STUDENT SURVEY FOR HIGHER EDUCATION QUALITY – CHALLENGES TO DESIGN AND ANALYSE DATA

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Purpose of the study: The objective of this study was to present useful practical advice on the process of designing questionnaires for student surveys for higher education quality, as well as conducting such survey through the analysis of results of such survey that was held in National University "Odesa Law Academy".

Methodology: This research is based on the results of an anonymous online survey among 142 students of the Faculty of Advocacy of the National University "Odesa Law Academy", which was conducted in April 2017. The survey consisted of 29 questions. All questions were divided into 3 separate groups: assessment of academic discipline, assessment of lectures, and assessment of practical classes. Each group consisted of open-ended and closed-ended questions. Closed-ended questions were evaluated on a 10-point scale, where 1 is the lowest score, and 10 is the highest.

Main Findings: The research findings demonstrate that to increase the response rate of student it's better to reduce the number of questionnaires and questions in them. Also, the authors stated that the online form of survey is better than paper form (in aspects of accessibility, anonymity, and convenience for students). It was found that the vast majority of students' responses were received during the first days of the survey, which indicates that it is impractical to be conducting such a survey over a long period. It was found that in response to closed-ended questions most students chose the highest mark (10 out of 10), so developers of questionnaires have to choose another scale for closed-ended question assessment which has some real references. Also, it was stated that only a fraction of open-ended questions will contain really useful information that can be further used to improve educational services.

Application of this study: This research can be used by administration staff and teachers of universities as a guideline in conducting similar surveys.

Novelty/Originality of this study: The novelty of this research lies in the attempt of combining relatively easy in implementation but quite effective in usage rules of conducting student’s survey on higher education quality in one paper.

Keywords: Student Survey, Education Quality, Quality Assurance of Higher Education.

INTRODUCTION

The problem of higher education quality is currently one of the most relevant in the modern educational process in Ukraine and the world. Higher education institutions are beginning to monitor the quality of higher education by their means. Students begin to be considered as consumers of educational services before everything else. And in such a situation logical question arises: how exactly could higher education institutions monitor the higher education quality, which method of understanding students' opinions about their satisfaction with the educational process is the most effective? And the most logical answer could be conduct of a questionnaire (or survey) among students after all survey is the most common way to evaluate the quality in higher education, which Schindler (2015) identified in four board conceptualizations (quality as purposeful, transformative, exceptional, and accountable). A common framework for a quality assurance model would provide a consistent assessment of learning design, content, and pedagogy (Puzziferro & Shelton, 2008). Yet, according to Trica Ruan (2015), there is still no common understanding among scholars on the definition of quality assurance in higher education, since "accreditation and quality assurance are no longer purely national undertakings" (Green, et. al., 2012).

The main purpose of this study is to analyze the results of the student's survey for higher education quality to formulate unified methods of conducting such type of survey. But other scientific articles in this sphere also were analyzed. For example, Rowley (2003) wrote the article about designing student feedback questionnaires, in which the author analyzed general concerns of such a survey, objectives of evaluation process data collection process, and others. Artino, La Rochelle, et. al (2014) studied the step-by-step process of developing questionnaires for educational research in procedural, not methodological aspects.

It is necessary to point out that recent scientific data on the methodology of quality of education survey is poor. However significant efforts in this field had been made by Marsh (1982; 1986; 1987) and his colleagues (Marsh & Dunkin, 1992; Marsh&Hocevar, 1991). They have published several papers reporting the results of Students Evaluations of Educational Quality (SEEQ) implementation, which is used in many countries due to its unified survey form (Balam&Shanon, 2010; Coffey&Gibbs, 2001; Watkins&Thomas, 1991; Grammatikopoulos, Linardakis& Gregoriadis, 2014). SEEQ consists of 35 items for measuring nine dimensions (Learning/Value – five items, Instructor Enthusiasm – five items, Organizing – four items, Group Interaction – four items, Individual Rapport – four items, Breadth of Coverage – four items,
Examinations/Grading – three items, Assignments/Readings – two items, and Workload/Difficult – four items). The implementation of a single unified form of the survey will simplify the assessment of survey results in different universities. However, SEEQ also has many shortcomings. One of the most important of them is that SEEQ does not have open-ended questions, and therefore only ranking score will be demonstrating the quality of education which cannot provide all the comprehensive information. On the other hand, as we believe, at this stage of Ukrainian higher education system development, first of all, it is recommended to create and individualize surveys for each university with the consideration of the special features of the educational process. And when the use of such surveys will become a common practice, they would be a good base for the creation of the unified form of the global survey for scientific work.

