.3868	0.96172

In order to answer O₃ “*Identifying satisfaction dissimilarities in students` perceptions of service across different departments*”, mean and standard deviation calculated and represented in Table 8. From the table it could be seen that mean for overall satisfaction by each department vary between 3.1812 to 3,810 points. Highest satisfaction rate demonstrated in Machine-building faculty (M = 3.810 points; SD = 1.065). The least satisfaction rate showed in Faculty of Computer Sciences and Information technologies (M = 3.182 points; SD = 0.81890).

Table 8. Overall satisfaction by faculties.

Faculty	n	Mean	Std. Deviation
Business faculty	78	3.3974	0.86493
Faculty of Computer Sciences and Information Technologies	15	3.1818	0.81890
Technological faculty	17	3.1925	0.99528
Faculty of Construction and Design	16	3.2045	0.93154
Faculty of Ecology and Instrumentation and Energy Systems	29	3.2119	1.01596
Faculty of Accounting and Finance	21	3.5675	1.13847
Machine-building faculty	23	3.8103	1.06474
Total	199	3.3868	0.96172

In conclusion, there is no significant dissimilarities between student`s perceptions of service across different faculties.

Regarding to answer the H₁ “*Everybody is satisfied with LNTU*”. While we need to testify if everybody is satisfied with LNTU, One-Sample T Test was applied. We compared overall satisfaction level with test value of four (“Satisfied”). Result is presented in Table 9. As it can be seen, the significance level is less than zero, which is below 0.05. Thus, we reject the Null Hypothesis of the mean being equal to four. In other words, we are 95% sure that the average satisfaction level is not equal to four.

Table 9. One-Sample T Test for overall satisfaction.

	t	Df	Sig. (2-tailed)
Overall Satisfaction	-8.995	198	<0.001

As we can see from Table 10, the mean of overall satisfaction is equal to 3.3868, which is less than four. So, we can conclude that this research hypothesis is not confirmed, but we can still conclude that the students expressed a positive perception about the services provided by the university.

Table 10. One-Sample Statistics for overall satisfaction.

	n	Mean	Std. Deviation	Std. Error Mean
Overall Satisfaction	199	3.3868	0.96172	0.06817

To answer H₂ “*There is negative correlation between age of respondents and overall satisfaction*”. As it is shown in Table 11, significance is equal to 0,002, which is less than 0,05 and it means that there is a significant relationship between overall satisfaction and age of respondents. Pearson correlation is equal to -0,225 (a weak relationship). Thus, there is negative correlation between age and overall satisfaction: higher scores on age are associated with lower scores on overall satisfaction. In addition, the main hypothesis corroborated. This is understandable since with older age we are more demanding about the perception of the services that are offered.

Table 11. Pearson correlation between overall satisfaction and age.

Age & Overall Satisfaction	
Pearson Correlation	-0.225
p-value	0.002
n	195

To answer H₃ “*There are differences in overall satisfaction by faculties of LNTU*”, it was decided to apply One-Way ANOVA. First it was checked the sample size for each study area. In Table 8, it is shown that for some faculties the sample size is smaller than 30. Thus, this test had violated. Therefore, non-parametric Kruskal-Wallis test applied. As it is presented in Table 12, significance is equal to 0.183, which is bigger than 0,05. So, it was concluded that there is no significant difference

between satisfaction level of students from different faculties. The result shows that main hypothesis does not corroborated.

Table 12. Kruskal Wallis Test to identify differences by faculties.

Overall Satisfaction	
Chi-Square (χ^2)	8.835
Df	6
p-value	0.183

In order answer H₄ “*There are differences in overall satisfaction by gender*”. While study had parametric data, it is necessary to check assumed distribution and assumed variance. Two independent samples will be examined, therefore t-student test applied. To apply this type of test, sample distribution should be more than 30 and scores should have homogeneous variances. In the Table 13 it is clarified that for the overall satisfaction sample size more than 30, which proven to apply Student’s t-test. To examine homogeneous variances Levene`s test was applied.

Table 13. Overall satisfaction by gender.

Gender	Mean	n	Std. Deviation
Male	3.4156	87	0.88905
Female	3.3644	112	1.01798
Total	3.3868	199	0.96172

While examining Levene`s test in Table 14, the significance of 0.213 was calculated, which is bigger than 0.05.

