EVALUATING THE QUALITY OF THE FINAL THESIS PREPARATION PROCESS: A COMBINATION OF SERVQUAL AND IMPORTANCE-PERFORMANCE ANALYSIS

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Annotation

The aim of this article is to present the analysis of of the final thesis preparation process by appling a combination of SERVQUAL and importance-performance analysis. The scores of the parameters of tangibility, accountability, reliability, reliability, assurance and empathy were calculated. The results showed that among the students' expectations and perceptions, empathy has the highest gap across all the metrics and reliability has the lowest gap. Similar results were obtained in both academic years. The importance-performance analysis (IPA) method was used to present and analyse the results obtained. The attributes that need urgent attention as they may lead to customer dissatisfaction were identified.These are that lecturers should treat students equally and with respect and that the faculty should take student feedback into account in improving the processes of preparing and defending theses.

Keywords: final thesis, SERVQUAL, importance-performance analysis.

Introduction

The evaluation of the quality of a training service is an important process that strongly influences the future performance of a training institution. The quality of the service has a direct impact on the image of the organisation, and has a significant impact on the success of the activity and the final outcome of the training process. The final stage of the training process is the preparation of the final thesis, which is a challenge for graduates and a responsible job for managers. The smooth organisation of this process and the timely support of students are factors crucial for the successful completion of studies.

By identifying the gap between students' expectations and their perception of educational provision, study process organisers can improve the quality of services and meet students' needs. In addition, the preparation of final theses consolidates the skills acquired during the studies and enables the acquisition of new skills.

The most commonly used technique for measuring service quality is the SERVQUAL model. In this paper, the authors evaluated service quality and compared the results with students' expectations of the thesis process as a service. For a clearer and more visual presentation of the data obtained, the authors of this paper use a process relevance and performance analysis.

This article evaluates the quality of a topical and complex process using the SERVQUAL methodology. In addition, much attention has been paid to the graphical presentation of the results obtained in order to better analyze and evaluate the results obtained.

The aim of the study was to assess the quality of the final thesis preparation process at Vilnius College of Information Systems by applying SERVQUAL, relevance and performance analysis methodologies in order to identify the activities to be improved.

Objectives of the study:

1. To analyse the methodologies used to assess the quality of educational services;
2. To develop a questionnaire to assess the quality of the services in question and to interview the target group;
3. Analyze and present the results of the obtained research graphically and identify the activities to be improved.

The study was carried out by surveying the same graduates 2 times, i.e. before and after the final thesis process, for 2 consecutive academic years (2018-2019 and 2019-2020).

1. Overview of methodologies for assessing service quality

HedPERF

HedPERF (Higher Education PERFormance) is a 41-element quality assessment methodology (Firdaus A., 2006a). This tool aims to take into account not only the academic components, but also the aspects of the overall service environment as experienced by students. The author of this theory has identified several aspects of the service quality concept:

1. Non-academic aspects. This dimension covers the things that are necessary for students to fulfil their study obligations and relates to the responsibilities of non-academic staff.
2. The academic dimension. This is the responsibility of academic staff.
3. Reputation. It is the responsibility of higher education institutions to create a professional image.
4. The access dimension. This aspect includes issues such as access to staff, ease of access, availability and convenience.
5. Programme issues. This aspect relates to the importance of offering broad and credible academic programmes and specialisations with a clear structure.

The SERVPERF and HedPERF scales were compared in terms of reliability and validity. It was thus concluded that the revised measurements are superior (Firdaus A., 2006b).

FM-SERVQUAL

The FM-SERVQUAL methodology is designed to measure the quality of services provided by local authorities (Wan Zahari et al., 2008). FM-SERVQUAL can also help in policy making and planning for the future of an organisation. FM-SERVQUAL is a tool to measure the quality of services in local authorities by comparing customer perceptions and expectations of the quality of services provided. A structured survey of this design is suitable for collecting data from a large sample to assess the quality of services in local authorities. The process of implementing FM-SERVQUAL consists of several steps, starting with the definition of the service quality assessment using a formula:

$$SQ = P \mid E, \qquad (1)$$

Where SQ is the institution's service level, or the gap between the Expectation - Perception (P-E) value and the Expectation - Expectation (E) value.

