Original Research   **Open Access**

The Efficiency of Free Survey Services

E. V. Udovichenko[*]
I.M. Sechenov First Moscow State Medical University, Trubetskaya St., 8-2, 119991, Moscow, Russia

T. M. Litvinova
I.M. Sechenov First Moscow State Medical University, Trubetskaya St., 8-2, 119991, Moscow, Russia

A. A. Udovichenko
ZAO National Telecom, Lusinovskaya St., 36-1, Moscow, 115093, Russia

O. V. Krylova
I.M. Sechenov First Moscow State Medical University, Trubetskaya St., 8-2, 119991, Moscow, Russia

O. V. Savinova
I.M. Sechenov First Moscow State Medical University, Trubetskaya St., 8-2, 119991, Moscow, Russia

Abstract

The use of new information technologies in the educational process intensifies the need for analyzing the existing resources suitable for teaching students in conformity with professional standards. The objective of this study is to consider the significance of survey services in teaching students market research, to analyze the efficiency of survey services, to prove their positive impact on the learning process and to determine requirements for educational survey services. The materials of the study were students' reports on conducting consumer surveys using either paper or online questionnaires. The research is based on a pedagogical experiment to analyze the applicability of Internet resources in the educational process. The results of students' research were processed through the comparison of the data obtained. The authors of the article have developed the life cycle of educational survey services. Based on stages of the life cycle, the authors have determined desired functional characteristics of free survey services, which will simplify the task of selecting a suitable educational tool. It has been confirmed that the exclusive use of Internet technologies in teaching students market research cannot be sufficient, and they should be used in combination with basic approaches to a marketing theory. The conducted pedagogical experiment has proved the consistency of Internet technologies as an educational tool. The authors of the article have revealed that despite undeniable advantages of online survey services they also have significant shortcomings, which makes it impossible to completely replace classic methods of collecting market information from this moment on. The introduction of free survey services into the educational process increases teaching efficiency and develops professional competencies within the existing standards. Defining functional requirements of the above-mentioned life cycle, teachers can choose the best educational survey service taking into account the stages students will go through while using it. An extensive use of information technologies is essential to the formation of new teaching materials and the renewal of the existing ones based on the synthesis of the classical theory of marketing and innovations.

Keywords: Survey service; Life cycle of an educational survey service; Pedagogical experiment; Requirements for functional characteristics.

1. Introduction

The primary goal of modern education is to form and develop students' competencies which are expressed in their striving for purposeful activity and their desire to realize their full potential while independently solving professional tasks (Milonova *et al.*, 2017). The fulfillment of these tasks is closely connected with social, economic and cultural changes in society characterized by a high level of informatization and scientific-technological development. Therefore, institutions of higher education need to improve teaching standards to form a higher information culture of future professionals that will enable them to effectively use computer technologies and software in the course of work (Kiselev and Bochkova, 2014); (Fabrikantova and Polyanskaya, 2017).

To radically improve the quality of education, it is necessary to change the existing education standards since traditional technologies hinder the full formation of competencies in accordance with both current and prospective trends in the development of science and technology. In particular, when teaching students market research, it is vital to overcome the problems of synthesizing "classical" methods of collecting information and modern innovative technologies. These challenges can be explained by the following reasons: on the one hand, the transition of some market research into the Internet environment calls for a new approach to teaching students and developing educational materials by faculty staff; on the other hand, students often have a higher command of information technologies than their teachers (Panfilova, 2012); (Sharshov and Belova, 2018); (Gushchina *et al.*, 2015).

*Corresponding Author

The objective of this study is to consider the significance of survey services in teaching students market research, to analyze the efficiency of survey services, to prove their positive impact on the learning process and to determine requirements for educational survey services.

2. Materials and Methods

The materials of the study were students' reports on conducting consumer surveys using either paper or online questionnaires. The research is based on a pedagogical experiment to analyze the applicability of Internet resources in the educational process. The results of students' research were processed through the comparison of the data obtained.

3. Results and Discussion

The applicability of Internet resources in the educational process was conducted by the Department of Pharmacy to form competencies that meet requirements of the relevant educational standard. One of the lines of this research was the introduction of modern survey services into educational programs.

Throughout the research, the authors have concluded that an optimal choice of teaching resources depends on the functions of these resources and their life cycle in the educational process.

The life cycle of an educational survey service is the stages students go through from applying software and then ceasing its use in the educational process. The life cycle diagram developed by the authors of this article is presented in Fig.1 below.

