

ASSESSMENT OF STUDENTS' KNOWLEDGE DURING DISTANCE LEARNING USING THE GOOGLE FORMS APPLICATION

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Key words:*distance learning, students, Google Forms, medicine, assessment of knowledge*

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The objective of the article – to analyze the effectiveness of assessing the 4th year students' knowledge during distance learning using the Google Forms application.**Material and methods.** Foreign students of Bukovinian State Medical University of the 4th year of education by «Medicine» specialty study «Pediatrics» discipline which includes 12 topics. Here is an example of an option for evaluating students' knowledge acquired during a practical session on topic № 9 «Functional and organic diseases of the gastrointestinal tract in children». For the purpose of assessment, students were asked to solve the Google Form. During the use of this form (2020-2022 years of education), 257 responses were received from students of the 4th year by «Medicine» specialty of the Medical Faculty № 3. The possibility of using Google Forms for objective assessment of students' knowledge during distance learning was analyzed.**Results.** Distance learning is a necessity in the process of acquiring knowledge in the modern world; it leads to the growth of independence and self-development of a young person; it contributes to the growth of competitiveness in the chosen specialty; as a form of education of the future has already become an urgent necessity of the modern academic process.

The Google Forms application is one of the alternative and powerful means of digital technologies for forming a system of tasks for the current control of students' educational activities. The use of Google Forms provides new opportunities for creating dynamic and relevant applications based on information and communication technologies, that can be used in distance learning. The use of forms is relevant when organizing students' independent educational activities, as a monitoring and management system.

Conclusions. Distance education has a positive influence on students: increases their creative and intellectual potential, stimulates their self-organization, expands their knowledge in use of modern information and digital technologies, stimulates the ability to make responsible decisions independently. Google Forms are easy to use and create, provide an individual approach to surveying students, allow to assess knowledge and provide an objective assessment under the conditions of distance learning.**Ключові слова:***дистанційне навчання, студенти, Google Forms, медицина, оцінювання знань.*

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ОЦІНЮВАННЯ ЗНАТЬ СТУДЕНТІВ ПІД ЧАС ДИСТАНЦІЙНОГО НАВЧАННЯ З ВИКОРИСТАННЯМ ДОДАТКУ GOOGLE FORMS*Л. Ю. Хлуновська*

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Мета роботи – проаналізувати ефективність оцінювання знань студентів 4 курсу під час дистанційного навчання за допомогою додатку Google Forms.**Матеріал і методи.** Іноземні студенти Буковинського державного медичного університету 4 курсу спеціальності «Медицина» вивчають дисципліну «Педіатрія», яка включає 12 тем. Наводимо приклад варіанту оцінювання знань студентів, отриманих під час практичного заняття з теми № 9 «Функціональні та органічні захворювання шлунково-кишкового тракту в дітей». З метою оцінювання знань студентам було запропоновано заповнити відповідну Google Form. За час використання цієї форми (2020-2022 роки навчання) отримано 257 відповідей від студентів 4 курсу спеціальності «Медицина» медичного факультету № 3. Була проаналізована можливість використання Google Forms для об'єктивного оцінювання студентів під час дистанційного навчання.**Результати.** Дистанційне навчання є необхідним у процесі здобуття освіти у сучасному світі; воно веде до зростання самостійності та саморозвитку здобувачів вищої освіти; сприяє зростанню конкурентоспроможності особи за обраною спеціальністю та, як форма навчання, вже стала нагальною потребою сучасного освітнього процесу.

Додаток Google Forms є одним з альтернативних і ефективних засобів цифрових технологій для формування системи завдань із метою поточного контролю освітньої діяльності студентів. Використання Google Forms відкриває нові можливості для створення динамічних і актуальних додатків на основі цифрових

технологій, що можуть бути використані в дистанційному навчанні. Використання форм є актуальним при організації самостійної освітньої діяльності студентів, як система контролю та управління.

Висновки. *Дистанційна навчання позитивно впливає на студентів: підвищує їх творчий та інтелектуальний потенціал, стимулює їх самоорганізацію, розширює знання з використання сучасних інформаційних та цифрових технологій, стимулює здатність самостійно приймати відповідальні рішення. Google Forms прості у використанні та створенні, забезпечують індивідуальний підхід до опитування студентів, дозволяють оцінити знання та надати об'єктивну оцінку в умовах дистанційного навчання.*

Introduction

The rapid development of the world society determines the need for highly qualified medical specialists. Bukovinian State Medical University is one of the leading medical institutions of higher education in Ukraine for the training of qualified specialists. In addition, our university occupies a leading position in the education of foreign students.