This was followed by the development of a 90-item questionnaire describing the quality of service based on the Integrated Facility Management Framework questionnaire. Subsequently, data collection and data analysis, identification of service quality, and reliability and validity assessments of FM-SERVQUAL were conducted (Wan Zahari et al., 2008).

INTQUAL

Service quality is extensively studied using different variations of the SERVQUAL instruments. As one of the applications of SERVQUAL, the INTQUAL methodology for internal service quality assessment was developed by Caruana and Pitt (1997). The INTQUAL model is one of the alternatives to the SERVQUAL methodology, which focuses on the internal measurement of the quality of the service organisation and emphasises the customer's perspective. INTQUAL describes a methodology for measuring internal service quality. It is used to manage service quality measures, expectations and service reliability as a validated model of internal service quality.

INTSERVQUAL

The INTSERVQUAL methodology was developed on the basis of the SERVQUAL scale and was originally proposed in a study carried out by a major international airline in order to assess the expectations and perceptions of internal customers. According to the authors, the two scales have been appropriately used as stand-alone measures of frontline staff (customer-facing staff) expectations of support services and their perceptions of the performance of support staff. The results showed that the scales can be successfully used to measure the size of the gaps between staff perceptions and expectations (Monroe Kent B et al., 2009).

DL-sQUAL

The DL-sQUAL methodology was introduced because a tool to assess the quality of distance education was needed. The previous SERVQUAL and e-SQ models measured the quality of traditional and e-commerce services and did not include any measures to ensure the quality of distance learning services. Studies (Shaik et al. 2006) have found that the DL-

eSQUAL scale has demonstrated psychometric properties in validity and reliability analyses (Shaik et al. 2006). The findings from the study provided useful initial insights into the criteria and processes that students use to evaluate distance learning services. These insights were the starting point for the development of a formal scale for conducting research using the DL-SQUAL methodology. A conceptual framework is presented that distance learning administrators can use to qualitatively assess the potential strengths and weaknesses of their services. The results of the assessment help to identify specific elements of the service that need to be improved and further training opportunities for staff. The data obtained using the DL-sQUAL tool are analysed at the level of individual elements. The results have practical implications for distance learning administrators in evaluating the student service experience of a particular institution. Due to the limited nature of the sample, the results of this study cannot be generalised beyond the specific sample area. The generalizability of this study is also limited by the lack of standardized data for comparison (Farah Merican et al., 2009).

The SERVQUAL methodology is widely used to study students' needs and expectations in the education sector. Autorius Leonnard (2018) has shown that the main factors influencing student satisfaction in private universities are the tangibles and reliability dimensions. In contrast, Afridi et al. (2016)34 have reported that the gap between expectations and perceptions is very high for responsiveness, whereas assurance has the smallest gap.

According to Rizvi et al. (2020), in a study on public sector universities in Karachi, students usually have higher expectations and trust in the organizational policies of private universities than public universities, because the latter lack the necessary advanced infrastructure to meet emergent needs. Therefore, their research findings showed the greatest gap in tangibility. The authors further identified the highest gap for responsiveness, thus indicating that staff members and faculty members in public universities are less responsive to students' needs and concerns. Rizvi et al. (2020) have reported a difference between perceptions and expectations of reliability; however, the results were not as significant as those for tangibility and responsiveness.

2. Description of the SERVQUAL methodology

The ***SERVQUAL*** methodology consists of two steps:

Steps 1. Respondents (college students) are asked to answer questions and express their expectations regarding the ideal implementation of the thesis process. The questions depend only on the specific academic activity - thesis preparation. At this stage, there is no reference to a specific specialty or a specific department. The stage determines which of the quality criteria are the most important for the respondents in relation to the abstract activities existing in the field under study. In order to identify the best service, respondents are invited to answer the questions using a scoring system. In order to do so, each respondent had to rate the criteria on a five-point scale. For evaluation purposes, it is common practice to use a five-point system, whereby respondents write down a rating for each question in the questionnaire, from 1 to 5. One point corresponds to a rating of 'very bad', five points to 'very good':

- 5 - Strongly disagree
- 4 – Disagree
- 3 - Neither agree nor disagree
- 2 – Agree
- 1 - Strongly agree

This step is necessary in order to create a generalised assessment of the subject of the activity under study, which offers one or other service or product. On the basis of this assessment, an ideal image of the activity can be obtained.

