

GOOGLE CLASSROOM – AN INNOVATIVE APPROACH TO A MORE EFFICIENT ORGANIZATION OF LEARNING

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Abstract. The article presents a pedagogical study, proving the positive impact of Google Classroom on the learning motivation of secondary school students in a selected school, and the improved communication among the participants in the educational process.

Keywords: Information Communication Technologies; Google Classroom; Education; Innovative school

Introduction

Education is one of the main factors for the formation and development of personality. The dynamic development of society in technical and intellectual terms implies the need for constant update of the educational methodology and content. In current education, concepts such as “innovation” and “innovative school”, usually linked to the introduction of models that are different from the ones used in traditional education, are permanently imposed.

Innovations in Bulgarian schools are defined by the Pre-school and School Education Act, such as: developing and introducing innovative elements in the organization and content of education; improvements in management organization, teaching and the learning environment; inclusion of new teaching methods; developing new curriculum content, curricula and syllabi.

The expectations, related to the establishment of innovative schools are aimed at creating a modern school model, where students should improve their performance and way of thinking through innovative educational processes, teaching methods, school leadership and syllabi. Developments in this direction are unthinkable without taking into account the role of “information and communication technologies in education”. The development of information technologies allows to integrate new innovative approaches into the modern learning environment.

In many publications, it is commented on:

– The role of e-learning resources (Dori & Barak, 2001; Staribratov & Angelova, 2011) and the use of dynamic and interactive electronic models for the presentation of learning content (Stoitsov & Gurov, 2013);

- Application of cloud technologies in education (Charkova & Shotlekov, 2013; Zheleva, 2018);
- The importance of multimedia learning (Chipangura & Aldridge, 2017);
- The positive influence of computer and mobile devices on student motivation (Stavros & Anastasios, 2016; Stoitsov & Stoitsova, 2019);
- The use of specialized electronic systems (Stoitsov & Stoitsova, 2017) and simulation software (Stoitsov & Aneva, 2014; Stoitsov & Shotlekov, 2015; Stoitsov, 2016; Stoitsov, 2017).

A step in this direction is the use Google Classroom from the package G Suite for Education. The research conducted on this innovative approach is of pedagogical interest in establishing its effectiveness in student learning, their success rate and motivation. The set goals include testing the readiness and motivation of students and teachers to implement Google Classroom as a learning aid, as well as its role for better learning.

Working hypothesis

Teaching with Google Classroom in a selected school increases student motivation and improves communication between the participants.

Research Methodology

In the course of two school years (2017/2018), a pedagogical study was carried out with a representative sample of 29 teachers and 117 students altogether from the 6th-11th grade of the “Hristo Botev” secondary school in the village of Chepintsi, Bulgaria, in order to check the working hypothesis. Conducting activities include: school registration in Google Gmail for Education; registration of teachers and students; training of the participants; practical use of the system; conducting a survey of the participants in the experiment; results analysis; analytical and graphical dependencies; conclusions.

Students learn how to use Google Classroom in IT classes and in their free time. Teacher training is conducted in the form of in-school training, including preparation of courses, course topics, assignments, questionnaires, surveys and tests.

Observation is one of the used empirical research methods. It is applied to students and teachers in order to track their motivation and activity, student achievement, adaptation, and the use of Google Classroom in the work of the teachers.

The analysis of the results includes:

- Quality assessment from the observations on the motivation and activity (communication) of the participants;
- Automatic compiling of tables and charts from the statistics section of Google Classroom, based on the results of the conducted surveys.

Survey results

The results from the direct observations indicate that teachers are active and motivated to use the proposed innovation. They responsibly participate in the training course,

and are highly motivated to introduce technology into their work. Evidence of this is both the results of the survey and their activity in the system.

Students are also active and motivated. They use the system for learning, materials, tests for self-control, its ability to communicate with teachers and classmates.