Many other articles analyze mostly results of such questionnaires: Ramsden (1991), O'Neill, & Palmer (2004), Douglas, J., Douglas A., & Barnes (2006) and others. However, all these articles emphasize more on the analysis of the whole scope of questionnaires, not the methodology of the survey itself. The article aims to provide valid and reliable advice for designing student surveys for higher education quality according to the results of our survey, which was conducted on the Faculty of Advocacy of the National University "Odesa Law Academy" in 2017. Such advice covers ground rules for such surveys, yet it will help to obtain reliable data even through conducting basic surveys on the quality of education.

**The objective of the study** is to conduct an analysis of the student's survey results and establish the most common and easily avoidable miscalculations for its design and conduct.

**METHODOLOGY**

To determine the methodology for student surveys on higher education quality an anonymous online survey among students of the Faculty of Advocacy of the National University "Odesa Law Academy" was conducted in April 2017. The survey consisted of 29 questions based on the Methodology for Independent, External, On-site Assessment of Legal Education Quality developed by the USAID New Justice program. All questions were divided into 3 separate groups: assessment of academic discipline, assessment of lectures, and assessment of practical classes. Accordingly, each group consisted of open-ended and closed-ended questions (Table 1). Closed-ended questions were evaluated on a 10-point scale, where 1 is the lowest score, and 10 is the highest. Each questionnaire concerned a specific academic discipline, the study of which ended in the current semester. That is, each student had from 8 to 12 questionnaires to answer.

<table>
<thead>
<tr>
<th>Table 1: List of questions for the survey</th>
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<tr>
<td><strong>Closed-ended questions</strong></td>
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<tr>
<td>Assessment of academic discipline</td>
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<tr>
<td>Evaluate the importance of this discipline for your future profession</td>
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<td>Evaluate how interesting the discipline was</td>
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<td>Evaluate the student's research work organization level of this discipline</td>
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<td>Assessment of lectures</td>
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<td>Evaluate the level of</td>
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<td>- informativity of lectures</td>
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<td>- organization of lectures</td>
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<td>- interactivity of lectures</td>
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<td>- the relevance of the material taught at lectures</td>
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<td>- preparedness of the lecturer</td>
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<td>- punctuality of the lecturer</td>
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<td>- culture of the lecturer</td>
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<td>Assessment of practical classes</td>
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<td>Evaluate the level of</td>
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<td>- informativity of practical classes</td>
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<td>- organization of practical classes</td>
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<td>- the interactivity of practical classes</td>
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<td>- the relevance of the material taught at practical classes</td>
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<td>- preparedness of the teacher</td>
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<td>- punctuality of the teacher</td>
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<td>- culture of the teacher</td>
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<td>- feedback of the teacher</td>
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<td>How fair and transparent was the teacher's evaluation of</td>
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The survey was conducted based on Google Forms platform. The reference to questionnaires was provided to all students of the Faculty of Advocacy of the National University "Odesa Law Academy" through the administration of the faculty. Participation in the survey was voluntary.

In total, 142 students took part in the survey, which makes up 26.8% of the total number of students. The results of the survey were analyzed using IBM SPSS v.23.

RESULTS/FINDINGS

First of all, we must pay attention to the critically low level of students’ participation in the survey. In this regard, we have two main questions: what percentage of students should take part in the survey for the results to be considered representative and how to increase the number of students who participate in surveys?