This method allows a comparative approach to be taken. The expectations will be quantified as an average of the scores obtained. Its indicator is the value of the quantity ***E - expectation*** value.

Steps 2. Respondents are asked to rate the quality of the service provided by the lecturers in a particular department by answering the same questions and using the same rating scale as in Phase 1. The perception of a particular person in relation to the services provided to him/her will also be scored. Its indicator is the P-value for perception. The results of the perception scores are then compared with the expectation scores, and the difference indicates how well the services/products are being delivered (the 'expectation minus perception' algorithm).

The quality of the service provided can thus be expressed in a simple mathematical formula:

$$SQ = P - E, \quad (2)$$

where *SQ* is the firm's service level or the gap between the E - expectation and P - perception value and the (***Expectation – Perception, P-E***) value.

1. If the expectation (expected or ideal) estimates exceed the perception values, the activity is successful.

2. If the expectation estimates are lower than the actual estimates, the organisation must take measures to improve the performance of certain criteria.

3. If the expectation estimates are the same as the actual estimates, the service is performing reasonably well but there is room for improvement.

The SERVQUAL algorithm:

1. Using the questionnaire below, an estimate is obtained for each of the questions asked, of the expectations of the future service. This is followed by a similar assessment of the perception of the service provided. For each question, the value of the gap A is calculated, where

gap A = perception P – expectation E.

2. For each group of questions, the average of the gap values is calculated.

3. The average of the gap values calculated in the second step is added together and divided by 5 to obtain the average SERVQUAL score. The resulting mean value is an unweighted measure of the measured service quality.

3. Study tools

The questionnaire consists of 3 parts: the first part presents the demographic characteristics of the undergraduate students, such as age, gender and grade point average. The second part uses the SERVQUAL questionnaire to assess the relationship between students' expectations and the quality of services. This questionnaire includes 25 questions covering five service quality assessment frameworks:

- tangibles (4 questions),
- reliability (5 questions),
- responsiveness (3 questions),
- assurance (4 questions),
- empathy (4 questions).

The SERVQUAL scale was developed by Parasuraman A. et al. (1991). In addition, a 5-point Likert-type scale ranging from strongly ***disagree*** (1) to ***strongly agree*** (5) (Strongly disagree, Disagree, Neither agree nor disagree. Agree, Strongly Agree). To learn about the expectations and perceptions of undergraduate students about the quality of the services of the higher education institution, a survey was conducted in 2018-2019 and 2019-2020. The students of the 4th year of Information Systems and E-Business Technologies specialisation who were preparing to write their final thesis.

The survey questionnaire is presented below (Table 1).

Table 1

Survey questionnaire

I. Tangibles
T1. It is important to you that the faculty's facilities are suitable and comfortable for the process of preparing and defending your thesis.
T2. It is important to you that the faculty has modern equipment (classrooms, laboratories, computers, software, projectors, etc.) for the preparation and defence of the thesis.
T3. It is important to you that the faculty is open at times convenient for all students.
T4. It is important to you that the teaching tools for the preparation and defence of the thesis are easily and conveniently accessible to students and are constantly updated and improved (curriculum descriptions, study procedures, leaflets, methodological guidelines, research resources, etc.).
II. Reliability