Quality analysis of the survey with teachers

The results show that most of the teachers did not use cloud technologies in their work prior to the training course on the subject. The course has helped clarify the role of this technology and increase their motivation to use it in their work. They approve the possibility to spread teaching materials. Google Forms is a desirable tool for getting feedback from students. Everyone appreciates communication through Google Classroom as convenient for discussing methodological questions and sharing resources. Teachers appreciate the efficiency of classroom management through this technology. Most of them intend to use the innovation, both for teaching and for testing.

Some of the teachers' questions and the results obtained are presented in Figure 1, Figure 2 and Figure 3.

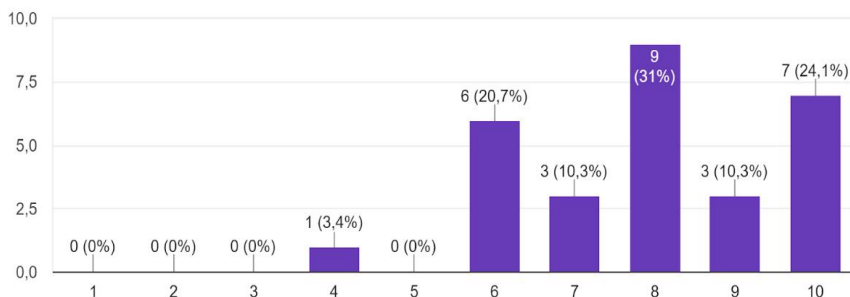


Figure 1. How do you evaluate the effectiveness of classroom management (communication with students and parents) through Google Classroom? – 29 replies

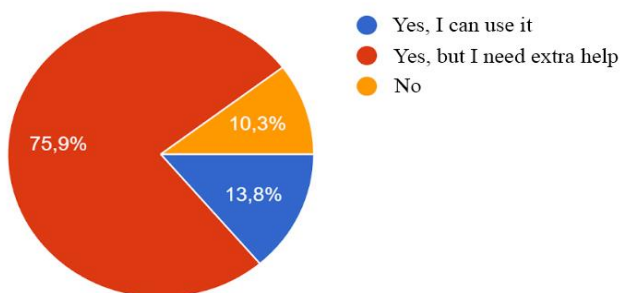


Figure 2. Do you intend to use Google Classroom for teaching? – 29 replies

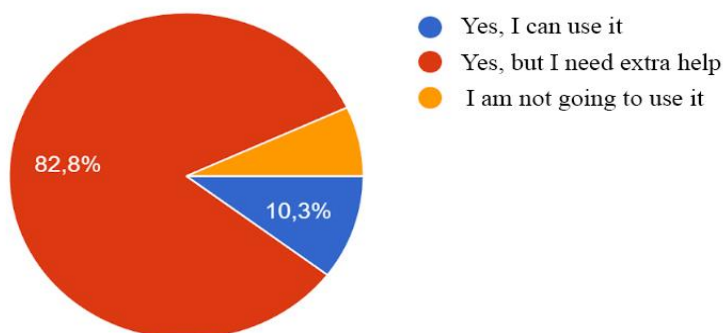


Figure 3. Do you intend to use Google Classroom for testing? – 29 replies

Quality analysis of the survey with students

The obtained results show that for most students the system is not difficult to use. They want to use it both for studying and for testing. About a quarter of them find the subject matter essential. The availability of electronic materials makes teaching easier for nearly all students. For most of them, Google Classroom forms a positive attitude towards the learning process. The role of communication with teachers and classmates is essential. A large number of students want to be able to check the knowledge they have acquired after their own preparation. About 15% of them prefer to use the system only for learning, but not for testing. Students can use a computer and a mobile device – a smartphone as a technical tool.

The answers that are not in favour of the working hypothesis are few and most of them are dictated by the lack of enough experience with Google Classroom, which is the reason for its further and more effective use.

Some of the students' questions and the results obtained are presented in Figure 4, Figure 5 and Figure 6.

