

ITEC

TOOLSET 4.2

"This document has been created in the context of the ITEC project. All information is provided "as is" and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability. The document reflects solely the views of its authors. The European Commission is not liable for any use that may be made of the information contained therein."

CONTRACT NO	257566
DATE	19/09/2014
ABSTRACT	Toolset 4.2 is part of Toolset 4 "Designing Innovative Learning Activities" from the Future Classroom Toolkit. The toolset presents links to tools and resources that can be used for Learning Activities. The toolset uses a selection of popular Learning Activities and identifies a number of technologies that have been successfully used in the classroom to support these Learning Activities.
AUTHOR, COMPANY	Kristian Kallesen, Leo Højsholt-Poulsen, STIL - National Agency for IT and Learning (former UNI•C)
REVIEWERS	Will Ellis (EUN)
WORKPACKAGE	WP 6
CONFIDENTIALITY LEVEL	<i>PU</i>
FILING CODE	Toolset 4.2.docx
RELATED ITEMS	-

Contents

1. BACKGROUND	4
2. TOOLSET 4.2 – TECHNOLOGIES FOR LEARNING ACTIVITIES	5
2.1. USING TECHNOLOGY FOR LEARNING ACTIVITIES	5
2.2. EXAMPLES OF TECHNOLOGY USED FOR LEARNING ACTIVITIES	5
Learning Activity “Dream” with TeamUp	5
Learning Activity “Explore” with Evernote	6
Learning Activity “Map” with Popplet	7
Learning Activity “Reflect” with ReFlex	7
Learning Activity “Make” with SketchUp	8
Learning Activity “Ask” with Padlet	9
Learning Activity “Show” with Prezi	10
Learning Activity “Collaborate” with VoiceThread	11

1. Background

Originally WP6 was due to produce “D6.4) iTEC environments’ manual v3: Version 3 of an iTEC environments’ and composer manual will include updates to a composer reference manual, a users’ guide and one or more tutorials made available online in a wiki or another appropriate form”. However, it was proposed and agreed that D6.4 should be replaced and instead have the following aim: “In the final year UNI-C will consolidate the work delivered over the 4 years under WP6 to provide a collection of resources guiding users in the effective use of technology in the support of Future Classroom Scenarios and Innovative Learning Activities. Users will be provided long term access to these materials through the final single iTEC toolkit.”

However, WP6 decided that D6.4 should be dynamically updated due to numerous technical developments before the last pilots. To cope with that <https://sites.google.com/site/itecenvironments/> was produced before the final training workshop (Feb 2014) where national technical coordinators met with people from the technical work packages to discuss the expectations and possibilities regarding iTEC technology in the last pilots. The website was provided to not only offer technical support but also to focus on the rationale of the various iTEC technologies by presented short user stories as animations.

The work presented in this document is provided to distil some of the work done in WP6 to fit with and be of use for the Future Classroom Toolkit. The result is “Tool 4.2: Technologies for Learning Activities – A link to tools and resources that can be used for Learning Activities. This uses a selection of popular Learning Activities and identifies a number of technologies that have been successfully used in the classroom.”

Toolset 4.2 presents the learning activities from cycle 4 and couples them with a 21st century skill and a relevant tool (free and online if possible to raise the chance of usefulness). The focus has been on demonstrating a variety of technologies (including resources to get started) and how IT can support a specific Learning Activity. It is meant as inspiration and not to be a complete list, just examples. Technology changes at a rapid pace, and Learning Activities always need to be adapted to fit a learning context. Thus there is no definite answer as to how Learning Activities should be coupled with technology.

Toolset 4.2 doe not try to bring together all the resources produced within WP6 through the four years of iTEC, as some early materials are now already out of date.

The following text is to be integrated on the website for the Future Classroom Toolkit.

