

Contract No. 2020-1-BG01-KA201-079295

## **METHODOLOGICAL GUIDANCE ON MODULE 2: DIGITAL CREATIVITY**

### **CREATION OF DIGITAL EDUCATIONAL RESOURCES**

*Expected results:*

- To familiarize teachers with platforms for creating digital educational resources.
- To learn practical skills for creating original digital educational resources - exercises, tests, tasks, etc.
- To acquire skills for using the author's digital didactic resources in the educational process in various subjects and in extracurricular activities of interest.
- To enrich the digital competence of teachers with the skills to construct educational resources.

Contract No. 2020-1-BG01-KA201-079295

## **THE DIGITALISATION OF EDUCATION AND TEACHER PREPAREDNESS**

The conditions for work and learning during the pandemic affected in specific ways the areas of health, economy, education. In the latter, the negative effects of teaching and learning in electronic environments have been widely discussed - a decline in motivation to learn, loss of habits and social skills against the backdrop of a reported European-wide lack of sufficient functional literacy. (Recovering learning, 2022) Teachers and students in many schools have faced the challenges of rapid digitization in the absence of sufficient technical devices and digital competences to deliver effective distance learning.

The lack of digital competencies in teachers has also adversely affected the development of students' digital competencies.

The COVID pandemic, which has caused the closure of kindergartens and schools in 2020, has created the need for teachers to quickly learn or enrich their digital competences to work in an electronic environment. The abrupt transition from face-to-face to online learning with unclear parameters and requirements has created serious difficulties for them and affected their job satisfaction during this crisis.

In the context of the pandemic and school closures, teachers have turned to the use of platforms and programmes, either on their own or with the help of colleagues, which can be divided into several main groups:

- Video conferencing and two-way communication programs;
- Platforms on which educational resources are made available, usually structured by subject and/or topic;
- Programs for creating educational resources - video, text and other multimedia materials;
- Programs for creating tests and other materials for assessment purposes.

It is easier to use ready-made programs with which assignments, tests, exercises, etc. are made, but when working with culturally diverse students and those with specific disabilities and learning difficulties, as with many of the students of the teachers working in this project, this is not enough. It is for this reason and for the purpose of the module on digital creativity, several programs and platforms that enable the creation of authoring educational resources were evaluated as the most

Contract No. 2020-1-BG01-KA201-079295

suitable.

## PROGRAMS FOR CREATING AUTHORIZING ONLINE-BASED EDUCATIONAL PRODUCTS

Within the Digital Creativity module, we chose to offer teachers three programs to use to create original products. These are:

- LearningApps
- Wordwall
- Kahoot

The first two provide rich possibilities to use ready-made templates and exercises, but also to create and save them, and the latter software enjoys great popularity given the attractiveness and interactivity in the course of solving the tasks.

All three programmes allow to work in different languages, which makes it possible to do exercises and assignments in the languages of instruction in the three partner countries - Bulgaria, Poland and Turkey.

The Web 2.0 service **LearningApps.org** was created in Switzerland as part of a research project at the University of Education Bern in collaboration with the Johannes Gutenberg University of Mainz and the University of Applied Sciences Zittau/Görlitz and in close collaboration with about a dozen teachers.

The goal of LearningApps.org is to increase the use of audio and video content in addition to media text and images that are widely used in the classroom.

**LearningApps.org** supports the learning process with separate interactive online modules that can be integrated into the learning content. They could be used as they are created and also changed easily and quickly in operational mode. The aim is to make the collected interactive blocks publicly available. These blocks (called exercises) are not complete learning units, but could be used as part of a lesson scenario. They are especially valuable for their interactivity.

There is a large amount of high-quality multimedia content on the web today, but teachers are struggling to make choices about their use in the classroom. Based on the YouTube principle,

Contract No. 2020-1-BG01-KA201-079295

learning modules, once created, can be posted on LearningApps.org and adapted by others to their own needs.

In addition to using simple formatting templates and developing authoring task types, LearningApps.org offers six other useful tools that can be used individually or integrated into an existing website, wiki, or learning platform. These include a dashboard on which audio and video can be posted in addition to text and images, or a tool for creating mind maps. Learning modules can be managed or used privately or within a class, but can also be published on the platform and thus be accessible to other teachers. The scope of use of the applications is very broad and takes into account the methodological and didactical requirements for learning resources in Web 2.0: use of mobile devices, easy exchange and the possibility of embedding in existing platforms. Individual learning modules can be called up directly via a web connection or integrated into learning platforms or digital teaching aids, for example with iBookAuthor, via interfaces such as SCORM.

