Digital Educational Resources
Support for the Development of Digital Literacy
2018-2020

Mgr. et Mgr. Klára Zářecká, PhD.

Arts module coordinator of the project

Support for the Development of Digital Literacy

DEPARTMENT OF ART, VISUAL CULTURE AND TEXTILE STUDIES

FACULTY OF EDUCATION

UNIVERSITY OF HRADEC KRÁLOVÉ

THE CZECH REPUBLIC

Annotation

The aim of this project contribution is to introduce some model educational materials (so-called Digital Educational Resources), intended to be used for Art education, and their methodologies which were created by a team of authors collaborating in the project Support for the Development of Digital Literacy (Digital Literacy for short). This project (realised in 2018-2020) is focused on creating didactic and methodological support for the teachers in practice to integrate educational activities developing digital literacy in the learning process of primary and secondary schools.
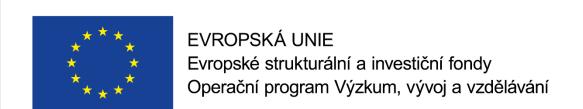
This contribution follows the text of *„Art education; digital literacy in the time of coronavirus"* (Mgr. Lucie Tikalová, Ph.D.)

Support for the Development of Digital Literacy

Registration Number: CZ.02.3.68/0.0/0.0/16_036/0005366

Realization Date: 1.1.2018 – 31.12.2020

Project website: https://digigram.cz/

Support for the Development of Digital Literacy

The project focuses on creating didactic and methodological support for the new and experienced teachers for appropriate and natural integration of educational activities to the learning process for the development of digital literacy.

The project involves 9 pedagogical faculties (Charles University, Masaryk University, University of Ostrava, Jana Evangelisty Purkyně University, University of South Bohemia, University of West Bohemia, Palacký University of Olomouc, Technical University of Liberec, University of Hradec Králové) and National Institute for Education (NÚV).

Levels of education for which the project is intended:

Pre-primary education

Primary education

Lower secondary education

Upper secondary education (grammar schools, vocational schools)

What is Digital Literacy?

The framework of Digital Literacy is based on the general framework of literacy as set of skills for identification, understanding, interpretation, creating, communication, counting and using of printed and written materials concerning various matters. Literacy enables us to reach our aims, to enhance our knowledge and potential and to be fully present in our community lives as so in the whole society.

The concept of digital literacy is inextricably linked to digital competences as a set of knowledge, skills and attitudes, including relevant competences, strategies and values. To formulate the definition of digital literacy and digital competences, several sources can be used (e.g. *Strategie digitální gramotnosti ČR na období 2015 až 2020*, *Digitální gramotnost dle RVP* or European document *Rámec digitálních kompetencí DigComp 2.1*).

Five main areas of digital competences:

- **Informative and data literacy**
- **Communication and collaboration**
- **Creation of digital content**
- **Safety**
- **Problem solving**
- **Technological competences**

A comprehensive definition of digital literacy, individual digital competencies and their levels, the development of which is the focus of the created teaching activities and materials (digital educational resources - DVZ), is available for download in the document Koncept digitální gramotnosti (https://digigram.cz/files/2019/06/VM1.1-Koncept-DG.pdf)

Open education

Open education is a term used to denote new possibilities in education caused by the development of information and communication technologies and their mass penetration into social life.

The open education system connects schools with extracurricular education, increases the digital literacy of teachers and pupils, speeds up the exchange of examples of good practice between teachers and supports changes in the pedagogical approach that are currently affected by the coronavirus crisis.

Open education can help overcome barriers in the current education system – e.g. limited availability of information resources, inequality in education…

Digital Educational Resources (DERs) = Open Educational Resources

What are Digital Educational Resources (DERs)?
Didactic and teaching materials in an electronic form, the aim of which is to integrate digital technologies and competence in the teaching of various educational disciplines.

How many DERs will be created?
We assume that around seventy DERs will be created for various general education fields of nursery, primary, and secondary schools.