2. Toolset 4.2 – Technologies for Learning Activities

This toolset presents links to tools and resources that can be used for Learning Activities. The toolset uses a selection of popular Learning Activities and identifies a number of technologies that have been successfully used in the classroom to support these Learning Activities. A full description of the Learning Activities can be found in the Learning Activity Directory [Link to Future Classroom Directory](#).

2.1. Using technology for Learning Activities

Sometimes technology is required to implement a Learning Activity, and other times it is just nice to have and can improve the learning process. There are rapid changes in technology tools so the examples of technology below are merely ideas for using technology in the classroom. Other tools with similar functionalities might fit the Learning Activities just as well – see toolset 4.3 “The Learning Resource Recommender” for further inspiration [Link to toolset 4.3](#). When technology is applied it is important that it is applied effectively to support the Learning Activity.

2.2. Examples of technology used for Learning Activities

Learning Activity “Dream” with TeamUp

[TeamUp](#) is a web-based tool to assist teachers and learners in forming teams based on skills and interests, and to allow teams to record their progress into short, 1 minute audio reflections. This makes it time-efficient for the teacher to review each team's progress, and forces the learners to think about how to summarize their activities and only focus on what is important.

A quick tutorial:

Insert: <http://youtu.be/qIqxZJf-6I8>

[TeamUp manual](#)

You can use TeamUp for the Learning Activity “Dream”. “Dream” is usually the starting point for a learning process and calls for the learners to exercise creativity in groups. For the dreaming to be effective the learners can apply technology to preserve the group’s reflections. This way they can keep track of their thoughts, have a more transparent learning process, and maybe see new ways to combine or develop their ideas. TeamUp is an example of technology that can be used to support creativity and preserve reflections.

TeamUp can also be used for the following Learning Activities: Design brief, Reflect, Reflection.

Alternative suggestion for technology: [Screencast-o-matic](#) – a free online tool to record the screen with accompanying speak (save the groups reflections).

Learning Activity “Explore” with Evernote

Evernote is a very flexible tool to capture notes, and not just written notes but also sound, photo, video and drawings. It works on laptops (both online or to be downloaded) and comes as an app for mobile devices. When you add notes to your account they are automatically synced if you use different computers/mobile devices. A note can be shared through Facebook/Twitter, by e-mail or by handing out a unique URL. The option to have shared notebooks and a number of different users adding to the same collection is not included in the free version.

In order to make drawings Evernote is integrating another program/app called Skitch. As shown in the video it offers various opportunities like annotating a photo or drawing on a sample from Google Maps/section from a website:

Insert:

<https://www.youtube.com/watch?v=jCymmC9JFz4&list=PL4I5cq2DfrSqDxIgxE1SXdYiWpizDpz8l>

[Evernote’s YouTube channel](#) with various tutorials and user stories.

You can use Evernote for the Learning Activity “Explore”. “Explore” calls for the learners to exercise innovation and to look for tangible and useful solutions to a given task, e.g. a design challenge. To do this effectively the learners can apply technology to capture important content and collect inspiring samples. Having digitized content and samples can help to give an overview and offers the possibility to manipulate, combine or continue work on the content/samples in various ways. Evernote is an example of technology that can be used for innovation and to capture content/samples.

Evernote can also be used for the following Learning Activities: Contextual Inquiry: Observation, Contextual Inquiry: Benchmarking, Dream, Design brief, Reflect, Reflection.

Alternative suggestion for technology: [Pinterest](#) – an online social bulletin board to find, save and share images on the web (find and capture important web based content).

Learning Activity “Map” with Popplet

[Popplet](#) is a mind-mapping tool to help learners think and learn visually together. With Popplet you can create notes and drawings as well as add pictures and videos, and you can always rearrange and link things, so the mind-map is in line with your thoughts. More learners can collaborate on the same Popplet from different devices, and you can tell which user added what. It is web-based and also comes as an iPad app.

[‘Popplets in education’-blog](#) with various examples.

