



# **ART EDUCATION AND DIGITAL LITERACY IN THE TIME OF CORONAVIRUS**

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# The Aim of the Paper

- To point out **the importance of the development of digital literacy of teachers** as a means to improve contactless education in art classes.
- Introduce the project ***“Support for the Development of Digital Literacy”***, which aims to improve the level of digital literacy of (not only) art teachers in the Czech Republic.
- **To bring forward new digital resources** that serve teachers as teaching material in art classes.
- **To show the opportunities that the coronavirus crisis** has given us and to focus on the **positive transfer** of this negative experience in pedagogical practices.

Comment: The presentation uses visual samples from digital educational sources, which were created within the project Support for the Development of Digital Literacy

# **What Has the Coronavirus Crisis Taught Us About Digital Literacy in Art Education?**

- The coronavirus crisis has highlighted the **need for developing digital literacy** so that teachers are prepared for similar situations requiring contactless education
- The coronavirus crisis has revealed a **lack of digital educational materials** available for art teachers.
- Low level of digital literacy **prevents teachers from providing quality contactless education.**
- The coronavirus crisis has **shown** art teachers **different ways of developing digital literacy.**
- The coronavirus crisis has **motivated** art educators to **create new stimulating study materials which develop digital literacy.**



Appendix to DER *Digital transformation and image analysis*, author Mgr. Patricie Pleyer.  
<https://digigram.cz/dvz/#DVZVV04>

# **Support for the Development of Digital Literacy**

- “*Support for the Development of Digital Literacy*” is the name of the project, which has been implemented since 2018.
- Two years ago, none of us thought that something like the coronavirus crisis which has paralyzed the world could occur.
- Even then, however, it was clear that the development of digital literacy in teachers is a crucial topic and needs to be dealt with.
- The coronavirus crisis has affected the whole school system, including the art classes, and has shown us that it is very important to support and develop the digital literacy of art teachers - this ongoing project is gaining importance due to the current situation.

## Workshops

# ZBrush QUICKLY CONCEPT CREATURE DESIGNS

Discover how to create a dynamic piece of character art from an initial concept sculpt generated in ZBrush. **Simon Webber** is your guide

**1 Choose a basic shape**

With the increasingly short deadlines in film production these days I find it hugely beneficial to plan straight into a project. With my background as a sculptor and painter in film effects, this approach to designing feels closest to the methods I would use to create a character in the practical or real (non-digital) world.

In this workshop I will use ZBrush to generate my work. I can offer a director or other client 360 degrees of a concept, thus removing any doubts they may have about how a particular character might hold up to scrutiny at any given angle or under different lighting conditions. I can also present multiple key poses, and apply surface textures and colour schemes with one tap on the Wacom.

There are generally three main ways in which I start modelling a concept. One is to begin blocking in the main volumes of my sculpture with ZSpheres, which is a great way to quickly establish the overall shape of your character while giving it a good, clean base mesh. Another method

is to start sculpting my character from either a piece of primitive geometry or a basic mesh from my library. I would do this if I feel it has a more suitable pose close to what I wanted to visualise.

For this workshop I have decided to opt for the latter method in conjunction with ZBrush's Dynamesh feature, which I regularly find is a more sketchy way of working and lends itself to quick explorations of form resulting in a looser, more organic model. It is essentially digital clay and a perfect introduction to 3D art!

**2 Imply muscle forms**

Once a general shape begins to emerge and the main forms become established, I begin addressing secondary forms to start adding some character. Secondary forms are usually shapes that imply the underlying muscle structure and the more prominent folds of the skin. During this time I jump in and out with the Smooth tool (hold Shift and Alt) to blend my shapes together as I work, keeping everything looking unified.

**3 Keep it real**

Think about weight and physics in your work. What are the effects of gravity on your character? How does the skin connect in a particular area? What changes when the anatomy is posed? An important part of making a fantasy creature or character look real is maintaining a natural level of asymmetry, so try to incorporate this into your design. Try alternating your use of the Symmetry function (X) once you have strong preliminary shapes established.