Where will DERs be verified?
DERs will be tested by teachers in practice and then in collaboration with a team of experts evaluated and re-evaluated in practice (each DER will be double verified).

How do we get to the final version of DERs?
The final version will be published on the web site where teachers can look for resources for particular programmes, sorted by different levels of education and digital competences.

What is the openness of DERs?
DERs are available for use freely, distribution and modification without the consent of the original author. The creation of a set of Creative Commons public licenses contributed to the sharing and dissemination of open educational materials.

Digital Literacy in Art education

Subject module for Art education

is guaranteed by the Department of Fine Arts and Textile Design, Faculty of Education, University of Hradec Králové under the leadership of PhDr. Kateřina Štěpánková, Ph.D., but the art departments of the Faculty of Education from **Hradec Králové, Olomouc, Pilsen, Prague, Brno and Ústí nad Labem** took part in the work activities.

Digital Educational Resources in Art Education (project outputs)

Available on DER Database - public part - https://digigram.cz/dvz-public/ after entering the subject - art education

Overview of publicly available DERs:

- *Animated dialogue* (author Mgr. Et MgA. Pavel Trnka, Ph.D.)
- *Digital transformation and image analysis* (author Mgr. Patricie Pleyerová)
- *HU! History of Art* (author Bc. Dominik Tyl)
- *Creative modification of a digital work* (authors Mgr. And Mgr. Adam Franc, Mgr. Monika Szűcsová)
- *Drawing between paper and touch screen* (author Mgr. Art. Ondřej Moučka)
- *Traditions in the new* (author Mgr. Et MgA. Petra Filipová, Ph.D.)
- *Creatures and monsters* (author PhDr. Jan Mašek, Ph.D.)
- *Use of applications and social networks in teaching art education* (author Mgr. Šimon Kříž)

In preparation:

- *3D modelling in online space - basic course* (author Mgr. Jan Fadrhonc)
- *Mobile phone and portrait* (author Mgr. Patricie Pleyerová)
- *From Dadaism to Collage and Rollage* (authors MgA. Jana Francová, Ph.D., Mgr. Tomáš Staudek, Ph.D.)

Animated dialogue
(author Mgr. et MgA. Pavel Trnka, Ph.D.)

Target group – lower secondary education

Developed competence - 3. 1. Creation of digital content

DER "Animated dialogue" deals with the animation of spoken language (lip-sync), which can be understood as a separate genre. The described animation skills are technologically simplified for teaching, without compromising their potential artistic reach and ability to develop students' natural artistic creativity. DVZ is designed for beginners without the need for expensive equipment using only a smartphone and common art aids.

Screenshots from the sample animation by Ely Trnkové (7 years old) (https://digigram.cz/dvz/#DVZVV07)

Digital transformation and image analysis
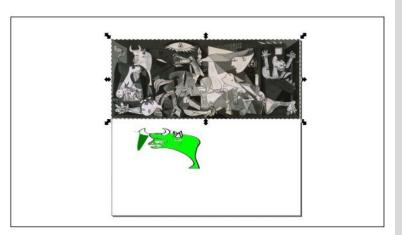(author Mgr. Patricie Pleyerová)

Target group – lower secondary education

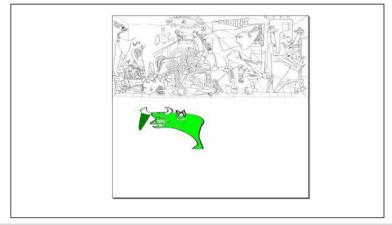**Developed competence -** 3. 1. Creation of digital content

DER is conceptually oriented to the teaching of art education and art history. The basic element is the image, selected with regard to the FEP ZV and taking into account the Copyright Act (121/2000 Coll.). The selected work (Guernica by P. Picasso) is converted into vector graphics in the corresponding, freely accessible program Inkscape. The image is divided into individual vector fragments, which exactly copy the given motif. Pupils are allowed to move with the individual parts as they wish. In this way, the transformed work gives the opportunity to create an interactive digital image in which students can analyse the individual components, express themselves to them and at the same time reshape them according to the teacher's tasks, thanks to which they are educated in contexts of fine arts, digital manipulation and postproduction. At the same time, the development of digital literacy is essential, for which the ability/knowledge of the use of digital technologies is important.