Training of specialists is impossible without improvement of teaching methods and introduction of new forms of educational activity. The unstoppable rhythm of the modern world, a large volume of information and growing professional requirements need changes in classical educational technologies [1]. Students nowadays have already developed digital skills, which provide great opportunities for effective construction of distance digital education. The relevance of this form of education from the point of view of current domestic and world events is undeniable [2].

The current state of events in the world and in our country, in particular, forces higher education teachers to change and adapt [2, 3]. For the past few years, we have been living in difficult socio-political conditions, but the educational process does not stop. Student education is moving from traditional face-to-face to a mixed and distance format, which is difficult, but not impossible, in medical higher education institutions [1, 4]. The teachers quickly transferred all the necessary materials into a digital format and are trying to reproduce virtually the conditions of a real examination of patients, taking an anamnesis, practicing all possible practical skills remotely.

There are a large number of definitions of distance education, most of which include distance between the teacher and the student at the time of the educational process, the use of the latest educational digital tools for student-teacher communication and the possibility of two-way intercourse [4].

Distance education expands and renews the role of the teacher, makes him a mentor-consultant who must coordinate the cognitive process, constantly improve the courses he teaches, increases creative activity and qualifications in accordance with innovations [1, 4-6].

The main features of distance learning are that teacher and student are separated; more independence and self-discipline are required from the acquirer; teacher must develop and implement a special training program, different from those previously used on the basis of digital learning tools [5]. The advantages of distance learning include ensuring the mobility of students, which is especially relevant when studying foreign students; free access to electronic educational materials

and information resources; use of the latest information technologies in the educational process; it stimulates the student's cognitive activity, creativity, develops self-awareness and independence, etc [5, 6].

At the same time, distance education has a number of disadvantages, including the lack of personal communication with the teacher and real patients, the difficulty of acquiring practical skills, which is especially important for students of medical universities, the difficulty of controlling students' independent performance of tasks, etc [5-7].

The lack of constant supervision by the teacher requires strict self-control, self-organization, and self-discipline from students, which are characteristic of not all students of higher educational establishments [6].

The objective of the article

The article provides an assessment of the Questions of the 4th year students' knowledge during distance learning using the Google Forms application.

Material and methods

Foreign students of Bukovinian State Medical University of the 4th year of education by «Medicine» specialty study «Pediatrics» discipline which includes 12 topics. Here is an example of an option for evaluating students' knowledge acquired during a practical session on topic № 9 «Functional and organic diseases of the gastrointestinal tract in children». For the purpose of assessment, students were asked to solve the Google Form. During the use of this form (2020-2022 years of education), 257 responses were received from students of the 4th year by «Medicine» specialty of the Medical Faculty № 3. The possibility of using Google Forms for objective assessment of students' knowledge during distance learning was analyzed.

The results and their discussion

Distance learning is a necessity in the process of acquiring knowledge in the modern world; it leads to the growth of independence and self-development of a young person; it contributes to the growth of competitiveness in the chosen specialty; as a form of education of the future has already become an urgent necessity of the modern academic process [6-8].

Distance learning is based on information and digital technologies that ensure the delivery of the main volume of educational material from the teacher to the student and feedback from the student to the teacher. All this is carried out on the basis of educational platforms in real time and requires more concentration from the student

and the teacher, because they have little time for the learning process. Therefore, it is considered necessary to conduct an initial control of the knowledge of education seekers in order to identify the student's basic level of knowledge at the educational stage. This is important for the teacher in order to clearly define the method of presentation of educational material [8]. The student needs orientation skills in the information space and the ability to express his opinion.

Google's digital capabilities turned out to be extremely effective under distance learning conditions. In addition to working with Google Meet application for conducting classes in the format of a real time videoconference, the Google Forms application is very convenient, which allows teachers to conduct student surveys in the form of Multiple Choice Questions (MCQ), solving situational tasks, etc. The link to the Google Form can be sent to student's e-mail or directly to Google Meet chat during the videoclass. Students easily receive assignments by following the teacher's link from their personal accounts.

