

AN INNOVATIVE SCHOOL FOR SUCCESSFUL AND HAPPY CHILDREN

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“P.R. Slaveykov” Primary School

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Abstract. This article delves into the paradigm of successful and innovative education through the lens of technology adoption in Bulgarian schools, specifically exemplified by the “P.R. Slaveykov” Primary School in Veliko Tarnovo. In response to the evolving needs of modern learners and the dynamic challenges faced by educators, this study investigates the integration of G Suite for Education – an ensemble of Google applications – into pedagogical practices. Positioned as an “innovative school for successful and happy children,” the model's practical orientation transforms learning through technology-enabled innovations. This study chronicles the positive outcomes of this approach, including accelerated understanding of innovations, heightened student interest in learning activities, and an amplified teacher motivation.

Keywords: school innovation; educational technology; teacher motivation; modern pedagogy; practical learning; digital competences

Being a teacher today requires a lot of responsibility and passion, because of the many challenges that the modern school has to face and because of the many commitments, including bureaucratic ones, that have to be fulfilled. For example students who attend school today have different needs than those who attended the educational institution only a decade ago. The traditional learning process gives way to the innovative one, where not only the acquisition of knowledge and skills are important, but also the formation of full-fledged personalities. In response to all these challenges and to help educators, G Suite for Education appears today. These are a series of teaching applications created by Google that interact with each other and allow the optimization of teachers' time. The article explores the question of how to teach and learn successfully by introducing innovations in schools in Bulgaria such as G Suite for Education. This is a matter of particular importance because of the times in which we live.

In the school's development strategy from 2020 to 2024, "Using Google for education, the electronic diary and other resources for organizing learning activities related to developing digital competences" is set as a sub-goal to priority goal 2. "Developing the key competences of students as a condition for expanding their horizons and their orientation in the modern world".

The results after the introduction of the model are encouraging. The understanding of innovations has accelerated, the interest of students in the learning activity has increased, and the motivation for work has also increased among teachers.

The world will long remember the challenges we faced due to the outbreak of the COVID-19 pandemic. A school located in the city of Veliko Tarnovo – "P.R. Slaveykov" Primary School, or as the team calls it – "innovative school for successful and happy children", shows a practically oriented model for learning through innovations developed and implemented in practice. The example represents how teaching in primary education can be aligned with learning innovations through experiential learning and real-life projects. "Petko R. Slaveykov" Primary School in Veliko Tarnovo is included in the List of Innovative Schools in Bulgaria for the 2021/2022 academic year. The approved innovation "Together in Google for Education – Digitization of School Life" focuses on digital sciences, personal development and project-based learning.

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The main research question of our study concerns the development and implementation of a practice-oriented model for teaching and learning through innovation that can be used both in distance learning and face-to-face throughout the year in school and extracurricular time. One of the authors of this article participated in the process of building and implementing the model. Good empirical methods to answer our research questions are based on qualitative data and analysis that allow for longitudinal description and interpretation of the action and events that occurred. The research strategy of the study is therefore based on a combination of an intensive case study and action research approach. The model that is the subject of research here is in line with the principles and goals of national and European educational priorities.

Background

Innovations are “products or processes that are new and applicable to a particular individual, group or organization and that are useful to the same or a different individual, group or organization” (Messmann&Mulder 201, p. 66). In this line of thought, in order to be useful, in February 2020, the staff of “Petko R. Slaveykov” Elementary School implemented the Google G Suite cloud platform, which is widely used in the digitization of school life. Profiles were created for the teaching and non-teaching staff, as well as for the students of the school, already in the fall of 2019. These are events that precede the outbreak of the COVID-19 pandemic, and the reasons are many: access to school documents anywhere and anytime, free and secure use, a rich set of applications, easy and effective teamwork in real time, the possibility of electronic document signing, e-learning content by and for teachers and students that is accessible to all, sharing good practices and e-resources in electronic and physical environments through the tools that Google offers.