Sample of Digital transformation and image analysis methodological material
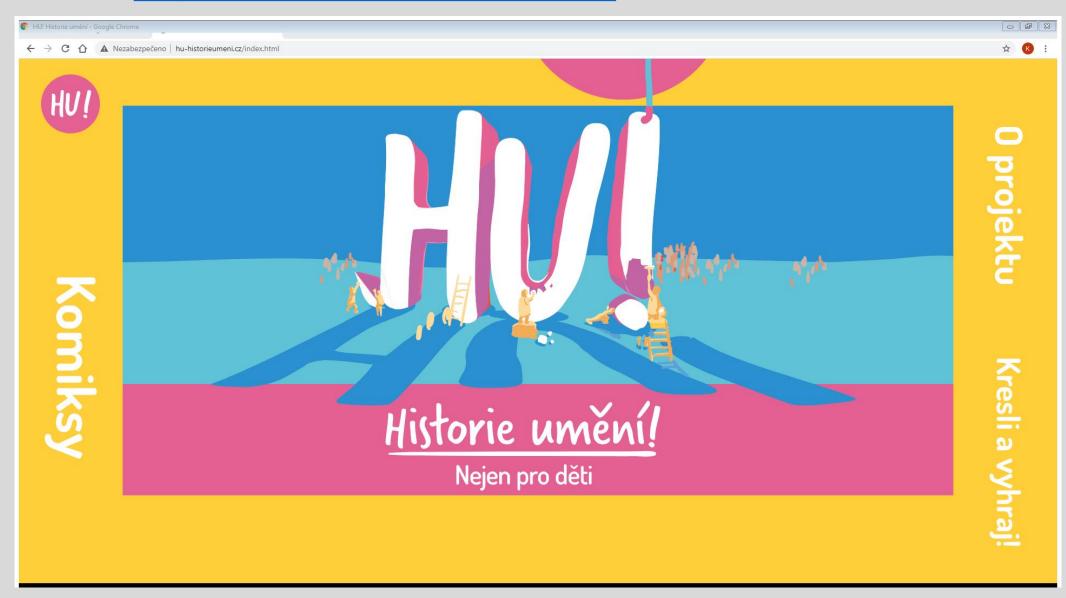(https://digigram.cz/dvz/#DVZVV04)

HU! History of Art
(author Bc. Dominik Tyl)