RL1. It is important to you that meetings with thesis supervisors and advisors take place according to a pre-announced timetable or by personal arrangement.
RL2. It is important to you that students are informed in a timely and exactly about the specific activities and stages of the thesis process (revisions, presentations, defences, etc.).
RL3. It is important to you that lecturers monitor and accurately record the progress of the final thesis (participation in consultations, reviews, mid-term reports, etc.).
RL4. It is important to you that lecturers apply objective and clear criteria for the assessment of final theses and communicate the results of the assessments to students.
RL5. It is important to you that the methodological material for the preparation and defence of the thesis is clear and easily understandable to students.
III. Responsiveness
RS1. It is important to you that students' preferences, requests and requirements are handled, dealt with in a timely and prompt manner.
RS2. It is important to you that faculty staff respond quickly and clearly to students' questions.
RS3. It is important to you that faculty staff provide support and assistance to students in the preparation of their theses.
IV. Assurance
A1. It is important to you that students are prepared and have sufficient competences to carry out and defend the thesis.
A2. It is important to you that the themes and content of the thesis are relevant to the aim of the degree programme.
A3. It is important to you that lecturers have the necessary subject knowledge and appropriate communication skills with students.
A4. It is important to you that lecturers provide professional answers to students' subject-related questions.
V. Emphathy
E1. It is important to you that lecturers understand the needs of students, show a positive attitude towards students and give individual attention to each student.
E2. It is important to you that lecturers treat students equally and with respect.
E3. It is important to you that lecturers are prepared to supervise students' final theses.
E4. It is important to you that the faculty takes student feedback into account in improving the processes of preparing and defending theses.

4. Overview of the results and discussion

All student questionnaires have been processed. The ***E (expectancy)***, ***P (perception)*** and ***SQ (gap)*** values were calculated for each question separately. The results of the survey are presented in Tables 2 and 3 and Figures 1 and 2.

Table 2

Survey results for each question in the 2018/2019 academic year

	Criterion	***E (expectancy) values***	***P (perception) values***	***SQ (gap)* values *(perception P - expectancy E)***
1	T1	4,03	3,73	-0,30
2	T2	4,16	3,56	-0,60
3	T3	4,07	3,81	-0,26
4	T4	4,26	3,83	-0,43
5	RL1	4,31	4,27	-0,04
6	RL2	4,38	4,13	-0,24
7	RL3	4,09	4,06	-0,03
8	**RL4**	**4,40**	**3,79**	**-0,61**

9	RL5	4,33	3,90	-0,42
10	**RS1**	**4,40**	**3,73**	**-0,67**
11	RS2	4,38	4,00	-0,38
12	RS3	4,50	4,21	-0,29
13	A1	4,45	4,06	-0,39
14	A2	4,17	3,98	-0,19
15	**A3**	**4,45**	**3,85**	**-0,60**
16	A4	4,52	4,00	-0,52
17	E1	4,24	3,90	-0,34
18	**E2**	**4,60**	**3,73**	**-0,87**
19	E3	4,29	3,94	-0,35
20	**E4**	**4,45**	**3,46**	**-0,99**

Table 3

Survey results for each question in the 2019/2020 academic year

	Criterion	***E (expectancy) values***	***P (perception) values***	***SQ (gap)* values *(perception P - expectancy E)***
1	T1	3.85	3.50	-0.35
2	T2	3.87	3.46	-0.42
3	T3	3.96	3.61	-0.35
4	**T4**	**4.15**	**3.61**	**-0.54**
5	RL1	3.91	4.26	0.35
6	**RL2**	**4.28**	**3.85**	**-0.43**
7	RL3	3.85	3.96	0.11
8	RL4	4.26	3.91	-0.34
9	**RL5**	**4.26**	**3.54**	**-0.71**
10	RS1	4.06	3.70	-0.37
11	RS2	4.15	3.80	-0.34
12	RS3	4.19	4.00	-0.19
13	A1	4.06	3.74	-0.32
14	A2	4.02	3.78	-0.24
15	A3	4.26	3.93	-0.32
16	A4	4.09	3.98	-0.11
17	E1	4.02	3.93	-0.09
18	**E2**	**4.36**	**3.61**	**-0.75**
19	E3	4.17	3.96	-0.21
20	**E4**	**4.23**	**3.59**	**-0.65**