The model in practice

The actual development of the practice-oriented model is a gradual process that begins at the beginning of the 2019/2020 academic year. Initially, trainings were made for educators, which included a practical part dedicated to the use of the most popular applications in the G suite for education: “despite all the difficulties that users may experience, its tools are very well received by both students and teachers and as seen in most published research, they seem to produce very good results in terms of supporting and improving learning and teaching” (Constantinou 2018, p. 315). The non-teaching staff is also trained. Classrooms have been created for all classes, as well as for subjects in junior high school. There is even a working office of the pedagogic advisor, in which children perform group and individual tasks, share and exchange ideas.

Innovation actually includes the following elements of school life: innovative elements in terms of the organization and content of learning; organizing in a new or improved way the management, training and educational environment; using new, more effective teaching methods, developing learning content in a new interactive way.

The chosen innovative model has its advantages. In 2020 and 2021, it facilitates hybrid learning – some students are present in real classrooms, and others, for various reasons, learn synchronously through a video link in Meet and asynchronously through assignments and materials in Google Classroom. In synchronous, students can: ask questions, discuss, watch demonstrations on a shared screen, play sports and create together in real time. In asynchronous, they perform tasks on their own using the various applications that the platform provides.

Teachers and students regularly attend Google Classroom, regardless of whether they are studying in person or not. This facilitates communication during

holidays and free time outside of class hours. That is why “Google Classroom is considered one of the best platforms for improving teachers' work processes” (Iftakhar 2016, p.12).

All educational specialists from the school are involved in the innovative process. They have acquired competencies in working with Google Classroom, Meet, Jamboard, Google Drive, Google Forms, Google Sites, using various applications and add-ons, shared documents, spreadsheets, and presentations. For internal school communication, they use their official email, a shared drive, Meet, and others. They will continue to improve their skills in utilizing the features offered by the platform.

The selected model is comprehensive and aims to meet the needs of all participants in the educational process. At the very beginning of the innovation, educators develop a publicly accessible Google Calendar that includes significant school events and initiatives. It is placed on the school website, allowing all stakeholders to participate and learn about upcoming events within the academic year. Additionally, each virtual classroom has a Google Calendar that automatically reminds students of upcoming assignment submissions.

An essential element of the educational innovation is the creation of shared drives with resources for the needs of the learning process. These drives provide access to educators for sharing materials they have created, fostering experience exchange and effective holistic education. They also contain educational resources for students, including materials created by and for them, as well as administrative documents accessible to all users of the school's cloud storage.

The Google Drive application offers the following advantages: unlimited storage space for information, individual drives for each user, shared drives for all members of the school community, file upload, download, creation, and collaboration, integration with calendars, tasks, and notes, and user activity tracking.

A specific aspect of the work at “P.R. Slaveykov” School is the implementation of a differentiated personalized approach. A separate shared drive has been created for the teams supporting the personality development of students with special educational needs, with access restricted only to the educational specialists working with them. This drive stores documents related not only to the direct work of educators but also to the development of these students. The information in the drive is largely confidential, necessitating limited access only to relevant parties.

In 2021, continuous training was conducted for educational specialists on new functionalities of Google Workspace for Education. In-person training sessions were also held for parents with the aim of supervising and assisting their children in working in a digital environment, ensuring their safety online, promoting healthy use of digital devices, and encouraging ethical behavior on the internet.

The resources and tools provided by Google find wide application in the digitization of school life. Unlimited storage space for documents and educational

resources is offered. Protection of information and personal data is ensured. Users have access to all their personal and shared resources from any device, wherever and whenever. The applications serve as an inexhaustible source of possibilities for creating and processing interactive educational materials, thereby enhancing motivation for learning.

A significant advantage is the translation of the applications into Bulgarian, making them accessible and easy to use for even the youngest students.

The innovative model serves as a framework for creating a comprehensive school approach that combines the use of high technologies with the integration of projects on various topics such as ecological thinking, social-emotional learning, effective parent involvement, and more.