Figure-1. The life cycle of a survey service in the educational process
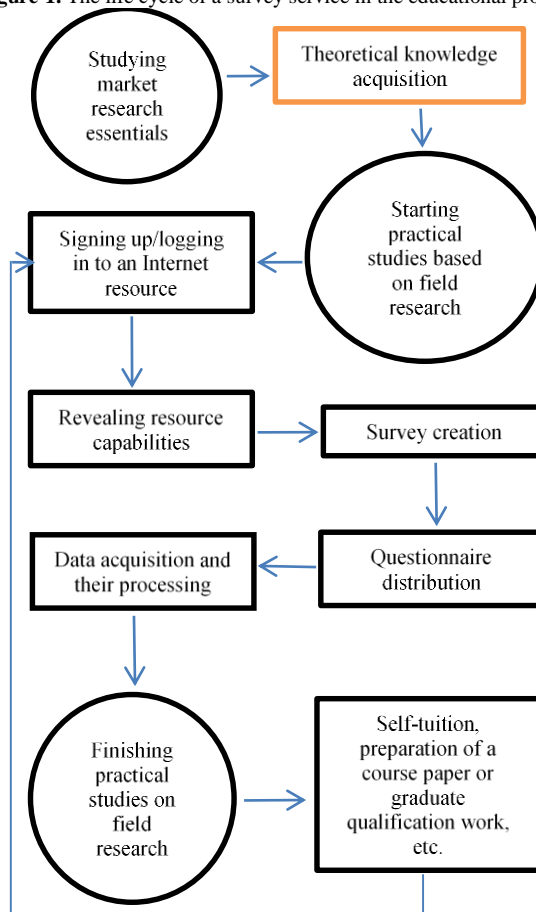
The diagram above demonstrates that the life cycle of survey services used for teaching market research includes practical classes, as well as the preparation of course papers or graduate qualification works. In addition, these survey services or the data obtained during their application can be re-used for purposes of independent study or the fulfillment of current tasks after a certain period. This fact indicates the undesirability of any restrictions on the time students can use such a service as an educational tool, i.e. some Internet resources limit the free usage of their services. The authors have distinguished the following stages of the educational use of survey services:

- Signing up/logging in to an Internet resource;
- Studying resource capabilities;
- Survey creation and its distribution;
- Dealing with the data received.

Each stage was characterized by its own "necessary" and "desirable" functional characteristics of a survey service (Marks and Ermolaeva, 2010); (Andreev and Gerova, 2010). The results are presented in Table 1.

Table-1. Requirements for functional characteristics of an educational survey service

	Signing up/logging in to an Internet resource	Studying resource capabilities	Survey creation	Questionnaire distribution	Data acquisition and their processing
Personal data protection	essential			essential	
Login/password access to an online account	essential				
Technical support provided by the resource itself		preferred	preferred		
Responsive help center		essential	essential		preferred
Compatibility with survey templates			preferred		
Possibility to ask direct and indirect questions			essential		
Possibility to ask Yes/No and alternative questions			essential		
Possibility to ask scalable questions			essential		
Shareable link to a survey				essential	
IP control of survey completion				preferred	
Notification during all the stages of a survey				essential	
Built-in analytical tool: diagrams, graphs, tables, filters					preferred
Print the questionnaire compiled in the service				essential	
Save survey results as an Excel file for later processing					essential

To analyze the efficiency of free survey services and determine their advantages and disadvantages, the authors of the article formed a target group of three students to conduct their own market research of pharmaceutical services.

The students were assigned the following tasks:
- To prepare and compile questionnaires;
- To pass on the questionnaires to the respondents;
- To conduct a survey;
- To process the survey results;
- To report on the work accomplished.
- Each experiment participant chose one of the following survey methods:
- Distribution of paper questionnaires to the respondents;
- Conducting an online survey using the free survey service Testograf (2014-2018);
- Conducting an online survey with the help of the free survey service Anketolog (2010-2018);

The general condition of the experiment was to receive at least forty completed questionnaires from the respondents for the same period of time (thirty days), which made it easier to compare the results. The survey results were processed in Microsoft Excel. In the end of the experiment, the authors of the article conducted a comparative analysis of the quantitative and temporal indices of students' efficiency. The resulting indices are presented in Table 2.

**Table-2.** Resulting indices of students' work

	Surveying the respondents without survey services	Surveying the respondents with the free survey service – testograf.ru	Surveying the respondents with the free survey service – anketolog.ru
Survey development (days)	7	3	3
The real time of collecting data (days)	20	11	12
The time of processing the survey results (days)	9	2	4
The number of filled questionnaires (pieces) for the set period	42	74	50

While comparing the results, the authors have revealed significant reduction in the time needed for obtaining the source data aimed to solve certain educational tasks and processing the information obtained with free survey services as compared with classical methods of data collection. It was noted that online surveys were conducted for a shorter period, but much more answers were received from the respondents.

The undeniable advantage of online market resources is a greater coverage of the respondents, the reduction of time and energy expenditures in the absence of any financial expenses.

However, the analysis of the data obtained has shown that Internet technologies mostly address young people. The distribution of the data obtained from different age groups is demonstrated in Fig.2.