Table 14. Student`s t-test and Levene`s test to identify differences by gender.

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	p-value	t	Df	p-value	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	1.563	0.213	0.371	197	0.711	0.05116	0.13774	-0.22047	0.32279

Consequently, for the Table 14, the variances are not significantly different and the upper row of results for t will be interpreted. Table 14 represents t-value of 0.371. The mean difference between male and female group is equal to 0.05116. Significance of 0.711 is bigger than 0.05, which means that the mean difference between these two groups is not statistically significant. Therefore, there are no differences exist in overall satisfaction by gender. Also, the main hypothesis does not corroborate.

In order to answer H₅ “*There are differences in overall satisfaction by style of management*”, One-Way ANOVA was failed to apply, because as it is shown in the Table 15, the sample size for some variables is less than 30. Thus, Kruskal-Wallis test was applied.

Table 15. Distribution of overall satisfaction by style of management.

How do you consider the style of management in university?	Mean	n	Std. Deviation
Democratic	3.6487	47	0.77849
Directive	2.7504	59	0.84955
Authorative	2.9795	4	0.74005
Affiliative	3.7045	40	0.81902
Pacesetting	2.9512	12	1.33841
Coaching	3.9704	35	0.75300
Total	3.3921	197	0.96506

While examining the results presented in Table 16, significance less than 0.001 was achieved, which is less than 0.05. In conclusion there is significant difference between satisfaction level of students by style of management in university. The main hypothesis corroborated.

Table 16. Kruskal Wallis Test to identify differences by style of management.

Overall Satisfaction	
Chi-Square (χ^2)	49.316
Df	5
p-value	<0.001

To answer H₆ “*There are differences in overall satisfaction related to style of teaching*”, firstly the mean and standard deviation for each option was calculated and presented in Table 17, and the Student T test was applied.

Table 17. Distribution of overall satisfaction by style of teaching.

Teaching style	Mean	n	Std. Deviation
Traditional	3.2708	165	0.94099
Innovative	3.9495	34	0.86919
Total	3.3868	199	0.96172

As it is presented in Table 18, the significance calculated in Levene`s test is equal to 0.652, which is more than 0.05. It is concluded that variances are not significantly different and the upper row of results for t will be interpreted. T-value is equal -3.877. The mean difference between groups of people that consider teaching style as innovative and ones that consider it as traditional is equal to -0.67864. Significance less than 0.001 means that the mean difference between these two groups is statistically significant. Therefore, there are differences exist in overall satisfaction by teaching style. In addition, the main hypothesis was corroborated.

Table 18. Student`s t-test and Levene`s test to identify differences by style of teaching.

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	p-value	t	Df	p-value	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	0.204	0.652	-3.877	197	<0.001	-0.67864	0.17504	-1.02382	-0.33345

In order to answer H₇ “*There are differences in overall satisfaction related to type of teaching*”, the mean and standard deviation was calculated (Table 19). As for balanced teaching type sample size is less than 30, One-Way ANOVA test was rejected to apply. Kruskal-Wallis test was applied and the results presented in Table 20.

Table 19. Distribution of overall satisfaction by type of teaching.

Teaching type	Mean	n	Std. Deviation
Theoretical	3.0746	92	0.90818
Practical	4.2545	5	0.62125
50/50	3.6410	101	0.92515
Total	3.3933	198	0.95970

It can be concluded, as the significance is less than 0.001, that the difference in overall satisfaction by groups of people, who consider teaching type as theoretical, practical or balanced is statistically significant. The main hypothesis is corroborated.

Table 20. Kruskal Wallis Test to identify differences by type of teaching.

Overall Satisfaction	
Chi-Square (χ^2)	20.082
Df	2
p-value	<0.001

Table 21 shows the results for the research hypothesis. Out of seven hypotheses 4 hypothesis were corroborated, others did not corroborate.