LearningApps.org provides schools with a free creation tool. The simple operation creates an incentive to increasingly use the multimedia potential of Web 2.0 in teachers' own lessons.

The cornerstone of LearningApps.org's success lies in the interaction between innovative software developers and experienced teachers who are open to new things, which is another step towards a Learning 2.0 culture.

In terms of school practice, LearningApps.org contributes to the diversity of methods and use of ICT in the classroom.

The tool's 1:1 focus on mobile devices and computers is consistent with the general trend in education. By linking the tool to ongoing software developments for digital textbook production, publishers of learning materials are also addressed as a target group.

### **Practical guidance for teachers:**

Users can use a huge amount of ready-made exercises, sorted thematically, that have been made by other teachers.

Each teacher, after registration, can make his/her own folder with different didactic materials to use with his/her students, but also to allow access to them to other teachers.

Contract No. 2020-1-BG01-KA201-079295

Exercises can be created in over 20 languages.

It is also possible to collect information on how students have coped with assignments, exercises, tests and other tasks.

**Wordwall.net** allows teachers to create interactive games and print materials for their students. Teachers simply enter their desired content and the system automates it.

It all started in a secondary school classroom in London (UK) in 2006. For generations, teachers have stuck laminated words on the wall to support literacy exercises. While working as a teacher, one of the founders created a program where a list of words could simply be entered for the same purpose. Added to this was a random selection with a spinning noise like a TV show. This is the first version of Wordwall. It was followed by other templates, but the first template was known as Flip Tiles. It can still be found in the program is today.

But the next real innovation came when the platform's creators realized that there was a deeper connection between the patterns that emerged. A set of keywords used to create Flip Tiles can easily be entered into Wordsearch. Content entered by the teacher once can be reused in many ways. With this idea, the Switch template feature was born and it has since become a core feature. Wordwall is a tool that supports a high-tech classroom. To use it, you need either an interactive whiteboard (IWB) or an audience response system (ARS). It has grown to a set of dozens of templates and has received wide acceptance. High-tech solutions proved fun to play with and caused initial excitement, but too many teachers lacked the funding to buy such things. The hardware was often difficult to manage for large groups, requiring too much technical knowledge to be trusted. For several years Wordwall was a niche product with very few users.

The company also changed direction in 2016 when it launched the Wordwall.net website. The concept was simple. To enable all teachers to create and share resources wherever they are in the world. This new product was made possible by the new HTML5 web standards, which for the first time meant that interactive content could be implemented on any device. Gone is the installed software and dependence on expensive hardware.

The product becomes easy to use so that people can discover it on their own.

Contract No. 2020-1-BG01-KA201-079295

Wordwall can be used to create interactive and print activities. Most of the templates are available in both interactive and print versions.

These templates include familiar classics like Quiz and Crossword, but there are also arcade-style games like Maze, Chase and Plane, and there are classroom management tools like Seating Plan.

### **Practical guidance for teachers:**

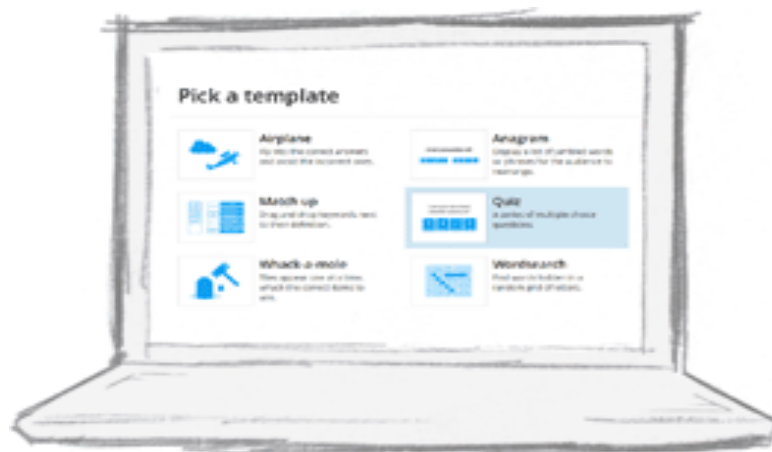
To make a new activity/exercise, start by selecting your template and then entering your content. It's easy and means you can create a fully interactive activity in just a few minutes.