You can use Popplet for the Learning Activity “Map” where the learners need to do research and organize their findings. To do this effectively the learners can use technology to keep an overview, to arrange and rearrange files of various types, and to keep ideas connected with online resources. This makes it easier to analyze the findings and more likely to discover relations, similarities and differences between collected pieces of content. Popplet is an example of technology that can be used for the research and to organize and analyze findings.

Popplet can also be used for the following Learning Activities: Dream, Design brief, Explore, Contextual Inquiry: Observation, Contextual Inquiry: Benchmarking, Reflect, Reflection, Collaborate.

Alternative suggestion for technology: [Diigo](#) – a multi-tool for knowledge management with a special focus on social bookmarking (research and organize).

Learning Activity “Reflect” with ReFlex

[ReFlex](#) is an easy-to-use tool for learners to build and reflect on their personal learning case by recording short audio clips about their learning. The recordings are displayed on a timeline to keep track of the chronology, and you can always go back and listen to former reflections. When you create a new recording you can choose to simply keep it, or you can save it as a "Time capsule". The "Time capsule"

stores your recordings for future listening and can only be heard from a given date – e.g. at the end of a project you might want to be reminded about the expectations you had before the project started.

To use the application learners need to create a reflection space (sign up). The reflection space is only for personal use and cannot be seen by others.

A quick tutorial:

Insert: https://www.youtube.com/watch?v=Q_PxYPZRM4o

ReFlex can be used for the Learning Activity “Reflect”. “Reflect” requires that the learners focus on critical thinking and analyze and evaluate facts, arguments, decisions, challenges and how things are progressing with the learning process in general. To do this effectively the learners can apply technology simply to record and possibly share their reflections. Having the reflections recorded might make the learner more committed, and provides the opportunity to listen again at a later stage to keep track of the learning process. ReFlex is an example of technology that can be used for critical thinking and to evaluate the learning process.

ReFlex can also be used for the following Learning Activity: Reflection

Alternative suggestion for technology: [Blogger](#) - a blogging service from Google (share and keep reflections in chronological order with the latest post at the top).

Learning Activity “Make” with SketchUp

[SketchUp](#) is a tool to make 3D drawings. The program needs to be downloaded and it comes in two versions (both are free for educators, and it is questionable whether you need the pro version). SketchUp provides a toolset and an intelligent drawing system to make 3D modelling easy. Some of the possibilities are: Combine your own models with shared model assemblies from an online repository, render the surface and place your model within Google Earth to see how it fits within a given environment.

With SketchUp the students can create, modify and share 3D models. It is suitable for both large and small scale models.

A brief introduction:

Insert: <https://www.youtube.com/watch?v=jb23enMOHyc>

K12 Education Case Studies

Official tutorials

SketchUp can be used for the Learning Activity “Make”. “Make” calls for the learners to solve problems and to make ideas real by creating good solutions/prototypes to e.g. a design challenge. To do this effectively the learners can apply technology to visualize and test ideas. It saves time and money and you can assess and alter a solution before there is no turning back. SketchUp is an example of technology that can be used for problem solving and to visualize ideas.

SketchUp can also be used for the following Learning Activities: Product Design, Final Product Design.

Alternative suggestion for technology: [123D](#) – a set of free tools for 3D modeling and 3D printing (visualize ideas).

Learning Activity “Ask” with Padlet

[Padlet](#) is a simple online bulletin board – you don’t even need to sign up to use it. Each board has a unique URL. You can share the URL with others, so they can add new post-it notes on the board. Post-it notes can be written notes of course but can also be e.g. pictures and videos. Notes can be dragged and dropped, and any changes will show up immediately for all users.

If you want to keep track of your boards, then you need to sign up for a free account.