Google Form is a free online service for creating surveys, MCQs and receiving feedback. All information entered by respondents is automatically entered into Google Sheets, and thanks to this function, you can quickly analyze the data with minimal expenditure of time and effort. The application has a simple and concise

design. All answers are automatically saved and sent to the teacher. The teacher, in its turn, has the opportunity to check the answers at any time convenient for him, provided he has access to the Internet.

Topic № 9 Google Form «Functional and organic diseases of the gastrointestinal tract in children» had a combined structure and included 20 tasks, of which 13 were MCQs and 7 situational tasks. All tasks were mandatory for solving. The student was not able to approve and send the Google Form to the teacher without answering all 20 questions. Students were asked to provide one correct answer to MCQs tasks № 1-13 and an extended answer to situational tasks № 14-20.

When evaluating the results of the survey, the student automatically received a maximum of 13 points for correct answers to MCQ questions № 1-13, and the written answers № 14-20 were evaluated personally by the teacher.

It is possible to evaluate both the individual answer of individual respondent and the general ones by comparing the answers of all students who gave answers to the Google Form. The «all answers» tab displays statistical data concerning all given answers during the entire time of using the Google Form: the total number of respondents, the average score, the minimum and maximum number of scored points, the number of respondents with the same number of answers (Fig.1).

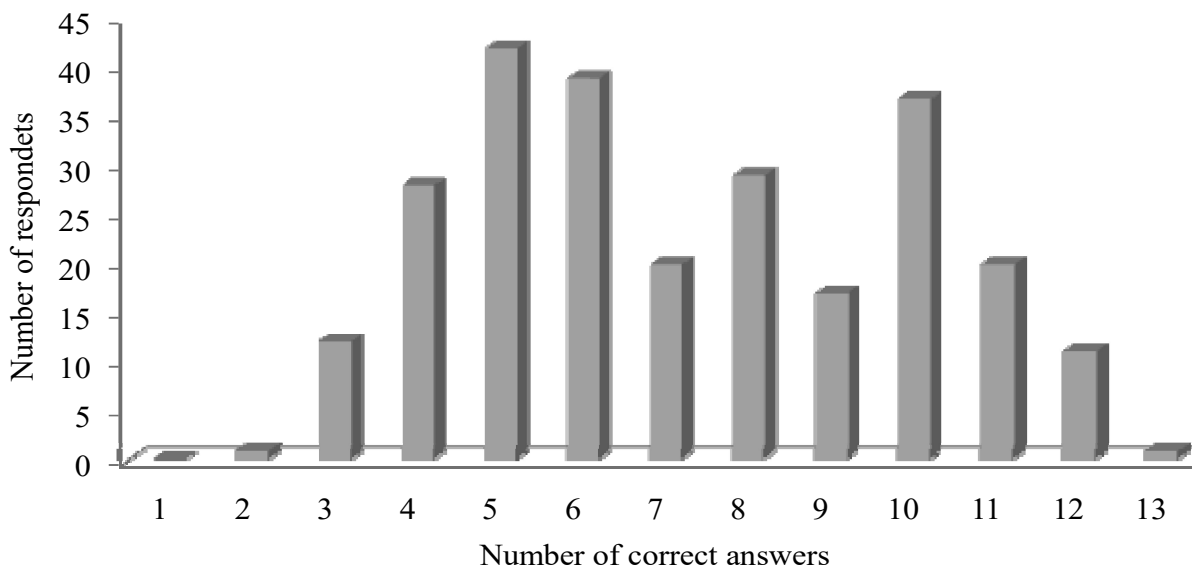


Fig. 1. Statistical data of answers.

In addition, it is possible to evaluate the quality of the proposed questions by analyzing the questions to which the wrong answer was most often given (compare the number of wrong answers with the total number of respondents) (Table 2). It allows the teacher to review the content of the question, its accessibility for understanding, the level of students' necessary knowledge to answer it correctly, the need to pay attention to certain questions during classes, etc.

Next, we can analyze all the options of students' answers in a percentage ratio for each individual question in this task (Fig.2). For example, question № 2 «The preferred noninvasive test to confirm H. pylori eradication is», which 70,4% of students answered correctly (option D). It demonstrates the correct

wording of the question (students understand what is required of them), the availability of this information and the quality of the received knowledge.