Figure-2. Age-related distribution of the respondents with regard to the chosen survey method
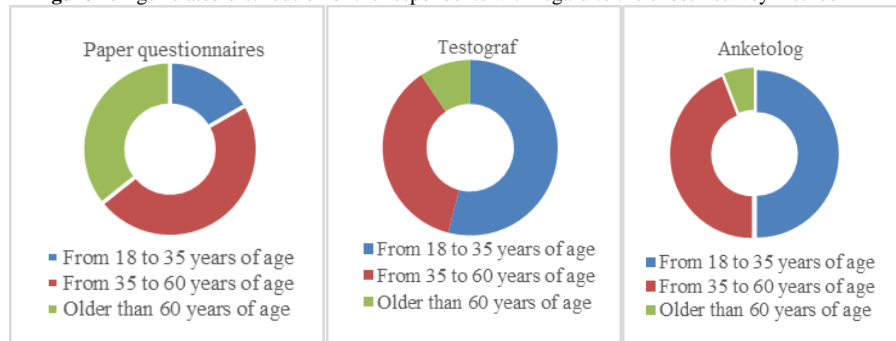
This age shift can be explained by a lower number of senior users among the Internet audience. Therefore, one should conduct additional research to thoroughly study the market.

During educational consultations, the authors of the article decided that the students who used free survey services should conduct an additional survey of older people. The study of survey service possibilities has showed that Testograf allows printing out the prepared questionnaires, which also reduces labor costs. Thus, it is possible to use free survey services as an independent source of obtaining market information and a tool for developing questionnaires used in traditional forms of research.

4. Conclusion

The conducted pedagogical experiment has proved the consistency of Internet technologies as an educational tool. The authors of the article have revealed that despite undeniable advantages of online survey services they also have significant shortcomings, which makes it impossible to completely replace classic methods of collecting market information from this moment on.

The introduction of free survey services into the educational process increases teaching efficiency and develops professional competencies within the existing standards.

Defining functional requirements of the above-mentioned life cycle, teachers can choose the best educational survey service taking into account all the stages students go through while using it.

An extensive use of information technologies is essential to the formation of new teaching materials and the renewal of the existing ones based on the synthesis of the classical theory of marketing and innovations.

References

Andreev, V. V. and Gerova, N. V. (2010). Trebovaniya k informatsionnoi sisteme upravleniya uchebnym protsessom vuza, Requirements for the system of managing the educational processes of higher education institutions. *Programmnye Produkty I Sistemy,* 1: 135-37.

Anketolog (2010-2018). Available: https://anketolog.ru/

Fabrikantova, E. V. and Polyanskaya, E. E. (2017). *Sovremennye informatsionnye tekhnologii v obrazovanii, uchebnoe posobie dlya studentov pedagogicheskikh vuzov, Modern information technologies, Textbook for students of pedagogical universities.* Orenburg: Izd-vo OGPU.

Gushchina, E. G., Sizeneva, L. A., Orlova, N. V. and Likhovidova, E. P. (2015). Problems and Prospects of Internet Marketing in Russia. *Mediterranean Journal of Social Sciences,* 6(5): 322-34.

Kiselev, G. M. and Bochkova, R. V. (2014). *Informatsionnye tekhnologii v pedagogicheskom obrazovanii, Information technologies in pedagogical education.* Dashkov i Ko: Moscow.

Marks, K. N. and Ermolaeva, L. V. (2010). Obshchie trebovaniya, predyavlyaemye k sovremennym informatsionnym sistemam, General requirements for modern informational systems. Sovremennye problemy ekonomicheskogo i socialnogo razvitiya. 6: 237-38.

Milonova, G. V., Kharitonova, I. V., Fomina, S. N. and Dyker, A. F. (2017). Opredelenie znachimykh umenii samostoyatelnoi raboty dlya uspeshnogo obucheniya v vuze, Determining significant skills of self-study necessary for successful education in institutions of higher education. *Integratsiya Obrazovaniya,* 2(87): 218-29.

Panfilova, A. P. (2012). *Innovatsionnye pedagogicheskie tekhnologii, Aktivnoe obuchenie, Uchebnoe posobie dlya stud. Uchrezhdenii vyssh. Prof. Obrazovaniya, Innovative pedagogical technologies, Active learning, Textbook for students of higher vocational colleges.* Akademiya: Moscow.

Sharshov, I. A. and Belova, E. A. (2018). Analiz pedagogicheskikh vozmozhnostei elektronnykh obrazovatelnykh resursov s elementami avtodidaktiki, Analysis of pedagogical possibilities of educational e-resources with components of autodidacticism. *Integratsiya Obrazovaniya,* 1(90): 166-76.

Testograf (2014-2018). Available: https://www.testograf.ru/