Target group – lower and upper secondary education

Developed competence - 3. 1. Creative use of digital technologies

DER „HU! History of Art "deals with teaching through artists' comics. The created comic builds on the popularity of this genre and uses its typical features such as visual captivity, exciting plot, acronym, anecdotality of stories, joke - but its goal is not only to entertain, but also to educate. Through the story, students will get acquainted with a certain period in the history of art and at the same time they will be offered creative activity - creating their own comics, its digitization and a non-traditional form of sharing the created stories on social networks.
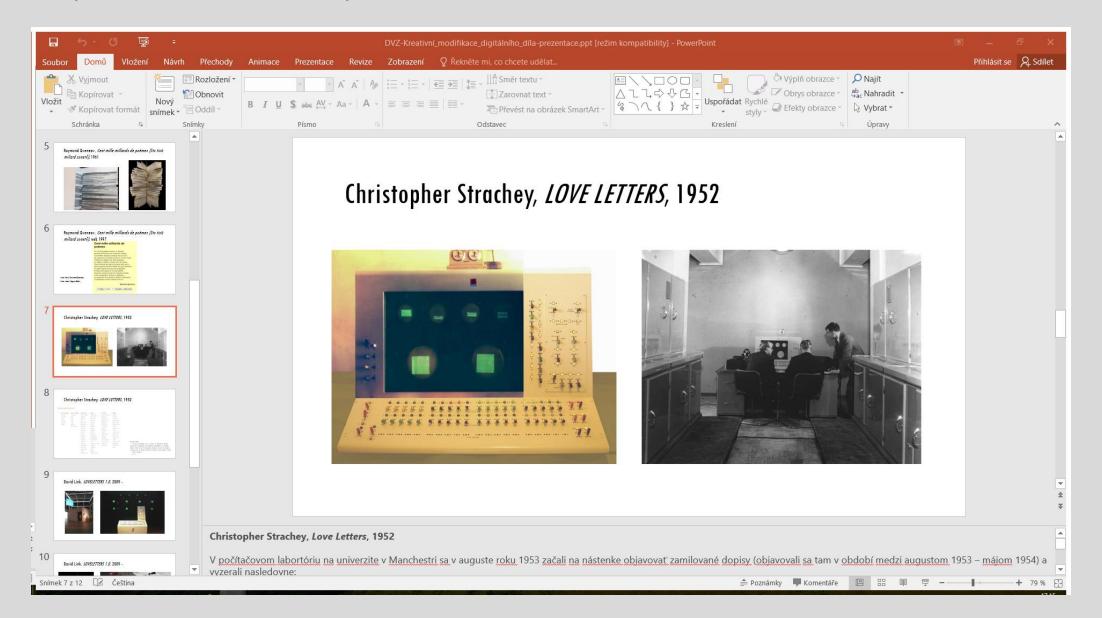
Website: http://www.hu-historieumeni.cz

Creative modification of a digital work
(authors Mgr. et Mgr. Adam Franc, Mgr. Monika Szűcsová)

Target group – upper secondary education

Developed competence – 5. 3. Creative use of digital technologies

DER aims to encourage students to creatively explore and modify a digital work at the level of its code, without having to be equipped with programming knowledge. Activities are focused on works that generate random texts or images and take the form of a website. Students will get acquainted with the basic anatomy of this type of web digital work and look at the code (hidden behind the visual surface) in which the work is written.

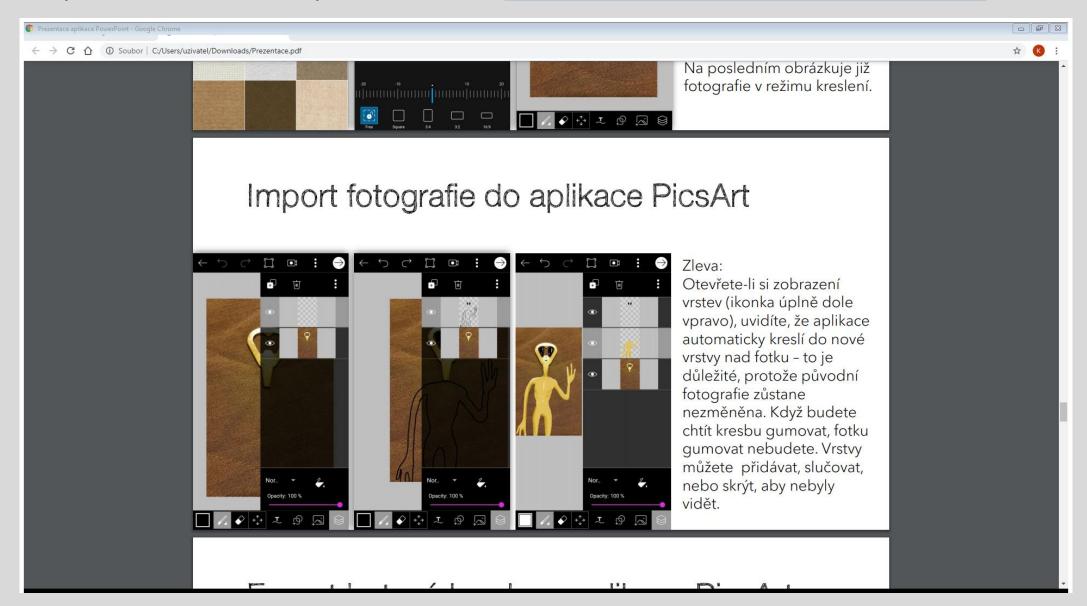# Sample of Educational presentation (https://digigram.cz/dvz/#DVZVV06)

