DEVELOPING DIGITAL LITERACY AND DIGITAL SKILLS AMONG ROMA PUPILS

Curriculum for the first educational period in elementary school

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1. DEFINITION OF THE SUBJECT

The Covid-19 pandemic limited the possibilities for people-to-people interaction and had a major impact on the traditional delivery of education, and it created new challenges for educators as teaching moved overnight from the classroom to the digital environment, for which no one, teachers or students, was fully prepared. Primary school students had the biggest problem with the sudden transition to distance learning, who had the least developed digital competences of all individuals in school, and in many cases their parents were unable to help them with their distance education because of their poorly developed digital competences.

The Covid-19 pandemic has shown that in today's society we can no longer function smoothly without developed digital literacy and digital skills, which are integrated into all areas of our lives, from the start of our education onwards. In order to be successful in today's society, we need to understand both the functioning of ICT and the processes and concepts on which this technology is based. Developed digital skills and digital literacy are the basis for successful and inclusive learning, and at the same time mean unhindered integration into the wider social community. Laptops, smartphones, tablets and other portable digital devices have become easily accessible and often essential for almost everyone to use. As a result, information and communication technology (ICT) and its use are now an integral part of modern life. Given that the school system is closely linked to general social change, the digital transformation of society requires the urgent implementation of ICT in education in terms of developing students' digital competences and new teaching and learning strategies using digital tools.

The way the course works encourages creativity, collaboration and a particular way of thinking and acting. The knowledge acquired in this subject is transferable and applicable to all areas of human activity. They will also benefit students in other subjects and in later life. Digital literacy is part of the European Reference Framework of the 8 key competences and is now classified as a basic literacy, alongside native language skills and mathematical skills.

2. GENERAL OBJECTIVES

In the subject, students:

- learn about digital devices, with a focus on the desktop computer and its basic components,
- learn about the concept and possibilities of the Internet, with an emphasis on e-etiquette,
- learn about the digital drawing app,
- learn about the concept of video call/meeting,
- develop the ability and responsibility to work as part of a group and build a positive self-image,

- are aware of the limitations of computer technology,
- learn about abstraction and simplification,
- develop creativity, precision and logical thinking,
- develop and enrich their vocabulary and ensure correct expression and professional terminology,
- understand the pitfalls of the Internet, how to use the Internet safely and the restrictions that apply to children.

3. COURSE STRUCTURE

The course consists of 5 modules:

1. Module 1: Digital Devices.
2. Module 2: Internet and e-etiquette.
3. Module 3: Digital drawing.
4. Module 4: Digital writing.
5. Module 5: Video calls/meetings.

The course is aimed at students in Years 2 and 3 of primary school, and should comprise 35 hours in each grade – in 2nd grade, students should be introduced to the basics of each module, especially Modules 1, 3 and 4, and their knowledge of these modules should be built on in 3rd grade, when teaching should focus mainly on Modules 2 and 5.

Recommendation to teachers:

In the 2nd grade, mainly because of the age and cognitive development of the students, teachers should focus on Modules 1, 3 and 4, and in the 3rd grade on Modules 2 and 5. They should also take into account the pedagogical principle of simple to complex when dealing with each module.

They should also give students the opportunity to try out digital devices for themselves and, if they are able, to use a digital pen and tablet. In the 2nd grade, they should also talk about the pitfalls of digital devices, the consequences of excessive use and playing games on computers or other digital devices. They should also be introduced to educational content, whether in the form of didactic computer games or additional explanations on YouTube, to show them when to use digital devices and the internet for learning.

The course is also suitable for cross-curricular integration with both natural and social sciences.

4. OPERATIONAL OBJECTIVES AND CONTENT
THE FIRST EDUCATIONAL PERIOD

AREA/TOPIC (MANDATORY AND/OR OPTIONAL)

Module 1: Digital devices	
2nd Grade	3rd Grade
Operational objectives (bold indicates content to be covered in 2nd Grade)	

Students:

- **Learn about basic digital devices: desktop, laptop, tablet, digital pen, mobile phone.**
- **Distinguish between digital devices and know their basic function.**
- **Learn about the parts of a desktop computer and their purpose.**
- They can name and identify the monitor, speaker, central processing unit, printer, keyboard and mouse as basic parts of a desktop computer.
- They can explain how the basic parts of a computer work.
- **They learn how to switch a desktop computer on and off.**
- **Know how to use a keyboard and mouse.**
- **They learn how to switch a laptop on and off.**
- **Learn about the digital pen and how to use it.**
- **Know how to use a digital pen on a tablet.**
- They know how to switch off and switch on a mobile phone.
- Know how to write a short message.
- **Understand why excessive use of digital devices can be bad for their health.**
- They can explain the difference between using digital devices for entertainment and for learning.
- **Learn about didactic games that can be used to learn or reinforce subject-specific material.**