The interactive exercises are playable on any web-enabled device such as a computer, tablet, phone or interactive whiteboard.

They can be played individually by students or led by teachers, with students taking turns at the front of the class.

Print materials can be printed directly or downloaded as a PDF file. They can be used to supplement the interactive or as stand-alone activities.

**Create a personalized resource with just a few words and a few clicks.**

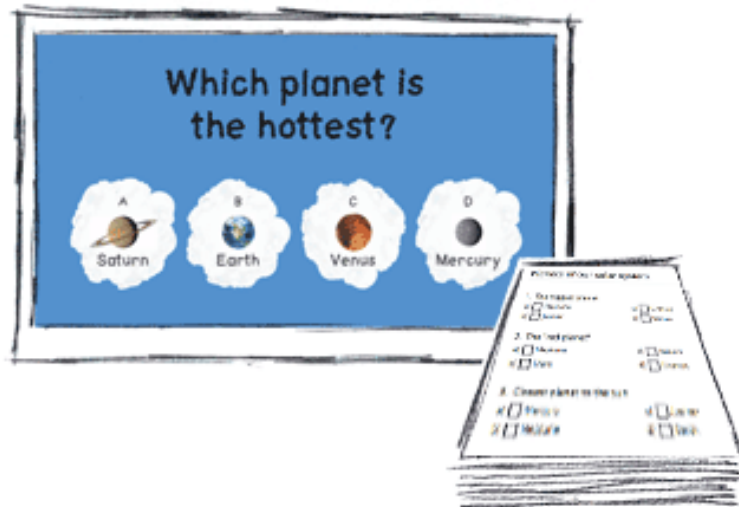


1. Select a template.

Contract No. 2020-1-BG01-KA201-079295



2. Enter your content.



3. Print out your exercises/assignments/tests, etc. or give students the opportunity to learn and play on the digital devices.

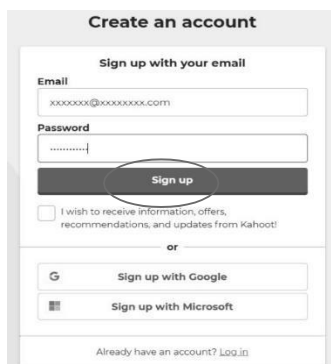
Contract No. 2020-1-BG01-KA201-079295

Any exercise/task that is created can be made public. This allows it to be shared on the contact page via email, on social media or through other means. It also allows other teachers to find and use your exercises and assignments within the community of registered users.

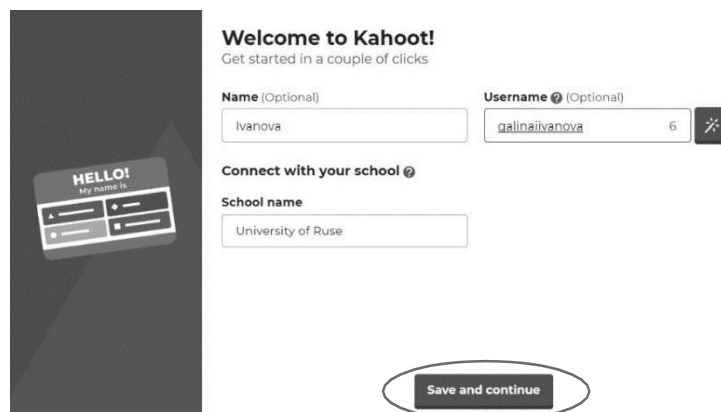
If you prefer, you can save the exercises you have done just for you, which means that only you can access them.

### Software for testing and evaluation

1. Register at <https://kahoot.com/>
2. Select the registration type - teacher.
3. Choose a place of work - school.
4. Sign up with your email address and password.



