

A SURVEY OF STUDENT SURVEYS

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This academic year the first group of Master students specialized in statistics, which had been studying in accordance with new programme and therefore had possibility to learn an advanced course of “Sample surveys theory and methods”, graduated the Faculty of Mechanics and Mathematics of Taras Shevchenko National University of Kyiv. Three students from this group decided to write master theses in survey statistics. I suggested them to make real surveys of students studying at the Faculty of Mechanics and Mathematics. They were free to choose any topic, which seemed interesting for them. Planning a survey, preparation of a questionnaire, selection a sample, interviewing and processing of data, and, finally, analysis of sample data were supposed to be made by a student alone. In order to minimize the influence of a scientific supervisor, there were no limitations or instructions concerning sampling design as well as estimation methods and software for data analysis. My objective was to understand (basing on a student's preferences and difficulties), what issues were complicated for students, and to identify deficiencies in the program of the course in survey statistics or gaps in the lecture materials.

As a result, the following surveys were conducted: “Living in dormitory” by Julia Brateshko, “Why I entered the Faculty of Mechanics and Mathematics” by Victoria Martynenko, and “Topicality of the diploma awarded by the Faculty of Mechanics and Mathematics” by Iryna Kramar. In each survey several characteristics were investigated, and the results are very interesting. For instance, students are not satisfied with living conditions in their dormitories, but at the same time they are not willing to help staff of the dormitories to make these conditions more comfortable. As for decision to enter the faculty of mathematics, the majority of students were influenced by their parents. And the survey of graduates showed that mostly employment does not correspond to their speciality, but studying at this faculty helped them much. More details about surveys' results will be presented at the conference.

Target populations in these surveys were not identical, because in the first one only students living in dormitories were surveyed, in the second survey the population consisted of all students studying at our faculty now, and in the third survey graduates from the faculty in 2012, 2013 and 2014 were surveyed. Nevertheless, in all three surveys students used stratified simple random sampling with stratification on the year of study or graduation. For estimation of parameters of interest the Horvitz-Thompson estimator was used. Nonresponses were ignored, although methods of weighting and imputation were presented at lectures. As characteristics of accuracy, coefficients of variation and design effects were calculated. Two students analyzed their data in SPSS and one used R. When it comes to relationships among variables, the students love cross tabulation and do not like regression.

Many questions arose during preparation of these theses including those, which seemed obvious for me, but appeared to be not so obvious for students. But my main conclusion is that it would be better to increase number of lectures and practical lessons on such topics as analysis of data with missing values, regression analysis and regression estimators, as well as usage of additional information in general. And more attention should be given to detailed explanations WHY in some situations it is important or necessary to use special techniques.

References

1. Brateshko, Ju. *Sample survey “Living in dormitory”*. Master theses, 2015.
2. Kramar, I. *Sample survey “Topicality of the diploma awarded by the Faculty of Mechanics and Mathematics”*. Master theses, 2015.
3. Martynenko, V. *Sample survey of students of the Faculty of Mechanics and Mathematics “Why I entered the MechMat”*. Master theses, 2015.