Drawing between paper and touch screen
(author Mgr. art. Ondřej Moučka)

Target group – lower and upper secondary education

Developed competence – 3. 1. Creation of digital content

"Drawing between paper and touch screen" introduces students to the possibilities of using a touch screen device for digital drawing. Through free applications available, students learn the basics of digital drawing - working with layers, with transparency, with various forms of texture, with the ability to edit or manipulate created drawings or photographs, etc.

Sample of Educational presentation (https://digigram.cz/dvz/#DVZVV03)

Traditions in the new
(author Mgr. et MgA. Petra Filipová, Ph.D.)

Target group – upper secondary education

Developed competence – 3. 1. Creation of digital content

"Tradition in the new" reflects current approaches in art (searching for connections between traditional works of art and contemporary art of new media). The presentation introduces students to a selected pair of works of art and focuses on the reception and reflection of the work of art. Based on the interpretive procedures of students and their associations, a common theme is created for creative activity in the medium of video.

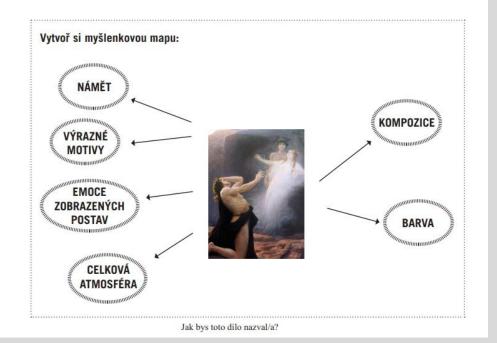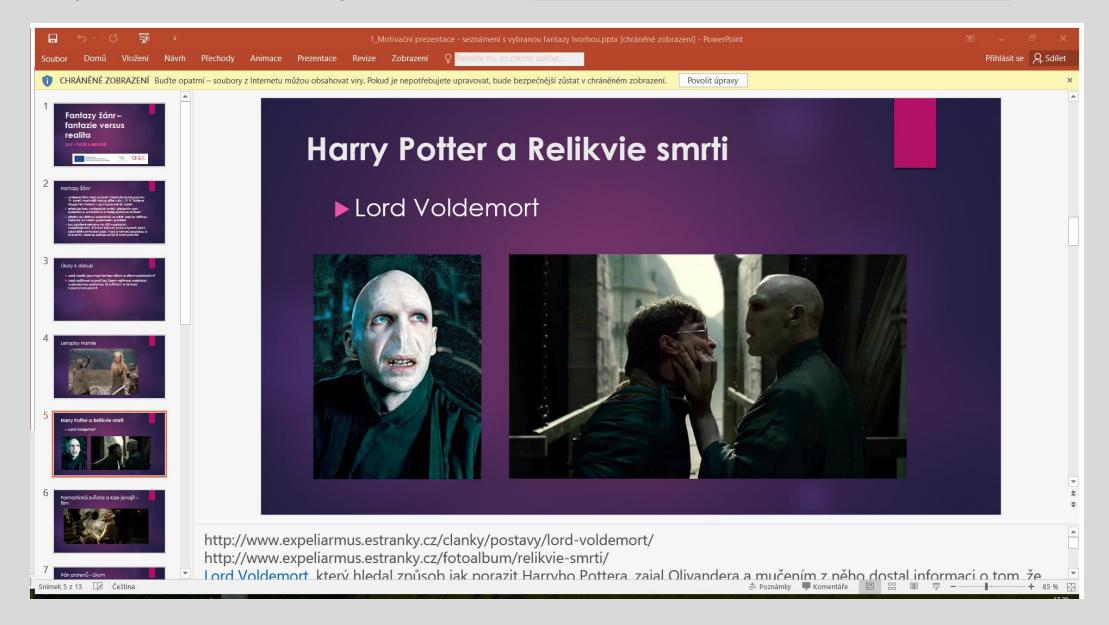# Sample of Worksheet (https://digigram.cz/dvz/#DVZVV02)