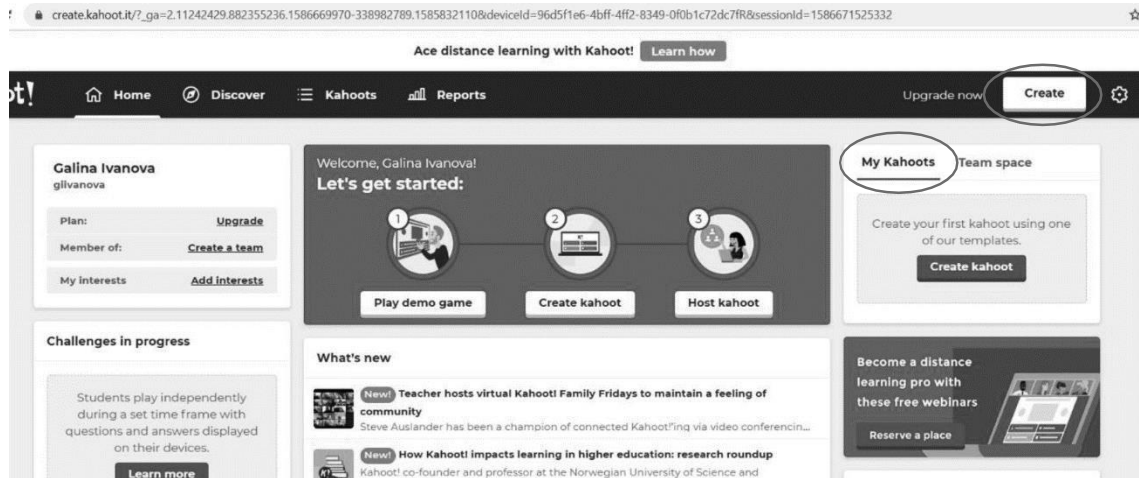
5. Choose a plan - You can choose a free plan that has the basic features of the program.
6. Enter your name, username and school name in the fields provided.



7. You can now take your first test. This is done in MyKahoots. Starting is with the Create button.

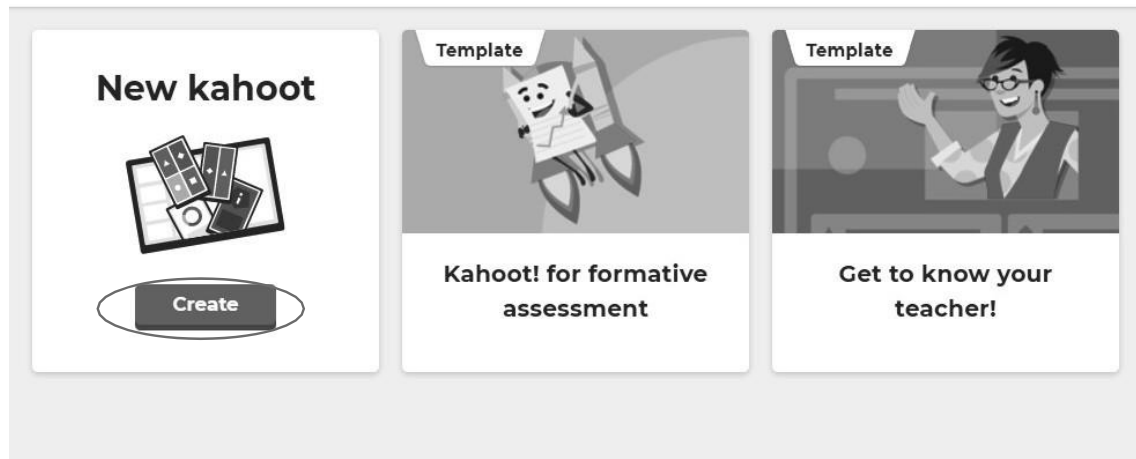


Contract No. 2020-1-BG01-KA201-079295



8. Select the option to create a new test.

## Create a new kahoot



Contract No. 2020-1-BG01-KA201-079295

9. Enter the form to create questions and fill it in the first line.

10. Then set the time students will have to answer this question in seconds.

11. Points for each question are assigned on a scale. There are three options - standard scoring, doubling the points and giving 0 points.

12. Pictures and a link to a YouTube video can be added to the question.

13. Answers can be either text or picture. The latter is recommended for younger students and children with reading difficulties or learning difficulties.

14. Indicate the correct answer with a tick in the circle.

15. Add new questions by clicking the Add question button.

16. Note that in the free version there are two options for the type of questions - true/false and Quiz. You can specify up to four answers, with one correct answer in the second option.