Appendix (motivational presentation) DER *Creatures and monsters*, author:  
PhDr. Jan Mašek, Ph.D. <https://digigram.cz/dvz/#DVZVV04>

PROJECT

# **Support for the Development of Digital Literacy**

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

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EVROPSKÁ UNIE  
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MINISTERSTVO ŠKOLSTVÍ,  
MLÁDEŽE A TĚLOVÝCHOVY

## **What is Digital Literacy?**

The **ability to perform** (make) **digital activities successfully** (the ability to work with digital technologies effectively) **in different life situations** that may include work, **learning**, free time, and other aspects of everyday life.

# What Areas Does Digital Literacy Include?

- Information and Data Literacy
- Communication and Collaboration
- Creating Digital Content
- Security Solutions
- Problem Solving
- Technology Competence

- **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.

# Historie generativního umění



Sol LeWitt, *Wall Drawing #879 Loopy Doopy (black and white)*, 1998  
© Centre Pompidou-Metz / Photo : Rémi Villaggi

Appendix to DER *Creative Modification of a Digital Work*, authors Mgr. et Mgr. Adam Franc, Mgr. Monika Szűcsová.

<https://digigram.cz/dvz/#DVZVV04>

## Project Aims

- To build a didactic and methodological support for teachers to **promote learning activities focused on the development of digital literacy into teaching** in general subjects of primary and secondary education in the context of the planned **innovation of the Educational Programmes**.
- Preparation of **digital education resources to develop digital literacy** of children and pupils, including methodological manuals for teachers.

# Digital Literacy in Art Education

- Within the project, **universities from all over the Czech Republic** have been involved in the subject module Art Education
- The subject module Art Education **is guaranteed by the Department of Art Culture and textile works of the Faculty of Education, University of Hradec Králové** under the guidance of PhDr. Kateřina Štěpánková, Ph.D.
- The art departments of the Faculty of Education from Hradec Králové, Olomouc, Plzeň, Prague, Brno and Ústí nad Labem have participated in the project.
- DERs for art education have been created by professional workplaces in Plzeň, Hradec Králové, Olomouc, Ústí nad Labem and Brno.

## Schedule of Project Activities

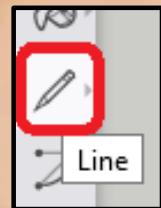
- **Mapping of resources** developing DG in the field of art education at schools of all levels schools (Pre-school Education, Elementary education, Grammar Schools, Secondary Schools)
- **Analysis and evaluation** of these resources
- **Establishing cooperation** with participating schools and teachers
- **Creation of digital educational resources** (minimum number 5)
- **Implementation** - verification of DER in school practice
- **Evaluation**
- **Incorporation of feedback** from DER verification in practice.
- **Publication of DERs** on the website <https://digigram.cz/DER>

## Garáž – pracovní list pro žáky 2

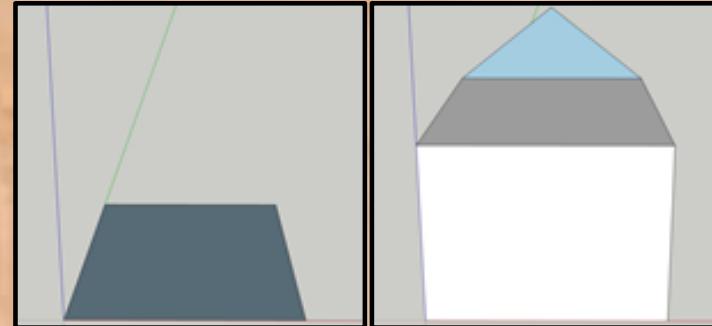
Otevřeme si program SketchUp v online verzi.

V programu vytvoříme základní tvar pro garáž, v našem případě se bude jednat o obdélník.

Z obdélníku pomocí vhodného nástroje vytvoříme kvádr.