There is no unambiguous answer to the first question. It is quite obvious that a single minimum of survey representativeness is impossible to establish and in each case, such number should be determined individually. But there is an opinion ([Williams & Brennan, 2004, p.33]) that if the number of respondents is less than 30% of the total, then such survey results should be treated with extreme care. A reliable indicator is considered to be 60% or more of respondents.

Second question: how to increase the number of students who participate in surveys? This question is much more complicated because, for example, since the 60s of the last century sociologists have been trying to identify reasons for the constant decrease in many people who want to participate in polls ([Karlberg, 2015, p.4]), so this problem is manifested not only among Ukrainian students. For example, in Australia, the number of students in higher education institutions that participated in the Student Experience Survey in 2016 amounted to 46% of the total number of students. At the same time, survey expertise called this percentage "staggering".

But in this case, we can name several ways to increase the number of survey participants. First, it's the reduction of the number of questionnaires and the reduction of the number of questions in them. During our survey at the Faculty of Advocacy of the National University "Odesa Law Academy," each student had about 230-340 questions. This is too much, and in this case, the low level of student’s participation in the survey can be explained by the survey fatigue. So, it is necessary to find a golden mean between the representativeness and the informative nature of a survey.

Another way to increase the representativeness of a survey is to change its form. If you conduct such surveys on paper, you can get almost 100% of the student’s answers. However, we are convinced that changing the form of the survey can significantly affect the validity of results. If such surveys are conducted in paper format an allotted period (for example, the last 15 minutes of a practical class), students will have to fill in questionnaires in a limited period, which may not allow them to fully express their suggestions and comments. Moreover, filling questionnaires in classrooms may be the reason why students may not give true answers. Also, obvious drawbacks of a paper form of questionnaires are the financial costs associated with their production and difficulty in processing them (for example, it was required to print, distribute, collect and process more than four and a half thousand questionnaires only at the Faculty of Advocacy of the National University "Odesa Law Academy").

Another factor that may increase the number of respondents could be the preliminary informative work among students. But it is not enough to just mention the existence of such a survey. Empowered officials (such as deans) must explain the purpose and significance of such a survey, emphasize its anonymity, provide real examples of changes in the learning process that have occurred (or will take place) through such surveys.

After the analyses of student's participation in surveys according to years (Figure 1), we can conclude that the senior years participated in the survey more actively. This can be explained by the higher experience of senior year students in the study, and therefore their greater interest. This result also prompts another question: is it necessary to conduct such surveys among first-year students? First-year students don't have a great deal of experience in studying yet and therefore cannot objectively assess the quality of lectures and practical classes. Indeed, such a position is appropriate. However, it is also incorrect to exclude such students of the survey entirely because they receive educational services at the institution of higher education on a basis equal with others. Therefore, there could be another solution: it will be logical to conduct a survey among first-year students not about the quality of education, but their expectations in education. This way, it is possible to determine what students want and then compare their expectations with the results they have gained.
Also, it is very important to correctly establish the date and time of the survey. During the survey of the Faculty of Advocacy students, the limit was set at two weeks. But the vast majority of students completed questionnaires in the first days of the survey (Figure 2). Also, in our case, absolutely all responses were provided within the first 7 days, and no response was received throughout the next week.

That is, the highest number of responses was received on the day of the announcement of the surveyor immediately after the announcement. This was due to the general interest of students in the survey, they were wondering what this questionnaire was and what questions they should answer. Thus, this result allows us to conclude that providing additional time for a survey will not increase the number of surveyed students (if such a survey is voluntary).

If we analyze the time during which students responded to the questionnaire, we can notice that most of all students responded in the second half of the day (Figure 3).
As already mentioned, some of the questions in the questionnaire were closed-ended. Using a mixture of closed-ended and open-ended questions we could collect both qualitative and quantitative data. Rowley (2003) stated, that closed-ended questions (tick box questions) offer an opportunity for analysis that allows the identification of a specific aspect of the program or module that might benefit further examination. In our case, the students were encouraged to evaluate, for example, informativity of lectures on a certain scale. So, there is a question as to what scale should be used. Thus, during the questioning at the Faculty of Advocacy, we used a 10-point system, where 1 was the lowest score, and 10 was the highest. However, the results of the survey showed that such a system is not ideal.

