

# GoDigital - Integrating mobile learning and upgrading teachers' digital skills: A tool kit for effective in primary school

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Intellectual Output 1: The Digital Competence Framework for primary schools

**NATIONAL REPORT - BULGARIA**

P2 – PDE Crete



## 1. NATIONAL REPORT – BULGARIA

### Bulgaria

#### 1. THE BULGARIAN NATIONAL POLICY FOR DIGITAL SCHOOL AND DIGITAL EDUCATIONAL CONTENT

##### *1.1. First attempts*

Different types of strategies and projects for implementation of ICT in education have been developed during the past decade. The aims of these strategies are harmonized with ones raised by EU. The modernisation of the education system and the improvement of its quality are intended to enhance students' digital literacy. A major obstacle for implementing ICT in education have been the lack of facilities, but since the start of Strategy 2014-2020, big numbers of schools are funded and equipped with new computers and other interactive technologies. A huge number of schools have set up their own website, National Educational Gateway/Portal was created (in 2006) and has been distributed to many teachers and students since then. Measures are also being taken for encouraging the publication of electronic materials and books and for the implementation of innovative educational methodologies using the ICT.

##### *1.2. National policy for digital school*

The main objectives in IT education are formulated in several government documents. They evolve and change according to the requirements of contemporary information society development. The rapid progress of the technologies and business requires students to obtain the necessary knowledge and develop variety of digital skills in school. The objectives are directly related to giving the basis of future successful professional realization in the spirit of new technologies and developing skills for continuous renewal and self-learning.

The present Strategy for Effective Implementation of Information and Communication Technologies in Education and Science of Bulgaria (2014-2020) has three pillars – ICT infrastructure, digital content and ICT training of teachers.

The aims of the Strategy is to be:

For teachers

- a means of supporting current pedagogical approaches for teaching, learning, and exchanging good practices with colleagues, as well as creating new practices using ICT. Important aspect is giving better opportunities for professional development and qualifications perspectives and the establishment and the exchange of good practices within the ICT.

For students

- a useful tool for learning, introducing holistic approach to developing skills, critical thinking and creativity, together with encouragement of learning of foreign language and the work in international groups and projects using the means of ICT.

For the entire school community (students and teachers)

- a tool for implementing the use of ICT in the educational process and so to develop, both in teachers and students the digital skills required by the modern world and economy. What is more, creating good communication between the members and creating environment for exchanging good practices are expected.

As a whole the strategy is designed to prepare students and teachers for tackling national and global challenges in a society with dynamic technological progress.

The specific objectives of the digital strategy for schools are:

- An establishment of modern educational environment (improving the quality of the technologies in all schools – provide them with new computers and other interactive technologies, and supplement where there are no such material base; in particular, improving the national educational gateway, improvement of learning resources and database, establishment of Cloud ICT infrastructure;
- Improving and encouraging foreign language learning, so that in perspective/future students could communicate and work in groups with foreign students using the means of ICT;
- An advantage to be taken of the good practices and the opportunities given by the digital educational environment
- An adequate infrastructure to be built, that is efficient and modern, which will support the implementation of ICT in education system, and face the rapid change/innovation of the modern technologies.

## 2. CURRENT MODEL OF INTEGRATION AND USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN PRIMARY SCHOOL

The integration of ICT into the learning process makes it interesting, creative and multilateral. The tendency for teachers to use ICT in their work seems to be increasing. They use technical tools and appliances and e learning resources.

ICT is implemented in two manners: ICT as elective subject and the use of ICT to support other school subjects. The schools that have necessary infrastructure offer the ICT subject in the primary school level curricula. This course is attractive for the pupils and motivates parents to choose the school. The Ministry of Education, Youth and Science (MEYS) in Bulgaria proposes syllabi for the elective ICT subject for grades 1-4. The teachers can use these syllabi as a ground for the development of the study year schedule. The syllabi are directed to mastering key digital skills that are applicable in the educational process. Key topics are: “Computer system”, “Information and information activities”, “e-Communication”, and “Information culture”.

### 3. OBJECTIVES IN INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN PRIMARY EDUCATION

#### The OBJECTIVES OF INFORMATION TECHNOLOGY TRAINING IN THE CLASS

In IT training on a practical basis, the following goals are achieved:

1. Create initial ideas for basic information
  1. activities and their purpose.
  2. To master skills in working with a computer system.
  3. Promote a positive attitude and a desire to work with the computer.
  4. Use basic computer capabilities to run on accessible learning tasks.
2. Know and observe basic health and ethics rules when working in computer room.

During the first year of ICT education the focus is on the “Computer system” and “Information and information activities”. The pupils obtain basic knowledge about the computer system, information, skills for the use of the keyboard and mouse, and software for drawing and writing of simple texts. In the second year, the basic topics from the first year are extended and the new topic “Information culture” is added. The main purpose of the ICT subject is to provide the necessary circumstance for the implementation of ICT in other subjects. The syllabus for the third grade is extended with the e-Communication topics with respect to searching information relevant to the topics of other school subjects in Internet. The main focus of the syllabus for the fourth grade is a combination of different types of information – images, text, audio, video, animations. The pupils may express their opinion and attitude towards different topics from the school subject and from the daily life through learned ICT. Usually the subject is taught one hour per week, but in some schools the hours can be extend to two hours per week The use of ICT as a tool to support educational activities in primary schools depends on the availability of hardware and educational software at the school. Also teacher qualification, initiatives and abilities are key factors for the successful implementation of ICT in primary schools. The school subject ICT is compulsory for the students from 5th to 10th grade. The school syllabi are directed to mastering key digital skills and competences and the implementation of acquired skills in studying other school subjects. Pupils study ICT one hour per week.