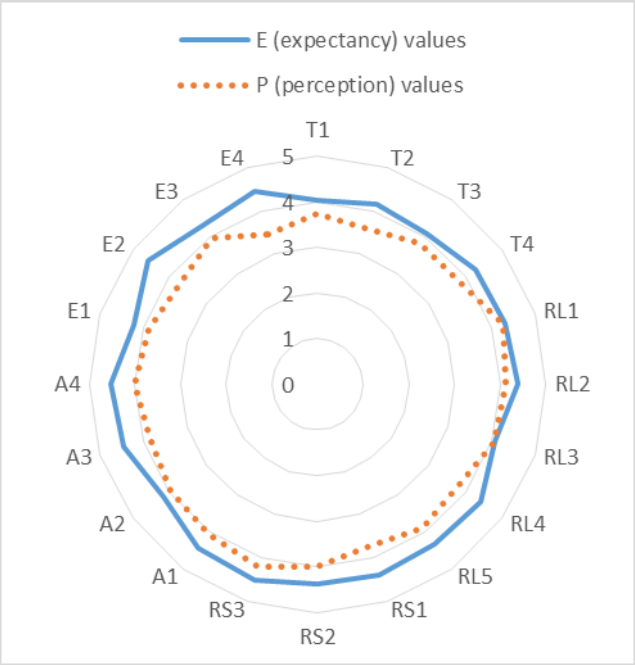

Fig. 1. Survey results for each question in the 2018/2019 academic year

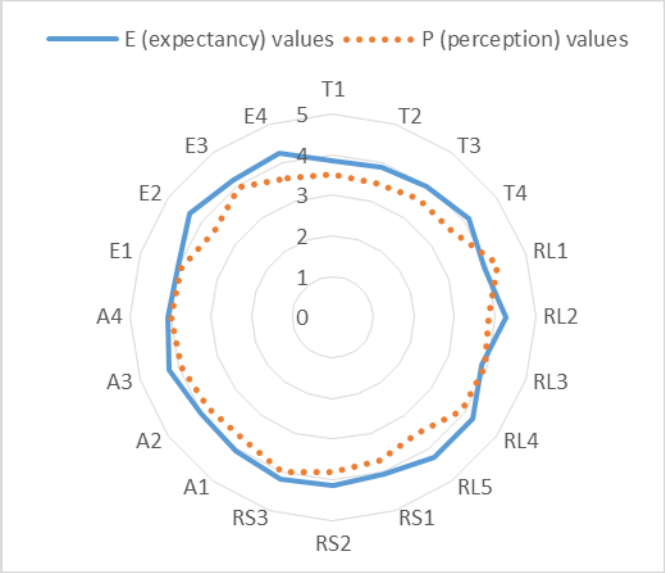

Fig. 2. Survey results for each question in the 2019/2020 academic year

The results show that some of the indicators that students perceive as having a low level of quality are among the most important in the opinion of the students surveyed. It can be said that special attention should be paid to the more prominently described problems.

According to the 2018/2019 survey data:

1. That the faculty takes student feedback into account to improve the processes of preparing and defending final theses. (Question 20 **E4**, gap **-0.99**)
2. That lecturers treat students equally and with respect. (Question 18 **E2**, gap **-0.87**)
3. That students' preferences, requests and requirements are handled, dealt with in a timely and prompt manner. (Question 10 **RS1**, gap **-0.67**)
4. That lecturers apply objective and clear criteria for the assessment of final theses and inform students properly about the results of the assessment of their theses. (Question 8 **RL4**, gap **-0.61**)
5. Lecturers should have the necessary subject knowledge and appropriate communication skills with students. (Question 15 **A3**, gap **-0.6**)

Based on data from the 2019/2020 survey:

1. Lecturers should treat students equally and with respect. (Question 18 E2, gap -0.75)

2. That the methodological material for the preparation and defence of the thesis is clear and easily understandable to students. (Question 9 RL5, gap -0.71)

3. That the faculty takes student feedback into account when improving the processes of preparing and defending theses. (Question 18 E4, gap -0.65)

4. That teaching tools for the preparation and defence of the thesis are easily and conveniently accessible to students and are continuously updated and improved (curriculum descriptions, study procedures, leaflets, guidelines, research resources, etc.) (Question 4, gap -0.54)

5. That students are informed in a timely and accurate manner about the specific activities and stages of the thesis (reviews, presentations, defences, etc.). (Question 6 RL2, gap -0.43).

In addition, a situation analysis was carried out for five groups of criteria (Tables 4 and 5). Respondents considered reliability, responsibility and empathy to be the most important criteria, while tangibility and empathy were the most problematic.