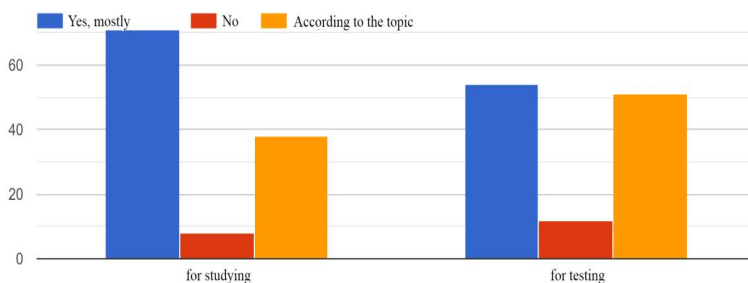


Figure 4. Do you want to use such a practice for studying and testing?

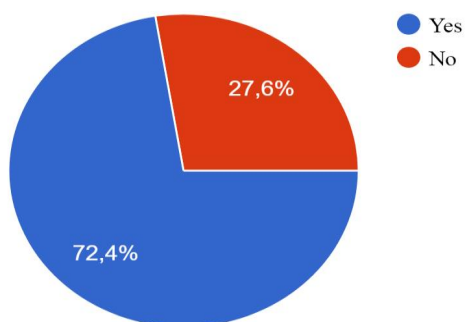


Figure 5. Do you use the system for contacting teachers and classmates in the learning process? – 116 replies

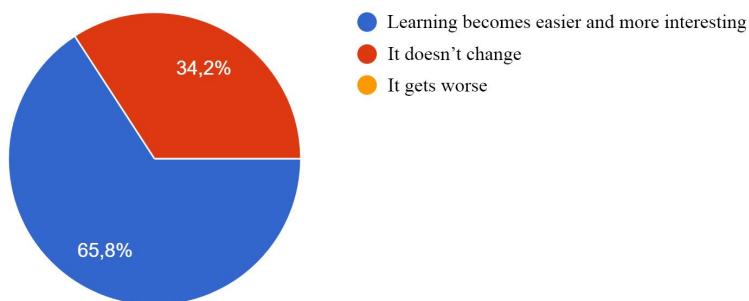


Figure 6. Does the use of Google Classroom change your attitude to learning? – 117 replies

Conclusions from the study

The obtained results confirm that the goals of the experimental study are achieved:

1. Students and teachers are convinced that introducing Google Classroom as an aid to learning is helpful;
2. Teachers do not have any particular difficulty working with this cloud technology after their training course;
3. Students are more interested in using the technology and are ready to be trained and tested through it;
4. This type of training helps to improve the learning of the subject matter in different subjects.

From the obtained results it can be concluded that the working hypothesis is correct.

Conclusion

In every era of the development of society, the question arises about the way of organizing the educational institutions and the efficiency of the educational process as their main activity. The effectiveness of the electronic form of study was examined in the training of students from 6th to 11th grade of the “Hristo Botev” secondary school in the village of Chepintsi, Bulgaria, through the successfully introduced for future use of G Suite For Education Google Classroom. This innovation has been implemented in several stages:

- School registration in G Suite;
- Teacher training, including introduction to cloud technology and Google Classroom application;
- Development of methodological units by teachers - topic, lesson with materials for teaching and testing (surveys and tests with automatic and combined evaluation);
- Creating surveys for teachers and students about the continuity of the method and its effectiveness.

The results of the performed practical research work confirm the assumption that Google Classroom training at the chosen school enhances student motivation and improves communication between the participants.

This gives us reason to conclude that modern school can successfully use an electronic form of training that:

- Provides an environment that allows presentation of the subject matter through various multimedia forms, ease of updating, easy integration of electronic materials into learning;
- Allows timely diagnosis, analysis and correction of gaps;
- Reduces the time and place limitations of the learning process. The school is not associated with the building, it is an abstraction of the environment in which the process is carried out.

The essence of this innovation is a new way of management – refreshing school education through: developing and implementing new educational ideas, learning and management technologies; modernization and improvement of the educational process; development and expansion of school activities. The goal is to find a new technological solution to problems and tasks through a certain novelty.

Like any alternative form, this one has its advantages and disadvantages. It is advisable to use and combine it with other forms of teaching so as to be as convenient as possible for the particular school organization.

The level of protection of personal data, as well as the reliability of the Google system and the free service, are also in favour of the realization of this innovation.

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