Of course, measuring the success of the innovation is important, which is why indicators for measuring achievements have been introduced. These indicators include student participation, awards, and performances following the implementation of the innovation, comparison with the previous academic year or other benchmarks. They also involve the creation and functioning of professional teams comprising both pedagogical and non-pedagogical specialists with different expertise and previous experience, including external individuals and organizations. Furthermore, the presence of a developed and functioning school system or components for self-evaluation of innovative activities, the number of trained pedagogical and non-pedagogical specialists from the school involved in implementing the innovative process (before and during the innovation process) are also considered.

The initiators of the innovation have created two main tools for assessing the progress and attitudes of teachers and students – a self-assessment card for educators and a questionnaire card for students. Both tools are practically applied at the end of each academic year, and the aggregated results provide an objective overview and serve as indicators of the achievements of the innovative process.

The self-assessment card for teachers consists of nine questions aimed at evaluating their direct work and their participation in the innovation. The number of materials uploaded to the shared drive varies from one to 357 within one academic year. The level of satisfaction for participation, on a scale from 1 (lowest) to 6 (highest), is distributed in percentage as follows: 45.5% of teachers indicated the highest level of satisfaction, i.e., 6; correspondingly, 24.2% indicated 5, 24.2% indicated 4, 3% rated 3, and 3% rated 2.

The student questionnaire also consists of nine questions. Its content is focused on involving students in the innovative process and their satisfaction with it. Regarding the question, “How many training sessions on Google for Education have you participated in during the past academic year 2021/2022?”, the percentages are distributed as follows: 43.3% participated in one training session, 15.5% participated in two, 6.2% participated in three, 1% participated in four, 5.2% participated in five,

22.7% participated in six, and 6.2% participated in more than six. This is because students can adapt to different paces of work and have individual needs.

Of particular interest is the percentage distribution in response to the question, “Did you learn interesting and useful new things through the Google for Education applications?” Please refer to Figure 1 for the responses.

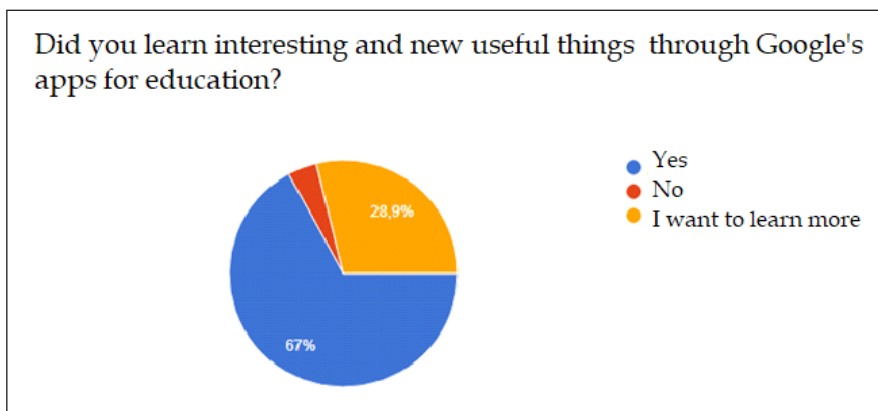


Figure 1

67% have learned new and useful things, while 28.9% have a desire to learn more. Only 4.1% of students responded “No,” which is a good indicator of the students' attitude towards the innovation.

The development of the innovative educational model requires continuous analysis of teaching activities and results, reflection on curriculum development, and feedback from teachers, parents, and students. As a result of all this work, the practice-oriented activities implemented at “P.R. Slaveykov” School are based on the following principles:

Innovators as key factors – innovations in teaching and learning are aimed at initiating intensive collaboration between students and teachers. During the training, these participants become innovators who are interested in using knowledge and skills to address practical problems and provide new solutions.

Collaboration without limitations – teaching innovation occurs through the expert experience of multiple participants (teachers, instructors, principals) in various creative ways. Opening up the innovation process in the classroom emphasizes the value of diversity in people and ideas, different perspectives, and creativity.

In addition to everything mentioned so far, there are opportunities for expanding innovation and multiplying acquired experience, namely through the implementation of the “One-to-One” model, team organization of activities, and communication through applications such as Chat, Spaces, Tasks, and Keep,

presenting the innovation to other schools through the “Innovations in Action” national program and various educational forums.