For example, the average student score on the question “What is the importance of this discipline for your future profession?” is 8.4 points, the question ”How informative was the lecture?” - 8.7 points. Similar assessments are found on all other closed-ended questions. That is, the most popular score was "10". Such a score can be explained by several factors. Students could be satisfied with the quality of education, and therefore they often gave a high score. However, questions arise as to the correct use of "10" points, which is the maximum, and therefore should not be encountered so often. We believe that there is another reason for such a distribution of points.

The proposed scale of evaluation is based on the ratio of points to each other only but does not provide any binding to certain features and characteristics. That is, on the scale from 1 to 10, we only know that “8” is better than “7” but worse than “9”. That's it. Points are compared with each other, but for students, there are no real associations between the points and what they reflect. This way, the evaluation system should be clear and easy to use for students. That is why we believe that the most successful evaluation system will be the 12-point system, that is, the school evaluation system. All students understand how it works, and therefore it will allow them to better evaluate the indicators provided in the questionnaire.

Open-ended questions also have great importance for surveys because students can freely comment on the quality of education, pointing to shortcomings and miscalculations in the educational process. At the same time, it is not worthwhile to expect extremely high validity of the results of open-ended questions. For example, for the question ”What did you like most when studying this discipline?” the most popular type of answer was a dash or similar symbols, which, respectively, did not contain any information and were used by students because of the simplicity of typing (Figure 4). So, one-third (and sometimes even almost half) of all responses in surveys had no value. The second and third most popular responses were "everything" and "nothing" in various forms (for example, everything is okay, everything is good, etc.). Similar results were obtained for all open-ended questions.

![Figure 4](https://joedoxponsorhqtio6.ldu/figure4.png)

**Figure 4:** What did you most like when studying this discipline?

Such answers can be explained by the general survey fatigue of students. So, this result is quite logical, and therefore it’s not worth to expect a large percentage of valid answers to open-ended questions.

Additionally, a very important step in every survey is the publication of results and further work with them. To interest more students in surveys, higher education institutions should demonstrate that the results of such surveys have an impact on the educational process. Students should receive feedback on survey results. But if we talk about the publication of survey results then we have another question: in what form should such results be published? The results of surveys should go through an analytical process, and after this process, the resulting analytics could be published. It will be quite informative and on the other hand, easy to perceive. This can be achieved by drawing up charts that demonstrate the results of the survey more clearly. It is also important to provide correlations at different levels (years, faculties, etc.) so that everyone can evaluate results in general and at individual levels. However, it is necessary to establish what can be published and what cannot.

It is obvious that for analytics closed-ended questions are the best for perception. They are easy to process, very informative, and anonymous. But we have a different question: is it possible to publish the results of an open-ended questionnaire? We concluded that such results cannot be published.
This is primarily due to issues of corporate ethics for teachers and students. The purpose of the survey should be identifying positive and negative points in the organization of the educational process, identifying ways to improve it and encourage teachers to self-improvement. The purpose of the survey cannot be to humiliate teachers in any form. However, answers to open-ended questions will allow identifying specific teachers who the worst/the best are. It is possible to try to disassociate the results of open-ended questions as much as possible. However, such results will not provide any specific user information. Besides, even impersonal survey results may indicate specific teachers they are referring to or specific students who have given answers.

Therefore, we emphasize once again that only the results of a closed-ended questioning should be published. Answers to open-ended questions should be passed on to those who they concern and who have the right to influence the educational process of specific teachers. To such persons, we include deans, heads of departments, and teachers themselves.