Table 21. Results of main Hypothesis

Label	Research Hypothesis	Result
H ₁	Everybody is satisfied with LNTU.	Not corroborated
H ₂	There is negative correlation between age of respondents and overall satisfaction.	Corroborated
H ₃	There are differences in overall satisfaction by faculties of LNTU.	Not corroborated
H ₄	There are differences in overall satisfaction by gender.	Not corroborated
H ₅	There are differences in overall satisfaction by style of management.	Corroborated
H ₆	There are differences in overall satisfaction related to style of teaching.	Corroborated
H ₇	There are differences in overall satisfaction related to type of teaching.	Corroborated

To answer O₄ “Identify loyalty of students”, items related to loyalty were detected and calculated mean and standard deviation. Results presented in Table 22 show that level of loyalty is equal to 3.4295 (“positive”) and SD is equal to 1.084. This result means that students are loyal.

Table 22. Descriptive statistics of student`s loyalty.

Loyalty		
n	Valid	199
	Missing	1
Mean		3.4295
Std. Deviation (SD)		1.08389

To present the results more detailed histogram was created (Figure 15). On the graph absolute frequencies are presented. The data of the study differs from the normal curve. To graphically examine relative frequencies there was created line graph (Figure 16).

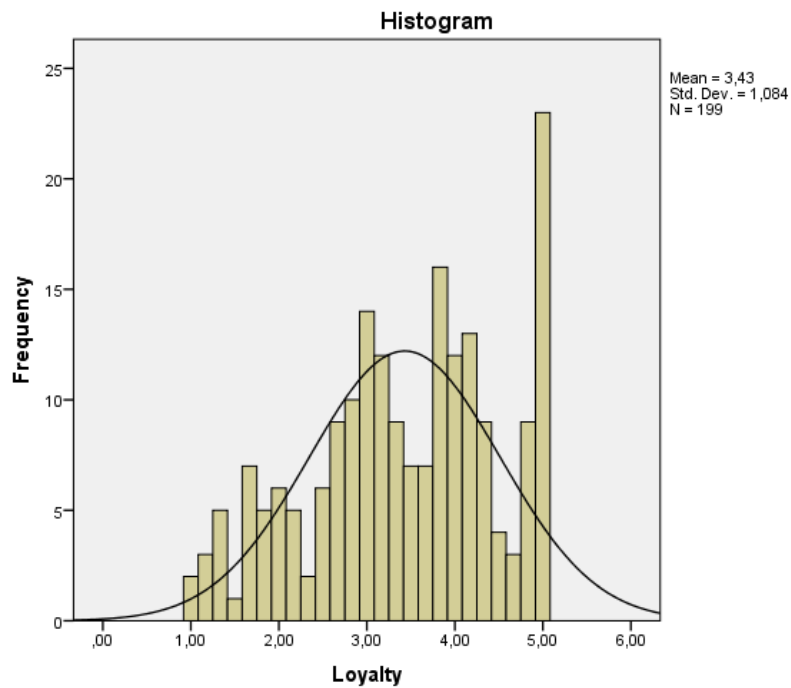


Figure 15. Absolute frequencies of loyalty.