Table 4

Survey results by question group for the 2018/2019 academic year

Group of criteria	***E (expectancy) values***	***P (perception) values***	***SQ (gap)* values *(perception P - expectancy E)***
Tangibles **T**	4,13	3,73	-0,40
Reliability **RL**	4,30	4,03	-0,27
Responsiveness **RS**	4,43	3,98	-0,44
Assurance **A**	4,40	3,97	-0,43
Emphathy **E**	4,40	3,76	-0,64

Table 5

Survey results by question group for the 2019/2020 academic year

Group of criteria	***E (expectancy) values***	***P (perception) values***	***SQ (gap)* values *(perception P - expectancy E)***
Tangibles **T**	3.96	3.54	-0.41
Reliability **RL**	4.11	3.90	-0.21
Responsiveness **RS**	4.13	3.83	-0.3
Assurance **A**	4.11	3.89	-0.25
Emphathy **E**	4.2	3.77	-0.43

The aim is to assess the quality of the faculty's work in organising the preparation of final theses. For this purpose, we need to calculate the quality indicator **Q** of the SERVQUAL methodology. If the quality indicator **Q** is zero, the client's expectations are the same as the actual quality. If the expectation value **E** is greater than the perception value **P**, the quality indicator **Q** will have a negative value. If the perception value of **P** is higher, the quality indicator **Q** will be positive. Zero and positive quality factors **Q** are considered as successful. Indicators close to zero are satisfactory. Negative quality indicators are unsatisfactory and indicate poor performance.

Calculation of SERVQUAL's quality indicator Q1 in relation to customer expectations.

The **SERVQUAL** quality indicator $\mathbf{Q_1}$ in relation to customer expectations is calculated according to the following formula:

$$Q_1 = \frac{E-P}{E} * 100\% \qquad (3)$$

where $\mathbf{Q_1}$ is the quality indicator related to customer expectations;
E is the average estimate of the expected quality level;
P is the average estimate of the perceived quality level.

The quality indicators related to customer expectations are calculated according to formula (3) and equal to:

Q1=9.86 (2018/2019 academic year)
Q1=7.66 (academic year 2019/2020).

The lower the value of the relative quality indicator **Q_1**, the higher the quality of the service provided by the company or organisation. This calculation methodology takes into account not only the difference between expectations and perceptions, but also the expected value of the quality assessment.

In the SERVQUAL methodology, the quality indicator **Q_1** is an absolute value. However, along with absolute statistical values, relative values are very important in economic-statistical analysis. The relative quality indicator can be calculated using the ideal value.

Calculation of the SERVQUAL quality indicator Q_2 in relation to the ideal value.

The ideal value is the highest possible expectation value, which in the SERVQUAL model is five. The quality indicator **Q_2** associated with the ideal value is calculated using the following formula:

$$Q_2 = \frac{5-P}{5} * 100\% \qquad (4)$$

where **Q_2** is the quality factor relative to the ideal value;

estimate **5** is the ideal or maximum estimate of consumer expectations.

The quality indicators related to the ideal value are calculated according to formula (4) and are equal to:

Q_2=22.06 (2018/2019 academic year)
Q_2=24.28 (2019/2020 academic year).

This coefficient reflects the relationship between users' perceived service quality and their maximum expectations. The lower the indicator, the higher the quality level.