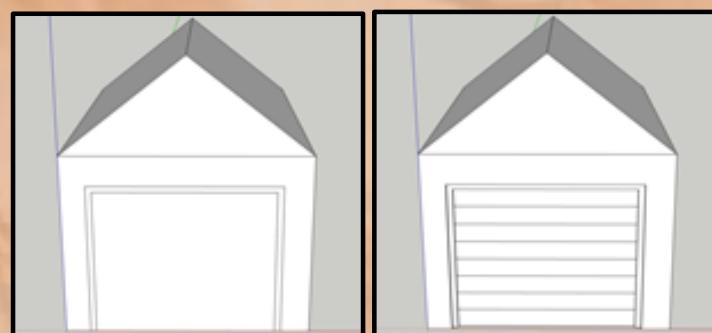


Na námi vytvořený kvádr umístíme pomocí nástroje Tužka trojúhelník jako základ pro vytážení střechy. Musíme dávat pozor, abychom tento trojúhelník nakreslili ve správné rovině. To zjistíme tak, že se nám plocha trojúhelníku vybarví a není průhledná, případně můžeme ještě ověřit otočením pohledu.



Základ střechy vytáhneme na velikost obdélníku a na přední část garáže nakreslíme základ pro vrata, jejich rám a přední stěnu.

Vrata zasuneme, aby bylo jasně patrné, že se jedná právě o vrata a dokreslíme jim rolety. Musíme postupovat v tomto pořadí, jinak budeme mít na rámu přebytečné čáry. V tomto okamžiku musíme též dávat pozor, abychom čáry rolety kreslili na vrata garáže a spojovali jsme je s vnitřní hranou rámu. Jednotlivé části rolety je vhodné mít stejně velké, proto můžeme využít automatického přichytávaní v půlce úseček.



## **Objectives of the Project**

- To **promote** the development of digital literacy of children **by providing information** to the general public.
- To **build opportunities to develop digital literacy of children and pupils** to verify the concept of developing digital literacy in the field of education in the **updated curriculum**.

## **Another benefit of the project**

- building a sophisticated **structure of accredited training courses for teachers** of kindergartens, primary, and secondary schools (mainly e-learning form) focused on the development of digital literacy of children (Nursery Schools), pupils (Elementary Schools) and students (Secondary Schools)
- After that, course graduates can **use their newly gained competencies in their everyday pedagogical practice.**

# Digital Educational Resources in Art Education

**Are focused on:**

- Art history (creation of comics)
- Animation
- Interpretation of a work of art
- 3D art print
- Working with tables

Etc.