Creatures and monsters
(author PhDr. Jan Mašek, Ph.D.)

Target group – lower and upper secondary education

Developed competence – 3. 1. Creation of digital content

DVZ "Creatures and monsters" teaches the art of new media, especially the fantasies of the genre in conjunction with filmmaking and reflects current approaches in 3D modelling in the form of organic modelling - digital sculpture - in the Sculptris program from Pixologic. Based on interpretive procedures and associations, students prepare their own designs of fantasy 3D creatures/monsters, implement this design through computer modelling and choose appropriate 3D tools, materials and textures for their own model and surface modifications of the creature/monster.

Sample of Motivational presentation (https://digigram.cz/dvz/#DVZVV01)

Use of applications and social networks in teaching art education
(author Mgr. Šimon Kříž)

Target group – lower secondary education

Developed competence – 3. 2. Integration and processing of digital content

"The use of applications and social networks in teaching art education" is a material that shows how to work creatively with mobile applications and social networks. It aims to present the general principles by which art education can be taught with the help of these digital platforms. It also focuses on the connection of classical art techniques in connection with digital literacy. Pupils create a series of photos using mobile phones and applications using their free downloadable filters.

Sample of Educational presentation (https://digigram.cz/dvz/#DVZVV08)

1. Hudba

- Raperka M.I.A. si vytváří vlastní grafiku ke svým deskám
- Využívá koláž jak klasickou, tak digitální
- Koláže vytváří z fotografií v mobilu
- Svou grafiku používá ve svých klipech, které často režíruje

CD obálky k deskám M.I.A.

In preparation (to be released):
3D modelling in online space - basic course
(author Mgr. Jan Fardhonc)

Target group – primary and lower secondary education

Developed competence – 3. 1. Creation of digital content

Comprehensive teaching material focused on 3D modelling in the online environment SketchUp contains complete teaching support for both teachers and students. The teaching material consists of a set of basic tasks suitable for school lessons. In these tasks, students will learn the basic principles of creating 3D models, using basic tools, students will be able to create a basic 3D model, including a model with accurate dimensions. Pupils will also get acquainted with the creation of more complex models, so they will be able to create a complex rotating 3D model.

Mobile phone and portrait
(author Mgr. Patricie Pleyerová)

Target group – primary education

Developed competence – 1. 2. Evaluation of data, information and digital content

The didactic material is conceptually oriented to the cross-sectional topic of media education, in which it emphasizes the student's ability to interpret the relationship between media messages and reality, awareness of the diversity of messages in a situational context and especially understanding the role of social digital representation in everyday life and the interaction of these factors. Here, the mobile phone serves as a transfer to the digital environment and at the same time a functional tool for verifying the topic and exploring one's own self-portrait.

From Dadaism to Collage and Rollage
(authors MgA. Jana Francová, Ph.D., Mgr. Tomáš Staudek, Ph.D.)

Target group – primary education

Developed competence – 3. 1. Creation of digital content

The goal of the DER is to get acquainted with new media that use the principles of "remake" and collage, through a simple online application. Pupils should understand the basics of working with the interpretation of already completed works of art. As a source of inspiration, there is a connection with historical avant-gardes (especially Dadaism and Surrealism) and especially the work of Jiří Kolář.

Thank you for your attention!

For more information about the project
Support for the Development of Digital Literacy
go to:
https://digigram.cz/