5. Applying the importance-performance analysis methodology

The importance-performance analysis (IPA) method was used for presentation the results and improve the analysis. This method is used to assign high/low importance categories to the study factors (Su, 2013). This graphical tool was first introduced by Martilla and James (1977) in order to better understand customer satisfaction measurement models. IPA can provide meaningful clues about critical aspects of service or cost reduction in less important areas (Frauman and Banks, 2010). Other advantages of this technique include the convenience and visuality to present the data, as well as suggestions and implications for strategic insights (Chu and Choi, 2000). These characteristics have expanded the application of IPA from a tool for customer satisfaction analysis (Matzler et al., 2004) to tourism management and destination marketing tools (Griffin and Edwards, 2012), manufacturing applications (Almanza et al., 1994), banking (Cunningham and Gaeth, 1989), the food industry (Jang et al., 2009), restaurant (Chen and Chen, 2010), and the assessment of management strategies in the hotel industry (Mohsin and Lockyer, 2010). IPA resembles a Cartesian coordinate system, which can only have positive implications. The vertical axis of the IPA typically reflects the customer's perception of the service provider's performance with respect to a particular aspect of service, while its horizontal axis indicates the importance of a particular aspect of customer service (Frauman and Banks, 2010). The two perpendicular columns create a space called the IPA grid (Oh, 2001). This grid is then divided into four squares, usually based on arithmetic averages of the sample, taking into account the aspects provided by the axes (Su, 2013). The first quadrant, ***possible overkill***, consists of attributes that the service provider performs well but are not considered important by the customer. The second quadrant - ***keep up the good work*** - contains attributes that are important to the customer and that the service provider has performed satisfactorily. The third quadrant - ***concentrate here*** - presents those attributes that are important to the customer but the service did not meet their expectations. Finally, the fourth quadrant - ***low priority*** - reflects the attributes of the service that are not satisfying to the customer, but which the customer does not care about (Figures 3 and 4).

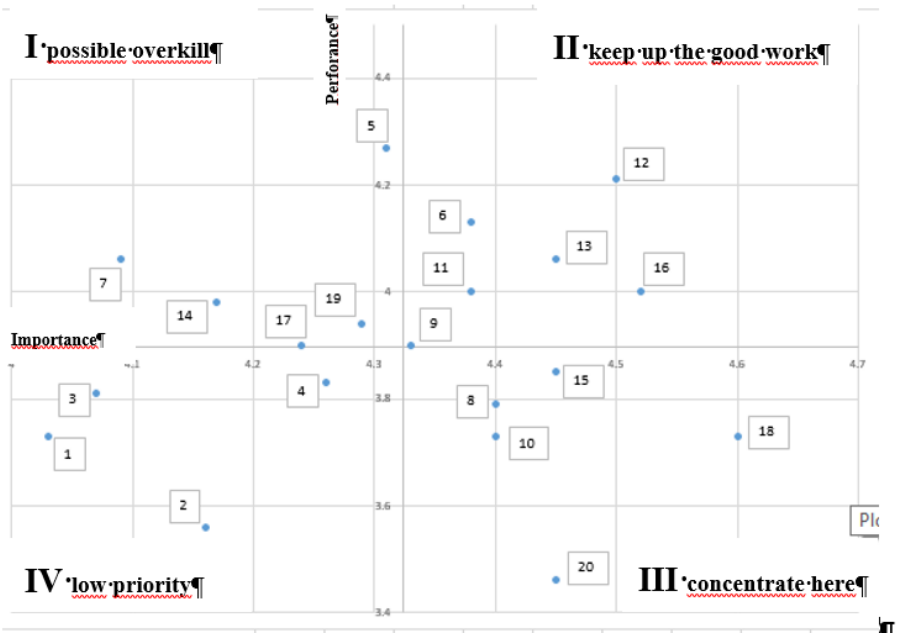

Fig. 3. Results of the importance-performance analysis (IPA) for the 2018/2019 academic year.