Module 2: Internet and e-etiquette	
2nd Grade	3rd Grade
Operational objectives (bold indicates content to be covered in 2nd Grade)	

Students:

- **Learn about the concept of the Internet.**
- They can explain what the Internet is.
- Learn about the benefits of the Internet.
- They can list the advantages of exchanging, receiving and sending messages as a basic function of the Internet.
- **Learn the rules of decent behavior on the Internet.**
- Know how to behave politely, responsibly and with respect for others on the Internet.
- Know 1 browser on the Internet.
- Know how to use a browser.
- Learn about the function of e-mail.

•	**Know what an online classroom is.**
	• They can access the online classroom independently.
	• Learn how to protect personal data and use the Internet safely.
	• Know their personal data and the dangers (pitfalls) of publishing it.
	• **Understand the pitfalls of excessive use of digital devices and the Internet.**
	• **They can explain why excessive use of computer games affects their well-being.**

Module 3: Digital drawing.

2nd Grade	3rd Grade

Operational objectives (bold indicates content to be covered in 2nd Grade)

Students:

- **Learn about the concept of digital drawing.**
- Explain the concept of digital painting/drawing and cite the Fresh Paint app as an option for digital painting/drawing.
- **Learn about Microsoft Fresh Paint and its basic capabilities.**
- **Know how to access Microsoft Fresh Paint themselves.**
- **Learn to draw/paint digitally.**
- **They can change colors.**
- **Distinguish between freehand drawing and the use of different characters.**
- They know how to show the basic tools in the application (color, type of brush/pen, type of paper.
- **Know how to use Microsoft Fresh Paint on computer and tablet.**
- **Know how to use a digital pen.**
- Use a digital pen independently.
- **They independently create a digital drawing/image and save it (in the 2nd Grade with the help of a teacher/parent).**

Module 5: Video calls/meetings

2nd Grade	3rd Grade

Operational objectives (bold indicates content to be covered in 2nd Grade)

Students:

- **Know what a video call/meeting is.**
- **Know the Zoom app.**
- Know the Teams app.
- Learn to explain the concept and purpose of a video call/meeting.
- **They can explain how a video call/meeting works and what it is for.**
- Learn how to join and leave a video call/meeting in Zoom and Teams and the basic functions of both apps.
- They can join and leave a video call/meeting in Zoom and Teams and know the basic functions of both apps.

5. KNOWLEDGE STANDARS

The minimum knowledge standards are written in bold print.

Knowledge standards and **minimum knowledge standards**
Knowledge standards at the end of the first educational period
The student knows basic digital devices: computer, laptop, tablet, digital pen and mobile phone.   - The student distinguishes between digital devices and knows their basic function.   - The student knows the parts of a desktop computer and their purpose.   - The student can name and identify the monitor, speaker, central processing unit, printer, keyboard and mouse and basic parts of a desktop computer.   - The student can explain how the basic parts of a computer work.   **The student can switch on and off a desktop computer and use a keyboard and mouse.**   - The student knows and can use a digital pen.   **The student can explain why excessive use of digital devices can be bad for their health.**   **The student can explain the difference between using digital devices for entertainment and for learning.**   - The student knows didactic games that can be used to learn or reinforce subject-specific material.   **The student is familiar with the concept of the Internet and can explain what it is.**   - The student knows the benefits of the Internet.   - The student can list the advantages of exchanging, receiving and sending messages as a basic function of the Internet.   **The student knows the rules of decent behavior on the Internet.**   **The student knows at least 1 browser on the Internet and knows how to use it.**   **The student knows what an online classroom is.**   - The student independently accesses the online classroom.   - The student understands the importance of protecting personal data and using the Internet safely.   - The student knows his/her personal data and the dangers (pitfalls) of publishing it.   **The student understands the pitfalls of excessive use of digital devices and the Internet.**   **The student can explain why the excessive use of computer games affects their well-being.**   **The student is familiar with the concept of digital drawing.**   **The student is familiar with Fresh Paint as a digital drawing/painting application and its basic capabilities.**   - The student independently accesses Microsoft Fresh Paint.   **The student can digitally draw/paint and change colors.**

- **The student can distinguish between freehand drawing and the use of different figures.**
- The student is able to demonstrate the basic tools in the application (color, type of brush/pen, type of paper).
- The student uses Microsoft Fresh Paint on a computer and tablet.
- The student knows how to use a digital pen.
- The student independently creates a digital drawing/image and saves it.