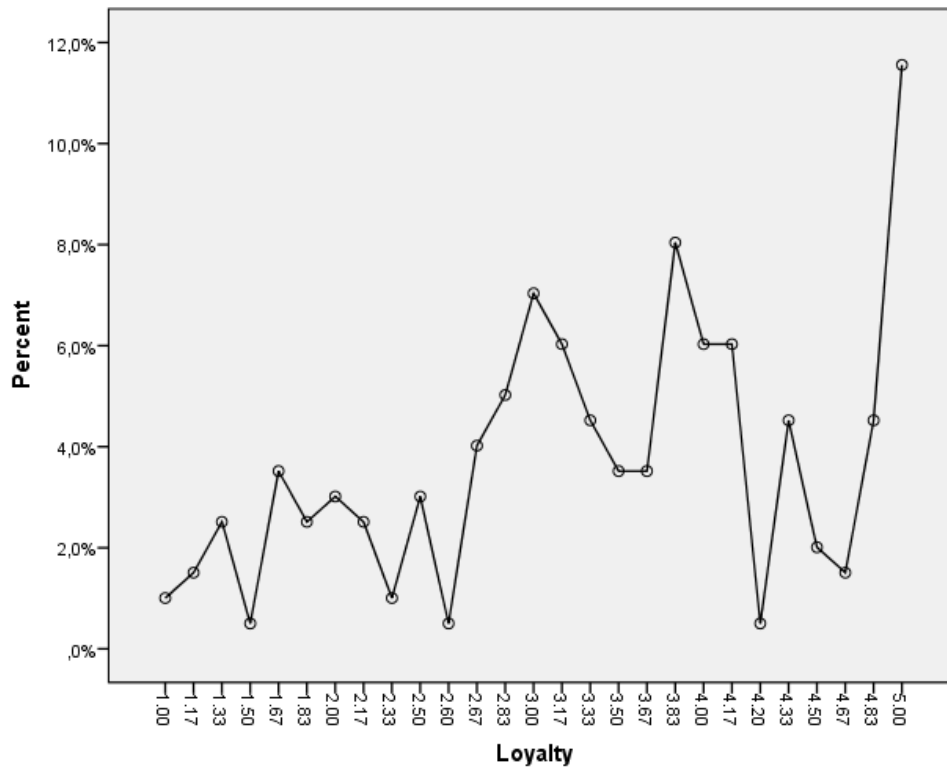


Figure 16. Relative frequencies of loyalty.

3.3. Implications for Practice

In conclusion, it can be said that in generally the students are satisfied with services provided by LNTU. It is important to highlight the factors, which can cause growth dissatisfaction level, that have been found during the research.

Based on all the research, recommendations were made. Firstly, were estimated that the younger students are, the more satisfied they are. It was concluded that the more time students spent in university the less satisfied they become. University have not only to do a good first impression, but to take care about its customers' satisfaction in the process. To improve and maintain level of satisfaction it is recommended to implement experience of more developed countries. For instance, Finnish educational system is considered as one the best educational systems in the world. It is based on seven main principles (Foynd, 2016):

1. Equality. Of all universities. Of every student.
2. The education is totally free.
3. Practical approach. Education is based on the preparation for real life conditions, instead of preparation for exams.
4. Individual approach. A designed individual plan for every student based on his strong sides and interest.

5. Voluntariness for every student. Forced knowledge is never done upon students.
6. Trust. Every relationship is based on trust with everyone. For instance, there is no sudden checks on professors.
7. Independence. The teachers help their students learn how to think, analyze, and gain knowledge independently.

Also it was calculated that only 10% of students have experience of studying abroad. It is important to state that International Relations Department of LNTU provides students, scientists and employees with useful information about the international relations in university, international exchange programs for scientists and students, and the possibility for foreigners to study in university. It represents opportunities for the university students to engage in international activities. The information about all international opportunities is showed online on the official website of university and everyone interested has access to it. For improving the statistics of abroad studies experience, it is only recommended to tighten promotion of International Relations Department services in social media.

It is recommended to change the educational program to make it close to European. For instance, apply the system of giving individual and group projects to students, which in contrast to nowadays system of coursework and exams can make students work continuously during semester and have experience of working in groups. In addition, it will make teaching type in LNTU balanced 50/50 and, as it was proven by analysis, it will increase level of satisfaction. This system will be innovative and this change will improve the whole environment of studies, because now students consider teaching style as traditional.

It was noted that there`s no common opinion considering style of management in university. Thus, it was concluded that students are treated in different way. It was proven that it affects a lot satisfaction level of students. Analysing the survey, it was found that 50% of students do not have private contact with the dean of their faculty. So, it is hard for students to give any feedback about service. For more detailed information, it was decided to make more detailed research and compare means of overall satisfaction of students depending on faculty and availability of private contact to dean. This comparison shows how availability of private contact to responsible person affects satisfaction. Results of correlation between overall satisfaction and availability of direct contact with dean presented in Table 23.

Table 23. Distribution of satisfaction by faculty and availability of private contact.