Contract No. 2020-1-BG01-KA201-079295

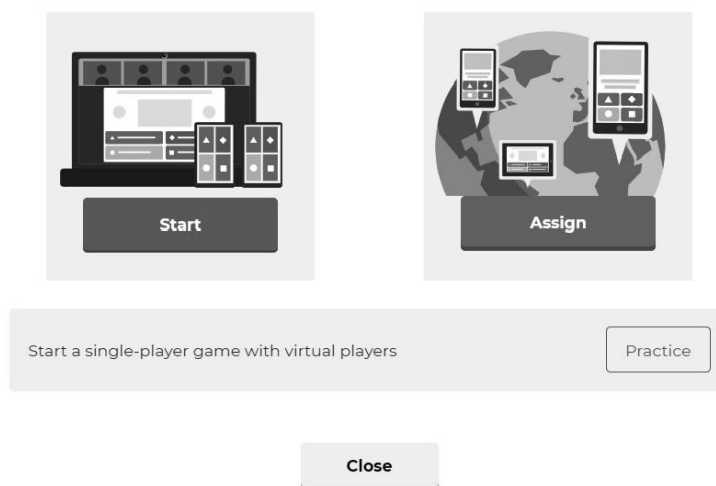
17. Setting the test name is done with the Settings button and the changes are finalized with the Done button.

18. After submitting all the questions you can review what you have done with the Preview button and if everything is OK save with the Save button which is in the top right corner.

19. The tests you create are saved with the MyKahoots folder. You can view them whenever you want.

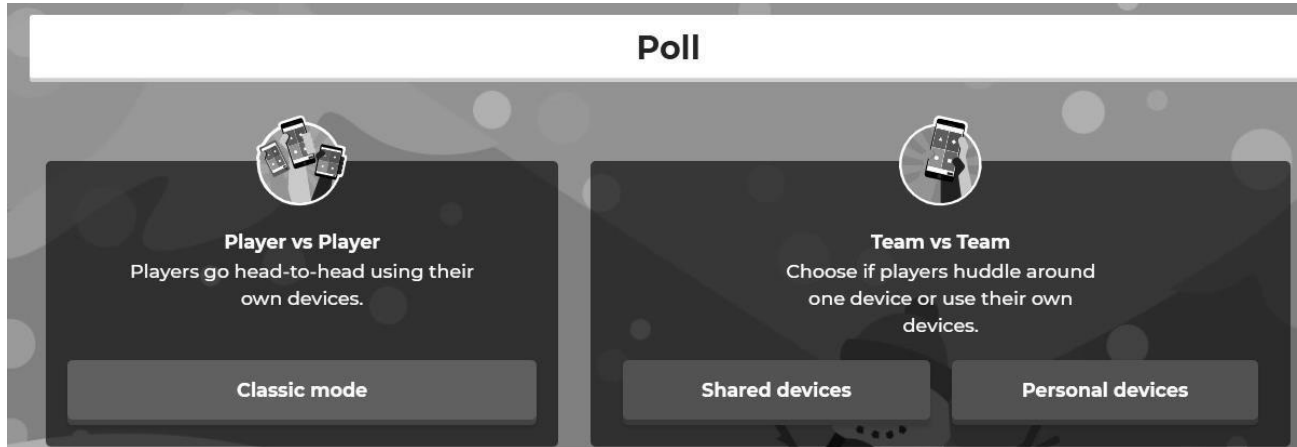
20. When you want to start a game/test for your students select Play. If you want to work in the classroom select Start. If you want to give the homework test select Assign.

### Choose a way to play this kahoot



21. The game in the classroom is possible in two variants - each student solves on his smart phone (classic variant) or a group of students work together in a team.

Contract No. 2020-1-BG01-KA201-079295



22. The system then generates a unique code for you to give to the students. They open <https://kahoot.it> in their browser and enter this pin code or scan the QR code with their phones.



23. On your screen you see who has entered the game after writing their name and when everyone is in you can start the quiz and the first question appears. A few seconds later the answers appear. After the time has elapsed your screen shows who was the fastest and gave the correct answer and also the others after them who gave correct answers. The system generates the information and at the end of the test shows the winner and their two runners-up.

## WHAT SHOULD A TEACHER WHO CREATES A MULTIMEDIA PRODUCT NOT FORGET?

**Contract No. 2020-1-BG01-KA201-079295**

"The development must evoke a positive attitude, curiosity, pleasure in those for whom it is intended..."