The study presented in this article employs a mixed-methods approach to comprehensively investigate the implementation and impact of the innovative model at “P.R. Slaveykov” Primary School. This research design incorporates both qualitative and quantitative elements to capture the multifaceted nature of educational innovation and its outcomes.

Qualitative methods were employed to capture the nuanced experiences, perceptions, and insights of various stakeholders involved in the innovative educational process. Semi-structured interviews were conducted with educators, students, and administrators to gather rich qualitative data. These interviews explored participants' perspectives on the adoption of technology, changes in teaching practices, and observed impacts on learning outcomes. The collected data underwent thematic analysis to identify recurring patterns, themes, and narratives.

Quantitative data was gathered through structured surveys administered to both teachers and students. These surveys included Likert-scale questions aimed at measuring satisfaction, engagement, and perceptions of the innovative model. Additionally, the survey responses were used to quantify the extent of participation in training sessions, adoption of tools, and perceived benefits. The quantitative data was analyzed using descriptive statistics to provide an overview of the overall trends and patterns.

The research design adopted characteristics of a longitudinal case study and action research approach. By examining the implementation and outcomes of the innovative model over a span of academic years, the study captures the evolution of practices and their sustained impacts. Action research principles were integrated, allowing for iterative adjustments to the implementation strategy based on ongoing observations and feedback from stakeholders.

Ethical considerations were paramount throughout the research process. Informed consent was obtained from all participants involved in interviews and surveys. Participant anonymity and confidentiality were ensured during data collection, analysis, and reporting. The study adhered to ethical guidelines and protocols set forth by relevant academic and institutional bodies.

The triangulation of qualitative and quantitative data, coupled with the longitudinal and action research design, provides a comprehensive understanding of the innovative model's dynamics and its effects on various dimensions of education. The incorporation of mixed methods enhances the credibility and validity of the study's findings, offering a holistic view of the transformative journey undertaken by “P.R. Slaveykov” Primary School.

New Ideas and Future Directions:

The innovative model implemented at “P.R. Slaveykov” Primary School not only presents a successful case study but also opens avenues for new ideas and

areas of exploration within the realm of educational innovation. Building upon the foundation laid by this model, several key directions emerge for further research and implementation.

1. Personalized Learning Pathways:

While the current model integrates technology to accommodate various learning styles and paces, future endeavors could delve deeper into creating truly personalized learning pathways. By leveraging data analytics and artificial intelligence, educational systems could adapt in real time to individual student needs, offering tailored content and pacing.

2. Assessment and Learning Analytics:

Expanding the scope of innovation to encompass advanced assessment methodologies and learning analytics could provide educators with valuable insights into student progress and areas of improvement. Incorporating data-driven feedback loops can inform both teaching strategies and curriculum design, fostering continuous enhancement.

3. Collaborative Virtual Learning Environments:

With the increasing prevalence of remote and hybrid learning, exploring innovative virtual environments that promote collaboration and engagement among students becomes imperative. Incorporating virtual reality (VR) or augmented reality (AR) tools could offer immersive experiences, transcending physical limitations.

4. Integration of Soft Skills and Social-Emotional Learning:

While technological tools facilitate cognitive growth, future innovations could emphasize the integration of soft skills and social-emotional learning into the curriculum. Nurturing empathy, communication, and resilience is essential for developing well-rounded individuals prepared for a complex world.

5. Global Collaborations and Cross-Cultural Exchanges:

Technology enables schools to transcend geographic boundaries and connect with peers globally. Collaborative projects, cross-cultural exchanges, and joint learning initiatives could instill cultural awareness and a global perspective in students, preparing them to be global citizens.

6. Lifelong Learning and Adult Education:

Extending the innovative model's principles to lifelong learning and adult education could address the evolving needs of individuals beyond traditional schooling. Developing user-friendly platforms and tools for diverse learners can facilitate continuous skill development throughout life.