A quick tutorial:

Insert: <https://www.youtube.com/watch?v=5c9vWCPn8ys>

Padlet can be used for the Learning Activity “Ask”. With “Ask” a team of learners need to get feedback on their design challenge. They need to collaborate with people who have an expert understanding of the domain the design is framed within. To do this effectively the learners can apply technology to present their ideas online and to gather and organize responses and new ideas from the people they ask. This way

they are not dependent on physical presence from everyone, and feedback can easily be preserved. Padlet is an example of technology that can be used for collaboration and to gather, organize and present ideas.

Padlet can also be used for the following Learning Activities: Participatory Design Workshop, Dream, Design brief, Explore, Contextual Inquiry: Observation, Contextual Inquiry: Benchmarking, Reflect, Reflection, Show, Collaborate.

Alternative suggestion for technology: IWB software from e.g. [SMART Technologies](#) or [Promethean](#). Or simply use [AWW](#) – a free web whiteboard where you can invite others to participate from their own device (collaboration and refinement of ideas).

Learning Activity “Show” with Prezi

[Prezi](#) is an online presentation tool very different from PowerPoint. In Prezi you can organize your ideas (text, shapes, pictures and videos) on a large canvas, and during a presentation you can show the big picture or zoom in on the finer details. Online collaboration with remote team members is possible since you can invite others to edit a Prezi-presentation with you.

Prezi.com is also a community where people can comment on published presentations or find Prezi-presentations for reuse and adaption.

To use Prezi you need an account. Students and teachers can get a free ['Edu Enjoy' account](#). One of the benefits of a student/teacher account is that you can keep your Prezi-presentations private or only shared with selected individuals. A free Prezi account only allows for public Prezi-presentations.

A quick tutorial:

Insert: https://www.youtube.com/watch?v=bluOTt_e4qU#t=62

[Prezi's YouTube channel](#) with various tutorials and user stories.

Prezi can be used for the Learning Activity “Show”. “Show” is usually one of the final steps of a learning process, and it calls for the learners to demonstrate initiative and self-direction. They need to present their results and document learning achievements as well as thoughts about future steps, so other people can take advantage of their results and findings and perhaps give advice for improvement. Using technology

to do this provides the optimal conditions for the communication: E.g. it is possible to target a wider audience and to visualize the learning process by integrating various media products that have been produced during the learning process. Prezi is an example of technology that can be used to handle initiative and self-direction and to present results.

Prezi can also be used for the following Learning Activities: Ask, Participatory Design Workshop, Dream, Design brief, Explore, Contextual Inquiry: Observation, Contextual Inquiry: Benchmarking, Reflect, Reflection, Show, Collaborate.

Alternative suggestion for technology: [Glogster](#) – a tool to create multimedia posters (present results).

Learning Activity “Collaborate” with VoiceThread

[VoiceThread](#) is an online tool to organize group conversations that are centered around digital media. Creating a VoiceThread is providing an online media album with various types of media (images, videos, documents) and allowing people to comment by using text, doodles, audio or video. The creator decides who can view and who can participate. Of course you can collect and share the group conversation within VoiceThread, but it can also be shared by link or embedded on other websites

There is an app for iPhone/iPad too that creates VoiceThreads easily. VoiceThread is free unless you want advanced features like a manager tool to create classes and student accounts.

A brief introduction:

Insert: <https://www.youtube.com/watch?v=yW2nb7FO7p8>

[Official blog](#) with ideas and user stories.

VoiceThread can be used for the Learning Activity “Collaborate”. Probably it is no surprise that “Collaborate” focuses on collaboration: Ad-hoc and serendipitous collaboration between learners from different schools. For learners from different schools to be able to collaborate seamlessly, they need online tools to connect and to handle the communication. Technology can be used to facilitate collaboration wherever and whenever it is convenient and with whoever needed. VoiceThread is an example of technology that can be used for collaboration and to discuss online.

VoiceThread can also be used for the following Learning Activities: Show, Reflect, Reflection

Alternative suggestion for technology: [Google Drive](#) – online documents, presentations and spreadsheets that multiple users can work on simultaneously from different devices (collaboration and discussion).