In contrast with question № 9 «What is the most important parameter to monitor in a patient with peptic ulcer disease receiving long-term maintenance therapy with a PPI?» correct and incorrect answers were given with almost the same frequency. 45,9% of students have chosen correct option B and 40,9% of respondents answered wrongly (option C) (Fig.3). It certainly demonstrates a lack of clinical thinking and ability to analyze the material in students. It is possible to conclude that it is necessary to pay more attention to the analysis of similar issues on practical classes.

Table 1

Analysis of questions that are often answered incorrectly		
Question	Correct answer (n /%)	Number of respondents
MCQ № 3. What of the following statements characterizes the current status of <i>H. pylori</i> testing and treating the best one?	108 / 42%	257
MCQ № 5. What is the preferred drug treatment for a penicillin-allergic <i>H. pylori</i> -positive 15-year-old boy with epigastric pain?	75 / 29,2%	257
MCQ № 6. What is the most important parameter to monitor to assess ulcer healing in an <i>H. pylori</i> -positive 14-year-old child who has just completed eradication therapy?	82 / 31,9%	257
MCQ № 7. What is the preferred <i>H. pylori</i> eradication regimen for a patient with an active ulcer who is admittedly noncompliant?	105 / 40,9%	257
MCQ № 9. What is the most important parameter to monitor in a patient with peptic ulcer disease receiving long-term maintenance PPI therapy?	118 / 45,9%	257

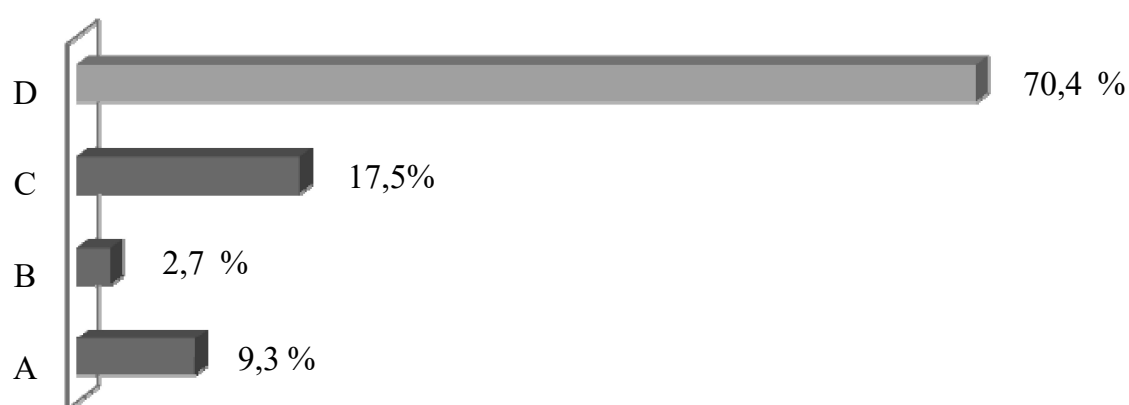


Fig. 2. An example of a student's answer to a Google Form MCQ № 2.

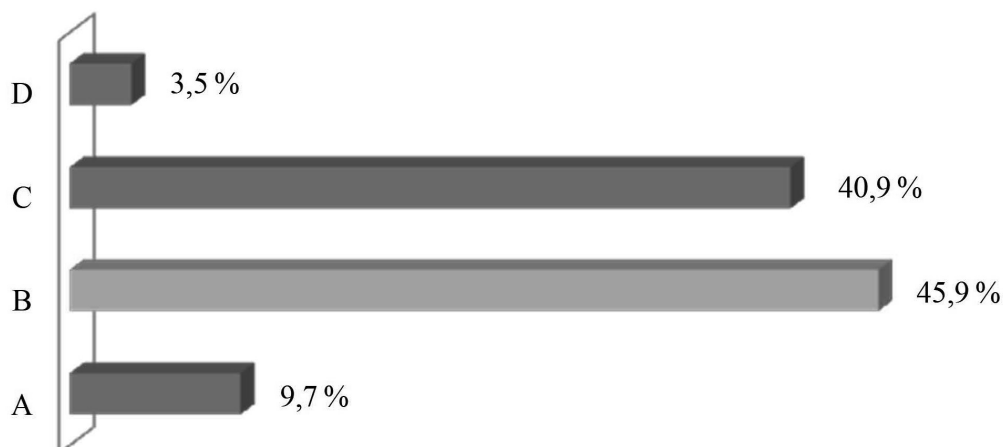


Fig. 3. An example of a student's answer to a Google Form MCQ № 9.

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