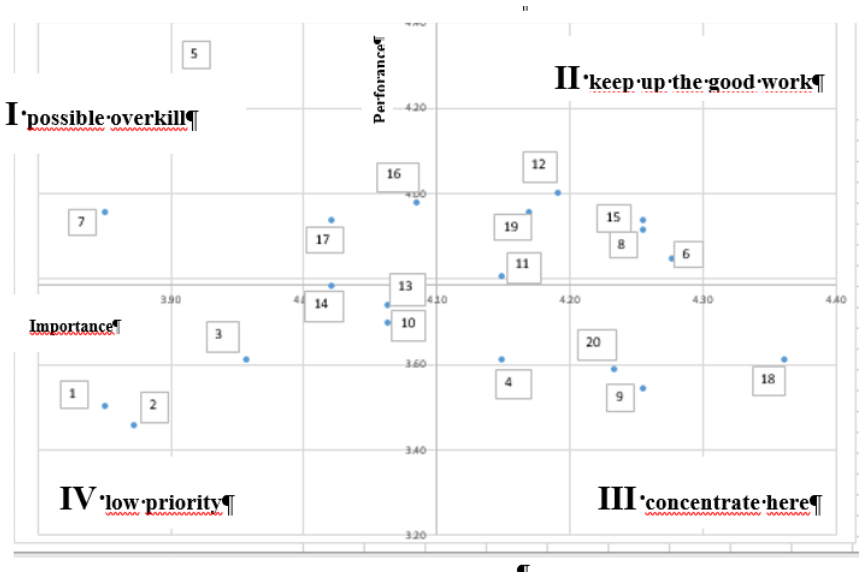

Fig. 4. Results of the importance-performance analysis (IPA) for the 2019/2020 academic year.

To use the IPA methodology, four steps must be followed: first, the key attributes of service quality must be identified. Second, the importance of each attribute must be measured to determine whether it is effective. Next, the data should be analysed by correlating the average scores of importance and performance for each attribute. Finally, the mean scores should be arranged in the IPA grid in the appropriate quadrant (Lai and To, 2010).

Notably, attributes in the first quadrant receive the most attention and can be targeted with cost reduction strategies; those in the second quadrant are managed effectively and should not be subject to changes in policy; those in the third quadrant require immediate attention as they may cause customer dissatisfaction; and those in the fourth quadrant do not require immediate attention as they are irrelevant to the customer's point of view (Abalo et al., 2007).

Analyzing the results obtained according to the IPA methodology, it can be stated that the problems with the preparation and defense of the final theses are presented in the third square (**concentrate here**). It contains questions that are important to the client (students), but the service did not meet their wishes and expectations. Similar results were obtained in both academic years. Recurring issues include:

- Teachers would treat students equally and with respect

- the faculty would take into account students' feedback in improving the processes of preparation and defense of final theses.

The best situation is with questions 6, 11 and 12, which are shown in the second square (**keep up the good work**). Again, the situation is similar in both school years. It should be noted that the second square has the most questions (6 questions in each academic year). Note that the fourth square (**low priority**) contains questions 1, 2, 3. They recur during both school years. But there are more questions in the 2019/2020 school year. Questions 10, 13 and 14 emerged as problematic but of little relevance to students. The first square includes questions that the service provider does well, but students do not consider them important (**possible overkill**). Questions 5, 7 and 16 are repeated during both academic years.

Conclusions

1. This paper applies one of the most popular quality assessment methodologies SERVQUAL, to define the quality of the study process. In particular, it focuses on the final and undoubtedly relevant stage of the study process - the organisation of the final thesis. The paper analyses the problems of study quality assessment and the possibilities of applying the SERVQUAL methodology to study quality assessment. The application of the SERVQUAL service quality assessment methodology to the process of preparing and defending final theses allowed to identify the perspectives of improving the work with students, and the results revealed the most important directions of improvement. A questionnaire of twenty questions was developed for the research. The research involved a questionnaire survey of 105 4th year students of Information Systems and Electronic Business Technology in order to find out the expected needs (expectations). The students were involved in the process of preparing their final theses in the 2018/2019 and 2019/2020 academic years.The scores for the parameters of tangibility, responsibility, reliability, assurance and empathy were calculated. The results showed that among the students' expectations and perceptions, empathy has the highest gap among all the metrics and reliability has the lowest gap. Similar results were obtained in both academic years.

2. Summarising the analysis of the two-year thesis process based on the calculated quality results and the results of the student surveys, it was found that in the process of preparing and defending theses, empathy is the most significant gap in the outline between students' expectations and perceptions. This process is extremely responsible, complex, knowledge-intensive, self-directed, disciplined and collaborative, working together with the thesis supervisor. Consequently, thesis supervisors must not only be professionals in their field, but also highly empathetic.

3. The importance-performance analysis (IPA) method was used to present and analyse the results obtained. The attributes that need urgent attention as they may lead to customer dissatisfaction were identified.These are that lecturers should treat students equally and with respect and that the faculty should take student feedback into account in improving the processes of preparing and defending theses.

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