Faculty	Do you have a phone number/email to your dean?	n	Mean	Std. Deviation
Business faculty	Yes	52	3.6124	0.75606
	No	26	2.9673	0.92170
	<i>Total</i>	<i>78</i>	<i>3.3974</i>	<i>0.86493</i>
Faculty of Computer Sciences and Information Technologies	Yes	6	3.2424	1.02798
	No	9	3.1414	0.71309
	<i>Total</i>	<i>15</i>	<i>3.1818</i>	<i>0.81890</i>
Technological faculty	Yes	8	3.4659	0.90836
	No	9	2.9495	1.05735
	<i>Total</i>	<i>17</i>	<i>3.1925</i>	<i>0.99528</i>
Faculty of Construction and Design	Yes	7	2.9221	0.89908
	No	9	3.4242	0.94694
	<i>Total</i>	<i>16</i>	<i>3.2045</i>	<i>0.93154</i>
Faculty of Ecology and Instrumentation and Energy Systems	Yes	11	3.6661	1.14089
	No	18	2.9343	0.84812
	<i>Total</i>	<i>29</i>	<i>3.2119</i>	<i>1.01596</i>
Faculty of Accounting and Finance	Yes	6	3.5606	1.59692
	No	15	3.5703	0.96994
	<i>Total</i>	<i>21</i>	<i>3.5675</i>	<i>1.13847</i>
Machine-building faculty	Yes	12	3.9394	0.94978
	No	11	3.6694	1.20829
	<i>Total</i>	<i>23</i>	<i>3.8103</i>	<i>1.06474</i>
Total	Yes	102	3.5730	0.92412
	No	97	3.1910	0.96621
	Total	199	3.3868	0.96172

As it can be observed from the table, in each case everyone who has a private contact is more satisfied. However, Faculty of Accounting and Finance is the only faculty where correlation does not work like this. It is concluded that to improve satisfaction level everyone should be provided with an official dean`s email and can contact him by it in case of existing incomprehensible situation or any other question connected to educational process.

Based on all the results, implications for practice were made. It is important to improve all the aspects of educational process, which were stated above, so level of satisfaction can increase.

Conclusions, Limitations and Future Research Lines

Ukraine scores highly in many indicators that characterize its human capital. It remains one of the most educated nations. At the same time, the productivity of Ukrainian educational sphere is low. According to a Gallup World Survey, only 38 percent of Ukrainians responded positively to the question `Are you satisfied with the quality of education in your city/locality?`.

In Ukrainian model there is an ideological shift, paternalistic methods, instead of on self-sufficient development of the person is observed; democratic institutes are not developed yet; authoritative traditional style of teaching where storing prevails over critical thinking: the limited access to world resources; discrepancy of experts' preparation level in system of the higher professional training to requirements of an innovative way of manufacture development.

Modern Bologna system puts the student in the centre and offers transparency and quality. Individualization in education is an urgent task, as the more individual the approach is, the more likely it is that each student will reach the desired learning outcomes and will master all subjects more successfully, and will acquire knowledge and skills in a larger volume and accordingly will be more satisfied.

This work is based on results of the survey conducted in LNTU (Ukraine). This university is one of two big high educational institutions in the Volyn region. The main advantage of university is in technical courses provided only there. Thus it is important to provide the high quality services for the students who has no ability to move to another region.

It was calculated the average level of overall satisfaction in LNTU of 3.5 out of 5 points. Which shows that students are satisfied, but with a low satisfaction level, with educational services provided by high educational institute. It was assumed that there are differences in overall satisfaction by different faculties. By testing this hypothesis, it was found that level of satisfaction doesn't differ among faculties. Which is bad because it was concluded that there exist problems in each department of university.

It was hypothesized that there are differences in overall satisfaction by gender, but it was found that gender of student has no influence on perception of quality of given educational services. Stated a fact of gender equality in university is a good point for further meeting standards of Bologna system.

In this research four out of seven hypotheses were corroborated. After tests were done, it was found that there is negative correlation between age of respondents and overall satisfaction. Which confirm the statement of influence of expectations and personal experience on student's perception of satisfaction.

In addition, test showed that there are differences in overall satisfaction by style of management. It is interesting that relying on the opinion of students, almost equal parts of respondents consider management style in LNTU as directive (30%) and democratic (25%), which are completely opposite to each other.

Moreover, there were proven differences in overall satisfaction related to style and type of teaching. Only 17% of students consider the style of teaching as innovative. It was concluded that the teaching system in university needs an improvement. To get closer to Bologna system, it should be introduced new methods. For instance, it could be used European project system in teaching when students get to do one or couple of group or/and individual projects per course. It will also solve the problem of only theory-based teaching type, provided, relaying on results of the survey, for a half of students of LNTU.

It is important to mention that 65% of students that responded positively to the question if they request to have European level of education provided. It was concluded that student have true interest in studying. This statement is based on the fact that 66% of students think their diploma will be useful, thus they are interesting in working in their study area. In addition, 60% of respondents consider themselves not ready to compete on labour market, so the responses were honest.