These proposed directions offer just a glimpse of the potential for ongoing innovation in education. As technology continues to evolve and societal needs change, educators and researchers have an exciting opportunity to shape the future of learning through creative exploration and strategic implementation.

By embracing these new ideas and continuously pushing the boundaries of educational innovation, schools can remain dynamic, relevant, and effective in preparing students for the challenges and opportunities of an ever-changing world. "P.R. Slaveykov" Primary School's journey serves as an inspiring starting point, urging us to embrace the spirit of inquiry and discovery in the pursuit of educational excellence.

Conclusion

Maintaining a favorable and innovative school environment is crucial for facilitating and promoting educational innovation. What has been achieved through the use of Google Workspace at "P.R. Slaveykov" School is to improve the ability of teachers and students to use technology wisely, especially in the learning process, environmental care, overcoming distances, saving time, increasing collaboration among students, parents, and teachers, continuous communication, and secure document storage.

In conclusion, the case study of "P.R. Slaveykov" Primary School in Veliko Tarnovo presents a compelling example of how innovative educational models, particularly those harnessed through Google Workspace for Education, can revolutionize the learning experience. The successful integration of technology into pedagogical practices demonstrates a transformative shift in education, not only in Bulgaria but also on a global scale.

The adoption of the "One-to-One" model, facilitated by Google Workspace tools like Google Classroom, Meet, and Drive, highlights the adaptability of educational practices to diverse learning styles and paces. The implementation of this model during the challenging times of the COVID-19 pandemic underscores the resilience of modern education and the potential for technology to bridge physical distances and maintain robust learning ecosystems.

The multifaceted benefits derived from the innovative approach extend beyond the classroom. The collaborative nature of these tools encourages interaction between teachers, students, and parents, fostering a holistic educational environment. Moreover, the engagement of educational specialists in continuous training underscores the commitment of educators to enhancing their skills and, consequently, the quality of education they provide.

While the immediate outcomes of the implemented innovation are promising – reflected in enhanced student engagement, increased motivation among teachers, and the creation of comprehensive resources – sustaining this momentum requires ongoing evaluation and adaptation. By continually assessing the impact of the innovative model through tools like self-assessment cards and student questionnaires, "P.R. Slaveykov" Primary School demonstrates its dedication to refining the learning experience based on real-time feedback.

As education continues to evolve, it is imperative for institutions to embrace innovation and technology as catalysts for positive change. The success of “P.R. Slaveykov” Primary School serves as an inspiration for educators, administrators, and policymakers to explore creative approaches that enhance learning outcomes, encourage collaboration, and prepare students for the dynamic challenges of the future.

In the ever-evolving landscape of education, the pioneering spirit exhibited by “P.R. Slaveykov” Primary School exemplifies the transformative power of innovation. The article underscores the pivotal role of technology in shaping modern education, and the documented journey of this school provides a roadmap for other institutions to embark on their own transformative endeavors.

By fostering a culture of innovation and adaptability, schools can empower students not only with knowledge and skills but also with the resilience and creativity required to navigate an ever-changing world. “P.R. Slaveykov” Primary School stands as a testament to the potential of innovative models to nurture successful and happy learners, and its story encourages all stakeholders in education to embark on a journey of exploration, adaptation, and growth.

As educators and researchers, the authors of this article are committed to contributing to the ongoing discourse surrounding educational innovation and its far-reaching impact. Their work exemplifies the spirit of continuous improvement and dedication to enhancing the educational landscape for the betterment of students and society at large.

In closing, the experiences and outcomes shared by “P.R. Slaveykov” Primary School inspire us to embrace innovation not as an abstract concept but as a tangible tool that can shape the present and future of education. By integrating technology thoughtfully and purposefully, schools can transcend traditional boundaries and empower learners to thrive in a rapidly changing world.

In the future, schools will face even more challenges and requirements to which the school community will have to respond. The best and most effective schools reflect their practices and constantly improve their ways of working, as is the case with us. We believe that the innovative digital model offers effective solutions and tools for schools, supports inclusive education and its underlying principles, and provides opportunities for researchers to participate in this transformative process.

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