Regardless of the nature of the learning material, the multimedia development uses all possible information means - text, sound, natural and abstract virtuality, static and dynamic, in a harmoniously built whole.

It is very essential that the learning information be structured in a multi-layered, hierarchical way. Good development offers many inputs and outputs, many connections and paths for the movement of thought. It is also open to new possibilities.

The author's developments provide for the creative activity, the creative expressions of the students for whom they are intended.

The structure and content of the development can be related to everything that has presumably been studied so far. At the same time, possibilities are foreseen for its incorporation (in its entirety or individual segments) into what is to be studied.

The end of the development does not give the impression that everything has been said, shown, achieved. On the contrary, "it leaves the feeling of how many more things remain unexamined, how many questions have no adequate answer" (Pavlov, 2003, pp. 177-178).

Along with the three platforms for creating authoring tests, questionnaires, assignments and more, teachers can also get familiar with the platforms and programs presented in the app.

Contract No. 2020-1-BG01-KA201-079295

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Contract No. 2020-1-BG01-KA201-079295

## PLATFORMS AND PORTALS WITH EDUCATIONAL RESOURCES AND SOFTWARE OF THEIR CREATION

- eTwinning: <http://www.etwinning.net/>
- School Education Gateway: <http://www.schooleducationgateway.eu/>
- <https://classbg.online/>
- Teacher.bg: <http://www.teacher.bg>
- BgLOG.net: <http://bglog.net/>
- <http://bglog.net/nachobrazovanie/>
- <https://www.khanacademy.org/>
- <https://www.britishcouncil.bg/en/teach/resources>
- <http://www.obrazovaniето.bg/novini/idejni-sajtove-za-uchiteli-novatori/>
- <https://www.classdojo.com/>
- <https://kahoot.com/>
- <https://www.liveworksheets.com/> - a platform that offers worksheets, tests, quizzes, and more. in different languages and on different topics;
- <https://learningapps.org/> - an application supporting the learning process using interactive modules.
- <https://quizizz.com/> - portal with many quizzes and questionnaires
- <https://www.youtube.com/channel/UCqTGIC4Li0GZoxpAlvsNaw> - free educational video lessons designed for students from grades 1 to 7 in Bulgarian schools. They are divided into topics in accordance with the state educational standards for the relevant subject and class.
- <https://pretvoritel.com/> - a platform with tests and assignments in BLE
- <https://www.superteacherworksheets.com/> - a platform with over 10,000 tasks and materials sorted by grade and subject in English
- <https://wordwall.net/> - software for developing Quizzes, match ups, word games, and much more
- <https://quizlet.com/en-gb> - materials on various subjects and topics.



Contract No. 2020-1-BG01-KA201-079295

- <https://wakelet.com/> - a platform for organizing and sharing multimedia resources with students, teachers and learning communities.
- <https://padlet.com/> - software that makes whiteboards, documents and web pages,
- <https://www.google.com/forms/about/> - form builder
- <https://www.mozaweb.com/en/mozabook> - themed applications created for different disciplines,
- <https://ed.ted.com/> - materials, interactive, video-based lessons;
- <http://www.wordle.net/> - tool to generate "cloud words" from text provided by you
- <https://www.smartest.bg/> - a tool for creating and solving tests online
- <https://www.flexiquiz.com/> - a powerful online tests and quiz creator.
- <http://krokotak.com/> - a platform with didactic materials on different subjects and for different English classes
- <https://www.quia.com/> - library and resources for teachers and students

#### **SCREEN RECORDING AND VIDEO EDITING SOFTWARE**

- <https://www.bandicam.com/bg/> - it can capture everything on your computer screen as high-quality video.
- <https://obsproject.com/> - free and open source video recording and live streaming software.
- <https://jitsi.org/> - solutions for video conferencing, audio, dialing, recording and simulation.
- <https://www.faststone.org/FSCaptureDetail.htm> - a tool to capture screen, activities and sound in video files.
- <https://screencast-o-matic.com/screen-recorder> - a screen recorder that can capture any area of the screen with the ability to add narration from your microphone and video from your webcam.
- <https://www.screencastify.com/> - a video recording, editing and sharing program

#### **OTHER**

- <https://www.ourboox.com/> - e-book authoring software