#### 4. PRESENTATION OF THE CURRENT SCENE IN EVERY COUNTRY

The majority of Bulgarian teachers (55% of the respondents in a survey from 2014) have used ICT resources in teaching particular subjects, which shows that they use ICT as a tool to support educational process. At the same time, a considerable part of the teachers (18%) have information about ICT resources, but still do not use them in their work. The most frequently teachers use ICT for the preparation of their lessons and when they search for additional resources. This indicates that teachers attempt to present interesting and up-to-date information to the students. In addition considerable part of the teachers use ICTs both in classroom work and for exercises. Not so many teachers believe that ICT are useful in preparing examinations and they prefer to use ICT in making projects and presentations. On the contrary, few of the teachers use technology tools and resources in their extracurricular work, although in it they have more freedom in choosing their methodologies.

The ICT products used in various learning contexts can be specified in 3 main groups:

- ICT-based technical tools: computers, multimedia devices and interactive whiteboards;
- e-learning resources: National Educational Portal, e-books, tutorials, presentations, computer-based tests and tasks;
- software: Microsoft Paint, PowerPoint, Word and Learning management system (Moodle).

At this stage, very few of the teachers use ICT-based examination and testing. This trend might be determined by the insufficient number of computers in schools, learning subjects' specifics or lack of competences in computer assessment and testing.

##### *4.1 Institutional support*

Important factor for successful implementation of ICT in educational process is the government support. Together with this support ( which comes in different forms such as funding for purchasing technological tools, organizing training courses, providing internet connection; creating e-learning resources, etc), the teacher's willingness and enthusiasm to enhance their knowledge and teaching methods is vital. Although there is institutional support, there are teachers who did not take advantage of this. This can be explained with the fact that they do not have enough information or the procedure is too complicated. The awareness of this issue should be raised. The motivation of teachers has relevant value to implementing ICT in school, as some of them see this as additional effort for them. However, the majority are fond of the possibilities technologies give to them and how ICT allows engagement in the education process.

##### *4.2 Main obstacles to using ICT tools in the school practice*

Some of the most significant obstacles, which draw our attention are Lack of teachers' training (43%), Lack of technical resources (39%) and Lack of appropriate products (36%) in the schools. The reported as a main obstruction Lack of training suggests to us that the previously held computer literacy training courses either were not effective enough or seems that there are many new ICT tools in schools that are difficult to handle. According to the survey [10] almost 80% of teachers declare relatively high basic computer skills in e-mail, word processing and finding learning resources on internet (more than 60% are self-assured while other are sure to some extent), which don't correspond with results in our survey, where 43% of respondents declare Lack of teachers' training as a primary obstacle to implementing ICT in schools.

## 5. OTHER PROVISIONS

Significant progress has been made in the area of Open Data, for which Bulgaria has become a trendsetter in Europe Top 10. The open data portal (<https://opendata.government.bg/>) is a central web-based public information system that allows publishing and management of reusable information in an open, machine-readable format. The platform is constructed in a manner that allows complete extraction of the published information or parts of it. Data are freely available and can be used for commercial or non-commercial purposes, as well as for applications development based on them. There are currently over 1700 datasets from about 50 national and regional administrations and agencies, and the system supports a variety of formats. The records include data on public procurement, the education system, healthcare facilities, regional public transport facilities, transport data, control, lists of schools and kindergartens, information about air pollution, registers of employment agencies, public non-profit organizations, etc.

## 6. RATES OF ICT USE

In the survey conducted, 52 teachers answered about ICT usage in the classroom. 5.7% of the teachers said that they have never used computers in their classes. 78.8% of them do not use interactive boards, 23% have never used projectors. 42.3% have never used devices like a television, camera or DVD.

25% of Bulgarian teachers use ICT to communicate with their students, the student's parents or other teachers. 28.8% of them use online channels and instruments for communication. Another 28.8% claim they need more digital knowledge. 50% use the internet to upgrade their knowledge. 15.3% actively take place in online trainings.

69.2% of the teachers can filter information found on the internet. 25% use learning platforms like Moodle for material sharing. 21.1% are familiar with newest educational platforms. 44.2% can use different programs to create documents and presentations. 34.6% of the asked teachers use links, images and videos in their presentations. 13.4% make their own applications and games to help the students with the learning process. 40.3% know the method to protect personal information.

19.2% of our teachers always use digital devices in their teaching process. The same percentage uses the devices that are already in the classrooms like computers and laptops. 11.5% make their own teaching materials like videos and interactive activities. 59.6% communicate with their students and listen to the problems they may have. 17.3% think about how their students can use digital devices.