**DISCUSSION / ANALYSIS**

The main task of any survey is to gather valid information, which can help us to make conclusions and to pay attention to the particular items. However, this study shows that only the fact of conducting a student survey for higher education quality doesn’t mean that we would obtain qualitative information that can be respectively analyzed. Most students evaluate not the quality of teaching but the personality of a teacher (El Hassan, 2009), which makes their assessment extremely subjective (McCann & Gardner, 2014). Another factor (such as form, duration of the survey, the wrongly selected scale of measurement, etc) can also reduce the validity level of the score. It means that every student questioning must be qualitatively designed, and an optimal method for conducting such surveys must be chosen.

Nowadays student's surveys for higher education quality are often carried out at various levels - at the national level, at the level of individual institutions of higher education, on request, or with the support of various programs. At the same time, the results of such surveys also indicate the existence of certain problems in the conduct of surveys. For example, the Center for Quality Assurance in the National University of "Kyiv-Mohyla Academy" also indicates a rather low level of voluntary survey participation of students in its report. At the same time, it was offered to involve representatives of student self-government and scientific and pedagogical staff more actively to inform students about such a survey. In the UK, where the participation of students in the national survey directly affects the place of a university in a ranking, in addition to educational activities, they even provide cash bonuses to those who complete a questionnaire (Williams, 2015). There are other studies on the quantitative index of student engagement in surveys, which is one of the main reasons for student survey fatigue (Karlberg, 2015; Porter, Whitcomb, & Weitzer, 2004). Bennet and Nair stated, that low response rates are highly correlated to a lack of follow-up actions (Bennet & Nair, 2011).

Scientists also studied the influence of web-based surveys on response rates and results. Despite some resistance of academic staff toward online surveys (Rientes, 2014), such form of questioning proved its efficiency, for example, by the ability to provide extended written comments by students (Risquez, Vaughan & Murphy, 2015). According to other studies, online surveys didn’t have any massive drop in response rate, but results can be processed much faster (Phan & Childs, 2017, p. 6). However, not many scientific articles analyze the structure of questions themselves and their influence on response rate, and this problem can be a subject of another scientific research.

Unified international or national survey forms (for example, SEEQ) could be adopted to avoid typical mistakes. Thus, unified questionnaires do not allow emphasizing the unique features of each university educational system, which may help to identify those specific factors that need to be improved. Therefore, we believe that this field remains promising for further scientific research.

**CONCLUSION**

Basing on our findings, we may conclude that key aspects of a successful student survey, among others, include the number of questionnaires and the number of questions in each of them, form of this surveys, duration and time limits of the survey, the scale for closed-ended question assessment and reporting of the survey results.

It is necessary to establish a golden mean between the informativeness of questionnaires and their laconism. If there are too many questions, the number of students taking part in the survey will be too small. At the same time, all questionnaires should be very informative.

At the moment, the online form of conducting surveys seems to be the most appropriate, since it allows students to provide answers in the most comfortable conditions, which positively affects the truthfulness of responses. Besides, the online form of questionnaires greatly simplifies the process of analyzing the results and does not require high financial costs. At the same time, the written form of surveys can significantly increase the total number of received responses.

Most of the responses will be received in the first few days of the survey, and therefore the artificial prolongation of survey duration will not allow a significant increase in the number of respondents.

To obtain the most reliable results, it is suggested to use the scale of assessment that is most appropriate and understandable for students (for example, the school 12-point system).
Only the analytics of closed-ended questions must be accessible in publicity. Answers to open-ended questions should not be published but should be redirected to those responsible for the quality of educational services.

LIMITATION AND STUDY FORWARD

The importance of this research lay in the opportunity of practical usage of this methodology during the conduct of surveys in different higher education institutes. Of course, the scope of the survey, its form, and questions themselves could wary depending on the aim of assessment. However, general tips are usable in almost any situation during the survey.

Yet there are still other aspects of a student survey on higher education quality that were not studied in this research. For example, it’s important to use the verification procedure of results. Such verification could be achieved by asking different stakeholders (students, teachers, employers, etc.) the same questions, or even by including in student questionnaire several same questions but in a different form. But the scope of this article could not cover all aspects of the student survey, so there are many opportunities to expand this research.

REFERENCES