# **Digitální vzdělávací zdroje pro obor výtvarná výchova (výstupy projektu)**

**3D modeling in online environment - basic course** (author Mgr. Jan Fardhonc)

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

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

**HA! History of Art** (author Bc. Dominik Tyl)

**Creative modification of a digital work** (authors Mgr. And Mgr. Adam Franc, Mgr. Monika Szűcssová)

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

**Mobile phone and portrait** (author Mgr. Patricie Pleyerová)

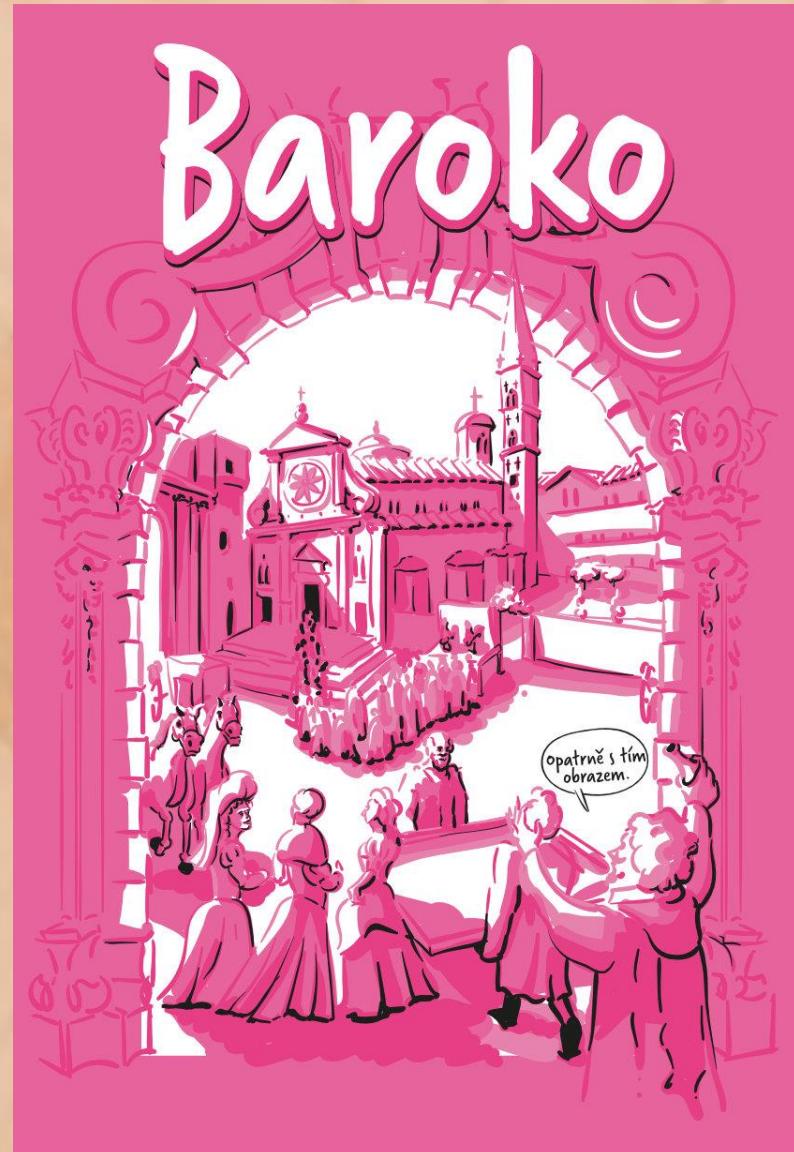
**From dadaism to collage and collage roll** (authors MgA. Jana Francová, Ph.D., Mgr. Tomáš Staudek, Ph.D.)

**Traditions in a new way** (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)

Comment: Individual digital educational resources are presented in more detail in my colleague's Mgr. and Mgr. Klára Zárecká, Ph.D. paper.



Appendix to DER HA! History of Art, author Bc. Dominik Tyl. <http://www.hu-historieumeni.cz/baroko.html>

## Summary

- Digital literacy has proved to be **one of the most important competencies** of a teacher during the coronavirus crisis.
- This negative experience **has given us a lot of valuable information** that we can use in pedagogical practices.
- It is necessary **to work on improving digital educational resources** for the field of art education.
- During enforced contactless education, **many valuable digital resources have been created** for art education.
- **The coronavirus crisis has shown us a new direction in education** and has permanently affected the work of not only art teachers.

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## **Other Online Resources Used in the Paper**

<https://digigram.cz>

<https://www.nedatovano.cz/>

<https://www.ceskegalerie.cz/cs/zpravy/vytvarne-umeni-online-ii-zaostreno-na-socialni-media>

<http://www.hu-historieumeni.cz>

[http://kultura.praha.eu/jnp/cz/individualni\\_ucelova\\_dotace/vyhlaseni\\_iud\\_pro\\_podporu\\_on\\_line\\_obsahu.htm  
?fbclid=IwAR06SL9DEtYycbmmqQpbjBd0sfW-jtAPoQ9QasTDQVB2792fSHJYATXgE1I](http://kultura.praha.eu/jnp/cz/individualni_ucelova_dotace/vyhlaseni_iud_pro_podporu_on_line_obsahu.htm?fbclid=IwAR06SL9DEtYycbmmqQpbjBd0sfW-jtAPoQ9QasTDQVB2792fSHJYATXgE1I)

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<http://ghmp.cz/news-482/?fbclid=IwAR1gf1-G6vpP1MdVbbY8auNNvwuFyk8nBqZ5dQjFSA2zn8i9hT8Cm5RM-Dc>

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<https://www.ngprague.cz/pro-ucitele>