Level of student's loyalty in LNTU is equal to 3,4, which is considered as positive information and the students recognize their loyalty with the university. Based on this research the younger students are, the bigger level of satisfaction is showed. Which can be explained by good first impression caused by university, but inability to maintain this image further.

For instance, only 50% of respondents have private contact to the dean of their faculty, which makes the connection between students and university more complicated. Students should be able to find help and support in university. While making literature review for this study, it was found that due to statistical research Ukraine is the most corrupted country in Europe after Russia. 70% of students responded negatively to the question about considering boorishness as a part of Ukrainian mentality. It was made a conclusion that students are ready for dialogue and true studies instead of paying for grades.

At the end, it is important to mention that this research is concentrated not on finding weaknesses of LNTU, but on finding the way to make improvements in students' life in LNTU and to make educational process as efficient as possible. Based on this study, management of university can develop its approach to organization of services provided by university and consequently improve the level of student satisfaction.

For the future, it will be interesting to make similar research after all aspects stated in previous subparagraph will be changed, so the improvements in overall satisfaction level can be checked. Also it will be interesting to check the importance of each attribute to have deeper understanding of urgency of existing problems.

In addition, regarding student's satisfaction and age of respondents, it will be a good idea to make detailed research and analyse why there is negative correlation index and what exact factors affect it. Also, it will be interesting to analyse student's opinion considering advantages and disadvantages of curriculum, location of university and it's convenience.

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Appendix

Questionnaire

Part I: Student`s profile

1. Age
2. Gender
 - Male
 - Female
3. Faculty
 - Business faculty
 - Faculty of Computer Sciences and Information Technologies
 - Technological faculty
 - Faculty of Construction and Design
 - Faculty of Ecology and Instrumentation and Energy Systems
 - Faculty of Accounting and Finance
 - Machine-building faculty
4. Last finished educational institute
 - School
 - College
 - Gymnasium
 - University
5. How many times was abroad
 - from 1 to 5
 - more than 5
6. Experience of studying abroad
 - Yes
 - No
7. Level of education expected
 - European
 - Nothing special
8. Opinion concerning usefulness of diploma in the future
 - Yes
 - No
10. If had a chance to do it over again, I would continue to enrol again in the LNTU
 - 1 - 'Strongly Disagree'
 - 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'
11. My choice to enroll in the LNTU was the right decision.
 - 1 - 'Strongly Disagree'
 - 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'
12. I am happy to have chosen to stay on LNTU.
 - 1 - 'Strongly Disagree'
 - 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'
13. I think I made the right choice when I decided to enrol in LNTU.
 - 1 - 'Strongly Disagree'
 - 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'
14. I am happy to attend the LNTU.
 - 1 - 'Strongly Disagree'
 - 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'
15. I like to talk about the LNTU to my friends.
 - 1 - 'Strongly Disagree'
 - 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'
16. I like to help future students by giving them information about LNTU and its programmes.
 - 1 - 'Strongly Disagree'

Part II: Satisfaction items

9. I am pleased with my decision to attend LNTU
 - 1 - 'Strongly Disagree'
 - 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'

- 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'
17. People ask for information about the programmes offered at LNTU.
- 1 - 'Strongly Disagree'
 - 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'
18. LNTU corresponds to my expectations.
- 1 - 'Strongly Disagree'
 - 2 - 'Disagree'
 - 3 - 'Neutral'
 - 4 - 'Agree'
 - 5 - 'Strongly Agree'
- Part III: Management of educational services**
19. How do you concern informal payments for professors?
- as necessary
 - as part of the system
 - as the only survival option for university teaching staff
 - as a sign of national degradation
20. Opinion concerning type of teaching in LNTU
- Theoretical
 - Practical
 - Balanced 50/50
21. Opinion concerning style of teaching in LNTU
- Traditional
 - Innovative
22. Do you concern yourself ready to compete on labor market
- Yes
 - No
23. Opinion concerning style of management in LNTU
- Democrative
 - Directive
 - Authorative
 - Partnership
 - Rhythm
 - Coaching
24. Do you have phone number or email to communicate with dean of your faculty
- Yes
 - No
25. Do you consider boorishness as a part of Ukrainian mentality
- Yes
 - No