- **The student is familiar with the concept of digital writing.**
- **On a computer, the student distinguishes between Microsoft Fresh Paint and WordPad.**
- The student uses Microsoft Fresh Paint app to write with a digital pen and writes independently in Fresh Paint with a digital pen.
- The student can save what he/she has written in Fresh Paint.
- **The student knows the keyboard.**
- The student is familiar with Microsoft WordPad and its basic capabilities.
- **The student writes individual words or simple sentences in WordPad (getting to know the keyboard)**
- The student creates a simple digital text.
- The student independently creates a short digital text and saves it.

- **The student can explain what a video call/meeting is.**
- **The student knows the Zoom app.**
- The student knows the Teams app.
- The student can explain the concept and purpose of the video call/meeting.
- The student can explain how the video call/meeting works and what it is for.
- **The student joins and leaves a video call/meeting in Zoom and Teams and learns the basic functions of both apps.**

6. DIDACTIC RECOMMENDATIONS

6.1 ACHIEVING THE OBJECTIVES OF THE SUBJECT

The teacher's key role in teaching is to create a supportive learning environment and circumstances that enable students to discover, build and shape knowledge and to develop criticality and responsibility.

The objectives of the curriculum are to introduce and develop basic digital literacy and digital skills and to understand the basis of both concepts. At the same time, it provides students with a basic introduction to basic digital devices, especially those they will encounter in their lives, and how to use them. In the course Developing Digital Literacy and Digital Skills among Roma Pupils, we create conditions in which Roma pupils (and others) can acquire the basics of digital literacy and digital skills, which will enable the further development of digital competences, and the desire to continue learning them. At the same time, we want to encourage independent research among the students.

Lessons should be based on students' active learning, and it is recommended that the focus should be on student activities that enable this to happen. It is advisable to take into account the background knowledge of each individual student, which is crucial for acquiring new, better quality knowledge through constructivist teaching. We suggest that the individual learning units be designed so that they can be completed in 45 minutes, following the principle from easy to difficult. We recommend that individual units are oriented towards a single activity.

The main guiding principle for teaching should be to think about how to take different didactic approaches as a challenge, with room for innovative approaches to teaching as well as for achieving minimum standards of knowledge. Through thoughtful lesson planning and the selection of appropriate activities, ensure that students acquire content knowledge, which you build on by practicing procedures and skills. At the same time, remember to develop a positive attitude towards digital literacy and digital skills.

The teacher's role should also be to create the conditions that motivate pupils to acquire new knowledge and encourage them to make sense of what they have learned outside school, in their everyday lives. Use examples from everyday life that students can make sense of, so most of your lessons should be experimental.

Lessons should communicate and inculcate a positive attitude towards oneself, others and the environment, and students should develop curiosity and maintain objectivity, criticality, accuracy and systematicity.

6.2 INDIVIDUALISATION AND DIFFERENTIATION

Differentiate lessons for students according to their abilities and other specificities in the planning, implementation and testing phases. Pay particular attention to specific groups and individuals.

Keep the following concepts in mind:

- Discovering and working with gifted students.
- The concept of working with children with learning difficulties.
- The concept of working with students with deficits in specific areas of learning.

6.3 CROSS-CURRICULAR CONNECTION

The curriculum offers several possibilities for cross-curricular planning and delivery of lessons. Cross-curricular connection is not only about linking content (related concepts), but also about enabling students to develop skills that are useful in different contexts.

The subject can be linked to various other subjects in the first educational period;

- art class – using the Fresh paint app and digital pen, sense of space, sense of drawing;

- Slovene language – using WordPad, writing with a digital pen, getting to know the keyboard, writing words, writing shorter text;
- social science – understanding the importance of the internet, e-etiquette, the advantages and disadvantages of digital devices and their use;
- environmental science – basic concept of computer operation, knowledge of computer parts, testing of procedures, systematic observation and detection;
- English language – learning English computer terminology;
- all subjects – working with resources, getting information, using ICT safely, planning, testing.